# MEASURING TOOLS

## NIIGATA SEIKI GENERAL CATALOG

## vol.125

SK-LOG GAUGE ANGLE
MEASUREMENT SENSOR VERNIER CALIPER
MICROMETER MICROMETER HEAD DIAL GAUGE
STANDARD TOOL RULER SCRIBER MICROSCOPE
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ANGLE
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VERNIER CALIPER
MICROMETER
MICROMETER HEAD
DIAL GAUGE
STANDARD TOOL
RULER
SCRIBER
MICROSCOPE
MAGNETIC TOOL
OTHERS

SK Niigata Seiki

English

# TOOLS CATALOG

# Vol.125

## Notices

### Products

The products on this catalog is based on information from April, 2025.
Niigata Seiki may change design or specification, or discontinue without advance notice.

### Precautions

Before using our products, please read through the Instruction Manual attached to the product carefully and follow the Precautions and Safety Warnings for proper use.

### Size indication

Listed sizes in this catalog are outline dimensions.

### Color

We pay extra attention to coloring of the catalog however, the color of actual product may vary from the photo.

http://www.niigataseiki.net/official/english/index.html

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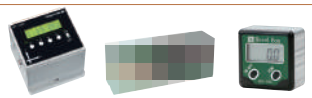
DIGITAL PROTRACTOR 

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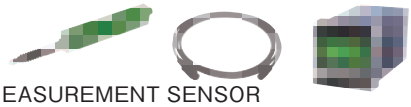
MEASUREMENT SENSOR 
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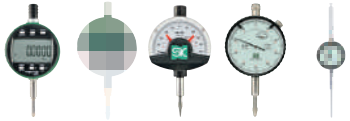
DIAL GAUGE 
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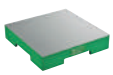
CAST IRON SURFACE PLATE 
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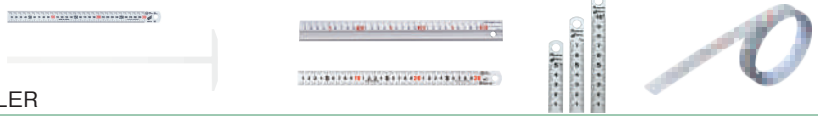
RULER 

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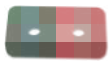
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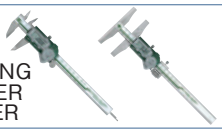
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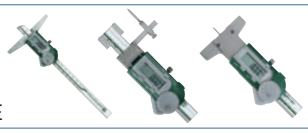
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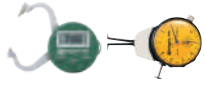
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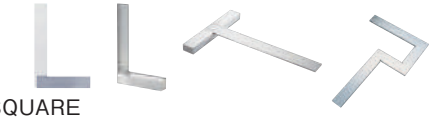
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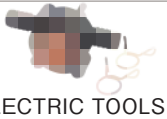
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0～9
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□= number
○= alphabet
＊= number or alphabet


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# How To Read This Catalog

NEW! — New Item

T — Traceability

PDI — Pre-Delivery Inspection Report

O — Produced abroad Inspected in Japan

Product Name

Product Features

Marks

Category

Product Photo

Classification within Category

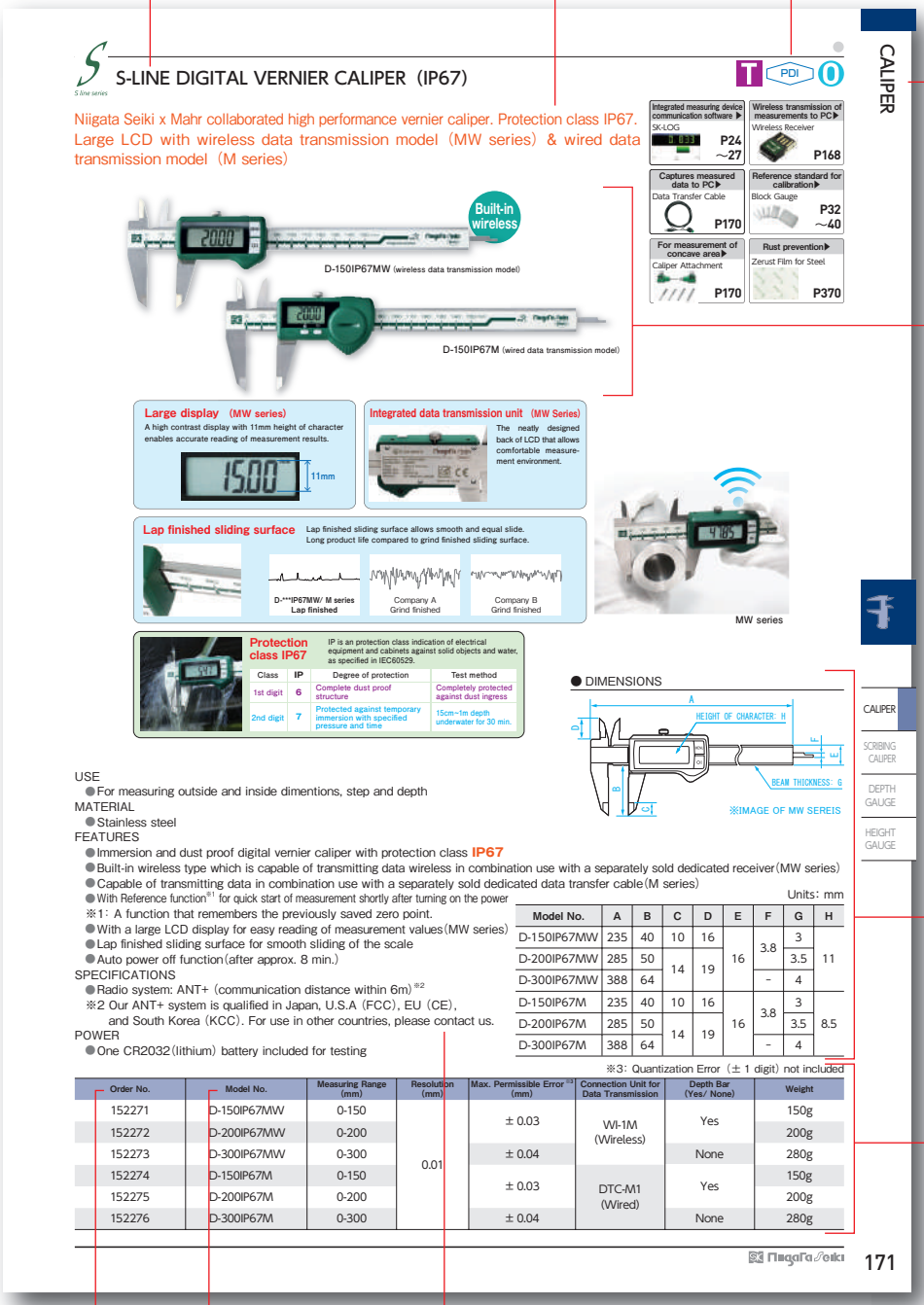
Dimensions

Specifications

Order No.

Model No.

Use・Material・Features・Power



S-LINE DIGITAL VERNIER CALIPER (IP67)

Niigata Seiki x Mahr collaborated high performance vernier caliper. Protection class IP67. Large LCD with wireless data transmission model (MW series) & wired data transmission model (M series)

Built-in wireless

D-150IP67MW (wireless data transmission model)

D-150IP67M (wired data transmission model)

Large display (MW series)

A high contrast display with 11mm height of character enables accurate reading of measurement results.

11mm

Integrated data transmission unit (MW Series)

The neatly designed back of LCD that allows comfortable measurement environment.

Lap finished sliding surface

Lap finished sliding surface allows smooth and equal slide. Long product life compared to grind finished sliding surface.

D-***IP67MW/ M series Lap finished

Company A Grind finished

Company B Grind finished

MW series

Protection class IP67

IP is an protection class indication of electrical equipment and cabinets against solid objects and water, as specified in IEC60529.

| Class | IP | Degree of protection | Test method |
|---|---|---|---|
| 1st digit | 6 | Complete dust proof structure | Completely protected against dust ingress |
| 2nd digit | 7 | Protected against temporary immersion with specified pressure and time | 15cm~1m depth underwater for 30 min. |

● DIMENSIONS

※IMAGE OF MW SEREIS

USE
- For measuring outside and inside dimentions, step and depth

MATERIAL
- Stainless steel

FEATURES
- Immersion and dust proof digital vernier caliper with protection class **IP67**
- Built-in wireless type which is capable of transmitting data wireless in combination use with a separately sold dedicated receiver (MW series)
- Capable of transmitting data in combination use with a separately sold dedicated data transfer cable (M series)
- With Reference function※1 for quick start of measurement shortly after turning on the power
- ※1: A function that remembers the previously saved zero point.
- With a large LCD display for easy reading of measurement values (MW series)
- Lap finished sliding surface for smooth sliding of the scale
- Auto power off function (after approx. 8 min.)

SPECIFICATIONS
- Radio system: ANT+ (communication distance within 6m)※2
- ※2 Our ANT+ system is qualified in Japan, U.S.A (FCC), EU (CE), and South Korea (KCC). For use in other countries, please contact us.

POWER
- One CR2032 (lithium) battery included for testing

Units: mm

| Model No. | A | B | C | D | E | F | G | H |
|---|---|---|---|---|---|---|---|---|
| D-150IP67MW | 235 | 40 | 10 | 16 | 16 | 3.8 | 3 | 11 |
| D-200IP67MW | 285 | 50 | 14 | 19 | | | 3.5 | |
| D-300IP67MW | 388 | 64 | | | | - | 4 | |
| D-150IP67M | 235 | 40 | 10 | 16 | 16 | 3.8 | 3 | 8.5 |
| D-200IP67M | 285 | 50 | 14 | 19 | | | 3.5 | |
| D-300IP67M | 388 | 64 | | | | - | 4 | |

※3: Quantization Error (± 1 digit) not included

| Order No. | Model No. | Measuring Range (mm) | Resolution (mm) | Max. Permissible Error※3 (mm) | Connection Unit for Data Transmission | Depth Bar (Yes/ None) | Weight |
|---|---|---|---|---|---|---|---|
| 152271 | D-150IP67MW | 0-150 | 0.01 | ± 0.03 | WI-1M (Wireless) | Yes | 150g |
| 152272 | D-200IP67MW | 0-200 | | | | | 200g |
| 152273 | D-300IP67MW | 0-300 | | ± 0.04 | | None | 280g |
| 152274 | D-150IP67M | 0-150 | | ± 0.03 | DTC-M1 (Wired) | Yes | 150g |
| 152275 | D-200IP67M | 0-200 | | | | | 200g |
| 152276 | D-300IP67M | 0-300 | | ± 0.04 | | None | 280g |

CALIPER

SCRIBING CALIPER

DEPTH GAUGE

HEIGHT GAUGE

171

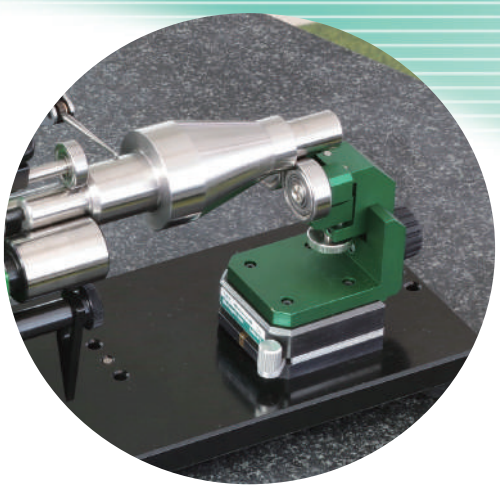
Vol.125 Information

# New Lineup

NEW

NEW LINEUP

Renewal



# NEW ITEMS

Introducing the latest products from the industry's first Welding Gauge for deformed fillet weld to the new digital protractor series !

## STEEL PIN GAUGES REFILL SET P42

20 sizes

Changed the Pin Gauge of "STEEL PIN GAUGE SET AA SERIES" to a paper box.
The price is lower than that of conventional pin gauge sets.

AA-9B-R

## STEEL LIMIT PLUG GAUGES P71

18 sizes

Replacement gauge for the Go side of STEEL LIMIT PLUG GAUGE H7 (for manufacturing) Only GO side where worn-out occurs can be replaced.

## TAP HOLE CHECKING GAUGE SET P77

7 sizes

Easily and accurately confirm thread pre-hole diameters with pin gauges! A set of 8 pins with percentage of thread engagement ranging from 100% to 65%.

THC-0204

## BALL GAP GAUGE SHAPE MEMORY P78

BNTP-020 ~ BNTP-070 (51 sizes)

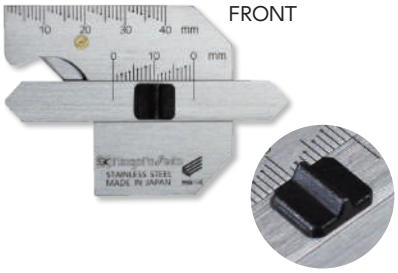
Shape memory alloy is used for the stem of BALL GAP GAUGE.
After bending and measuring, it can be returned to its original shape.

BNTP-050

## WELDING GAUGES P92

WG-1FKD

WG-1 with finger hook.Operation is now possible with gloves on.

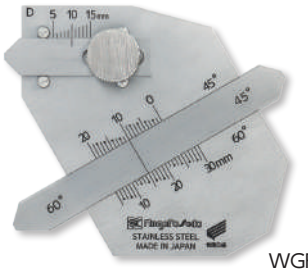


FRONT

## WELDING GAUGES P96

WGF-60/WGF-50

60° · 50° beveled deformed fillet weld supports throat thickness measuremenet!



WGF-60

## LEVELNIC P129

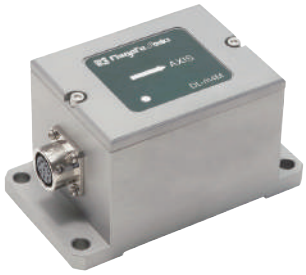
DL-mini

The lightest and Smallest LEVELNIC ever made !!! Thislight weight level is suitable for measuring weight effective work.

## LEVELNIC P130

DL-m4M

To be used as a installed tilt sensor for all kinds of machinery



## DISPLAY P132

DL-D6F/DL-D6FXY

DISPLAYS LEVELNIC measurements at hand.Measurement values can be recorded directly in the device, eliminating the need for handwritten notes.

DL-D6F DL-D6FXY

## CONNECTING CABLE P135

DL-P7

Cable for connecting LEVELNIC to computer.
USB Type-A type.

## DIGITAL PROTRACTOR P142 • P143

DP-45XYS/DP-80XYH/DP-90XYM/DP-60XYB

The latest of DIGITAL PROTRACTOR SERIES with excellent robustness (temperature, humidity, vibration, shock, etc.) and easy portability to the field. Achieves industry-leading reading accuracy through the adoption of MEMS sensors and proprietary control correction methods.

DP-45XYS DP-80XYH DP-90XYM DP-60XYB

## DIGITAL PRECISION INDICATOR/LCD DISPLAY FOR DPI/CONNECTION CABLE FOR DPI P164

**DPI Series**

Achieve wide-range, high-precision measurements with a measuring range of 10mm and a resolution of 0.1 μm when combined with a display unit!
DIGITAL PRECISION INDICATOR that can also function as a positioning sensor.

DPI-1001SC

DPI-1001LC
(Low measuring force type)

DPI-DRC

DPI-CS2C

DPI-CL2C

## CALIPER ATTACHMENT P170

**(Optional Parts for N-5AS)**

Replacement probe for caliper attachment N-5AS

## GDC VERNIER CALIPERS KEYBOARD DATA TRANSFER CABLE P169

**GDC-KEY**

This communication cable connects GDC series such as VERNIER CALPERS and DEPTH GAUGE to a PC and outputs measurement data

## GDC-KEY FOOT PEDAL P169

**GDC-KEY-FP**

Connect to the "GDC VERNIER CALIPER KEYBOARD DATA TRANSFER CABLE" and output data with the foot pedal! It will be can continuous measurement and data output improves work efficiency.

## USB FOOT PEDAL P169

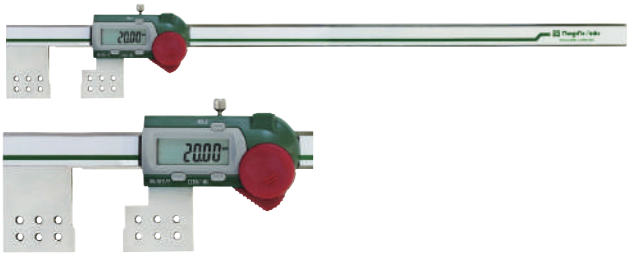
**USB-FP1**

Input shortcut keys with your foot! When combined with SK-LOG, it allows measurement and recording work with both hands free.

## DIGITAL MULTI UNIT CALIPERS P179

**GDCP-300MU**

Compatible with the optional Bluetooth BOX! Attach custom-made probes to create your own original caliper!



## DIGITAL VERNIER CALIPER FOR CHAMFER MEASURING P184

**GDCP-45C8/GDCP-30C8/MCM-4**

Compatible with the optional Bluetooth BOX! Accurately measures difficult-to-measure chamfer dimensions digitally.

Optional Master MCM-4

GDCP-45C8

## DIGITAL GEAR TOOTH MICROMETER P215

**QEM290-25D/QEM290-50D**

Suitable for thickness measurement of gear and paper by disk type measuring faces

QEM290-25D

## DIGITAL THREE-POINT INTERNAL MICROMETER P217

**QEM3385 Series**

For high precision measurement of internal diameter. Supplied with extension rod for deeper hole measurement.

QEM3385-1216TP

QEM3385-87100TP

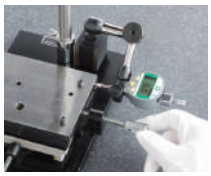
# NEW ITEMS

## Digital measuring microscope that simplifies image measurement and

### DIGITAL S-LINE MINI INDICATOR (Built-in Bluetooth/ IP54) P235

**DMI-1095SW**

Built-in Bluetooth function!
Compact type with an overall length of 110 mm and a thickness of 22 mm.



### DIGITAL S-LINE TEST INDICATOR (IP54) P236

**DET-0800S/DET-2000S**

IP54 compliant digital test indicator.
Data transfer is possible with a dedicated cable (sold separately).

DET-0800S

DET-2000S

### KEYBOARD DATA TRANSFER CABLE P238

**DEI-C-KEY**

Connects PC to a compatible measurement device and outputs measurement data.
No special software is required, the data can be recorded into Excel etc.

### MINI PLUG FOOT PEDAL P238

**EPJ35-FP**

Combined with KEYBOARD DATA TRANSFER CABLE can be output data without the use of hands

### PROTECTION FILM FOR DIAL GAUGE P243

**DI-PF**

For protection of dial gauge crystal!
With instruction stickers

### MAGNETIC BASE THICK MAIN POST TYPE P250

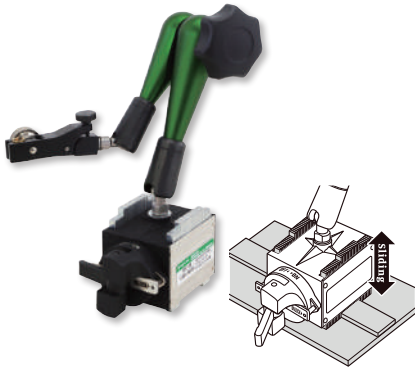
**SB-130PL**

Highest main post and largest base size in series history strong adsorption type is newly released!

### MAGNETIC BASE TRANSFORMABLE BASE TYPE P251

**WMB-45FR**

Lock firmly even with light force! The suction surface is deformable and can adsorb on uneven and R-shaped surfaces!




### DIAL CALIPER GAUGE P258

**WDC-MA1/WDC-MA2**

Quickly measure the thickness of small parts, tubes, etc. with a single touch!

WDC-MA1

WDC-MA2

### LED RING ILLUMINATOR WITH POLARIZING FILTER P339

**L-120DF**

A high-brightness, long-lasting LED light system for stereo microscopes. Polarizing filters can reduce halation that interferes with observation.

# endoscopes with simultaneous 2-way viewing support the inspection site!

## ADJUSTABLE ROLLER HOLDER P272

**LRH-Y1**

Combined with S-LINE RUN-OUT GAUGE SYSTEM, it enables measurement of long or stepped workpieces!

## BENCH TABLE FOR OUTSIDE / BENCH TABLE FOR INSIDE P277

**BTO-25C/BTI-23C/BTI-67C/BTI-260C**

High-precision measurement of mass-produced products is possible by attaching digital precision indicators, electric micrometer, etc

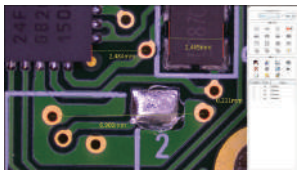
BTO-25C

BTI-67C

## DIGITAL MEASURING MICROSCOPE P335

**MMS-1498**

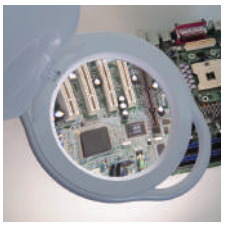
Standard Monitor Included! A microscope capable of measurement and recording. Equipped with an automatic detection function to recognize the workpiece's contour, allowing for intuitive operation.

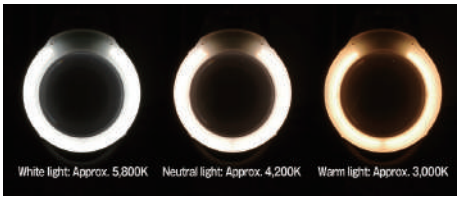


## ARM TYPE MAGNIFIER WITH DIMMABLE LED LIGHT P345

**LS2-175ADT**

Brightness and light color can be adjusted!
Equipped with a large lens for excellent visibility.






## USB CAMERA FOR MICROSCOPE P340

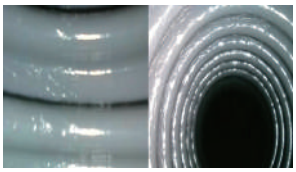
**MU-130Plus**

Easy to install! View images from your stereo microscope on your computer.
Compatible with microscopes other than our own products.

## DUAL CAMERA TYPE BORE SCOPE P341

**E902-RD/E905-RD**

Equipped with dual cameras for simultaneous forward + side view! This industrial endoscope allows you to inspect and record inside curved pipes.



Features a dual camera for simultaneous front and side view inspection.

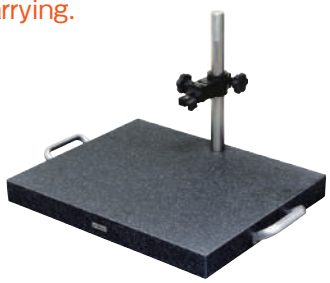
# NEW ITEMS & RENEWAL

Renewal of long-selling products and additions to the series have further improved convenience.

## GRANITE COMPARATOR STAND P280

**WGC-400**

Large base measuring table of 400×500 mm!
Comes with a handle for easy carrying.



## GRANITE SURFACE PLATE LIQUID WAX P288

**GW-300Y2**

For prevention of dirt adhesion and protection of granite surface plate surfaces!

## LEEB HARDNESS TESTER MASTER BLOCK/MEASURING RING P269

**LHT-B/LHT-BR**

Standard equipment for LHT-400plus.For replacement when worn out.

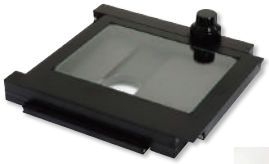
LHT-B

LHT-BR

## XY STAGE FOR MICROSCOPE P338

**STD-8090**

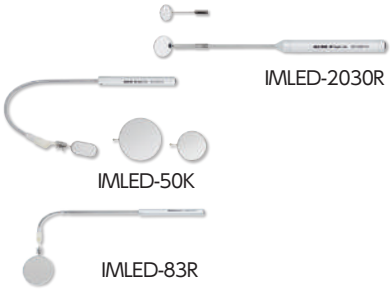
Fine adjustments of the sample position are easy with separate vertical and horizontal dials!



## INSPECTION MIRROR WITH LIGHT P348

**IMLED-2030R/IMLED-50K/IMLED-83R**

Inspection mirror that is convenient for use in dim and hard-to-see areas



IMLED-2030R

IMLED-50K

IMLED-83R

## FLEXIBLE ARM FOR CENTERING P372

**CCA-200**

For milling machines and drilling machines, etc Attach to the drill chuck of the machine. Ideal for parallel and vertical alignment, as well as centering inner and outer diameters!

## MAGNETIC HOLDER P357

**SKM-01D ～ SKM-05D**

Various applications such as holding various documents, temporary fixing of workpieces, chip removal, etc

SKM-01D SKM-02D

SKM-03D SKM-04D SKM-05D

## MAGNETIC HOLDER P357

**SKM-01F ～ SKM-05F**

Ferrite magnet type with less adsorption force

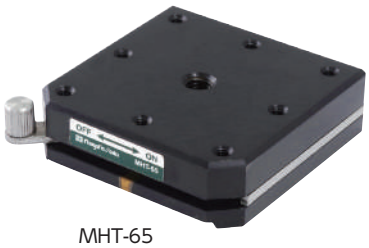
SKM-01F SKM-02F

SKM-03F SKM-04F SKM-05F

## MAGNETIC HOLDER THIN TYPE P359

**MHT-45/MHT-65**

By utilizing the upper female thread, various jigs can be created!



MHT-65

## CARBIDE TIP FIRM JOINT DIVIDERS P328

**TBFD-100/150/200/250/300**

Adjustable riveted joints for extended use, even if loosened

TBFD-200

## INSIDE CALIPERS P329

**IC2-300/IC2-400/IC2-600**

An essential tool for fieldwork!
Convenient for transferring inner diameter measurements.

IC2-300

## OUTSIDE CALIPERS P329

**OC2-300/OC2-400/OC2-600/OC2-1000**

Convenient for transferring outer dimensions of round bars, pipes, etc!

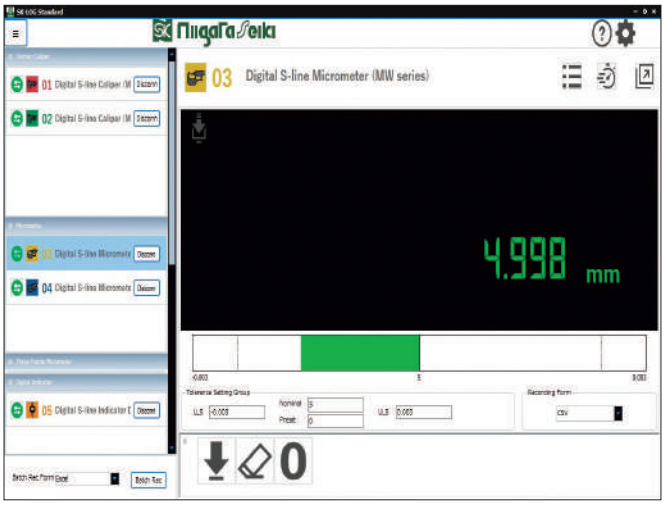
OC2-300

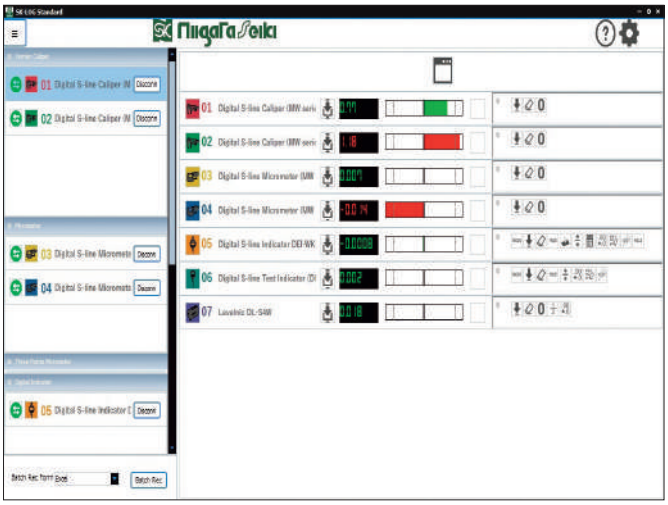
# INTEGRATED SOFTWARE FOR MEASURING INSTRUMENTS SK-LOG

SK-LOG

# INTEGRATED SOFTWARE FOR MEASURING INSTRUMENTS SK-LOG

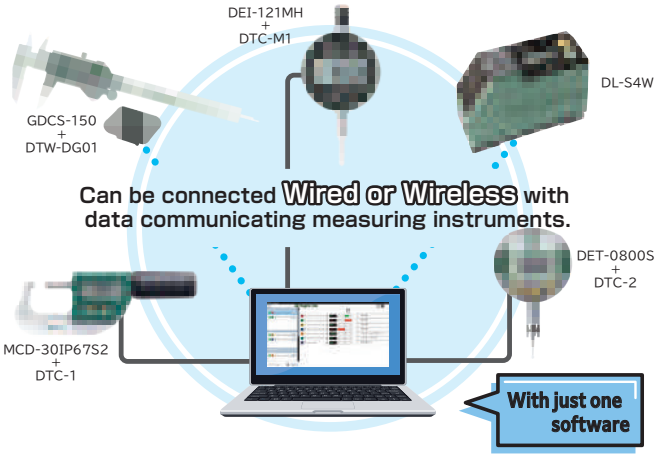
For everyone who wants to manage measurement data and focus on IoT.
Why not start risk management and efficiency improvement for your future business now?
Importing measurement data from multiple measuring instruments to PC, Pass/ Fail judge based on pre-set tolerance, and data recording are possible with this software.



## Controlling multiple measuring instruments all at once

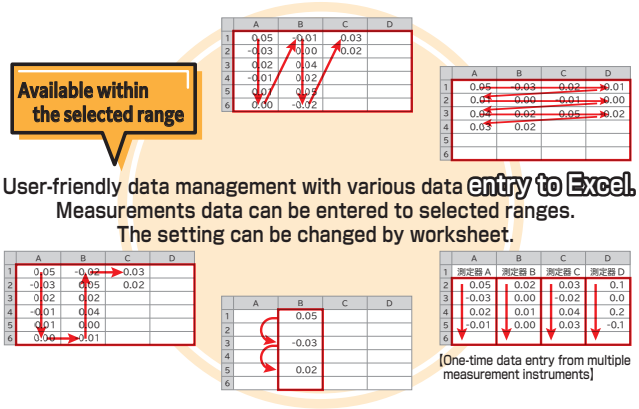
- Can be connected **WIRED or WIRELESS** with data communicating measuring instruments
- Measurement data of several measuring instruments can be managed with **JUST ONE SOFTWARE**
- **THE LATEST VERSION** is always available with an automatic version upgrade function
  *Internet connection is required.
- When connecting multiple instruments, measurement results will be shown in a **LIST-FORM** and their **TOLERANCE** can be shown as well
- Cell-specified output function allows **VARIOUS DATA FORMATS** and **TEMPLATES** to output measurement data to
- Voice reading function will let you know measurement results **WITHOUT LOOKING at a PC monitor**
- WEB authentication ver. **for ONLINE ENVIRONMENT** or USB dongle ver. **for OFFLINE ENVIRONMENT** can be chosen depending on your work environment




## Highly flexible Excel input

Various ways of entering data to Excel are possible.
**ONE-TIME DATA ENTRY FROM MULTIPLE MEASUREMENT INSTRUMENTS** as well.

**VARIOUS STYLES OF FORMATS** can be used for data entry such as an inspection report or calibration certificate




## Two versions are available depending on your work environment.

**Web authentication version SK-LOG-W**

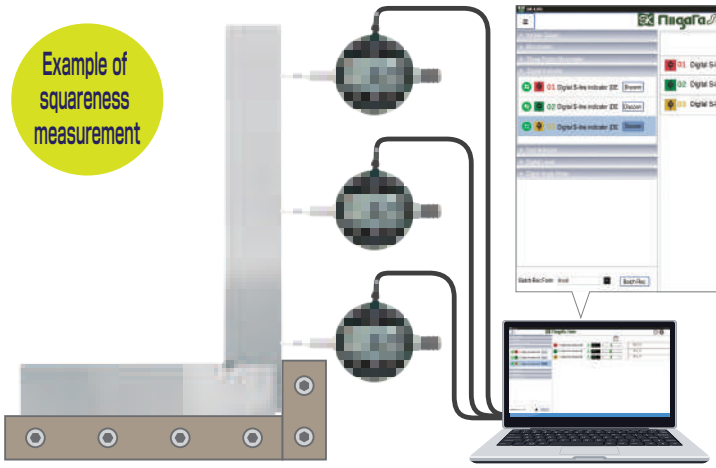
⇒ For those who have an internet connection.
Using one same product key in different PCs is also possible (can not be used at the same time).

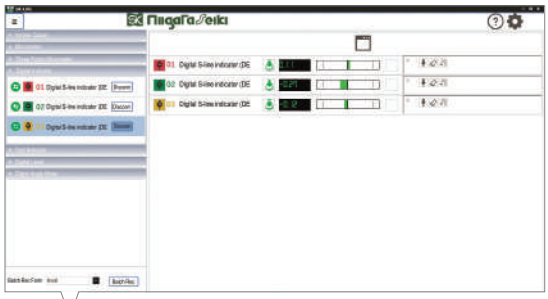
**USB dongle version SK-LOG-D**

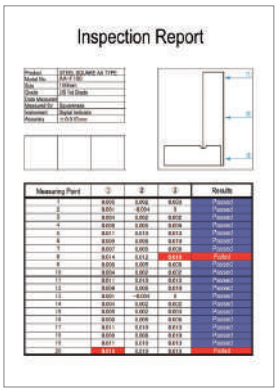
⇒ For those who wish to use without an internet connection.

# INTEGRATED SOFTWARE FOR MEASURING INSTRUMENTS SK-LOG

Example of squareness measurement








- Install S-line digital indicators onto fixtures before use
- Squareness measurement is possible by comparative measurement with a master
- Three different data can be imported simultaneously, which will increase your work efficiency

## ◆ Using S-line digital indicator DEI-121MH

Example of cylinder run-out measurement

- For measuring outside diameter based run-out easily without using V-blocks
- Improved work efficiency can be achieved by using with S-line test indicator and SK-LOG

## ◆ Using Run-out gauge system ROG-221LS and S-line test indicator DET-0800S

USE
- For importing measurement data to PC

FEATURES
- When connecting multiple instruments, measuring results will be shown in a list-form and their tolerance can be shown as well
- Recording method: Manual recording - record button on measuring instrument or in the software Auto recording - time interval set in the software
- Output : To any specified application such as Excel, CSV or text file
- Cell-specified output function
- Automatic version upgrade function (Free)
- Voice reading of measurement value function
- Eye-catching command buttons for easy-to-use
- Connectable to multiple measuring instruments
- UNDO function (Excel recording only)
- Language setting - Japanese / English / Chinese
- ◎WEB authentication ver. : For online environment
- ◎USB dongle ver. : For offline environment

PRODUCT INCLUDES
- CD software (SK-LOG Lite ver.)
- Product key paper (WEB authentication ver.)
- USB dongle (USB dongle ver.)

REQUIRED PC SPECS
- CPU : Intel Core i3-2350M 2.30GHz
- Memory : 4GB

※The maximum number of connections depends on the communication method.
※Operation may become slow depending on PC specs and number of connected devices.
※Compatible measuring instruments may be limited depending on the OS.

RECOMMENDED PC SPECS
- CPU : Intel Core i3-8145U 2.30GHz or over
- Memory : 4GB or over
- OS : Windows 7, 8, 10, 11

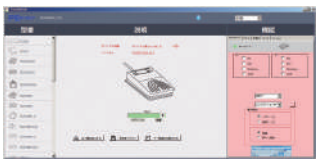
Try SK-LOG Lite version for FREE from the link below.
*Number of connectable device：1unit only.
Cell-specified output function is unavailable.

**SK-LOG Official site**
http://www.niigataseiki.net/official/english/support/software_sklog.html

| Order No. | Model No. | Version |
|---|---|---|
| 010077 | SK-LOG-W | Web authentication |
| 010078 | SK-LOG-D | USB dongle |

# USB FOOT PEDAL NEW!

Enter the shortcut key with your foot!
Combined with SK-LOG,
it enables measurement and recording work with both hands free.



Setup software

USE ●For foot key input. Download the dedicated software from the Niigata Seiki website and use it with any key setting.
MATERIAL ●ABS
FEATURES ●Multiple key input combinations can also be registered. ●Multiple units can be connected at the same time, each with separate key input. ●Available with SK-LOG
SPECIFICATIONS ●Operating force : Approx. 35N(3.5kgf) ●Switch life : 300,000 times or more ●Type : Momentary type ※Operates only when stepped on ●Number of recordings: selectable in software (single input or continuous input)
POWER ●USB/bus

| Order No. | Model No. | OS | Connector Specs | Cable Length (m) | Body Dimensions (mm) | Weight |
|---|---|---|---|---|---|---|
| NEW! 152073 | USB-FP1 | Windows 7、8、10、11 | USB Type-A | Approx. 3.0 | Approx. 71 × 100 × 34 | 140g |

# ■ INTEGRATED SOFTWARE FOR MEASURING INSTRUMENTS SK-LOG COMPATIBLE PRODUCTS

| Category | Product | Series | Page Reffered |
|---|---|---|---|
| VERNIER CALIPER | S-LINE DIGITAL VERNIER CALIPER | MW Series | 171 |
| | S-LINE DIGITAL VERNIER CALIPER | M Series | 171 |
| | DIGITAL VERNIER CALIPER | GDC Series | 172 ~ 184 |
| | DIGITAL SCRIBING VERNIER CALIPER / DIGITAL SCRIBING GAUGE | GDC Series | 189 ~ 190 |
| | DIGITAL GAP CALIPER | GDG Series | 191 ~ 196 |
| | DIGITAL DEPTH GAUGE / DIGITAL MINI DEPTH GAUGE | GDC Series / GDCS-25STG | 197 ~ 199 |
| | S-LINE DIGITAL HEIGHT GAUGE | M Series | 201 |
| MICROMETER | S-LINE DIGITAL MICROMETER | MW Series | 209 |
| | S-LINE DIGITAL MICROMETER | S2 Series | 210 |
| | S-LINE DIGITAL BLADE MICROMETER | MCD-25IP67BS2 | 210 |
| INDICATOR | S-LINE DIGITAL INDICATOR | MW Series | 243 ~ 244 |
| | S-LINE DIGITAL INDICATOR | MH Series | 243 ~ 244 |
| | S-LINE DIGITAL MINI INDICATOR (Bluetooth) | DMI-1095SW | 235 |
| | S-LINE DIGITAL TEST INDICATOR | DET-0800S / DET-2000S | 236 |
| | S-LINE DIGITAL TEST INDICATOR (Bluetooth) | DET-0800SW / DET-2000SW | 237 |
| MEASUREMENT SENSOR | DIGITAL PRECISION INDICATOR | DPI-DRC | 164 |
| DIGITAL LEVEL | LEVELNIC | DL-SXY | 122 |
| | LEVELNIC | DL-SXYW-S | 123 |
| | LEVELNIC | DL-SXYW-S(HID) | 123 |
| | LEVELNIC | DL-mXY | 124 |
| | LEVELNIC | DL-S4W | 125 |
| | LEVELNIC | DL-S4W(HID) | 125 |
| | LEVELNIC | DL-S3 / S3C / S3L | 126 ~ 127 |
| | LEVELNIC | DL-S2W | 128 |
| | LEVELNIC | DL-S2W(USB) | 128 |
| | LEVELNIC | DL-mini | 129 |
| | LEVELNIC | DL-m4 | 130 |
| | LEVELNIC | DL-m5 | 131 |
| | LEVELNIC | DL-m5W | 131 |
| DIGITAL PROTRACTOR | DIGITAL PROTRACTOR | DP-45XYS | 142 |
| | DIGITAL PROTRACTOR | DP-80XYH | 142 |
| | DIGITAL PROTRACTOR | DP-90XYM | 143 |
| | DIGITAL PROTRACTOR | DP-60XYB | 143 |
| | DIGITAL PROTRACTOR | DP-10XY | 144 |
| | DIGITAL PROTRACTOR | DP-10S • DP-10D SET | 145 |
| | DIGITAL PROTRACTOR | DP-180 | 147 |
| | BEVEL BOX | BB-180W | 149 |

| Connecting Units | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Wireless | | | | | | | Wired | | | | | |
| WIRELESS RECEIVER WI-1M | Bluetooth BOX DTW-DG01/02 | Bluetooth BOX DTW-DL01 | WIRELESS ADAPTER FOR LEVELNIC DL-BW DL-BW (USB) | WIRELESS ADAPTER FOR LEVELNIC DL-BW2 (USB) | USB receiving unit | RS232C receiving unit | DATA TRANSFER CABLE DTC-1 | DATA TRANSFER CABLE DTC-2/ DTC-2-DS | DATA TRANSFER CABLE DTC-M1 | CONNECTING CABLE DL-P6 | CONNECTING CABLE DL-P7 | USB cable |
| P168 | P168 | P134 | P134 | P135 | — | — | P208 | P232 | P170 | P135 | P135 | — |
| ○ | | | | | | | | | | | | |
| | | | | | | | | | ○ | | | |
| | ○ | | | | | | | | | | | |
| | ○ | | | | | | | | | | | |
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| | | | | | | | ○ | | | | | |
| ○ | | | | | | | | | ○※1 | | | |
| | | | | | | | | | ○ | | | |
| Built-in Bluetooth | | | | | | | | ○ | | | | |
| | | | | | | | | ○ | | | | |
| Built-in Bluetooth | | | | | | | | ○ | | | | |
| | | | | | | | | | | | | ○ (Off - the - shelf) |
| | | △※2 | ○ | ○※2 | | | | | | ○ (Included) | ○ | |
| | | | | | ○ (Included) | | | | | ○ | ○ | |
| | | | ○ | ○※2 | | | | | | ○ | ○ | |
| | | △ | ○ | ○※2 | | | | | | ○ | ○ | |
| | | ○※2 | | | ○ (Included) | | | | | ○ | ○ | |
| | | ○ | ○ | ○※2 | | | | | | ○ | ○ | |
| | | ○ | ○ | ○ | | | | | | ○ | ○ | |
| | | | | | | ○ (Included) | | | | | | |
| | | | | | ○ (Included) | | | | | | | |
| | | ○※2 | ○ | ○※2 | | | | | | ○ | ○ | |
| | | ○ | ○ | ○※2 | | | | | | ○ | ○ | |
| | | ○ | ○ | ○※2 | | | | | | ○ | ○ | |
| | | ○ | | | ○ (Included) | | | | | ○ | ○ | |
| | | | | | | | | | | | | ○ (Off - the - shelf) |
| | | | | | | | | | | | | ○ (Off - the - shelf) |
| | | | | | | | | | | | | ○ (Off - the - shelf) |
| | | | | | | | | | | | | ○ (Off - the - shelf) |
| | | | ○ | ○※2 | | | | | | ○ (Included) | ○ | |
| | | | ○ | ○※2 | | | | | | ○ (Included) | ○ | |
| | | | | | | | | | | | | ○ (Included) |
| Built-in Bluetooth | | | | | | | | | | | | |

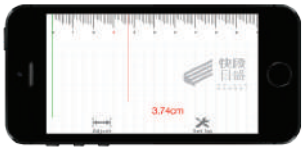
△:Switchable to 1-axis measurement ※1:Can not be used with Wireless function at the same time ※2:Can not be installed with the included mounting plate

# Measuring Apps for Smartphone

## — Measurement Apps for Smartphone —

## SK KAIDAN RULER

The well-reputed easy-to-read KAIDAN ruler is now available as an app!



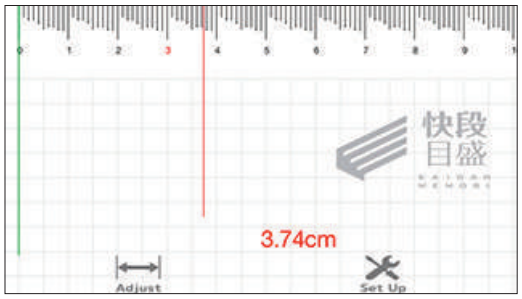

### Supported models

iPhone: iOS 13.0 or later

### Main functions

Simple ruler with no extra functions.
Calibration function and unit switching between cm and mm are available.

※ The width is adjusted according to the device, but it may be out of alignment depending on the device.
Please use the Adjust function to adjust the 3cm of the actual ruler and the 3cm of the terminal.




Staircase shape makes it easy to see at a glance.
Don't misread.

Calibration function

Unit switching between cm and mm are available.

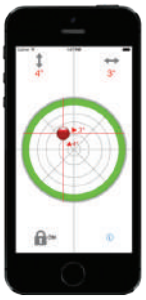
### Download Free Version

Download from App Store

Download on the App Store

## SK LEVEL

Simple and easy-to-use leveler app with no extra functions

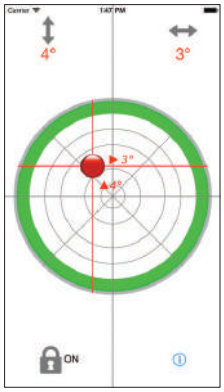


### Supported models

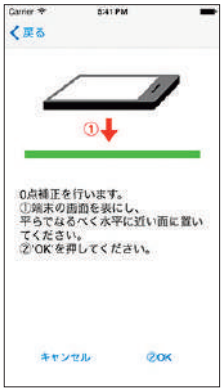
iPhone: iOS 13.0 or later

### Main functions

Level application with 0-point correction function, lock function, and angle line display.
Please use it as a guide for a level.




Lock function




0-point correction function

### Download Free Version

Download from App Store

Download on the App Store

# GAUGE

BLOCK GAUGE
PIN GAUGE
PIN VISE
PIN GAUGE ACCESSORIES
RING GAUGE
PLUG GAUGE
LIMIT GAUGE
THICKNESS GAUGE
TAPER GAUGE
WELDING GAUGE
OTHER GAUGES

# ■ PIN GAUGE LIST

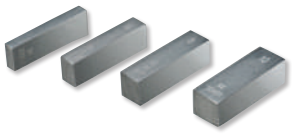
| Product Photo | | | | |
|---|---|---|---|---|
| | Steel Set Individual | Steel Set Individual | Steel Individual MTO | Steel Set Individual |
| | | | | |
| Product Name | Steel Pin Gauge | Steel Pin Gauge | Steel Pin Gauge | Maintenance Line Pin Gauge |
| Series | AA series | SA series | AAH series | AML series |
| Features | The most popular type | High precision quality | New standard product with diameter accuracy of ± 0.5 μ | Wear-line for checking wear status |
| Material | Steel | Steel | Steel | Steel |
| Catalog Page | 41 ~ 42 | 43 | 43 | 44 |

| Product Photo | | | | |
|---|---|---|---|---|
| | Steel Set Individual | Steel Set Individual | Steel Individual | Steel Individual |
| | | | | |
| Product Name | Steel Pin Gauge | Steel Pin Gauge | Steel Pin Gauge with Center Hole | Master Gauge |
| Series | AH・AP・AAP・AS series | PM・PG series | AC series | – |
| Features | For high use applications | Plus (+) or Minus (-) tolerance | Suitable for measuring runout of work | Actual value marked on pin gauge |
| Material | Steel | Steel | Steel | Steel |
| Catalog Page | 45 | 46 | 47 | 47 |

| Product Photo | | | | |
|---|---|---|---|---|
| | Steel Set Individual | Steel Set Individual | Carbide Set Individual | Carbide Set Individual |
| | | | | |
| Product Name | Steel Pin Gauge (with handle) | Steel Pin Gauge (for Gear Measurement) | Carbide Pin Gauge | Carbide Pin Gauge (with Handle) |
| Series | AG series | OP series | TAA series | TAG series |
| Features | The handle protects pin gauge from skin oil and salts | For over ping diameter measurement of internal and external gears | High durability and high hardness | High durability and high hardness |
| Material | Gauge: Steel | Steel | Carbide | Gauge: Carbide |
| Catalog Page | 48 | 49 | 50 | 50 |

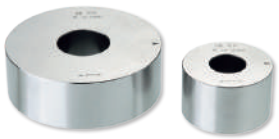
| Product Photo | | | | |
|---|---|---|---|---|
| | Ceramic Set Individual | Ceramic Set Individual | Steel Individual | Steel Individual |
| | | | | |
| Product Name | Ceramic Pin Gauge | Ceramic Pin Gauge (with handle) | Thread Pin Gauge RA type | Thread Pin Gauge THP |
| Series | CAA series | CAG series | Model No. RA- | Model No. THP- |
| Features | Rust and corrosion free | Rust and corrosion free | Firmly fixed to the workpiece with tapered thread | For indicating the center of threaded hole |
| Material | Ceramic (Zirconia) | Ceramic (Zirconia) | Stainless steel (SUS303) | Stainless steel (SUS303) |
| Catalog Page | 51 | 51 | 58 | 59 |

# ■ BLOCK GAUGE LIST

| Product Photo | Carbide Individual | Steel Set Individual | Steel Set Individual | Ceramic Set Individual |
|---|---|---|---|---|
| |  | | | |
| Product Name | Carbide Block Gauge | Block Gauge (Grade 0 eq.) | Block Gauge (Grade 1 eq.) | Ceramic Block Gauge (Grade 0 eq.) |
| Series | BTK0- ／ BTK- ／ BT0- | GBS0- / GB0- | GBS1- / GB1- | BC- / BC0- |
| Features | Niigata Seiki's own super high precision standard "Grade K0" | High accuracy, class 0 eq. model | High cost performance model | Rust and corrosion free |
| Material | Carbide | High Carbon high chromium steel | High Carbon high chromium steel | Ceramic (Zirconia) |
| Catalog Page | 32 | 33～34 | 35～39 | 40 |

# ■ RING GAUGE LIST

| Product Photo | Steel Individual | Steel Individual MTO | Ceramic Individual | Carbide Individual |
|---|---|---|---|---|
| | | | | |
| Product Name | Steel Ring Gauge | Steel Ring Gauge (Large size) | Ceramic Ring Gauge | Carbide Ring Gauge |
| Features | A wide range of sized are in stock | Up to 520mm manufactualbe | Rust and corrosion free | High durability and high hardness |
| Material | Alloy tool steel | Alloy tool steel | Ceramic (Zirconia) | Gauge: Carbide |
| Catalog Page | 62 | 63 | 64 | 64 |

| Product Photo | Steel Individual MTO | Steel Carbide Ceramic Individual MTO | Steel MTO | Steel MTO |
|---|---|---|---|---|
| | | |  | |
| Product Name | Steel Ring Gauge with Maintenance line | Ring Gauge with Protective Cover | Steel Ring Gauge (OD model) | Multiple-step Gauge |
| Features | Maintenance line for gauge ware out | No-slip and easy to handle | For quick calibration of micrometers or 0 adjustment | 5・10・15・20・25mm pitch integrated type |
| Material | Alloy tool steel | Gauge: Steel / Carbide / Ceramic | Alloy tool steel | Alloy tool steel |
| Catalog Page | 65 | 65 | 65 | 66 |

| Product Photo | Steel MTO | Steel MTO | Steel MTO |
|---|---|---|---|
| | | | |
| Product Name | Multiple-step Gauge (OD model) | Step Gauge (ID model) | Cut Out Gauge |
| Features | For OD measurement. Size combination is arranged on request | For ID measurement. Size combination is arranged on request | For use with fixing to the jig |
| Material | Alloy tool steel | Alloy tool steel | Alloy tool steel |
| Catalog Page | 66 | 66 | 66 |

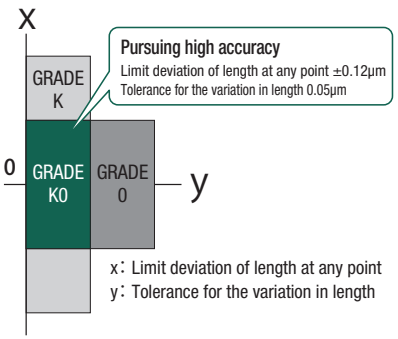
# CARBIDE BLOCK GAUGE

PDI

HOW TO MOVIE

Niigata Seiki's own super high precision standard "Grade K0" carbide block gauges.
JIS standard "Grade K" and "Grade 0" are also available.

**"Grade K0" has been designed for high precision by combining Grade K and Grade 0.**




■What is Limit deviation of length at any point?
Tolerances of difference from dimensions
■What is Tolerance for the variation in length?
Tolerance of the difference between the maximum and minimum dimensions (tolerance of parallelism)

USE
- For master reference of general measurement work or measuring instruments

MATERIAL
- Carbide

FEATURES
- Niigata Seiki's own super high precision standard **"Grade K0"**, which pursues **higher precision of both Grade K and Grade 0 of JIS standard**.
  We guarantee high accuracy beyond the highest accuracy of JIS standard, with a combination of Grade K dimensional deviation and Grade 0 tolerance (Grade K0).
- Resistant to wear and corrosion, and long-lasting high accuracy
- Provided with plastic case
- Provided with inspection report

SPECIFICATIONS
- Section size: 30(0~−0.3)×9(−0.05~0.2)mm
- Coefficient of thermal expansion: $4.5\times10^{-6}$/K

※Calibration and custom size production are NOT available

## ◆ GRADE K0

●Limit deviation of length at any point: ±0.12μm
Tolerance for the variation in length 0.05μm

| Order No. | Model No. | Size (mm) |
|---|---|---|
| 153502 | BTK0-100 | 1.00 |
| 153503 | BTK0-110 | 1.10 |
| 153504 | BTK0-120 | 1.20 |
| 153505 | BTK0-130 | 1.30 |
| 153506 | BTK0-140 | 1.40 |
| 153507 | BTK0-150 | 1.50 |
| 153508 | BTK0-160 | 1.60 |
| 153509 | BTK0-170 | 1.70 |
| 153510 | BTK0-180 | 1.80 |
| 153511 | BTK0-190 | 1.90 |
| 153512 | BTK0-200 | 2.00 |
| 153513 | BTK0-300 | 3.00 |
| 153514 | BTK0-400 | 4.00 |
| 153515 | BTK0-500 | 5.00 |
| 153516 | BTK0-600 | 6.00 |
| 153517 | BTK0-700 | 7.00 |
| 153518 | BTK0-800 | 8.00 |
| 153519 | BTK0-900 | 9.00 |
| 153520 | BTK0-1000 | 10.00 |

## ◆ GRADE K

●Limit deviation of length at any point: ±0.20μm
Tolerance for the variation in length 0.05μm

| Order No. | Model No. | Size (mm) |
|---|---|---|
| 153522 | BTK-100 | 1.00 |
| 153523 | BTK-110 | 1.10 |
| 153524 | BTK-120 | 1.20 |
| 153525 | BTK-130 | 1.30 |
| 153526 | BTK-140 | 1.40 |
| 153527 | BTK-150 | 1.50 |
| 153528 | BTK-160 | 1.60 |
| 153529 | BTK-170 | 1.70 |
| 153530 | BTK-180 | 1.80 |
| 153531 | BTK-190 | 1.90 |
| 153532 | BTK-200 | 2.00 |
| 153533 | BTK-300 | 3.00 |
| 153534 | BTK-400 | 4.00 |
| 153535 | BTK-500 | 5.00 |
| 153536 | BTK-600 | 6.00 |
| 153537 | BTK-700 | 7.00 |
| 153538 | BTK-800 | 8.00 |
| 153539 | BTK-900 | 9.00 |
| 153540 | BTK-1000 | 10.00 |

## ◆ GRADE 0

●Limit deviation of length at any point: ±0.12μm
Tolerance for the variation in length 0.10μm

| Order No. | Model No. | Size (mm) |
|---|---|---|
| 153542 | BT0-100 | 1.00 |
| 153543 | BT0-110 | 1.10 |
| 153544 | BT0-120 | 1.20 |
| 153545 | BT0-130 | 1.30 |
| 153546 | BT0-140 | 1.40 |
| 153547 | BT0-150 | 1.50 |
| 153548 | BT0-160 | 1.60 |
| 153549 | BT0-170 | 1.70 |
| 153550 | BT0-180 | 1.80 |
| 153551 | BT0-190 | 1.90 |
| 153552 | BT0-200 | 2.00 |
| 153553 | BT0-300 | 3.00 |
| 153554 | BT0-400 | 4.00 |
| 153555 | BT0-500 | 5.00 |
| 153556 | BT0-600 | 6.00 |
| 153557 | BT0-700 | 7.00 |
| 153558 | BT0-800 | 8.00 |
| 153559 | BT0-900 | 9.00 |
| 153560 | BT0-1000 | 10.00 |

# BLOCK GAUGE SET (GRADE 0)

T PDI 0

HOW TO MOVIE

## High accuracy, class 0 model

Rust prevention▶
Zerust Film for Steel
P370

GBS0-32

USE
- ●As reference standard and for general measurement work
- ●As spacer and prefinished sub-assembly components

MATERIAL
- ●High carbon high chromium steel

FEATURES
- ●Conforms to JIS (Grade 0)
- ●Provided with inspection report

SPECIFICATIONS
- ●Section size: 10mm or under: 30(0~−0.3)×9(−0.05~−0.2)mm
  Over 10mm: 35(0~−0.3)×9(−0.05~−0.2)mm
- ●Coefficient of thermal expansion: $11.5\times10^{-6}$／K

※Calibration and custom size production are NOT available

### SPECIFICATIONS

| Size (mm) | | Grade 0 | |
|---|---|---|---|
| Over | Or under | Tolerance (μm) | Dimensional deviation (μm) |
| — | 10 | ± 0.12 | 0.10 |
| 10 | 25 | ± 0.14 | 0.10 |
| 25 | 50 | ± 0.2 | 0.10 |
| 50 | 75 | ± 0.25 | 0.12 |
| 75 | 100 | ± 0.3 | 0.12 |

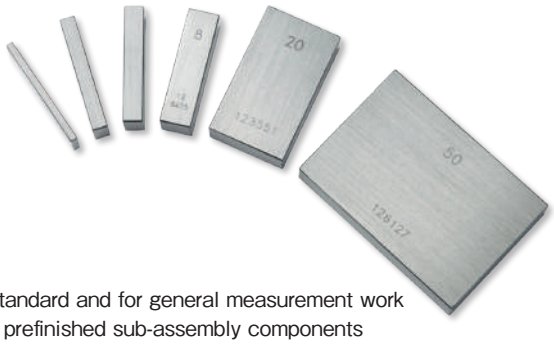
| Order No. | Model No. | Pieces per set | Step (mm) | Nominal Size (mm) | Number of pieces | Weight |
|---|---|---|---|---|---|---|
| 150293 | GBS0-103 | 103 | | 1.005 | 1 | 3.1kg |
| | | | 0.01 | 1.01•1.02…1.49 | 49 | |
| | | | 0.5 | 0.5•1.0…24.5 | 49 | |
| | | | 25 | 25•50•75•100 | 4 | |
| 150292 | GBS0-76 | 76 | | 1.005 | 1 | 1.81kg |
| | | | 0.01 | 1.01•1.02…1.49 | 49 | |
| | | | 0.5 | 0.5•1.0…9.5 | 19 | |
| | | | 10 | 10•20•30•40 | 4 | |
| | | | 25 | 50•75•100 | 3 | |
| 150291 | GBS0-47 | 47 | | 1.005 | 1 | 1.94kg |
| | | | 0.01 | 1.01•1.02…1.09 | 9 | |
| | | | 0.1 | 1.1•1.2…1.9 | 9 | |
| | | | 1.0 | 1•2•3…24 | 24 | |
| | | | 25 | 25•50•75•100 | 4 | |
| 150290 | GBS0-32 | 32 | | 1.005 | 1 | 0.75kg |
| | | | 0.01 | 1.01•1.02…1.09 | 9 | |
| | | | 0.1 | 1.1•1.2…1.9 | 9 | |
| | | | 1.0 | 1•2•3…9 | 9 | |
| | | | 10 | 10•20•30 | 3 | |
| | | | | 60 | 1 | |

# BLOCK GAUGE (GRADE 0)

HOW TO MOVIE

Rust prevention▶
Zerust Film for Steel
P370

## High accuracy, class 0 model



USE
- As reference standard and for general measurement work
- As spacer and prefinished sub-assembly components

MATERIAL
- High carbon high chromium steel

FEATURES
- Conforms to JIS (Grade 0)
- Provided with inspection report

SPECIFICATIONS
- Section size: 10mm or under: 30(0~−0.3)×9(−0.05~−0.2)mm
  Over 10mm: 35(0~−0.3)×9(−0.05~−0.2)mm
- Coefficient of thermal expansion: $11.5\times10^{-6}$／K

※Calibration and custom size production are NOT available

## SPECIFICATIONS

| Size(mm) | | Grade 0 | |
|---|---|---|---|
| Over | Or under | Tolerance(μm) | Dimensional deviation(μm) |
| — | 10 | ± 0.12 | 0.10 |
| 10 | 25 | ± 0.14 | 0.10 |
| 25 | 50 | ± 0.20 | 0.10 |
| 50 | 75 | ± 0.25 | 0.12 |
| 75 | 100 | ± 0.30 | 0.12 |
| 125 | | ± 0.40 | 0.14 |
| 150 | | ± 0.40 | 0.14 |
| 175 | | ± 0.50 | 0.16 |
| 200 | | ± 0.50 | 0.16 |
| 250 | | ± 0.60 | 0.16 |
| 300 | | ± 0.70 | 0.18 |
| 400 | | ± 0.90 | 0.20 |
| 500 | | ± 1.10 | 0.25 |
| 600 | | ± 1.30 | 0.25 |

| Order No. | Model No. | Size (mm) |
|---|---|---|
| 150294 | GB0-05 | 0.5 |
| 150295 | GB0-10 | 1.0 |
| 150296 | GB0-1-005 | 1.005 |
| 150297 | GB0-101 | 1.01 |
| 150298 | GB0-102 | 1.02 |
| 150299 | GB0-103 | 1.03 |
| 150300 | GB0-104 | 1.04 |
| 150301 | GB0-105 | 1.05 |
| 150302 | GB0-106 | 1.06 |
| 150303 | GB0-107 | 1.07 |
| 150304 | GB0-108 | 1.08 |
| 150305 | GB0-109 | 1.09 |
| 150306 | GB0-110 | 1.10 |
| 150307 | GB0-111 | 1.11 |
| 150308 | GB0-112 | 1.12 |
| 150309 | GB0-113 | 1.13 |
| 150310 | GB0-114 | 1.14 |
| 150311 | GB0-115 | 1.15 |
| 150312 | GB0-116 | 1.16 |
| 150313 | GB0-117 | 1.17 |
| 150314 | GB0-118 | 1.18 |
| 150315 | GB0-119 | 1.19 |
| 150316 | GB0-120 | 1.20 |
| 150317 | GB0-121 | 1.21 |
| 150318 | GB0-122 | 1.22 |
| 150319 | GB0-123 | 1.23 |
| 150320 | GB0-124 | 1.24 |
| 150321 | GB0-125 | 1.25 |
| 150322 | GB0-126 | 1.26 |
| 150323 | GB0-127 | 1.27 |
| 150324 | GB0-128 | 1.28 |
| 150325 | GB0-129 | 1.29 |
| 150326 | GB0-130 | 1.30 |
| 150327 | GB0-131 | 1.31 |
| 150328 | GB0-132 | 1.32 |
| 150329 | GB0-133 | 1.33 |
| 150330 | GB0-134 | 1.34 |
| 150331 | GB0-135 | 1.35 |
| 150332 | GB0-136 | 1.36 |
| 150333 | GB0-137 | 1.37 |
| 150334 | GB0-138 | 1.38 |

| Order No. | Model No. | Size (mm) |
|---|---|---|
| 150335 | GB0-139 | 1.39 |
| 150336 | GB0-140 | 1.40 |
| 150337 | GB0-141 | 1.41 |
| 150338 | GB0-142 | 1.42 |
| 150339 | GB0-143 | 1.43 |
| 150340 | GB0-144 | 1.44 |
| 150341 | GB0-145 | 1.45 |
| 150342 | GB0-146 | 1.46 |
| 150343 | GB0-147 | 1.47 |
| 150344 | GB0-148 | 1.48 |
| 150345 | GB0-149 | 1.49 |
| 150346 | GB0-150 | 1.50 |
| 150347 | GB0-160 | 1.60 |
| 150348 | GB0-170 | 1.70 |
| 150349 | GB0-180 | 1.80 |
| 150350 | GB0-190 | 1.90 |
| 150351 | GB0-200 | 2.00 |
| 150352 | GB0-250 | 2.50 |
| 150353 | GB0-300 | 3.00 |
| 150354 | GB0-350 | 3.50 |
| 150355 | GB0-400 | 4.00 |
| 150356 | GB0-450 | 4.50 |
| 150357 | GB0-500 | 5.00 |
| 150358 | GB0-550 | 5.50 |
| 150359 | GB0-600 | 6.00 |
| 150360 | GB0-650 | 6.50 |
| 150361 | GB0-700 | 7.00 |
| 150362 | GB0-750 | 7.50 |
| 150363 | GB0-800 | 8.00 |
| 150364 | GB0-850 | 8.50 |
| 150365 | GB0-900 | 9.00 |
| 150366 | GB0-950 | 9.50 |
| 150367 | GB0-1000 | 10.00 |
| 150368 | GB0-1050 | 10.50 |
| 150369 | GB0-1100 | 11.00 |
| 150370 | GB0-1150 | 11.50 |
| 150371 | GB0-1200 | 12.00 |
| 150372 | GB0-1250 | 12.50 |
| 150373 | GB0-1300 | 13.00 |
| 150374 | GB0-1350 | 13.50 |
| 150375 | GB0-1400 | 14.00 |

| Order No. | Model No. | Size (mm) |
|---|---|---|
| 150376 | GB0-1450 | 14.50 |
| 150377 | GB0-1500 | 15.00 |
| 150378 | GB0-1550 | 15.50 |
| 150379 | GB0-1600 | 16.00 |
| 150380 | GB0-1650 | 16.50 |
| 150381 | GB0-1700 | 17.00 |
| 150382 | GB0-1750 | 17.50 |
| 150383 | GB0-1800 | 18.00 |
| 150384 | GB0-1850 | 18.50 |
| 150385 | GB0-1900 | 19.00 |
| 150386 | GB0-1950 | 19.50 |
| 150387 | GB0-2000 | 20.00 |
| 150388 | GB0-2050 | 20.50 |
| 150389 | GB0-2100 | 21.00 |
| 150390 | GB0-2150 | 21.50 |
| 150391 | GB0-2200 | 22.00 |
| 150392 | GB0-2250 | 22.50 |
| 150393 | GB0-2300 | 23.00 |
| 150394 | GB0-2350 | 23.50 |
| 150395 | GB0-2400 | 24.00 |
| 150396 | GB0-2450 | 24.50 |
| 150397 | GB0-2500 | 25.00 |
| 150398 | GB0-3000 | 30.00 |
| 150399 | GB0-4000 | 40.00 |
| 150400 | GB0-5000 | 50.00 |
| 150401 | GB0-6000 | 60.00 |
| 150402 | GB0-7000 | 70.00 |
| 150403 | GB0-7500 | 75.00 |
| 150404 | GB0-8000 | 80.00 |
| 150405 | GB0-9000 | 90.00 |
| 150406 | GB0-10000 | 100.00 |
| 150407 | GB0-12500 | 125 |
| 150408 | GB0-15000 | 150 |
| 150409 | GB0-17500 | 175 |
| 150410 | GB0-20000 | 200 |
| 150411 | GB0-25000 | 250 |
| 150412 | GB0-30000 | 300 |
| 150413 | GB0-40000 | 400 |
| 150414 | GB0-50000 | 500 |
| 150415 | GB0-60000 | 600 |

# BLOCK GAUGE SET (GRADE 1)

HOW TO MOVIE

Rust prevention▶
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## High cost performance model

GBS1-32

USE
- ●As reference standard and for general measurement work
- ●As spacer and prefinished sub-assembly components

MATERIAL
- ●High carbon high chromium steel

FEATURES
- ●Conforms to JIS (Grade 1)
- ●Provided with inspection report

SPECIFICATIONS
- ●Section size: 10mm or under: 30(0~−0.3)×9(−0.05~−0.2)mm
  Over 10mm and less than 100mm: 35(0~−0.3)×9(−0.05~−0.2)mm
- ●Coefficient of thermal expansion: $11.5\times10^{-6}$/K

※Calibration and custom size production are NOT available

### SPECIFICATIONS

| Size (mm) | | Grade 1 | |
|---|---|---|---|
| Over | Or under | Tolerance (μm) | Dimensional deviation (μm) |
| — | 10 | ± 0.20 | 0.16 |
| 10 | 25 | ± 0.30 | 0.16 |
| 25 | 50 | ± 0.40 | 0.18 |
| 50 | 75 | ± 0.50 | 0.18 |
| 75 | 100 | ± 0.60 | 0.20 |

| Order No. | Model No. | Pieces per set | Step (mm) | Nominal Size (mm) | Number of pieces | Weight |
|---|---|---|---|---|---|---|
| 150801 | GBS1-103 | 103 | | 1.005 | 1 | 3.1kg |
| | | | 0.01 | 1.01•1.02…1.49 | 49 | |
| | | | 0.5 | 0.5•1.0…24.5 | 49 | |
| | | | 25 | 25•50•75•100 | 4 | |
| 150802 | GBS1-76 | 76 | | 1.005 | 1 | 1.81kg |
| | | | 0.01 | 1.01•1.02…1.49 | 49 | |
| | | | 0.5 | 0.5•1.0…9.5 | 19 | |
| | | | 10 | 10•20•30•40 | 4 | |
| | | | 25 | 50•75•100 | 3 | |
| 150804 | GBS1-47 | 47 | | 1.005 | 1 | 1.94kg |
| | | | 0.01 | 1.01•1.02…1.09 | 9 | |
| | | | 0.1 | 1.1•1.2…1.9 | 9 | |
| | | | 1 | 1•2•3…24 | 24 | |
| | | | 25 | 25•50•75•100 | 4 | |
| 150806 | GBS1-32 | 32 | | 1.005 | 1 | 0.75kg |
| | | | 0.01 | 1.01•1.02…1.09 | 9 | |
| | | | 0.1 | 1.1•1.2…1.9 | 9 | |
| | | | 1 | 1•2•3…9 | 9 | |
| | | | 10 | 10•20•30 | 3 | |
| | | | | 60 | 1 | |

# BLOCK GAUGE (GRADE 1)

HOW TO MOVIE

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USE
- ●As reference standard and for general measurement work
- ●As spacer and prefinished sub-assembly components

MATERIAL
- ●High carbon high chromium steel

FEATURES
- ●Conforms to JIS (Grade 1)
- ●Provided with inspection report

SPECIFICATIONS
- ●Section size: 10mm or under: 30(0~−0.3)×9(−0.05~−0.2)mm
  Over 10mm: 35(0~−0.3)×9(−0.05~−0.2)mm
- ●Coefficient of thermal expansion: 11.5×$10^{-6}$／K

※Calibration and custom size production are NOT available

## SPECIFICATIONS

| Size (mm) | | Grade 1 | |
|---|---|---|---|
| Over | Or under | Tolerance (μm) | Dimensional Deviation (μm) |
| – | 10 | ± 0.20 | 0.16 |
| 10 | 25 | ± 0.30 | 0.16 |
| 25 | 50 | ± 0.40 | 0.18 |
| 50 | 75 | ± 0.50 | 0.18 |
| 75 | 100 | ± 0.60 | 0.20 |
| 100 | 150 | ± 0.80 | 0.20 |
| 150 | 200 | ± 1.00 | 0.25 |
| 200 | 250 | ± 1.20 | 0.25 |
| 250 | 300 | ± 1.40 | 0.25 |
| 300 | 400 | ± 1.80 | 0.30 |
| 400 | 500 | ± 2.20 | 0.35 |
| 500 | 600 | ± 2.60 | 0.40 |

| Order No. | Model No. | Size (mm) | Order No. | Model No. | Size (mm) | Order No. | Model No. | Size (mm) |
|---|---|---|---|---|---|---|---|---|
| 150810 | GB1-05 | 0.5 | 150862 | GB1-132 | 1.32 | 153024 | GB1-174 | 1.74 |
| 150820 | GB1-10 | 1.0 | 150863 | GB1-133 | 1.33 | 153025 | GB1-175 | 1.75 |
| 150822 | GB1-1-001 | 1.001 | 150864 | GB1-134 | 1.34 | 153026 | GB1-176 | 1.76 |
| 150823 | GB1-1-002 | 1.002 | 150865 | GB1-135 | 1.35 | 153027 | GB1-177 | 1.77 |
| 150824 | GB1-1-003 | 1.003 | 150866 | GB1-136 | 1.36 | 153028 | GB1-178 | 1.78 |
| 150825 | GB1-1-004 | 1.004 | 150867 | GB1-137 | 1.37 | 153029 | GB1-179 | 1.79 |
| 150826 | GB1-1-005 | 1.005 | 150868 | GB1-138 | 1.38 | 153030 | GB1-180 | 1.80 |
| 150827 | GB1-1-006 | 1.006 | 150869 | GB1-139 | 1.39 | 153031 | GB1-181 | 1.81 |
| 150828 | GB1-1-007 | 1.007 | 150870 | GB1-140 | 1.40 | 153032 | GB1-182 | 1.82 |
| 150829 | GB1-1-008 | 1.008 | 150871 | GB1-141 | 1.41 | 153033 | GB1-183 | 1.83 |
| 150830 | GB1-1-009 | 1.009 | 150872 | GB1-142 | 1.42 | 153034 | GB1-184 | 1.84 |
| 150831 | GB1-101 | 1.01 | 150873 | GB1-143 | 1.43 | 153035 | GB1-185 | 1.85 |
| 150832 | GB1-102 | 1.02 | 150874 | GB1-144 | 1.44 | 153036 | GB1-186 | 1.86 |
| 150833 | GB1-103 | 1.03 | 150875 | GB1-145 | 1.45 | 153037 | GB1-187 | 1.87 |
| 150834 | GB1-104 | 1.04 | 150876 | GB1-146 | 1.46 | 153038 | GB1-188 | 1.88 |
| 150835 | GB1-105 | 1.05 | 150877 | GB1-147 | 1.47 | 153039 | GB1-189 | 1.89 |
| 150836 | GB1-106 | 1.06 | 150878 | GB1-148 | 1.48 | 153040 | GB1-190 | 1.90 |
| 150837 | GB1-107 | 1.07 | 150879 | GB1-149 | 1.49 | 153041 | GB1-191 | 1.91 |
| 150838 | GB1-108 | 1.08 | 150880 | GB1-150 | 1.50 | 153042 | GB1-192 | 1.92 |
| 150839 | GB1-109 | 1.09 | 153001 | GB1-151 | 1.51 | 153043 | GB1-193 | 1.93 |
| 150840 | GB1-110 | 1.10 | 153002 | GB1-152 | 1.52 | 153044 | GB1-194 | 1.94 |
| 150841 | GB1-111 | 1.11 | 153003 | GB1-153 | 1.53 | 153045 | GB1-195 | 1.95 |
| 150842 | GB1-112 | 1.12 | 153004 | GB1-154 | 1.54 | 153046 | GB1-196 | 1.96 |
| 150843 | GB1-113 | 1.13 | 153005 | GB1-155 | 1.55 | 153047 | GB1-197 | 1.97 |
| 150844 | GB1-114 | 1.14 | 153006 | GB1-156 | 1.56 | 153048 | GB1-198 | 1.98 |
| 150845 | GB1-115 | 1.15 | 153007 | GB1-157 | 1.57 | 153049 | GB1-199 | 1.99 |
| 150846 | GB1-116 | 1.16 | 153008 | GB1-158 | 1.58 | 150885 | GB1-200 | 2.00 |
| 150847 | GB1-117 | 1.17 | 153009 | GB1-159 | 1.59 | 153050 | GB1-201 | 2.01 |
| 150848 | GB1-118 | 1.18 | 153010 | GB1-160 | 1.60 | 153051 | GB1-202 | 2.02 |
| 150849 | GB1-119 | 1.19 | 153011 | GB1-161 | 1.61 | 153052 | GB1-203 | 2.03 |
| 150850 | GB1-120 | 1.20 | 153012 | GB1-162 | 1.62 | 153053 | GB1-204 | 2.04 |
| 150851 | GB1-121 | 1.21 | 153013 | GB1-163 | 1.63 | 153054 | GB1-205 | 2.05 |
| 150852 | GB1-122 | 1.22 | 153014 | GB1-164 | 1.64 | 153055 | GB1-206 | 2.06 |
| 150853 | GB1-123 | 1.23 | 153015 | GB1-165 | 1.65 | 153056 | GB1-207 | 2.07 |
| 150854 | GB1-124 | 1.24 | 153016 | GB1-166 | 1.66 | 153057 | GB1-208 | 2.08 |
| 150855 | GB1-125 | 1.25 | 153017 | GB1-167 | 1.67 | 153058 | GB1-209 | 2.09 |
| 150856 | GB1-126 | 1.26 | 153018 | GB1-168 | 1.68 | 153059 | GB1-210 | 2.10 |
| 150857 | GB1-127 | 1.27 | 153019 | GB1-169 | 1.69 | 153060 | GB1-211 | 2.11 |
| 150858 | GB1-128 | 1.28 | 153020 | GB1-170 | 1.70 | 153061 | GB1-212 | 2.12 |
| 150859 | GB1-129 | 1.29 | 153021 | GB1-171 | 1.71 | 153062 | GB1-213 | 2.13 |
| 150860 | GB1-130 | 1.30 | 153022 | GB1-172 | 1.72 | 153063 | GB1-214 | 2.14 |
| 150861 | GB1-131 | 1.31 | 153023 | GB1-173 | 1.73 | 153064 | GB1-215 | 2.15 |

# BLOCK GAUGE (GRADE 1)

HOW TO MOVIE

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Please refer to page 36 for detailed specifications and tolerance

| Order No. | Model No. | Size (mm) | Order No. | Model No. | Size (mm) | Order No. | Model No. | Size (mm) |
|---|---|---|---|---|---|---|---|---|
| 153065 | GB1-216 | 2.16 | 153113 | GB1-265 | 2.65 | 153161 | GB1-314 | 3.14 |
| 153066 | GB1-217 | 2.17 | 153114 | GB1-266 | 2.66 | 153162 | GB1-315 | 3.15 |
| 153067 | GB1-218 | 2.18 | 153115 | GB1-267 | 2.67 | 153163 | GB1-316 | 3.16 |
| 153068 | GB1-219 | 2.19 | 153116 | GB1-268 | 2.68 | 153164 | GB1-317 | 3.17 |
| 153069 | GB1-220 | 2.20 | 153117 | GB1-269 | 2.69 | 153165 | GB1-318 | 3.18 |
| 153070 | GB1-221 | 2.21 | 153118 | GB1-270 | 2.70 | 153166 | GB1-319 | 3.19 |
| 153071 | GB1-222 | 2.22 | 153119 | GB1-271 | 2.71 | 153167 | GB1-320 | 3.20 |
| 153072 | GB1-223 | 2.23 | 153120 | GB1-272 | 2.72 | 153168 | GB1-321 | 3.21 |
| 153073 | GB1-224 | 2.24 | 153121 | GB1-273 | 2.73 | 153169 | GB1-322 | 3.22 |
| 153074 | GB1-225 | 2.25 | 153122 | GB1-274 | 2.74 | 153170 | GB1-323 | 3.23 |
| 153075 | GB1-226 | 2.26 | 153123 | GB1-275 | 2.75 | 153171 | GB1-324 | 3.24 |
| 153076 | GB1-227 | 2.27 | 153124 | GB1-276 | 2.76 | 153172 | GB1-325 | 3.25 |
| 153077 | GB1-228 | 2.28 | 153125 | GB1-277 | 2.77 | 153173 | GB1-326 | 3.26 |
| 153078 | GB1-229 | 2.29 | 153126 | GB1-278 | 2.78 | 153174 | GB1-327 | 3.27 |
| 153079 | GB1-230 | 2.30 | 153127 | GB1-279 | 2.79 | 153175 | GB1-328 | 3.28 |
| 153080 | GB1-231 | 2.31 | 153128 | GB1-280 | 2.80 | 153176 | GB1-329 | 3.29 |
| 153081 | GB1-232 | 2.32 | 153129 | GB1-281 | 2.81 | 153177 | GB1-330 | 3.30 |
| 153082 | GB1-233 | 2.33 | 153130 | GB1-282 | 2.82 | 153178 | GB1-331 | 3.31 |
| 153083 | GB1-234 | 2.34 | 153131 | GB1-283 | 2.83 | 153179 | GB1-332 | 3.32 |
| 153084 | GB1-235 | 2.35 | 153132 | GB1-284 | 2.84 | 153180 | GB1-333 | 3.33 |
| 153085 | GB1-236 | 2.36 | 153133 | GB1-285 | 2.85 | 153181 | GB1-334 | 3.34 |
| 153086 | GB1-237 | 2.37 | 153134 | GB1-286 | 2.86 | 153182 | GB1-335 | 3.35 |
| 153087 | GB1-238 | 2.38 | 153135 | GB1-287 | 2.87 | 153183 | GB1-336 | 3.36 |
| 153088 | GB1-239 | 2.39 | 153136 | GB1-288 | 2.88 | 153184 | GB1-337 | 3.37 |
| 153089 | GB1-240 | 2.40 | 153137 | GB1-289 | 2.89 | 153185 | GB1-338 | 3.38 |
| 153090 | GB1-241 | 2.41 | 153138 | GB1-290 | 2.90 | 153186 | GB1-339 | 3.39 |
| 153091 | GB1-242 | 2.42 | 153139 | GB1-291 | 2.91 | 153187 | GB1-340 | 3.40 |
| 153092 | GB1-243 | 2.43 | 153140 | GB1-292 | 2.92 | 153188 | GB1-341 | 3.41 |
| 153093 | GB1-244 | 2.44 | 153141 | GB1-293 | 2.93 | 153189 | GB1-342 | 3.42 |
| 153094 | GB1-245 | 2.45 | 153142 | GB1-294 | 2.94 | 153190 | GB1-343 | 3.43 |
| 153095 | GB1-246 | 2.46 | 153143 | GB1-295 | 2.95 | 153191 | GB1-344 | 3.44 |
| 153096 | GB1-247 | 2.47 | 153144 | GB1-296 | 2.96 | 153192 | GB1-345 | 3.45 |
| 153097 | GB1-248 | 2.48 | 153145 | GB1-297 | 2.97 | 153193 | GB1-346 | 3.46 |
| 153098 | GB1-249 | 2.49 | 153146 | GB1-298 | 2.98 | 153194 | GB1-347 | 3.47 |
| 150886 | GB1-250 | 2.50 | 153147 | GB1-299 | 2.99 | 153195 | GB1-348 | 3.48 |
| 153099 | GB1-251 | 2.51 | 150887 | GB1-300 | 3.00 | 153196 | GB1-349 | 3.49 |
| 153100 | GB1-252 | 2.52 | 153148 | GB1-301 | 3.01 | 150888 | GB1-350 | 3.50 |
| 153101 | GB1-253 | 2.53 | 153149 | GB1-302 | 3.02 | 153197 | GB1-351 | 3.51 |
| 153102 | GB1-254 | 2.54 | 153150 | GB1-303 | 3.03 | 153198 | GB1-352 | 3.52 |
| 153103 | GB1-255 | 2.55 | 153151 | GB1-304 | 3.04 | 153199 | GB1-353 | 3.53 |
| 153104 | GB1-256 | 2.56 | 153152 | GB1-305 | 3.05 | 153200 | GB1-354 | 3.54 |
| 153105 | GB1-257 | 2.57 | 153153 | GB1-306 | 3.06 | 153201 | GB1-355 | 3.55 |
| 153106 | GB1-258 | 2.58 | 153154 | GB1-307 | 3.07 | 153202 | GB1-356 | 3.56 |
| 153107 | GB1-259 | 2.59 | 153155 | GB1-308 | 3.08 | 153203 | GB1-357 | 3.57 |
| 153108 | GB1-260 | 2.60 | 153156 | GB1-309 | 3.09 | 153204 | GB1-358 | 3.58 |
| 153109 | GB1-261 | 2.61 | 153157 | GB1-310 | 3.10 | 153205 | GB1-359 | 3.59 |
| 153110 | GB1-262 | 2.62 | 153158 | GB1-311 | 3.11 | 153206 | GB1-360 | 3.60 |
| 153111 | GB1-263 | 2.63 | 153159 | GB1-312 | 3.12 | 153207 | GB1-361 | 3.61 |
| 153112 | GB1-264 | 2.64 | 153160 | GB1-313 | 3.13 | 153208 | GB1-362 | 3.62 |

# BLOCK GAUGE (GRADE 1)

HOW TO MOVIE

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Please refer to page 36 for detailed specifications and tolerance

| Order No. | Model No. | Size (mm) | Order No. | Model No. | Size (mm) | Order No. | Model No. | Size (mm) |
|---|---|---|---|---|---|---|---|---|
| 153209 | GB1-363 | 3.63 | 153257 | GB1-412 | 4.12 | 153305 | GB1-461 | 4.61 |
| 153210 | GB1-364 | 3.64 | 153258 | GB1-413 | 4.13 | 153306 | GB1-462 | 4.62 |
| 153211 | GB1-365 | 3.65 | 153259 | GB1-414 | 4.14 | 153307 | GB1-463 | 4.63 |
| 153212 | GB1-366 | 3.66 | 153260 | GB1-415 | 4.15 | 153308 | GB1-464 | 4.64 |
| 153213 | GB1-367 | 3.67 | 153261 | GB1-416 | 4.16 | 153309 | GB1-465 | 4.65 |
| 153214 | GB1-368 | 3.68 | 153262 | GB1-417 | 4.17 | 153310 | GB1-466 | 4.66 |
| 153215 | GB1-369 | 3.69 | 153263 | GB1-418 | 4.18 | 153311 | GB1-467 | 4.67 |
| 153216 | GB1-370 | 3.70 | 153264 | GB1-419 | 4.19 | 153312 | GB1-468 | 4.68 |
| 153217 | GB1-371 | 3.71 | 153265 | GB1-420 | 4.20 | 153313 | GB1-469 | 4.69 |
| 153218 | GB1-372 | 3.72 | 153266 | GB1-421 | 4.21 | 153314 | GB1-470 | 4.70 |
| 153219 | GB1-373 | 3.73 | 153267 | GB1-422 | 4.22 | 153315 | GB1-471 | 4.71 |
| 153220 | GB1-374 | 3.74 | 153268 | GB1-423 | 4.23 | 153316 | GB1-472 | 4.72 |
| 153221 | GB1-375 | 3.75 | 153269 | GB1-424 | 4.24 | 153317 | GB1-473 | 4.73 |
| 153222 | GB1-376 | 3.76 | 153270 | GB1-425 | 4.25 | 153318 | GB1-474 | 4.74 |
| 153223 | GB1-377 | 3.77 | 153271 | GB1-426 | 4.26 | 153319 | GB1-475 | 4.75 |
| 153224 | GB1-378 | 3.78 | 153272 | GB1-427 | 4.27 | 153320 | GB1-476 | 4.76 |
| 153225 | GB1-379 | 3.79 | 153273 | GB1-428 | 4.28 | 153321 | GB1-477 | 4.77 |
| 153226 | GB1-380 | 3.80 | 153274 | GB1-429 | 4.29 | 153322 | GB1-478 | 4.78 |
| 153227 | GB1-381 | 3.81 | 153275 | GB1-430 | 4.30 | 153323 | GB1-479 | 4.79 |
| 153228 | GB1-382 | 3.82 | 153276 | GB1-431 | 4.31 | 153324 | GB1-480 | 4.80 |
| 153229 | GB1-383 | 3.83 | 153277 | GB1-432 | 4.32 | 153325 | GB1-481 | 4.81 |
| 153230 | GB1-384 | 3.84 | 153278 | GB1-433 | 4.33 | 153326 | GB1-482 | 4.82 |
| 153231 | GB1-385 | 3.85 | 153279 | GB1-434 | 4.34 | 153327 | GB1-483 | 4.83 |
| 153232 | GB1-386 | 3.86 | 153280 | GB1-435 | 4.35 | 153328 | GB1-484 | 4.84 |
| 153233 | GB1-387 | 3.87 | 153281 | GB1-436 | 4.36 | 153329 | GB1-485 | 4.85 |
| 153234 | GB1-388 | 3.88 | 153282 | GB1-437 | 4.37 | 153330 | GB1-486 | 4.86 |
| 153235 | GB1-389 | 3.89 | 153283 | GB1-438 | 4.38 | 153331 | GB1-487 | 4.87 |
| 153236 | GB1-390 | 3.90 | 153284 | GB1-439 | 4.39 | 153332 | GB1-488 | 4.88 |
| 153237 | GB1-391 | 3.91 | 153285 | GB1-440 | 4.40 | 153333 | GB1-489 | 4.89 |
| 153238 | GB1-392 | 3.92 | 153286 | GB1-441 | 4.41 | 153334 | GB1-490 | 4.90 |
| 153239 | GB1-393 | 3.93 | 153287 | GB1-442 | 4.42 | 153335 | GB1-491 | 4.91 |
| 153240 | GB1-394 | 3.94 | 153288 | GB1-443 | 4.43 | 153336 | GB1-492 | 4.92 |
| 153241 | GB1-395 | 3.95 | 153289 | GB1-444 | 4.44 | 153337 | GB1-493 | 4.93 |
| 153242 | GB1-396 | 3.96 | 153290 | GB1-445 | 4.45 | 153338 | GB1-494 | 4.94 |
| 153243 | GB1-397 | 3.97 | 153291 | GB1-446 | 4.46 | 153339 | GB1-495 | 4.95 |
| 153244 | GB1-398 | 3.98 | 153292 | GB1-447 | 4.47 | 153340 | GB1-496 | 4.96 |
| 153245 | GB1-399 | 3.99 | 153293 | GB1-448 | 4.48 | 153341 | GB1-497 | 4.97 |
| 150889 | GB1-400 | 4.00 | 153294 | GB1-449 | 4.49 | 153342 | GB1-498 | 4.98 |
| 153246 | GB1-401 | 4.01 | 150890 | GB1-450 | 4.50 | 153343 | GB1-499 | 4.99 |
| 153247 | GB1-402 | 4.02 | 153295 | GB1-451 | 4.51 | 150891 | GB1-500 | 5.00 |
| 153248 | GB1-403 | 4.03 | 153296 | GB1-452 | 4.52 | 153344 | GB1-501 | 5.01 |
| 153249 | GB1-404 | 4.04 | 153297 | GB1-453 | 4.53 | 153345 | GB1-502 | 5.02 |
| 153250 | GB1-405 | 4.05 | 153298 | GB1-454 | 4.54 | 153346 | GB1-503 | 5.03 |
| 153251 | GB1-406 | 4.06 | 153299 | GB1-455 | 4.55 | 153347 | GB1-504 | 5.04 |
| 153252 | GB1-407 | 4.07 | 153300 | GB1-456 | 4.56 | 153348 | GB1-505 | 5.05 |
| 153253 | GB1-408 | 4.08 | 153301 | GB1-457 | 4.57 | 153349 | GB1-506 | 5.06 |
| 153254 | GB1-409 | 4.09 | 153302 | GB1-458 | 4.58 | 153350 | GB1-507 | 5.07 |
| 153255 | GB1-410 | 4.10 | 153303 | GB1-459 | 4.59 | 153351 | GB1-508 | 5.08 |
| 153256 | GB1-411 | 4.11 | 153304 | GB1-460 | 4.60 | 153352 | GB1-509 | 5.09 |

# BLOCK GAUGE (GRADE 1)

HOW TO MOVIE

Rust prevention▶
Zerust Film for Steel
P370

Please refer to page 36 for detailed specifications and tolerance

| Order No. | Model No. | Size (mm) |
|---|---|---|
| 153353 | GB1-510 | 5.10 |
| 153354 | GB1-511 | 5.11 |
| 153355 | GB1-512 | 5.12 |
| 153356 | GB1-513 | 5.13 |
| 153357 | GB1-514 | 5.14 |
| 153358 | GB1-515 | 5.15 |
| 153359 | GB1-516 | 5.16 |
| 153360 | GB1-517 | 5.17 |
| 153361 | GB1-518 | 5.18 |
| 153362 | GB1-519 | 5.19 |
| 153363 | GB1-520 | 5.20 |
| 153364 | GB1-521 | 5.21 |
| 153365 | GB1-522 | 5.22 |
| 153366 | GB1-523 | 5.23 |
| 153367 | GB1-524 | 5.24 |
| 153368 | GB1-525 | 5.25 |
| 153369 | GB1-526 | 5.26 |
| 153370 | GB1-527 | 5.27 |
| 153371 | GB1-528 | 5.28 |
| 153372 | GB1-529 | 5.29 |
| 153373 | GB1-530 | 5.30 |
| 153374 | GB1-531 | 5.31 |
| 153375 | GB1-532 | 5.32 |
| 153376 | GB1-533 | 5.33 |
| 153377 | GB1-534 | 5.34 |
| 153378 | GB1-535 | 5.35 |
| 153379 | GB1-536 | 5.36 |
| 153380 | GB1-537 | 5.37 |
| 153381 | GB1-538 | 5.38 |
| 153382 | GB1-539 | 5.39 |
| 153383 | GB1-540 | 5.40 |
| 153384 | GB1-541 | 5.41 |
| 153385 | GB1-542 | 5.42 |
| 153386 | GB1-543 | 5.43 |
| 153387 | GB1-544 | 5.44 |
| 153388 | GB1-545 | 5.45 |
| 153389 | GB1-546 | 5.46 |
| 153390 | GB1-547 | 5.47 |
| 153391 | GB1-548 | 5.48 |
| 153392 | GB1-549 | 5.49 |
| 150893 | GB1-550 | 5.50 |
| 153393 | GB1-551 | 5.51 |
| 153394 | GB1-552 | 5.52 |
| 153395 | GB1-553 | 5.53 |
| 153396 | GB1-554 | 5.54 |
| 153397 | GB1-555 | 5.55 |
| 153398 | GB1-556 | 5.56 |
| 153399 | GB1-557 | 5.57 |
| 153400 | GB1-558 | 5.58 |

| Order No. | Model No. | Size (mm) |
|---|---|---|
| 153401 | GB1-559 | 5.59 |
| 153402 | GB1-560 | 5.60 |
| 153403 | GB1-561 | 5.61 |
| 153404 | GB1-562 | 5.62 |
| 153405 | GB1-563 | 5.63 |
| 153406 | GB1-564 | 5.64 |
| 153407 | GB1-565 | 5.65 |
| 153408 | GB1-566 | 5.66 |
| 153409 | GB1-567 | 5.67 |
| 153410 | GB1-568 | 5.68 |
| 153411 | GB1-569 | 5.69 |
| 153412 | GB1-570 | 5.70 |
| 153413 | GB1-571 | 5.71 |
| 153414 | GB1-572 | 5.72 |
| 153415 | GB1-573 | 5.73 |
| 153416 | GB1-574 | 5.74 |
| 153417 | GB1-575 | 5.75 |
| 153418 | GB1-576 | 5.76 |
| 153419 | GB1-577 | 5.77 |
| 153420 | GB1-578 | 5.78 |
| 153421 | GB1-579 | 5.79 |
| 153422 | GB1-580 | 5.80 |
| 153423 | GB1-581 | 5.81 |
| 153424 | GB1-582 | 5.82 |
| 153425 | GB1-583 | 5.83 |
| 153426 | GB1-584 | 5.84 |
| 153427 | GB1-585 | 5.85 |
| 153428 | GB1-586 | 5.86 |
| 153429 | GB1-587 | 5.87 |
| 153430 | GB1-588 | 5.88 |
| 153431 | GB1-589 | 5.89 |
| 153432 | GB1-590 | 5.90 |
| 153433 | GB1-591 | 5.91 |
| 153434 | GB1-592 | 5.92 |
| 153435 | GB1-593 | 5.93 |
| 153436 | GB1-594 | 5.94 |
| 153437 | GB1-595 | 5.95 |
| 153438 | GB1-596 | 5.96 |
| 153439 | GB1-597 | 5.97 |
| 153440 | GB1-598 | 5.98 |
| 153441 | GB1-599 | 5.99 |
| 150894 | GB1-600 | 6.00 |
| 150895 | GB1-650 | 6.50 |
| 150896 | GB1-700 | 7.00 |
| 150897 | GB1-750 | 7.50 |
| 150899 | GB1-800 | 8.00 |
| 150900 | GB1-850 | 8.50 |
| 150901 | GB1-900 | 9.00 |
| 150902 | GB1-950 | 9.50 |

| Order No. | Model No. | Size (mm) |
|---|---|---|
| 150903 | GB1-1000 | 10.00 |
| 150905 | GB1-1050 | 10.50 |
| 150906 | GB1-1100 | 11.00 |
| 150907 | GB1-1150 | 11.50 |
| 150908 | GB1-1200 | 12.00 |
| 150909 | GB1-1250 | 12.50 |
| 150911 | GB1-1300 | 13.00 |
| 150912 | GB1-1350 | 13.50 |
| 150913 | GB1-1400 | 14.00 |
| 150914 | GB1-1450 | 14.50 |
| 150915 | GB1-1500 | 15.00 |
| 150916 | GB1-1550 | 15.50 |
| 150917 | GB1-1600 | 16.00 |
| 150918 | GB1-1650 | 16.50 |
| 150919 | GB1-1700 | 17.00 |
| 150920 | GB1-1750 | 17.50 |
| 150921 | GB1-1800 | 18.00 |
| 150922 | GB1-1850 | 18.50 |
| 150923 | GB1-1900 | 19.00 |
| 150924 | GB1-1950 | 19.50 |
| 150925 | GB1-2000 | 20.00 |
| 150927 | GB1-2050 | 20.50 |
| 150928 | GB1-2100 | 21.00 |
| 150929 | GB1-2150 | 21.50 |
| 150930 | GB1-2200 | 22.00 |
| 150931 | GB1-2250 | 22.50 |
| 150933 | GB1-2300 | 23.00 |
| 150934 | GB1-2350 | 23.50 |
| 150935 | GB1-2400 | 24.00 |
| 150936 | GB1-2450 | 24.50 |
| 150937 | GB1-2500 | 25.00 |
| 150939 | GB1-3000 | 30.00 |
| 150940 | GB1-4000 | 40.00 |
| 150941 | GB1-5000 | 50.00 |
| 150942 | GB1-6000 | 60.00 |
| 150944 | GB1-7000 | 70.00 |
| 150945 | GB1-7500 | 75.00 |
| 150946 | GB1-8000 | 80.00 |
| 150947 | GB1-9000 | 90.00 |
| 150948 | GB1-10000 | 100.00 |
| 150949 | GB1-12500 | 125 |
| 150950 | GB1-15000 | 150 |
| 150794 | GB1-17500 | 175 |
| 150795 | GB1-20000 | 200 |
| 150796 | GB1-25000 | 250 |
| 150797 | GB1-30000 | 300 |
| 150798 | GB1-40000 | 400 |
| 150799 | GB1-50000 | 500 |
| 150800 | GB1-60000 | 600 |

# CERAMIC BLOCK GAUGE SET (GRADE 0)

HOW TO MOVIE

## Free from rust and corrosion, and easy maintenance

BC-032

USE
- As reference standard and for general measurement work
- As spacer and prefinished sub-assembly components

MATERIAL
- Ceramic (Zirconia)

FEATURES
- Abrasion resistant
- Free from rust and corrosion, and easy maintenance
- Ceramic material is less susceptible to abrasion and aged deterioration than steel
- Non-magnetic
- Conforms to JIS (Grade 0)
- Provided with inspection report

SPECIFICATIONS
- Section size: 10mm or under: 30(0~−0.3)×9(−0.05~−0.2)mm
  Over 10mm and less than 100mm: 35(0~−0.3)×9(−0.05~−0.2)mm
- Coefficient of thermal expansion: (9.5±1)×$10^{-6}$／K
- Young's modulus: Approx.206GPa ●Poisson's raito: 0.3

※Calibration and custom size production are NOT available

SPECIFICATIONS

| Size (mm) | | Grade 0 | |
|---|---|---|---|
| Over | Or under | Tolerance (μm) | Dimensional Deviation (μm) |
| – | 10 | ± 0.12 | 0.10 |
| 10 | 25 | ± 0.14 | 0.10 |
| 25 | 50 | ± 0.20 | 0.10 |
| 50 | 75 | ± 0.25 | 0.12 |
| 75 | 100 | ± 0.30 | 0.12 |

Comparison between steel and ceramic materials

| Item \ Material | | Ceramics (Zirconia) | Steel |
|---|---|---|---|
| Hardness | HV | 1,250 | 800 Over |
| Coefficient of thermal expansion | $10^{-6}$/K | 9.5 | 11.5 |
| Specific Gravity | | 6 | 7.8 |
| Heat conductivity | W/m·K | 3 | 54.4 |

※Values in the table are for reference only.
Please contact us for detailed product values.

## SET Item

| Order No. | Model No. | Pieces per set | Step (mm) | Nominal Size (mm) | Number of piece | Weight |
|---|---|---|---|---|---|---|
| 150770 | BC-032 | 32 | – | 1.005 | 1 | 950g |
| | | | 0.01 | 1.01•1.02…1.09 | 9 | |
| | | | 0.1 | 1.1•1.2…1.9 | 9 | |
| | | | 1 | 1•2•3…9 | 9 | |
| | | | 10 | 10•20•30 | 3 | |
| | | | – | 50 | 1 | |
| 150771 | BC-047 | 47 | – | 1.005 | 1 | 2.25kg |
| | | | 0.01 | 1.01•1.02…1.09 | 9 | |
| | | | 0.1 | 1.1•1.2…1.9 | 9 | |
| | | | 1 | 1•2•3…24 | 24 | |
| | | | 25 | 25•50•75•100 | 4 | |

## SINGLE Item

| Order No. | Model No. | Size (mm) |
|---|---|---|
| 150720 | BC0-100 | 1 |
| 150721 | BC0-1-005 | 1.005 |
| 150722 | BC0-101 | 1.01 |
| 150723 | BC0-102 | 1.02 |
| 150724 | BC0-103 | 1.03 |
| 150725 | BC0-104 | 1.04 |
| 150726 | BC0-105 | 1.05 |
| 150727 | BC0-106 | 1.06 |
| 150728 | BC0-107 | 1.07 |
| 150729 | BC0-108 | 1.08 |
| 150730 | BC0-109 | 1.09 |
| 150731 | BC0-110 | 1.1 |
| 150732 | BC0-120 | 1.2 |
| 150733 | BC0-130 | 1.3 |
| 150734 | BC0-140 | 1.4 |
| 150735 | BC0-150 | 1.5 |
| 150736 | BC0-160 | 1.6 |
| 150737 | BC0-170 | 1.7 |
| 150738 | BC0-180 | 1.8 |
| 150739 | BC0-190 | 1.9 |
| 150740 | BC0-200 | 2 |
| 150741 | BC0-300 | 3 |
| 150742 | BC0-400 | 4 |
| 150743 | BC0-500 | 5 |
| 150744 | BC0-600 | 6 |

| Order No. | Model No. | Size (mm) |
|---|---|---|
| 150745 | BC0-700 | 7 |
| 150746 | BC0-800 | 8 |
| 150747 | BC0-900 | 9 |
| 150748 | BC0-1000 | 10 |
| 150749 | BC0-1100 | 11 |
| 150750 | BC0-1200 | 12 |
| 150751 | BC0-1300 | 13 |
| 150752 | BC0-1400 | 14 |
| 150753 | BC0-1500 | 15 |
| 150754 | BC0-1600 | 16 |
| 150755 | BC0-1700 | 17 |
| 150756 | BC0-1800 | 18 |
| 150757 | BC0-1900 | 19 |
| 150758 | BC0-2000 | 20 |
| 150759 | BC0-2100 | 21 |
| 150760 | BC0-2200 | 22 |
| 150761 | BC0-2300 | 23 |
| 150762 | BC0-2400 | 24 |
| 150763 | BC0-2500 | 25 |
| 150764 | BC0-3000 | 30 |
| 150765 | BC0-5000 | 50 |
| 150766 | BC0-6000 | 60 |
| 150767 | BC0-7500 | 75 |
| 150768 | BC0-10000 | 100 |

# STEEL PIN GAUGE SET AA SERIES

JCSS Calibration available

HOW TO MOVIE

The most standard and popular type pin gauge. Available from 1pc.
JCSS calibration is also available.

## SUB-ZERO (Cryogenic hardened) TREATMENT

※ 2,700mm or over

**φ0.200 ～ 10.000mm**
**0.001 step**
**IN STOCK**


Master for calibration using length measuring machine▶ Master Gauge P47

For storage and maintenance▶ Pin Gauge Accessories P52～55

For holding pin gauge▶ Pin Vise P56～57

Rust prevention▶ Zerust Film for Steel P370


FEATURES

- The most popular type
- Custom made Pin Gauges are available on request
- Individual pin gauges are also available (plastic case included)
- Aluminum Pin Vise is included with AA-0A to AA-9B.
  Pin Vise is included with AA-0E to AA-6F.
- For above 1.000mm, nominal size is marked on gauge
- Provide with individual pin gauge stand
  By setting the most frequently used sizes on the stand, you can save time and effort in searching for them.
  (AA-00～6B)
- With certificate of compliance

SPECIFICATIONS [Standard stock]

| Nominal Size (mm) | Step (mm) | Length (mm) | Tolerance (μm) | Out of Roundness (μm) | Diameter Inequality (μm) | Hardness (HV) |
|---|---|---|---|---|---|---|
| 0.05 | 0.01 step | 5 | ±0.5 | 0.5 | 0.5 | More than 720 |
| 0.06 ··· 0.09 | | 10 | | | | |
| 0.10 ··· 0.19 | | 40 | ±0.8 | | 0.8 | |
| 0.200 ··· 0.999 | 0.001step | | | | | |
| 1.000 ··· 2.699 | | 50 | | | | More than 650 |
| 2.700 ···10.000 | | | | | | |
| 10.01 ···20.00 | 0.01 step | | ±1.5 | 0.8 | 1.3 | |
| 20.01 ···30.00 | | | ±2 | 1.6 | 1.6 | |
| 30.01 ···41.00 | — | | ±3 | 3 | 3 | |

※ 5mm from each edge is not precision guaranteed ※ 30.01～41.00 are custom made
Pin gauges are slightly chamfered on both edge at the following level;
φ 1mm···Approx. 0.03mm φ 3mm···Approx. 0.1mm φ 5mm···Approx. 0.2mm
φ 7mm···Approx. 0.25mm φ 10mm···Approx. 0.3mm

## AA series (0.010mm step)

| Order No. | Model No. | Nominal Size (mm) | Pins per set | Aluminum Pin Vise | Weight (Including case) |
|---|---|---|---|---|---|
| 201000 | AA-00 | 0.06 • 0.07 • 0.08 ····· 0.290 | 24 | | 0.90kg |
| 201001 | AA-0A | 0.200 • 0.210 • 0.220 ····· 0.500 | 31 | APV-0A | 0.95kg |
| 201002 | AA-0B | 0.500 • 0.510 • 0.520 ····· 1.000 | 51 | APV-0B | 1.02kg |
| 201011 | AA-1A | 1.000 • 1.010 • 1.020 ····· 1.500 | 51 | APV-1A | 1.03kg |
| 201012 | AA-1B | 1.500 • 1.510 • 1.520 ····· 2.000 | 51 | APV-1B | 1.06kg |
| 201021 | AA-2A | 2.000 • 2.010 • 2.020 ····· 2.500 | 51 | APV-2A | 1.09kg |
| 201022 | AA-2B | 2.500 • 2.510 • 2.520 ····· 3.000 | 51 | APV-2B | 1.13kg |
| 201031 | AA-3A | 3.000 • 3.010 • 3.020 ····· 3.500 | 51 | APV-3A | 1.18kg |
| 201032 | AA-3B | 3.500 • 3.510 • 3.520 ····· 4.000 | 51 | APV-3B | 1.23kg |
| 201041 | AA-4A | 4.000 • 4.010 • 4.020 ····· 4.500 | 51 | APV-4A | 1.29kg |
| 201042 | AA-4B | 4.500 • 4.510 • 4.520 ····· 5.000 | 51 | APV-4B | 1.37kg |
| 201051 | AA-5A | 5.000 • 5.010 • 5.020 ····· 5.500 | 51 | APV-5A | 1.44kg |
| 201052 | AA-5B | 5.500 • 5.510 • 5.520 ····· 6.000 | 51 | APV-5B | 1.53kg |
| 201061 | AA-6A | 6.000 • 6.010 • 6.020 ····· 6.500 | 51 | APV-6A | 1.63kg |
| 201062 | AA-6B | 6.500 • 6.510 • 6.520 ····· 7.000 | 51 | APV-6B | 1.73kg |
| 201071 | AA-7A | 7.000 • 7.010 • 7.020 ····· 7.500 | 51 | APV-7A | 2.33kg |
| 201072 | AA-7B | 7.500 • 7.510 • 7.520 ····· 8.000 | 51 | APV-7B | 2.45kg |
| 201081 | AA-8A | 8.000 • 8.010 • 8.020 ····· 8.500 | 51 | APV-8A | 2.58kg |
| 201082 | AA-8B | 8.500 • 8.510 • 8.520 ····· 9.000 | 51 | APV-8B | 2.71kg |
| 201091 | AA-9A | 9.000 • 9.010 • 9.020 ····· 9.500 | 51 | APV-9A | 2.85kg |
| 201092 | AA-9B | 9.500 • 9.510 • 9.520 ····· 10.000 | 51 | APV-9B | 3.00kg |
| 201101 | AA-10A | 10.000 • 10.01 • 10.02 ····· 10.50 | 51 | | 3.12kg |
| 201102 | AA-10B | 10.50 • 10.51 • 10.52 ····· 11.00 | 51 | | 3.29kg |
| 201111 | AA-11A | 11.00 • 11.01 • 11.02 ····· 11.50 | 51 | | 3.46kg |
| 201112 | AA-11B | 11.50 • 11.51 • 11.52 ····· 12.00 | 51 | | 3.64kg |
| 201121 | AA-12A | 12.00 • 12.01 • 12.02 ····· 12.50 | 51 | | 3.83kg |
| 201122 | AA-12B | 12.50 • 12.51 • 12.52 ····· 13.00 | 51 | | 4.03kg |
| 201131 | AA-13A | 13.00 • 13.01 • 13.02 ····· 13.50 | 51 | | 4.24kg |
| 201132 | AA-13B | 13.50 • 13.51 • 13.52 ····· 14.00 | 51 | | 4.45kg |
| 201141 | AA-14A | 14.00 • 14.01 • 14.02 ····· 14.50 | 51 | | 4.67kg |
| 201142 | AA-14B | 14.50 • 14.51 • 14.52 ····· 15.00 | 51 | | 4.90kg |
| 201151 | AA-15A | 15.00 • 15.01 • 15.02 ····· 15.50 | 51 | | 5.14kg |
| 201152 | AA-15B | 15.50 • 15.51 • 15.52 ····· 16.00 | 51 | | 5.38kg |
| 201161 | AA-16A | 16.00 • 16.01 • 16.02 ····· 16.50 | 51 | | 5.79kg |
| 201162 | AA-16B | 16.50 • 16.51 • 16.52 ····· 17.00 | 51 | | 6.05kg |
| 201171 | AA-17A | 17.00 • 17.01 • 17.02 ····· 17.50 | 51 | | 6.32kg |
| 201172 | AA-17B | 17.50 • 17.51 • 17.52 ····· 18.00 | 51 | | 6.60kg |
| 201181 | AA-18A | 18.00 • 18.01 • 18.02 ····· 18.50 | 51 | | 6.88kg |
| 201182 | AA-18B | 18.50 • 18.51 • 18.52 ····· 19.00 | 51 | | 7.18kg |
| 201191 | AA-19A | 19.00 • 19.01 • 19.02 ····· 19.50 | 51 | | 7.48kg |
| 201192 | AA-19B | 19.50 • 19.51 • 19.52 ····· 20.00 | 51 | | 7.78kg |

## AA series (0.005mm step)

| Order No. | Model No. | Nominal Size (mm) | Pins per set | Aluminum Pin Vise | Weight (Including case) |
|---|---|---|---|---|---|
| 202005 | AA-0E | 0.500 • 0.505 • 0.510 ····· 0.750 | 51 | PV-0B | 1.12kg |
| 202006 | AA-0F | 0.750 • 0.755 • 0.760 ····· 1.000 | 51 | PV-0B | 1.12kg |
| 202103 | AA-1C | 1.000 • 1.005 • 1.010 ····· 1.250 | 51 | PV-1A | 1.13kg |
| 202104 | AA-1D | 1.250 • 1.255 • 1.260 ····· 1.500 | 51 | PV-1A | 1.14kg |
| 202105 | AA-1E | 1.500 • 1.505 • 1.510 ····· 1.750 | 51 | PV-1B | 1.15kg |
| 202106 | AA-1F | 1.750 • 1.755 • 1.760 ····· 2.000 | 51 | PV-1B | 1.17kg |
| 202203 | AA-2C | 2.000 • 2.005 • 2.010 ····· 2.250 | 51 | PV-2A | 1.18kg |
| 202204 | AA-2D | 2.250 • 2.255 • 2.260 ····· 2.500 | 51 | PV-2A | 1.20kg |
| 202205 | AA-2E | 2.500 • 2.505 • 2.510 ····· 2.750 | 51 | PV-2B | 1.22kg |
| 202206 | AA-2F | 2.750 • 2.755 • 2.760 ····· 3.000 | 51 | PV-2B | 1.24kg |
| 202303 | AA-3C | 3.000 • 3.005 • 3.010 ····· 3.250 | 51 | PV-3A | 1.27kg |
| 202304 | AA-3D | 3.250 • 3.255 • 3.260 ····· 3.500 | 51 | PV-3A | 1.30kg |
| 202305 | AA-3E | 3.500 • 3.505 • 3.510 ····· 3.750 | 51 | PV-3B | 1.33kg |
| 202306 | AA-3F | 3.750 • 3.755 • 3.760 ····· 4.000 | 51 | PV-3B | 1.36kg |
| 202403 | AA-4C | 4.000 • 4.005 • 4.010 ····· 4.250 | 51 | PV-4A | 1.39kg |
| 202404 | AA-4D | 4.250 • 4.255 • 4.260 ····· 4.500 | 51 | PV-4A | 1.42kg |
| 202405 | AA-4E | 4.500 • 4.505 • 4.510 ····· 4.750 | 51 | PV-4B | 1.46kg |
| 202406 | AA-4F | 4.750 • 4.755 • 4.760 ····· 5.000 | 51 | PV-4B | 1.50kg |
| 202503 | AA-5C | 5.000 • 5.005 • 5.010 ····· 5.250 | 51 | PV-5A | 1.54kg |
| 202504 | AA-5D | 5.250 • 5.255 • 5.260 ····· 5.500 | 51 | PV-5A | 1.58kg |
| 202505 | AA-5E | 5.500 • 5.505 • 5.510 ····· 5.750 | 51 | PV-5B | 1.62kg |
| 202506 | AA-5F | 5.750 • 5.755 • 5.760 ····· 6.000 | 51 | PV-5B | 1.67kg |
| 202603 | AA-6C | 6.000 • 6.005 • 6.010 ····· 6.250 | 51 | PV-6A | 1.71kg |
| 202604 | AA-6D | 6.250 • 6.255 • 6.260 ····· 6.500 | 51 | PV-6A | 1.76kg |
| 202605 | AA-6E | 6.500 • 6.505 • 6.510 ····· 6.750 | 51 | PV-6B | 1.81kg |
| 202606 | AA-6F | 6.750 • 6.755 • 6.760 ····· 7.000 | 51 | PV-6B | 1.87kg |
| 202703 | AA-7C | 7.000 • 7.005 • 7.010 ····· 7.250 | 51 | | 2.26kg |
| 202704 | AA-7D | 7.250 • 7.255 • 7.260 ····· 7.500 | 51 | | 2.32kg |
| 202705 | AA-7E | 7.500 • 7.505 • 7.510 ····· 7.750 | 51 | | 2.38kg |
| 202706 | AA-7F | 7.750 • 7.755 • 7.760 ····· 8.000 | 51 | | 2.44kg |
| 202803 | AA-8C | 8.000 • 8.005 • 8.010 ····· 8.250 | 51 | | 2.50kg |
| 202804 | AA-8D | 8.250 • 8.255 • 8.260 ····· 8.500 | 51 | | 2.57kg |
| 202805 | AA-8E | 8.500 • 8.505 • 8.510 ····· 8.750 | 51 | | 2.64kg |
| 202806 | AA-8F | 8.750 • 8.755 • 8.760 ····· 9.000 | 51 | | 2.71kg |
| 202903 | AA-9C | 9.000 • 9.005 • 9.010 ····· 9.250 | 51 | | 2.78kg |
| 202904 | AA-9D | 9.250 • 9.255 • 9.260 ····· 9.500 | 51 | | 2.85kg |
| 202905 | AA-9E | 9.500 • 9.505 • 9.510 ····· 9.750 | 51 | | 2.93kg |
| 202906 | AA-9F | 9.750 • 9.755 • 9.760 ····· 10.000 | 51 | | 3.00kg |

Sizes available: 0.05～41.00mm (Please contact us with request)

# STEEL PIN GAUGES REFILL SET NEW!

JCSS Calibration available

HOW TO MOVIE

Changed the pin gauge of "STEEL PIN GAUGE SET AA Series" to a paper box.
The price is lower than that of conventional pin gauge sets, and the plastic used has been greatly reduced.

## Recommended for

☑Sites where a plastic case is not required
☑Easy switchable only the contents of the set case
☑Want to promote plastic reduction

AA-9B-R

**For gauge size accuracy and specifications, please refer to "STEEL PIN GAUGE SET AA Series" ⇒P41**

**01** It can be used as a storage box if you cut off the inner box's lid along the cut lines

**02** Easy pick and carry with the size you need to the site

**03** Just fit for the B5 or B4 size drawer, and you can put it in a drawer and carry it directly

Includes convenient cut lines

USE

●For those who already have a set case and want to update the contents, or for workers on sites that do not require a set case.
AA series pin gauges only are available at a lower price than conventional sets.

FEATURES

●It can be used as a Stand-up storage box if you cut off the inner box's lid along the cut lines
●Easy pick and carry with the size you need to the site
●Just fit for the B5 or B4 size drawer, and you can put it in a drawer and carry it directly
●By not using a case for the set, plastic was greatly reduced

FEATURES

●All pin gauges come in each plastic case ●With certificate of conformance ※Pin Vise is not included

| Order No. | Model No. | Nominal Size (mm) | | Step (mm) | Pins per set | Inside box Size (mm) | Weight ("inside box" included ) |
|---|---|---|---|---|---|---|---|
| NEW! 202001 | AA-0A-R | 0.200・0.210・0.220 …… | 0.500 | 0.010 step | 31 | W253×D180×H68mm (B5 considerable) | 255g |
| NEW! 202002 | AA-0B-R | 0.500・0.510・0.520 …… | 1.000 | | 51 | | 345g |
| NEW! 202011 | AA-1A-R | 1.000・1.010・1.020 …… | 1.500 | | 51 | | 355g |
| NEW! 202012 | AA-1B-R | 1.500・1.510・1.520 …… | 2.000 | | 51 | | 385g |
| NEW! 202021 | AA-2A-R | 2.000・2.010・2.020 …… | 2.500 | | 51 | | 415g |
| NEW! 202022 | AA-2B-R | 2.500・2.510・2.520 …… | 3.000 | | 51 | | 455g |
| NEW! 202031 | AA-3A-R | 3.000・3.010・3.020 …… | 3.500 | | 51 | | 505g |
| NEW! 202032 | AA-3B-R | 3.500・3.510・3.520 …… | 4.000 | | 51 | | 555g |
| NEW! 202041 | AA-4A-R | 4.000・4.010・4.020 …… | 4.500 | | 51 | | 615g |
| NEW! 202042 | AA-4B-R | 4.500・4.510・4.520 …… | 5.000 | | 51 | | 695g |
| NEW! 202051 | AA-5A-R | 5.000・5.010・5.020 …… | 5.500 | | 51 | | 765g |
| NEW! 202052 | AA-5B-R | 5.500・5.510・5.520 …… | 6.000 | | 51 | | 855g |
| NEW! 202061 | AA-6A-R | 6.000・6.010・6.020 …… | 6.500 | | 51 | | 955g |
| NEW! 202062 | AA-6B-R | 6.500・6.510・6.520 …… | 7.000 | | 51 | | 1055g |
| NEW! 202071 | AA-7A-R | 7.000・7.010・7.020 …… | 7.500 | | 51 | W360×D255×H68mm (B4 considerable) | 1.40kg |
| NEW! 202072 | AA-7B-R | 7.500・7.510・7.520 …… | 8.000 | | 51 | | 1.53kg |
| NEW! 202081 | AA-8A-R | 8.000・8.010・8.020 …… | 8.500 | | 51 | | 1.66kg |
| NEW! 202082 | AA-8B-R | 8.500・8.510・8.520 …… | 9.000 | | 51 | | 1.79kg |
| NEW! 202091 | AA-9A-R | 9.000・9.010・9.020 …… | 9.500 | | 51 | | 1.93kg |
| NEW! 202092 | AA-9B-R | 9.500・9.510・9.520 …… | 10.000 | | 51 | | 2.08kg |

# STEEL PIN GAUGE SET SA SERIES

JCSS Calibration available

HOW TO MOVIE

High precision model.
JCSS calibration is also available.

**SUB-ZERO (Cryogenic hardened) TREATMENT**
**※ 2,700mm or over**

For storage and maintenance▶ Pin Gauge Accessories P52 ～55
For holding pin gauge▶ Pin Vise P56 ～57
Rust prevention▶ Zerust Film for Steel P370

FEATURES
- ●High precision quality pin gauge
- ●With certificate of compliance
- ●Individual pin gauges are also available(plastic case included)

※Pin Vise is not included

SPECIFICATIONS

| Nominal Size (mm) | Step (mm) | Length (mm) | Tolerance (μm) | Out of Roundness (μm) | Diameter Inequality (μm) | Hardness (HV) |
|---|---|---|---|---|---|---|
| 0.100··· 0.999 | 0.001step | 40 | ±0.3 | 0.3 | 0.3 | More than 720 |
| 1.000··· 2.699 | | 50 | | | | |
| 2.700··· 7.010 | | | | | | More than 650 |
| 7.011···10.000 | | | ±0.5 | 0.5 | 0.5 | |

※ 5mm from each edge is not precision guaranteed (Length 30mm over)
(0.001mm step)

| Order No. | Model No. | Nominal size (mm) | Pins per set | Weight (Including case) |
|---|---|---|---|---|
| 201203 | SA-03 | 0.297 ····· 0.310 | 14 | 870g |
| 201204 | SA-04 | 0.397 ····· 0.410 | 14 | 870g |
| 201205 | SA-05 | 0.497 ····· 0.510 | 14 | 870g |
| 201206 | SA-06 | 0.597 ····· 0.610 | 14 | 870g |
| 201207 | SA-07 | 0.697 ····· 0.710 | 14 | 870g |
| 201208 | SA-08 | 0.797 ····· 0.810 | 14 | 870g |
| 201209 | SA-09 | 0.897 ····· 0.910 | 14 | 870g |
| 201210 | SA-10 | 0.997 ····· 1.010 | 14 | 870g |
| 201211 | SA-11 | 1.097 ····· 1.110 | 14 | 870g |
| 201212 | SA-12 | 1.197 ····· 1.210 | 14 | 870g |
| 201213 | SA-13 | 1.297 ····· 1.310 | 14 | 870g |
| 201214 | SA-14 | 1.397 ····· 1.410 | 14 | 880g |
| 201215 | SA-15 | 1.497 ····· 1.510 | 14 | 880g |
| 201216 | SA-16 | 1.597 ····· 1.610 | 14 | 880g |
| 201217 | SA-17 | 1.697 ····· 1.710 | 14 | 880g |
| 201218 | SA-18 | 1.797 ····· 1.810 | 14 | 880g |
| 201219 | SA-19 | 1.897 ····· 1.910 | 14 | 880g |
| 201220 | SA-20 | 1.997 ····· 2.010 | 14 | 880g |
| 201221 | SA-21 | 2.097 ····· 2.110 | 14 | 890g |
| 201222 | SA-22 | 2.197 ····· 2.210 | 14 | 890g |
| 201223 | SA-23 | 2.297 ····· 2.310 | 14 | 890g |
| 201224 | SA-24 | 2.397 ····· 2.410 | 14 | 890g |
| 201225 | SA-25 | 2.497 ····· 2.510 | 14 | 890g |
| 201226 | SA-26 | 2.597 ····· 2.610 | 14 | 900g |
| 201227 | SA-27 | 2.697 ····· 2.710 | 14 | 900g |
| 201228 | SA-28 | 2.797 ····· 2.810 | 14 | 900g |
| 201229 | SA-29 | 2.897 ····· 2.910 | 14 | 900g |
| 201230 | SA-30 | 2.997 ····· 3.010 | 14 | 910g |
| 201231 | SA-31 | 3.097 ····· 3.110 | 14 | 910g |
| 201232 | SA-32 | 3.197 ····· 3.210 | 14 | 910g |
| 201233 | SA-33 | 3.297 ····· 3.310 | 14 | 910g |
| 201234 | SA-34 | 3.397 ····· 3.410 | 14 | 920g |
| 201235 | SA-35 | 3.497 ····· 3.510 | 14 | 920g |
| 201236 | SA-36 | 3.597 ····· 3.610 | 14 | 920g |

| Order No. | Model No. | Nominal size (mm) | Pins per set | Weight (Including case) |
|---|---|---|---|---|
| 201237 | SA-37 | 3.697 ····· 3.710 | 14 | 930g |
| 201238 | SA-38 | 3.797 ····· 3.810 | 14 | 930g |
| 201239 | SA-39 | 3.897 ····· 3.910 | 14 | 930g |
| 201240 | SA-40 | 3.997 ····· 4.010 | 14 | 940g |
| 201241 | SA-41 | 4.097 ····· 4.110 | 14 | 940g |
| 201242 | SA-42 | 4.197 ····· 4.210 | 14 | 940g |
| 201243 | SA-43 | 4.297 ····· 4.310 | 14 | 950g |
| 201244 | SA-44 | 4.397 ····· 4.410 | 14 | 950g |
| 201245 | SA-45 | 4.497 ····· 4.510 | 14 | 960g |
| 201246 | SA-46 | 4.597 ····· 4.610 | 14 | 960g |
| 201247 | SA-47 | 4.697 ····· 4.710 | 14 | 960g |
| 201248 | SA-48 | 4.797 ····· 4.810 | 14 | 970g |
| 201249 | SA-49 | 4.897 ····· 4.910 | 14 | 970g |
| 201250 | SA-50 | 4.997 ····· 5.010 | 14 | 980g |
| 201251 | SA-51 | 5.097 ····· 5.110 | 14 | 980g |
| 201252 | SA-52 | 5.197 ····· 5.210 | 14 | 980g |
| 201253 | SA-53 | 5.297 ····· 5.310 | 14 | 990g |
| 201254 | SA-54 | 5.397 ····· 5.410 | 14 | 990g |
| 201255 | SA-55 | 5.497 ····· 5.510 | 14 | 1.00kg |
| 201256 | SA-56 | 5.597 ····· 5.610 | 14 | 1.00kg |
| 201257 | SA-57 | 5.697 ····· 5.710 | 14 | 1.01kg |
| 201258 | SA-58 | 5.797 ····· 5.810 | 14 | 1.01kg |
| 201259 | SA-59 | 5.897 ····· 5.910 | 14 | 1.02kg |
| 201260 | SA-60 | 5.997 ····· 6.010 | 14 | 1.02kg |
| 201261 | SA-61 | 6.097 ····· 6.110 | 14 | 1.03kg |
| 201262 | SA-62 | 6.197 ····· 6.210 | 14 | 1.03kg |
| 201263 | SA-63 | 6.297 ····· 6.310 | 14 | 1.04kg |
| 201264 | SA-64 | 6.397 ····· 6.410 | 14 | 1.05kg |
| 201265 | SA-65 | 6.497 ····· 6.510 | 14 | 1.05kg |
| 201266 | SA-66 | 6.597 ····· 6.610 | 14 | 1.06kg |
| 201267 | SA-67 | 6.697 ····· 6.710 | 14 | 1.06kg |
| 201268 | SA-68 | 6.797 ····· 6.810 | 14 | 1.07kg |
| 201269 | SA-69 | 6.897 ····· 6.910 | 14 | 1.07kg |
| 201270 | SA-70 | 6.997 ····· 7.010 | 14 | 1.49kg |

Sizes available: 0.100 ～ 10.000mm (Please contact us with request)

# STEEL PIN GAUGE AAH SERIES Individual

JCSS Calibration available

MTO product

High accuracy than the AA series and more affordable than the SA series.
New standard pin gauge with diameter accuracy of ± 0.5 μ.

For storage and maintenance▶ Pin Gauge Accessories P52 ～55
For holding pin gauge▶ Pin Vise P56 ～57
Rust prevention▶ Zerust Film for Steel P370

FEATURES
- ●New standard pin gauge with diameter accuracy of ±0.5μ
- ●Plastic case included

SPECIFICATIONS

| Nominal Size (mm) | Step (mm) | Length (mm) | Tolerance (μm) | Out of Roundness (μm) | Diameter Inequality (μm) | Hardness (HV) |
|---|---|---|---|---|---|---|
| 1.000···2.690 | 0.010step | 50 | ±0.5 | 0.5 | 0.5 | More than 720 |
| 2.700···7.000 | | | | | | More than 650 |

※ 5mm from each edge is not precision guaranteed (Length 30mm over)

Sizes available: 1.000 ～ 7.000mm (Please contact us with request)

# MAINTENANCE LINE PIN GAUGE AML SERIES

JCSS Calibration available

HOW TO MOVIE

For those concerned about gauge wear

## SUB-ZERO (Cryogenic hardened) TREATMENT


Master for calibration using length measuring machine ▶ Master Gauge P47

For storage and maintenance ▶ Pin Gauge Accessories P52 ~55

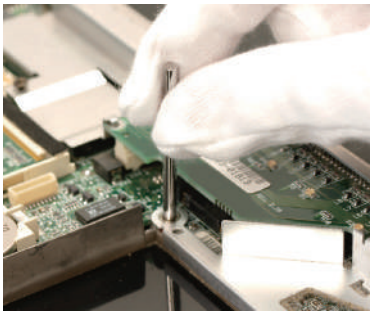
For holding pin gauge ▶ Pin Vise P56 ~57

Rust prevention ▶ Zerust Film for Steel P370

POINT

**Wear-line**
**for checking wear status**
**Tip wear is easy to see**

When line disappears, wear is more than approx. 1μm



MATERIAL
- Steel

FEATURES
- Wear-line on both ends of pin gauge, able to see gauge wear
- When line disappears, wear is more than approx. 1μm
- With certificate of compliance
- Individual pin gauges are also available (plastic case included)

ACCESSORIES
- Aluminum Pin vise included

SPECIFICATIONS [Standard stock]

| Size (mm) | Step (mm) | Length (mm) | Tolerance (μm) | Roundness (μm) | Diameter Inequality (μm) | Hardness (HV) |
|---|---|---|---|---|---|---|
| 3.000…10.000 | 0.010 step | 50 | ±0.8 | 0.5 | 0.8 | More than 650 |

※ 5mm from each edge is not precision guaranteed (Length 30mm over)

## SET Item

| Order No. | Model No. | Nominal Size (mm) | Step (mm) | Pins per Set | Aluminum Pin vise | Weight (Including case) |
|---|---|---|---|---|---|---|
| 370031 | AML-3A | 3.000・3.010・3.020 …… 3.500 | 0.010 step | 51 | APV-3A | 1.18kg |
| 370032 | AML-3B | 3.500・3.510・3.520 …… 4.000 | | 51 | APV-3B | 1.23kg |
| 370041 | AML-4A | 4.000・4.010・4.020 …… 4.500 | | 51 | APV-4A | 1.29kg |
| 370042 | AML-4B | 4.500・4.510・4.520 …… 5.000 | | 51 | APV-4B | 1.37kg |
| 370051 | AML-5A | 5.000・5.010・5.020 …… 5.500 | | 51 | APV-5A | 1.44kg |
| 370052 | AML-5B | 5.500・5.510・5.520 …… 6.000 | | 51 | APV-5B | 1.53kg |
| 370061 | AML-6A | 6.000・6.010・6.020 …… 6.500 | | 51 | APV-6A | 1.63kg |
| 370062 | AML-6B | 6.500・6.510・6.520 …… 7.000 | | 51 | APV-6B | 1.73kg |
| 370071 | AML-7A | 7.000・7.010・7.020 …… 7.500 | | 51 | APV-7A | 2.33kg |
| 370072 | AML-7B | 7.500・7.510・7.520 …… 8.000 | | 51 | APV-7B | 2.45kg |
| 370081 | AML-8A | 8.000・8.010・8.020 …… 8.500 | | 51 | APV-8A | 2.58kg |
| 370082 | AML-8B | 8.500・8.510・8.520 …… 9.000 | | 51 | APV-8B | 2.71kg |
| 370091 | AML-9A | 9.000・9.010・9.020 …… 9.500 | | 51 | APV-9A | 2.85kg |
| 370092 | AML-9B | 9.500・9.510・9.520 …… 10.000 | | 51 | APV-9B | 3.00kg |

0.001 step pin gauges are also available on request. Sizes available: 3.00 ~ 10.00mm (Please contact us with request)


BLOCK GAUGE
PIN GAUGE
PIN VISE
PIN GAUGE ACCESSORIES
RING GAUGE
PLUG GAUGE
LIMIT GAUGE
THICKNESS GAUGE
TAPER GAUGE
WELDING GAUGE
OTHER GAUGES

# STEEL PIN GAUGE SET AH • AP • AAP • AS SERIES

JCSS Calibration available

HOW TO MOVIE

Pin gauge set that consists of frequently-used sizes. JCSS calibration is also available.

**SUB-ZERO (Cryogenic hardened) TREATMENT**

**※ 2,700mm or over**

Master for calibration using length measuring machine▶ Master Gauge P47

For storage and maintenance▶ Pin Gauge Accessories P52 ~55

For holding pin gauge▶ Pin Vise P56 ~57

Rust prevention▶ Zerust Film for Steel P370

FEATURES

- Pin gauge set consists of frequently used sizes
- Same specifications as AA series
- Custom made pin gauge sets are available on request
- With certificate of compliance
- Individual pin gauges are also available (plastic case included)

※ Pin Vise is not included

## AH series (0.050mm step)

| Order No. | Model No. | Nominal size (mm) | Pin per set | Weight (Including case) |
|---|---|---|---|---|
| 201500 | AH-0 | 0.200・0.250・0.300…1.000 | 17 | 0.88kg |
| 201501 | AH-1 | 1.000・1.050・1.100…3.500 | 51 | 1.07kg |
| 201502 | AH-2 | 3.500・3.550・3.600…6.000 | 51 | 1.72kg |
| 201503 | AH-3 | 6.000・6.050・6.100…8.500 | 51 | 2.30kg |
| 201504 | AH-4 | 8.500・8.550・8.600…11.00 | 51 | 2.97kg |
| 201505 | AH-5 | 11.00・11.05・11.10…13.50 | 51 | 3.84kg |
| 201506 | AH-6 | 13.50・13.55・13.60…16.00 | 51 | 4.91kg |
| 201507 | AH-7 | 16.00・16.05・16.10…18.50 | 51 | 5.92kg |
| 201508 | AH-8 | 18.50・18.55・18.60…20.00 | 31 | 4.77kg |

## AAP series (0.010mm step)

Consist of intermediate nominal size pin gauges of AA Series

| Order No. | Model No. | Nominal size (mm) | Pin per set | Weight (Including case) |
|---|---|---|---|---|
| 201302 | AAP-0B | 0.505・0.515・0.525… 1.005 | 51 | 0.99kg |
| 201311 | AAP-1A | 1.005・1.015・1.025… 1.505 | 51 | 1.00kg |
| 201312 | AAP-1B | 1.505・1.515・1.525… 2.005 | 51 | 1.03kg |
| 201321 | AAP-2A | 2.005・2.015・2.025… 2.505 | 51 | 1.06kg |
| 201322 | AAP-2B | 2.505・2.515・2.525… 3.005 | 51 | 1.10kg |
| 201331 | AAP-3A | 3.005・3.015・3.025… 3.505 | 51 | 1.15kg |
| 201332 | AAP-3B | 3.505・3.515・3.525… 4.005 | 51 | 1.20kg |
| 201341 | AAP-4A | 4.005・4.015・4.025… 4.505 | 51 | 1.26kg |
| 201342 | AAP-4B | 4.505・4.515・4.525… 5.005 | 51 | 1.34kg |
| 201351 | AAP-5A | 5.005・5.015・5.025… 5.505 | 51 | 1.42kg |
| 201352 | AAP-5B | 5.505・5.515・5.525… 6.005 | 51 | 1.50kg |
| 201361 | AAP-6A | 6.005・6.015・6.025… 6.505 | 51 | 1.60kg |
| 201362 | AAP-6B | 6.505・6.515・6.525… 7.005 | 51 | 2.08kg |
| 201371 | AAP-7A | 7.005・7.015・7.025… 7.505 | 51 | 2.29kg |
| 201372 | AAP-7B | 7.505・7.515・7.525… 8.005 | 51 | 2.41kg |
| 201381 | AAP-8A | 8.005・8.015・8.025… 8.505 | 51 | 2.54kg |
| 201382 | AAP-8B | 8.505・8.515・8.525… 9.005 | 51 | 2.67kg |
| 201391 | AAP-9A | 9.005・9.015・9.025… 9.505 | 51 | 2.81kg |
| 201392 | AAP-9B | 9.505・9.515・9.525… 10.005 | 51 | 2.97kg |

## AP series (0.100mm step)

| Order No. | Model No. | Nominal size (mm) | Pin per set | Weight (Including case) |
|---|---|---|---|---|
| 201601 | AP-1 | 1.000・1.100・1.200…… 5.000 | 41 | 1.08kg |
| 201602 | AP-2 | 5.000・5.100・5.200……10.000 | 51 | 2.38kg |
| 201603 | AP-3 | 10.000・10.10・10.20……15.00 | 51 | 3.97kg |
| 201604 | AP-4 | 15.00・15.10・15.20……20.00 | 51 | 5.98kg |

## AS series (0.010mm step)

Consist of pin gauge in the range of ± 0.05mm based on integer number size

| Model No. | Nominal size (mm) | Pin per set |
|---|---|---|
| AS-1 | 0.950・0.960…… 1.000…… 1.040・1.050<br>1.950・1.960…… 2.000…… 2.040・2.050<br>2.950・2.960…… 3.000…… 3.040・3.050<br>3.950・3.960…… 4.000…… 4.040・4.050<br>4.950・4.960…… 5.000…… 5.040・5.050 | 55 |
| AS-2 | 5.950・5.960…… 6.000…… 6.040・6.050<br>6.950・6.960…… 7.000…… 7.040・7.050<br>7.950・7.960…… 8.000…… 8.040・8.050<br>8.950・8.960…… 9.000…… 9.040・9.050<br>9.950・9.960……10.000……10.04・10.05 | 55 |
| AS-3 | 10.95・10.96……11.00……11.04・11.05<br>11.95・11.96……12.00……12.04・12.05<br>12.95・12.96……13.00……13.04・13.05<br>13.95・13.96……14.00……14.04・14.05<br>14.95・14.96……15.00……15.04・15.05 | 55 |
| AS-4 | 15.95・15.96……16.00……16.04・16.05<br>16.95・16.96……17.00……17.04・17.05<br>17.95・17.96……18.00……18.04・18.05<br>18.95・18.96……19.00……19.04・19.05<br>19.95・19.96……20.00……20.04・20.05 | 55 |
| ASP-1 | 0.450・0.460…… 0.500…… 0.540・0.550<br>1.450・1.460…… 1.500…… 1.540・1.550<br>2.450・2.460…… 2.500…… 2.540・2.550<br>3.450・3.460…… 3.500…… 3.540・3.550<br>4.450・4.460…… 4.500…… 4.540・4.550 | 55 |
| ASP-2 | 5.450・5.460…… 5.500…… 5.540・5.550<br>6.450・6.460…… 6.500…… 6.540・6.550<br>7.450・7.460…… 7.500…… 7.540・7.550<br>8.450・8.460…… 8.500…… 8.540・8.550<br>9.450・9.460…… 9.500…… 9.540・9.550 | 55 |
| ASP-3 | 10.45・10.46……10.50……10.54・10.55<br>11.45・11.46……11.50……11.54・11.55<br>12.45・12.46……12.50……12.54・12.55<br>13.45・13.46……13.50……13.54・13.55<br>14.45・14.46……14.50……14.54・14.55 | 55 |
| ASP-4 | 15.45・15.46……15.50……15.54・15.55<br>16.45・16.46……16.50……16.54・16.55<br>17.45・17.46……17.50……17.54・17.55<br>18.45・18.46……18.50……18.54・18.55<br>19.45・19.46……19.50……19.54・19.55 | 55 |

# STEEL PIN GAUGE SET PM • PG SERIES

Available from 1pc. Either plus [+] or minus [-] tolerance set.

**SUB-ZERO (Cryogenic hardened) TREATMENT**

**※ 2,700mm or over**

HOW TO MOVIE


Master for calibration using length measuring machine▶ Master Gauge P47

For storage and maintenance▶ Pin Gauge Accessories P52～55

For holding pin gauge▶ Pin Vise P56～57

Rust prevention▶ Zerust Film for Steel P370


## PM series⊕⊖

FEATURES

- Pin Gauges with tolerance of 0 to plus 2μm or 0 to minus 2μm based on nominal size
- For over 1.000mm, nominal size and P (for Plus) or M (for Minus) is marked on gagues
- Please indicate "plus" or "minus" when ordering
- Sets from PM-0B to PM-6B are with a pin vise.
- With certificate of compliance
- Individual Pin Gauges are also available

SPECIFICATIONS [Standard stock]

| Size (mm) | Step (mm) | Length (mm) | Tolerance (μm) | Out of Roundness (μm) | Diameter Inequality (μm) | Hardness (HV) |
|---|---|---|---|---|---|---|
| 0.20… 0.99 | 0.01 step | 40 | Plus or Minus 0~2 | 1.0 | 1.0 | More than 720 |
| 1.00… 2.69 | | 50 | | | | |
| 2.70…10.00 | | | | | | More than 650 |

※5mm from each edge is not precision guaranteed (Length 30mm over)

(0.01mm step)

| Model No. | Nominal size (mm) | Pins per set | Pin Vise | Weight (Including case) |
|---|---|---|---|---|
| PM-0A | 0.20・0.21・0.22…… 0.50 | 31 | – | 0.95kg |
| PM-0B | 0.50・0.51・0.52…… 1.00 | 51 | PV-0B | 1.02kg |
| PM-1A | 1.00・1.01・1.02…… 1.50 | 51 | PV-1A | 1.03kg |
| PM-1B | 1.50・1.51・1.52…… 2.00 | 51 | PV-1B | 1.06kg |
| PM-2A | 2.00・2.01・2.02…… 2.50 | 51 | PV-2A | 1.09kg |
| PM-2B | 2.50・2.51・2.52…… 3.00 | 51 | PV-2B | 1.13kg |
| PM-3A | 3.00・3.01・3.02…… 3.50 | 51 | PV-3A | 1.18kg |
| PM-3B | 3.50・3.51・3.52…… 4.00 | 51 | PV-3B | 1.18kg |
| PM-4A | 4.00・4.01・4.02…… 4.50 | 51 | PV-4A | 1.18kg |
| PM-4B | 4.50・4.51・4.52…… 5.00 | 51 | PV-4B | 1.18kg |
| PM-5A | 5.00・5.01・5.02…… 5.50 | 51 | PV-5A | 1.18kg |
| PM-5B | 5.50・5.51・5.52…… 6.00 | 51 | PV-5B | 1.18kg |
| PM-6A | 6.00・6.01・6.02…… 6.50 | 51 | PV-6A | 1.18kg |
| PM-6B | 6.50・6.51・6.52…… 7.00 | 51 | PV-6B | 1.18kg |
| PM-7A | 7.00・7.01・7.02…… 7.50 | 51 | – | 1.53kg |
| PM-7B | 7.50・7.51・7.52…… 8.00 | 51 | | 1.53kg |
| PM-8A | 8.00・8.01・8.02…… 8.50 | 51 | – | 1.53kg |
| PM-8B | 8.50・8.51・8.52…… 9.00 | 51 | | 1.53kg |
| PM-9A | 9.00・9.01・9.02…… 9.50 | 51 | – | 1.53kg |
| PM-9B | 9.50・9.51・9.52……10.00 | 51 | | 1.53kg |

## PG series⊕⊖

FEATURES

- Pin Gauges with tolerance of +2 to +5μm or -2 to -5μm based on nominal size
- Please indicate "plus" or "minus" when ordering
- With certificate of compliance
- Individual Pin Gauges are also available

※ Pin Vise is not included
※ PG-00 and PG-3 differ in size step

SPECIFICATIONS [Standard stock]

| Nominal size (mm) | Step (mm) | Length (mm) | Tolerance (μm) | Out of Roundness (μm) | Diameter Inequality (μm) | Hardness (HV) |
|---|---|---|---|---|---|---|
| 0.100… 0.190 | 0.010 step | 20 | Plus or Minus 2~5 | 1.5 | 1.5 | More than 720 |
| 0.200… 0.290 | | 40 | | | | |
| 0.300… 0.975 | 0.025 step | | | | | |
| 1.000… 2.675 | | 50 | | | | More than 650 |
| 2.700…12.975 | | | | | | |
| 13.000…19.000 | 0.1 step | | ※ | | | |

※The tolerance of 13.000~19.000 Pin Gauges is with Plus or Minus 1~5μm
※5mm from each edge is not precision guaranteed (Length 30mm over)

| Model No. | Nominal size | Step | Pins per set | Weight (Including case) |
|---|---|---|---|---|
| PG-00 | 0.100・ 0.110・ 0.120 … 0.290 | 0.010 step | 20 | 0.89kg |
| PG-0 | 0.300・ 0.325・ 0.350 … 1.525 | 0.025 step | 50 | 0.99kg |
| PG-1 | 1.550・ 1.575・ 1.600 … 6.275 | | 190 | 2.52kg |
| PG-2A | 6.300・ 6.325・ 6.350 … 9.775 | | 140 | 4.31kg |
| PG-2B | 9.800・ 9.825・ 9.850 …12.525 | | 110 | 5.73kg |
| PG-2C | 12.550・12.575・12.600 …12.975 | | 18 | 2.20kg |
| PG-3 | 13.000・13.100・13.200 …19.000 | 0.100 step | 61 | 6.29kg |


BLOCK GAUGE
PIN GAUGE
PIN VISE
PIN GAUGE ACCESSORIES
RING GAUGE
PLUG GAUGE
LIMIT GAUGE
THICKNESS GAUGE
TAPER GAUGE
WELDING GAUGE
OTHER GAUGES

## STEEL PIN GAUGE WITH CENTER HOLE AC SERIES

T

Suitable for measuring run out of work

**SUB-ZERO (Cryogenic hardened) TREATMENT**

Master for calibration using length measuring machine▶ Master Gauge P47
For storage and maintenance▶ Pin Gauge Accessories P52 ~55
For holding pin gauge▶ Pin Vise P56 ~57
Rust prevention▶ Zerust Film for Steel P370

FEATURES
- Smooth and easy measurement of run out
- For checking surface deflection of gear wheel and measureing run out of gear wheel and pulley
- For measuring squareness between hole and side face
- Nominal size is marked on gauge
- Individual Pin Gauges are also available (plastic case included)

SPECIFICATIONS [Standard stock]

| Nominal size (mm) | Step (mm) | Length (mm) | Tolerance (μm) | Out of Roundness (μm) | Diameter Inequality (μm) | Runout Tolerance (μm) | Center hole Angle | Center hole Diameter (mm) | Hardness (HV) |
|---|---|---|---|---|---|---|---|---|---|
| 2.00··· 2.99 | 0.01 step | 50 | ±2.0 | 1.0 | 1.0 | Within 2.0 | 60° | 1.3 | More than 650 |
| 3.00··· 3.99 | | | | | | | | 1.8 | |
| 4.00··· 6.99 | | | | | | | | 2.4 | |
| 7.00···10.00 | | | | | | | | 4.0 | |

※5mm from each edge is not precision guaranteed (Length 30mm over)

## MASTER GAUGE

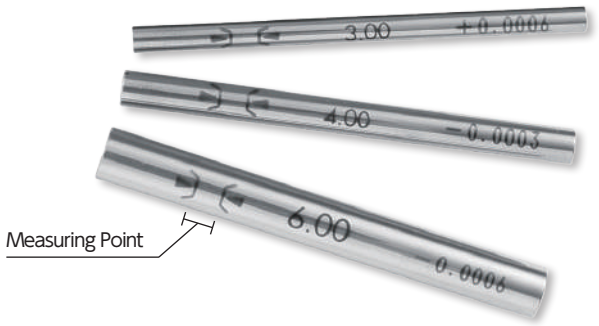
JCSS Calibration available

T

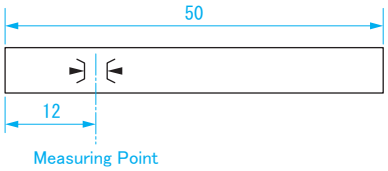
Actual value of the measuring point is marked on pin gauge !
Can be used as a measurement master.

**SUB-ZERO (Cryogenic hardened) TREATMENT**
**※ 2,700mm or over**

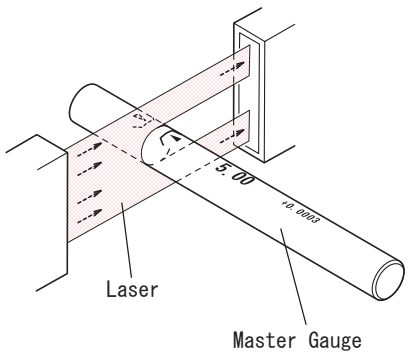
For storage and maintenance▶ Pin Gauge Accessories P52 ~55
Rust prevention▶ Zerust Film for Steel P370




● DIMENSIONS Units: mm




● Example of use




When measuring the actual dimensions of the outside diameter of a specific area with a laser outside diameter measuring instrument, the boundary is not covered by the laser beam, thus improving the zero-point adjustment accuracy of the laser outside diameter measuring instrument

MATERIAL
- steel

FEATURES
- Actual value of the measuring point is marked on pin gauge
- Plastic case included

SPECIFICATIONS [Standard stock]

| Nominal size (mm) | Step (mm) | Length (mm) | Uncertainty (μm) | Hardness (HV) |
|---|---|---|---|---|
| 1.00··· 2.69 | 0.01 step | 50 | 0.4 | More than 720 |
| 2.70··· 6.00 | | | | More than 650 |

# STEEL PIN GAUGE SET WITH HANDLE AG SERIES

Available from 1pc. Handle enables indirect contact with hand and gauge to avoid thermal expansion.

**SUB-ZERO (Cryogenic hardened) TREATMENT**
**※ 2,700mm or over**

HOW TO MOVIE

Rust prevention▶
Zerust Film for Steel
P370

FEATURES

- AA series Pin Gauge with plastic handle
- Easy to handle for measuring
- Less affected by temperature
- The handle protects Pin Gauges from skin oil and salts
- Size is marked on each plastic handle
- With certificate of compliance
- Individual pin gauges are also available

SPECIFICATIONS [Standard stock]

| Nominal size (mm) | Step (mm) | Length (mm) | | Tolerance (μm) | Out of Roundness (μm) | Diameter Inequality (μm) | Hardness (HV) |
|---|---|---|---|---|---|---|---|
| | | Gauge Length | Overall Length | | | | |
| 0.07··· 0.09 | 0.01 step | 3 | 41 | ± 0.5 | 0.5 | 0.5 | More than 720 |
| 0.10··· 0.29 | | | | ± 0.8 | | 0.8 | |
| 0.30··· 0.49 | | 10 | 48 | | | | |
| 0.50··· 0.99 | | 20 | 58 | | | | |
| 1.00··· 2.69 | | 30 | 71 | | | | |
| 2.70··· 5.00 | | | | | | | More than 650 |
| 5.01···10.00 | | | 76 | | | | |

※ Exceptionally, for 1.00mm Pin Gauge in Set No. AG-0B -- Gauge Length: 20mm / Overall Length: 58mm
※ 5mm from each edge is not precision guaranteed (Length 30mm over)

(0.01mm step)

| Order No. | Model No. | Nominal size (mm) | Pins per set | Weight (Including case) |
|---|---|---|---|---|
| 203001 | AG-0A | 0.20•0.21•0.22··· 0.50 | 31 | 0.92kg |
| 203002 | AG-0B | 0.50•0.51•0.52··· 1.00 | 51 | 0.99kg |
| 203011 | AG-1A | 1.00•1.01•1.02··· 1.50 | 51 | 1.08kg |
| 203012 | AG-1B | 1.50•1.51•1.52··· 2.00 | 51 | 1.10kg |
| 203021 | AG-2A | 2.00•2.01•2.02··· 2.50 | 51 | 1.13kg |
| 203022 | AG-2B | 2.50•2.51•2.52··· 3.00 | 51 | 1.17kg |
| 203031 | AG-3A | 3.00•3.01•3.02··· 3.50 | 51 | 1.22kg |
| 203032 | AG-3B | 3.50•3.51•3.52··· 4.00 | 51 | 1.28kg |
| 203041 | AG-4A | 4.00•4.01•4.02··· 4.50 | 51 | 1.34kg |
| 203042 | AG-4B | 4.50•4.51•4.52··· 5.00 | 51 | 1.41kg |
| 203051 | AG-5A | 5.00•5.01•5.02··· 5.50 | 51 | 1.82kg |
| 203052 | AG-5B | 5.50•5.51•5.52··· 6.00 | 51 | 1.91kg |
| 203061 | AG-6A | 6.00•6.01•6.02··· 6.50 | 51 | 2.00kg |
| 203062 | AG-6B | 6.50•6.51•6.52··· 7.00 | 51 | 2.10kg |
| 203071 | AG-7A | 7.00•7.01•7.02··· 7.50 | 51 | 2.21kg |
| 203072 | AG-7B | 7.50•7.51•7.52··· 8.00 | 51 | 2.33kg |
| 203081 | AG-8A | 8.00•8.01•8.02··· 8.50 | 51 | 2.51kg |
| 203082 | AG-8B | 8.50•8.51•8.52··· 9.00 | 51 | 2.64kg |
| 203091 | AG-9A | 9.00•9.01•9.02··· 9.50 | 51 | 2.79kg |
| 203092 | AG-9B | 9.50•9.51•9.52··· 10.00 | 51 | 2.94kg |

Sizes available: 0.07 ~ 10.00mm (Please contact us with request)

# STEEL PIN GAUGE FOR GEAR MEASUREMENT OP SERIES

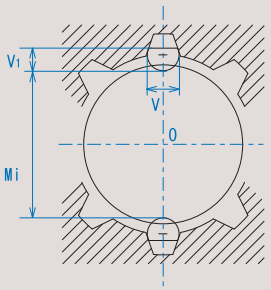
Available from 1pc. Must-have item for gear wheel measurement.

**SUB-ZERO (Cryogenic hardened) TREATMENT**
**※ 2,700mm or over**

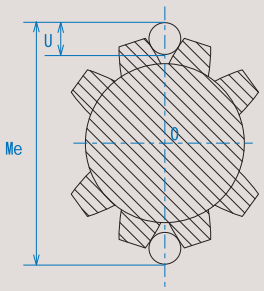
Master for calibration using length measuring machine ▶ Master Gauge P47
Rust prevention ▶ Zerust Film for Steel P370

## How To Measure

■For inside diameter




■For outside diameter




Over-pin diameter is measured by measuring the diameter after placing two pin gauges in opposite grooves of the gear as shown above

FEATURES

- For quick and accurate over-pin diameter measurement of internal and external gears (magnetize the pin for easy handling)
- OP series gauge is for measuring over pin diameter of gears and involute splines. Each module is a set of two pins each for measuring external gear over-pin-diameter, and internal gear over-pin-diameter.
- Individual pin gauges are also available (plastic case included)
- Custom made pin gauges are available upon request

To determine proper pin gauge, please note the following

1) For inside diameter or outside diameter
2) Module or diametrical pitch
3) Number of teeth
4) Pressure angle
5) Profile shift coefficient
6) Torsion angle

## OP-1

| Module (mm) | Inner dia. (hole) pin diameter(V) × groove height($V_1$) (mm) | Outer (axis) pin diameter(U) (mm) |
|---|---|---|
| 0.5 | 1.00 × 0.84 | 0.90 |
| 1.0 | 2.00 × 1.68 | 1.80 |
| 1.25 | 2.50 × 2.10<br>2.40 × 2.00 ※1 | 2.25<br>— |
| 1.667 | 3.333 × 2.80 | 3.00 |
| 2.5 | 5.00 × 4.26 | 4.50 |
| 5.0 | 10.00 × 8.40 | 9.00 |
| 10.0 | 20.00 × 16.80 | 18.00 |

※ 1 Module 1.25 is used for tooth 8・12

## OP-2

| Module (mm) | Inner dia (hole) pin diameter(V) × groove height($V_1$) (mm) | Outer (axis) pin diameter(U) (mm) |
|---|---|---|
| 0.75 | 1.50 × 1.20<br>— | 1.35<br>1.40 ※2 |
| 1.5 | 3.00 × 2.52 | 2.70 |
| 2.0 | 4.00 × 3.36 | 3.60 |
| 3.0 | 6.00 × 5.04 ※1 | 5.40 |
| 3.75 | 7.50 × 6.30<br>— | 6.75<br>7.00 ※3 |
| 4.5 | 9.00 × 7.56 | 8.10 |
| 6.0 | 12.00 × 10.08 | 10.80 |
| 7.5 | 15.00 × 12.60 | 13.50 |

※ 2 Module 0.75 is used for tooth 6・7・8・9・10・11

※ 3 Module 3.75 is used for tooth 6・7・8・9・10・11

## OP-3

This is combination set of OP-1 and OP-2
(Please refer to the table above for sizes.)

SPECIFICATIONS

| | |
|---|---|
| **Dimensional deviation(V and U)** | 0.90mm~10.00mm : ±1 μm<br>10.01mm~20.00mm : ±1.5μm |
| **Out of Roundness** | 0.90mm~10.00mm : 1 μm<br>10.01mm~20.00mm : 1.5μm |
| **Diameter Inequality** | 0.90mm~10.00mm : 2 μm<br>10.01mm~20.00mm : 3 μm |
| **Length** | 50mm |
| **Hardness** | 0.90mm~ 2.69mm : More than HV720<br>2.70mm~20.00mm : More than HV650 |

※ 5mm from each edge is not precision guaranteed (Length 30mm over)

# CARBIDE PIN GAUGE SET TAA・TAG SERIES

JCSS Calibration available (TAA series)

HOW TO MOVIE

Available from 1pc. Made of highly-durable material.
High resistance to thermal expansion and outstanding economy.
JCSS calibration is also available. (TAA series・φ 0.50 ~ 20.00mm)

For storage and maintenance▶ Pin Gauge Accessories P52 ~55

For holding pin gauge▶ Pin Vise P56 ~57

MATERIAL

●Gauge: Carbide

FEATURES

●About 20-30 times more durable than Steel Pin Gauge
●The coefficient of thermal expansion is small (1/2 of steel, $5\times10^{-6}$/K) so the changes due to temperature are small
●Less likely to be damaged due to high hardness
●Even if broken, dimension does not change (no burrs on broken edges)
●Economical - longer span of periodic calibration compared to steel gauge
●For above 1.00mm, nominal size is marked on gauge
●With certificate of compliance
●Individual pin gauges are also available (plastic case included for TAA series)

## TAA series (0.20 ~ 20.00mm)

SPECIFICATIONS [Standard stock]

| Nominal size (mm) | Step (mm) | Length (mm) | Tolerance (μm) | Out of Roundness (μm) | Diameter Inequality (μm) | Hardness (HV) |
|---|---|---|---|---|---|---|
| 0.20··· 0.99 | 0.01step | 30 | ±1 | 0.8 | 0.8 | More than 1300 |
| 1.00··· 2.99 | | 38 | | | | |
| 3.00···10.00 | | 50 | | | | |
| 10.01···20.00 | | | ±1.5 | 1.3 | 1.3 | |

※5mm from each edge is not precision guaranteed (Length 30mm over)

(0.01mm step)

| Order No. | Model No. | Nominal size (mm) | Pins per set | Weight (Including case) |
|---|---|---|---|---|
| 204002 | TAA-0B | 0.50・0.51・0.52··· 1.00 | 51 | 0.99kg |
| 204011 | TAA-1A | 1.00・1.01・1.02··· 1.50 | 51 | 1.01kg |
| 204012 | TAA-1B | 1.50・1.51・1.52··· 2.00 | 51 | 1.05kg |
| 204021 | TAA-2A | 2.00・2.01・2.02··· 2.50 | 51 | 1.09kg |
| 204022 | TAA-2B | 2.50・2.51・2.52··· 3.00 | 51 | 1.15kg |
| 204031 | TAA-3A | 3.00・3.01・3.02··· 3.50 | 51 | 1.29kg |
| 204032 | TAA-3B | 3.50・3.51・3.52··· 4.00 | 51 | 1.39kg |
| 204041 | TAA-4A | 4.00・4.01・4.02··· 4.50 | 51 | 1.50kg |
| 204042 | TAA-4B | 4.50・4.51・4.52··· 5.00 | 51 | 1.63kg |
| 204051 | TAA-5A | 5.00・5.01・5.02··· 5.50 | 51 | 1.78kg |
| 204052 | TAA-5B | 5.50・5.51・5.52··· 6.00 | 51 | 1.94kg |
| 204061 | TAA-6A | 6.00・6.01・6.02··· 6.50 | 51 | 2.11kg |
| 204062 | TAA-6B | 6.50・6.51・6.52··· 7.00 | 51 | 2.30kg |
| 204071 | TAA-7A | 7.00・7.01・7.02··· 7.50 | 51 | 2.99kg |
| 204072 | TAA-7B | 7.50・7.51・7.52··· 8.00 | 51 | 3.20kg |
| 204081 | TAA-8A | 8.00・8.01・8.02··· 8.50 | 51 | 3.44kg |
| 204082 | TAA-8B | 8.50・8.51・8.52··· 9.00 | 51 | 3.68kg |
| 204091 | TAA-9A | 9.00・9.01・9.02··· 9.50 | 51 | 3.95kg |
| 204092 | TAA-9B | 9.50・9.51・9.52···10.00 | 51 | 4.22kg |

## TAG series (with Handle) (0.20~10.00mm)

※TAA series Pin Gauge with plastic handle

SPECIFICATIONS [Standard stock]

| Nominal size (mm) | Step (mm) | Length (mm) | | Tolerance (μm) | Out of Roundness (μm) | Diameter Inequality (μm) | Hardness (HV) |
|---|---|---|---|---|---|---|---|
| | | Gauge Length | Overall Length | | | | |
| 0.20··· 0.99 | 0.01step | 25 | 63 | ±1 | 0.8 | 0.8 | More than 1300 |
| 1.00··· 2.99 | | 28 | 69 | | | | |
| 3.00··· 5.00 | | 30 | 71 | | | | |
| 5.01···10.00 | | | 76 | | | | |

※5mm from each edge is not precision guaranteed (Length 30mm over)

(0.01mm step)

| Order No. | Model No. | Nominal size (mm) | Pins per set | Weight (Including case) |
|---|---|---|---|---|
| 205002 | TAG-0B | 0.50・0.51・0.52··· 1.00 | 51 | 0.99kg |
| 205011 | TAG-1A | 1.00・1.01・1.02··· 1.50 | 51 | 1.09kg |
| 205012 | TAG-1B | 1.50・1.51・1.52··· 2.00 | 51 | 1.12kg |
| 205021 | TAG-2A | 2.00・2.01・2.02··· 2.50 | 51 | 1.17kg |
| 205022 | TAG-2B | 2.50・2.51・2.52··· 3.00 | 51 | 1.22kg |
| 205031 | TAG-3A | 3.00・3.01・3.02··· 3.50 | 51 | 1.36kg |
| 205032 | TAG-3B | 3.50・3.51・3.52··· 4.00 | 51 | 1.46kg |
| 205041 | TAG-4A | 4.00・4.01・4.02··· 4.50 | 51 | 1.58kg |
| 205042 | TAG-4B | 4.50・4.51・4.52··· 5.00 | 51 | 1.71kg |
| 205051 | TAG-5A | 5.00・5.01・5.02··· 5.50 | 51 | 2.18kg |
| 205052 | TAG-5B | 5.50・5.51・5.52··· 6.00 | 51 | 2.34kg |
| 205061 | TAG-6A | 6.00・6.01・6.02··· 6.50 | 51 | 2.52kg |
| 205062 | TAG-6B | 6.50・6.51・6.52··· 7.00 | 51 | 2.71kg |
| 205071 | TAG-7A | 7.00・7.01・7.02··· 7.50 | 51 | 2.91kg |
| 205072 | TAG-7B | 7.50・7.51・7.52··· 8.00 | 51 | 3.13kg |
| 205081 | TAG-8A | 8.00・8.01・8.02··· 8.50 | 51 | 3.41kg |
| 205082 | TAG-8B | 8.50・8.51・8.52··· 9.00 | 51 | 3.66kg |
| 205091 | TAG-9A | 9.00・9.01・9.02··· 9.50 | 51 | 3.92kg |
| 205092 | TAG-9B | 9.50・9.51・9.52···10.00 | 51 | 4.19kg |

# CERAMIC PIN GAUGE SET CAA・CAG SERIES

JCSS Calibration available (CAA series)

HOW TO MOVIE

Available from 1pc. Made of highly-durable material with free from rust.
Excellent workability and economy.
JCSS calibration is also available. (CAA series・ϕ 0.50 ～ 20.00mm)

For storage and maintenance▶ Pin Gauge Accessories P52 ～55

For holding pin gauge▶ Pin Vise P56 ～57

MATERIAL
- Gauge: Ceramic (Zirconia)

FEATURES
- Strong against abrasion
- Free from rust and corrosion, and easy maintenance
- Ceramic material is less susceptible to abrasion and aged deterioration than steel
- Non-magnetic
- For above 1.50mm, nominal size is laser marked on gauge
- With certificate of compliance
- Individual pin gauges are also available (plastic case included for CAA series)

## Comparison between carbide and steel materials

| Item \ Material | | Ceramics (Zirconia) | Cemented Carbide | Steel |
|---|---|---|---|---|
| Specific Gravity | | 6 | 14.8 | 7.8 |
| Hardness | HV | 1,250 | 1,300 | 650～720 |
| Bending strength | MPa | 1,000 | 1,960 | 1,960 |
| Young's Modulus | GPa | 200 | 610 | 205 |
| Coefficient of thermal expansion | $10^{-6}$/K | 9.5 | 5.5 | 11.5 |
| Heat conductivity | W/m·K | 3 | 79.5 | 54.4 |

※Values in the table are for reference only. Please contact us for detailed product values.

## CAA series (0.20 ～ 20.00mm)

SPECIFICATIONS [Standard stock]

| Nominal size (mm) | Step (mm) | Length (mm) | Tolerance (μm) | Out of Roundness (μm) | Diameter Inequality (μm) | Hardness (HV) |
|---|---|---|---|---|---|---|
| 0.20… 2.99 | 0.01 step | 38 | ±1 | 0.8 | 0.8 | More than 1250 |
| 3.00…10.00 | | 50 | | | | |
| 10.01…20.00 | | | ±1.5 | 1.3 | 1.3 | |

※5mm from each edge is not precision guaranteed (Length 30mm over)
※ Length can be changed without any prior notice due to improvement of product

(0.01mm step)

| Order No. | Model No. | Nominal size (mm) | Pins per set | Weight (Including case) |
|---|---|---|---|---|
| 206002 | CAA-0B | 0.50・0.51・0.52… 1.00 | 51 | 0.98kg |
| 206011 | CAA-1A | 1.00・1.01・1.02… 1.50 | 51 | 0.99kg |
| 206012 | CAA-1B | 1.50・1.51・1.52… 2.00 | 51 | 1.01kg |
| 206021 | CAA-2A | 2.00・2.01・2.02… 2.50 | 51 | 1.02kg |
| 206022 | CAA-2B | 2.50・2.51・2.52… 3.00 | 51 | 1.05kg |
| 206031 | CAA-3A | 3.00・3.01・3.02… 3.50 | 51 | 1.11kg |
| 206032 | CAA-3B | 3.50・3.51・3.52… 4.00 | 51 | 1.15kg |
| 206041 | CAA-4A | 4.00・4.01・4.02… 4.50 | 51 | 1.20kg |
| 206042 | CAA-4B | 4.50・4.51・4.52… 5.00 | 51 | 1.25kg |
| 206051 | CAA-5A | 5.00・5.01・5.02… 5.50 | 51 | 1.31kg |
| 206052 | CAA-5B | 5.50・5.51・5.52… 6.00 | 51 | 1.38kg |
| 206061 | CAA-6A | 6.00・6.01・6.02… 6.50 | 51 | 1.45kg |
| 206062 | CAA-6B | 6.50・6.51・6.52… 7.00 | 51 | 1.53kg |
| 206071 | CAA-7A | 7.00・7.01・7.02… 7.50 | 51 | 2.09kg |
| 206072 | CAA-7B | 7.50・7.51・7.52… 8.00 | 51 | 2.18kg |
| 206081 | CAA-8A | 8.00・8.01・8.02… 8.50 | 51 | 2.28kg |
| 206082 | CAA-8B | 8.50・8.51・8.52… 9.00 | 51 | 2.38kg |
| 206091 | CAA-9A | 9.00・9.01・9.02… 9.50 | 51 | 2.49kg |
| 206092 | CAA-9B | 9.50・9.51・9.52…10.00 | 51 | 2.60kg |

## CAG Series (with Handle) (0.20 ～ 10.00mm)

※CAA series Pin Gauge with plastic handle

SPECIFICATIONS [Standard stock]

| Nominal size (mm) | Step (mm) | Length (mm) Gauge Length | Length (mm) Overall Length | Tolerance (μm) | Out of Roundness (μm) | Diameter Inequality (μm) | Hardness (HV) |
|---|---|---|---|---|---|---|---|
| 0.20… 0.29 | 0.01 step | 3 | 41 | ±1 | 0.8 | 0.8 | More than 1250 |
| 0.30… 0.49 | | 10 | 48 | | | | |
| 0.50… 0.99 | | 28 | 66 | | | | |
| 1.00… 2.99 | | | 69 | | | | |
| 3.00… 5.00 | | 30 | 71 | | | | |
| 5.01…10.00 | | | 76 | | | | |

※5mm from each edge is not precision guaranteed (Length 30mm over)
※ Length can be changed without any prior notice due to improvement of product

(0.01mm step)

| Order No. | Model No. | Nominal size (mm) | Pins per set | Weight (Including case) |
|---|---|---|---|---|
| 206302 | CAG-0B | 0.50・0.51・0.52… 1.00 | 51 | 0.98kg |
| 206311 | CAG-1A | 1.00・1.01・1.02… 1.50 | 51 | 1.07kg |
| 206312 | CAG-1B | 1.50・1.51・1.52… 2.00 | 51 | 1.08kg |
| 206321 | CAG-2A | 2.00・2.01・2.02… 2.50 | 51 | 1.10kg |
| 206322 | CAG-2B | 2.50・2.51・2.52… 3.00 | 51 | 1.12kg |
| 206331 | CAG-3A | 3.00・3.01・3.02… 3.50 | 51 | 1.18kg |
| 206332 | CAG-3B | 3.50・3.51・3.52… 4.00 | 51 | 1.22kg |
| 206341 | CAG-4A | 4.00・4.01・4.02… 4.50 | 51 | 1.27kg |
| 206342 | CAG-4B | 4.50・4.51・4.52… 5.00 | 51 | 1.33kg |
| 206351 | CAG-5A | 5.00・5.01・5.02… 5.50 | 51 | 1.71kg |
| 206352 | CAG-5B | 5.50・5.51・5.52… 6.00 | 51 | 1.78kg |
| 206361 | CAG-6A | 6.00・6.01・6.02… 6.50 | 51 | 1.85kg |
| 206362 | CAG-6B | 6.50・6.51・6.52… 7.00 | 51 | 1.93kg |
| 206371 | CAG-7A | 7.00・7.01・7.02… 7.50 | 51 | 2.01kg |
| 206372 | CAG-7B | 7.50・7.51・7.52… 8.00 | 51 | 2.10kg |
| 206381 | CAG-8A | 8.00・8.01・8.02… 8.50 | 51 | 2.25kg |
| 206382 | CAG-8B | 8.50・8.51・8.52… 9.00 | 51 | 2.35kg |
| 206391 | CAG-9A | 9.00・9.01・9.02… 9.50 | 51 | 2.46kg |
| 206392 | CAG-9B | 9.50・9.51・9.52…10.00 | 51 | 2.58kg |

# PIN GAUGE CASE

Can be sold cases only.
You can choose from two types of inner cases, printed or non-printed of the dimensions of the storage space.

PCS-1
(NON-PRINTED)

PCS-1P
(PRINTED)

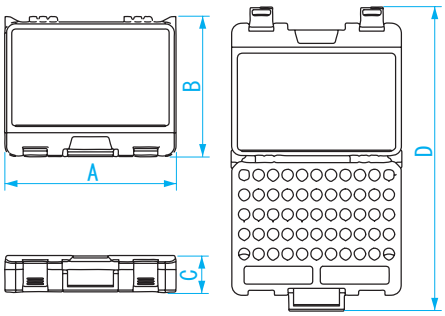


**Removable lid for use as tray**

**Stands**

**Stacks**

● DIMENSIONS




Units: mm

| Model No. | A | B | C | D※ |
|---|---|---|---|---|
| PCS-1、PCS-1P | 290 | 206 | 71 | (460) |
| PCS-2、PCS-2P | 325 | 265 | 71 | (578) |
| PCS-2W、PCS-2WP | 325 | 265 | 71 | (578) |

※ Reference only

| Order No. | Model No. | Applicable pin gauge set | Inner Board | No. of Slots |
|---|---|---|---|---|
| 992015 | PCS-1 | ■ STEEL<br>AA-00 ～ AA-6B<br>AH-0 ～ AH-2<br>AP-1<br>AA-0E ～ AA-6F<br>AAP-0B ～ AAP-6A<br>PG-00 ⊕⊖<br>PG-0 ⊕⊖<br>PM-0B ⊕⊖～ PM-6B ⊕⊖<br>■ CARBIDE<br>TAA-0B ～ TAA-6B<br>■ CERAMIC<br>CAA-0B ～ CAA-6B | NON-PRINTED | 55 |
| 992017 | PCS-1P | | PRINTED | |
| 992016 | PCS-2 | ■STEEL<br>AA-7A ～ AA-15B<br>AH-3 ～ AH-6<br>AP-2 ～ AP-3<br>AA-7C ～ AA-9F<br>AAP-6B ～ AAP-9B<br>PG-2C ⊕⊖<br>PM-7A ⊕⊖～ PM-9B ⊕⊖<br>■CARBIDE<br>TAA-7A ～ TAA-9B<br>■CERAMIC<br>CAA-7A ～ CAA-9B | NON-PRINTED | 55 |
| 992018 | PCS-2P | | PRINTED | |
| 992019 | PCS-2W | ■STEEL<br>AA-16A ～ AA-19B<br>AH-7 ～ AH-8<br>AP-4<br>※PCS-2W and PCS-2WP cannot be stored with plastic case for individual pin gauge | NON-PRINTED | 55 |
| 992020 | PCS-2WP | | PRINTED | |

# PIN GAUGE CASE

Can be sold cases only.
For Pin gauge set with shank, you can choose from two types of inner cases, printed or non-printed of the dimensions of the storage space.

W-PG1(+)
(PRINTED)

W-PG2B(+)
(PRINTED)

W-PG3(+)
(PRINTED)

W-4
(NON-PRINTED)

W-4P
(PRINTED)

| Order No. | Model No. | Standard | Applicable pin gauge set | Inner | No. of slots | Weight | Size (Approx: W×D×H) |
|---|---|---|---|---|---|---|---|
| 217100 | W-PG1(+) | For PG-1 | ■STEEL PG-1⊕ | PRINTED | 190 | 1.50kg | 325 × 265 × 71mm |
| 217101 | W-PG1(−) | | ■STEEL PG-1⊖ | | | | |
| 217210 | W-PG2A(+) | For PG-2A | ■STEEL PG-2A⊕ | PRINTED | 140 | 1.46kg | 325 × 265 × 71mm |
| 217211 | W-PG2A(−) | | ■STEEL PG-2A⊖ | | | | |
| 217221 | W-PG2B(+) | For PG-2B | ■STEEL PG-2B⊕ | PRINTED | 110 | 1.45kg | 325 × 265 × 71mm |
| 217222 | W-PG2B(−) | | ■STEEL PG-2B⊖ | | | | |
| 217300 | W-PG3(+) | For PG-3 | ■STEEL PG-3⊕ | PRINTED | 61 | 1.38kg | 325 × 265 × 71mm |
| 217301 | W-PG3(−) | | ■STEEL PG-3⊖ | | | | |
| 992324 | W-4 | Pin gauge with handle: Small | ■ STEEL AG-0A ～ AG-4B ■ CARBIDE TAG-0A ～ TAG-4B ■ CERAMIC CAG-0A ～ CAG-4B | NON-PRINTED | 55 | 0.82kg | 300 × 185 × 91mm |
| 992304 | W-4P | | | PRINTED | | | |
| 992325 | W-5 | Pin gauge with handle: Large | ■ STEEL AG-5A ～ AG-9B ■ CARBIDE TAG-5A ～ TAG-9B ■ CERAMIC CAG-5A ～ CAG-9B | NON-PRINTED | 55 | 1.02kg | 330 × 212 × 87mm |
| 992305 | W-5P | | | PRINTED | | | |

# PLASTIC CASE FOR INDIVIDUAL PIN GAUGE

Easy to distinguish pin gauges material by color. For storing individual pin gauges.

MATERIAL●ABS

| Appearance | | | | | |
|---|---|---|---|---|---|
| Order No. | 217941 | 217942 | 217943 | 217944 | 217945 |
| Model No. | PC-S-SM | PC-S-GR | PC-S-OR | PC-S-BL | PC-S-MW |
| Size | S | | | | |
| Material & Series | Steel | Carbide | Ceramic | Maintenance Line | PM Series |
| Applicable Pin Gauge Size | ~ 6.999 | | | | |
| Applicable Pin Gauge Case | PCS-1 | | | | |

| Appearance | | | | | |
|---|---|---|---|---|---|
| Order No. | 217951 | 217952 | 217953 | 217954 | 217955 |
| Model No. | PC-M-SM | PC-M-GR | PC-M-OR | PC-M-BL | PC-M-MW |
| Size | M | | | | |
| Material & Series | Steel | Carbide | Ceramic | Maintenance Line | PM Series |
| Applicable Pin Gauge Size | 7.000 ~ 15.99 | | | | |
| Applicable Pin Gauge Case | PCS-2 | | | | |

| Appearance | | | | |
|---|---|---|---|---|
| Order No. | 217961 | 217962 | 217963 | 217966 |
| Model No. | PC-L-SM | PC-L-GR | PC-L-OR | PC-LL-SM |
| Size | L | | | LL |
| Material & Series | Steel | Carbide | Ceramic | Steel |
| Applicable Pin Gauge Size | 16.00 ~ 21.99 | | | 22.00 ~ 30.00 |

## PIN GAUGE CABINET

Pin gauge storage cabinet can store up to
10 pin gauge sets

Applicable case : PCS-1, PCS-2

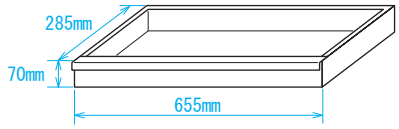
USE
- For storage of pin gauge set

MATERIAL
- SPCC (cold rolled steel)

FEATURES
- Deep drawer can store SK pin gauge carrying case

SPECIFICATIONS
- Applicable case: PCS-1, PCS-2
  ※Remove the cover case when storing
- Number of drawers: 5
  (2 sets each drawer, total of 10 sets can be stored)

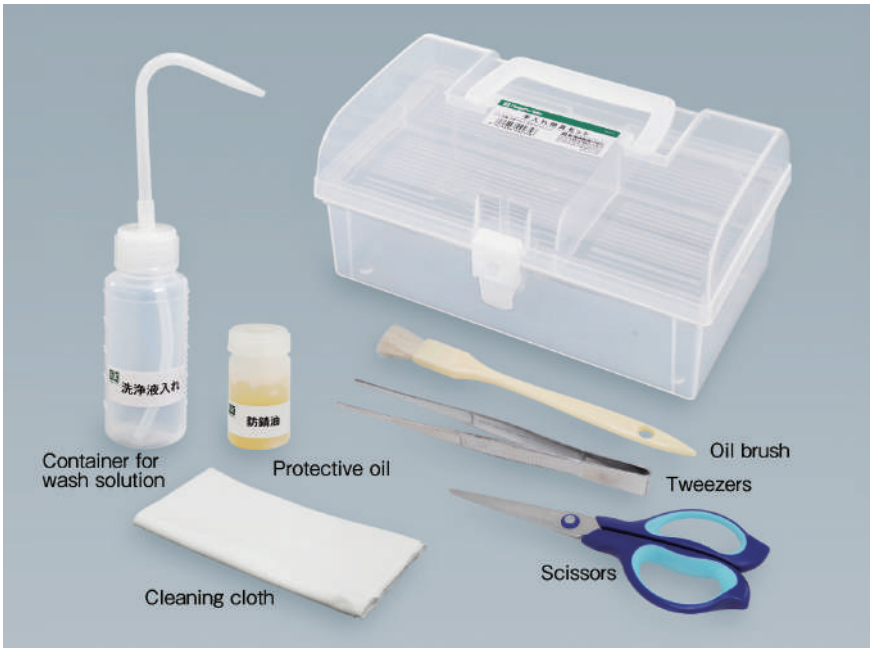
【Drawer dimensions (removed)】




※ Pin gauges are not included

| Order No. | Model No. | Product Dimensions (mm) | Weight |
|---|---|---|---|
| 217930 | P-5C | W825×D350×H630 | 36kg |

## MAINTENANCE KIT




USE
- For pin gauge maintenance

FEATURES
- Provide with plastic case for easy to carry

| Order No. | Product Dimensions (mm) | Weight |
|---|---|---|
| 992101 | W225×D135×H110 | 470g |

# ALUMINUM PIN VISE

HOW TO MOVIE

## 0.5mm of wide holding range on both sides

USE
- GO/NOGO pin gauge holder - double ended

MATERIAL
- Body: Aluminum

FEATURES
- With special made resin collet. **Aluminum Pin Vise is strong against deformation but soft for Pin Gauge.**
- Aluminum pin vise can be used as limit gauge by holding pin gauges at both GO (green) and NOGO (red) sides

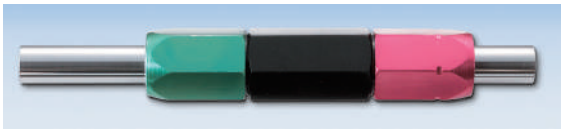
SPECIFICATIONS
- Holding range: 0.5mm

※With exception of APV-0A: 0.3mm

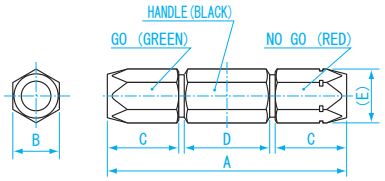
APV-17A

APV-6A

Example use



● DIMENSIONS




Units: mm

| Model No. | A | B | C | D | E |
|---|---|---|---|---|---|
| APV-0A～ 6B | 91 | 14 | 23 | 40 | 16 |
| APV-7A～ 9B | 90 | 17 | 26 | 34 | 19.5 |
| APV-10A～12B | 105 | 21 | 31 | 39 | 24 |
| APV-13A～15B | 111 | 24 | 31 | 45 | 27.5 |
| APV-16A～19B | 117 | 28 | 32 | 48 | 32 |

| Order No. | Model No. | Pin Gauge size (mm) | Weight |
|---|---|---|---|
| 216001 | APV-0A | 0.200～ 0.500 | 30g |
| 216002 | APV-0B | 0.500～ 1.000 | 30g |
| 216011 | APV-1A | 1.000～ 1.500 | 30g |
| 216012 | APV-1B | 1.500～ 2.000 | 30g |
| 216021 | APV-2A | 2.000～ 2.500 | 30g |
| 216022 | APV-2B | 2.500～ 3.000 | 30g |
| 216031 | APV-3A | 3.000～ 3.500 | 30g |
| 216032 | APV-3B | 3.500～ 4.000 | 30g |
| 216041 | APV-4A | 4.000～ 4.500 | 30g |
| 216042 | APV-4B | 4.500～ 5.000 | 30g |
| 216051 | APV-5A | 5.000～ 5.500 | 30g |
| 216052 | APV-5B | 5.500～ 6.000 | 30g |
| 216061 | APV-6A | 6.000～ 6.500 | 30g |
| 216062 | APV-6B | 6.500～ 7.000 | 30g |
| 216071 | APV-7A | 7.000～ 7.500 | 40g |
| 216072 | APV-7B | 7.500～ 8.000 | 40g |
| 216081 | APV-8A | 8.000～ 8.500 | 40g |
| 216082 | APV-8B | 8.500～ 9.000 | 40g |
| 216091 | APV-9A | 9.000～ 9.500 | 40g |
| 216092 | APV-9B | 9.500～ 10.000 | 40g |

| Order No. | Model No. | Pin Gauge size (mm) | Weight |
|---|---|---|---|
| 216101 | APV-10A | 10.000～10.50 | 65g |
| 216102 | APV-10B | 10.50 ～11.00 | 65g |
| 216111 | APV-11A | 11.00 ～11.50 | 65g |
| 216112 | APV-11B | 11.50 ～12.00 | 65g |
| 216121 | APV-12A | 12.00 ～12.50 | 65g |
| 216122 | APV-12B | 12.50 ～13.00 | 65g |
| 216131 | APV-13A | 13.00 ～13.50 | 80g |
| 216132 | APV-13B | 13.50 ～14.00 | 80g |
| 216141 | APV-14A | 14.00 ～14.50 | 80g |
| 216142 | APV-14B | 14.50 ～15.00 | 80g |
| 216151 | APV-15A | 15.00 ～15.50 | 80g |
| 216152 | APV-15B | 15.50 ～16.00 | 80g |
| 216161 | APV-16A | 16.00 ～16.50 | 110g |
| 216162 | APV-16B | 16.50 ～17.00 | 110g |
| 216171 | APV-17A | 17.00 ～17.50 | 110g |
| 216172 | APV-17B | 17.50 ～18.00 | 110g |
| 216181 | APV-18A | 18.00 ～18.50 | 110g |
| 216182 | APV-18B | 18.50 ～19.00 | 110g |
| 216191 | APV-19A | 19.00 ～19.50 | 110g |
| 216192 | APV-19B | 19.50 ～20.00 | 110g |

# SINGLE OPEN-END ALUMINUM PIN VISE

HOW TO MOVIE

## 0.5mm of wide holding range. Specialized in holding function.

USE
- Pin gauge holder

MATERIAL
- Body: Aluminum

FEATURES
- With special made resin collet.

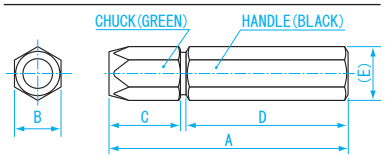
**Aluminum Pin Vise is strong against deformation but soft for Pin Gauge.**

SPECIFICATIONS
- Holding range: 0.5mm

※With exception of APV-0A-S: 0.3mm

APV-6A-S

● DIMENSIONS




Units: mm

| Model No. | A | B | C | D | E |
|---|---|---|---|---|---|
| APV-0A-S ～ 6B-S | 86 | 14 | 23 | 60 | 16 |
| APV-7A-S ～ 9B-S | 87 | 17 | 26 | 59 | 19.5 |

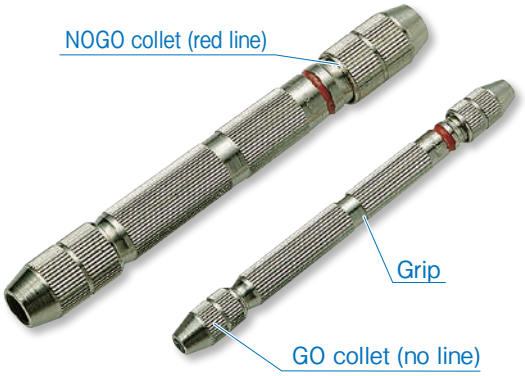
| Order No. | Model No. | Pin Gauge size (mm) | Weight |
|---|---|---|---|
| 217001 | APV-0A-S | 0.200～ 0.500 | 35g |
| 217002 | APV-0B-S | 0.500～ 1.000 | 35g |
| 217011 | APV-1A-S | 1.000～ 1.500 | 35g |
| 217012 | APV-1B-S | 1.500～ 2.000 | 35g |
| 217021 | APV-2A-S | 2.000～ 2.500 | 35g |
| 217022 | APV-2B-S | 2.500～ 3.000 | 35g |
| 217031 | APV-3A-S | 3.000～ 3.500 | 35g |
| 217032 | APV-3B-S | 3.500～ 4.000 | 35g |
| 217041 | APV-4A-S | 4.000～ 4.500 | 35g |
| 217042 | APV-4B-S | 4.500～ 5.000 | 35g |

| Order No. | Model No. | Pin Gauge size (mm) | Weight |
|---|---|---|---|
| 217051 | APV-5A-S | 5.000～ 5.500 | 35g |
| 217052 | APV-5B-S | 5.500～ 6.000 | 35g |
| 217061 | APV-6A-S | 6.000～ 6.500 | 35g |
| 217062 | APV-6B-S | 6.500～ 7.000 | 35g |
| 217071 | APV-7A-S | 7.000～ 7.500 | 43g |
| 217072 | APV-7B-S | 7.500～ 8.000 | 43g |
| 217081 | APV-8A-S | 8.000～ 8.500 | 43g |
| 217082 | APV-8B-S | 8.500～ 9.000 | 43g |
| 217091 | APV-9A-S | 9.000～ 9.500 | 43g |
| 217092 | APV-9B-S | 9.500～ 10.000 | 43g |

# PIN VISE

HOW TO MOVIE

Can be used as limit gauge by installing two different size pin gauges.
This is a significant cost savings over a limit plug gauge.




USE
- GO/NOGO pin gauge holder - double ended

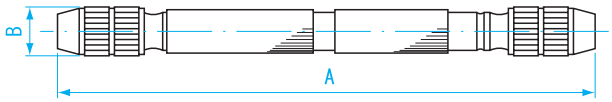
MATERIAL
- Chrome plated brass

FEATURES
- Pin vise can be used as limit gauge by holding pin gauges at both GO (no line) and NOGO (red line) sides

SPECIFICATIONS
- Holding range: 0.5mm

※With exception of PV-0A: 0.3mm

● DIMENSIONS



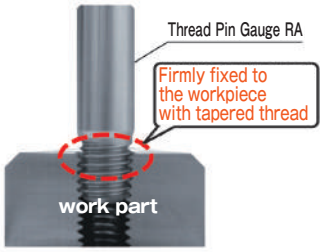

Units: mm

| Model No. | A | B |
|---|---|---|
| PV-0A ~ 2B | 98 | 9 |
| PV-3A ~ 4B | 104 | 11 |
| PV-5A ~ 6B | 114 | 14 |
| PV-7A ~ 9B | 135 | 17 |

| Order No. | Model No. | Pin Gauge Size (mm) | Part No. | | | Weight |
|---|---|---|---|---|---|---|
| | | | Ring | Grip | Collet | |
| 219001 | PV-0A | 0.200 ~ 0.500 | B1 | B2 | B00 | 30g |
| 219002 | PV-0B | 0.500 ~ 1.000 | B1 | B2 | B01 | 30g |
| 219011 | PV-1A | 1.000 ~ 1.500 | B1 | B2 | B3 | 30g |
| 219012 | PV-1B | 1.500 ~ 2.000 | B1 | B2 | B4 | 30g |
| 219021 | PV-2A | 2.000 ~ 2.500 | B1 | B2 | B5 | 30g |
| 219022 | PV-2B | 2.500 ~ 3.000 | B1 | B2 | B6 | 30g |
| 219031 | PV-3A | 3.000 ~ 3.500 | B7 | B8 | B9 | 40g |
| 219032 | PV-3B | 3.500 ~ 4.000 | B7 | B8 | B10 | 40g |
| 219041 | PV-4A | 4.000 ~ 4.500 | B7 | B8 | B11 | 40g |
| 219042 | PV-4B | 4.500 ~ 5.000 | B7 | B8 | B12 | 40g |
| 219051 | PV-5A | 5.000 ~ 5.500 | B13 | B14 | B15 | 70g |
| 219052 | PV-5B | 5.500 ~ 6.000 | B13 | B14 | B16 | 80g |
| 219061 | PV-6A | 6.000 ~ 6.500 | B13 | B14 | B17 | 80g |
| 219062 | PV-6B | 6.500 ~ 7.000 | B13 | B14 | B18 | 80g |
| 219071 | PV-7A | 7.000 ~ 7.500 | B19 | B20 | B21 | 110g |
| 219072 | PV-7B | 7.500 ~ 8.000 | B19 | B20 | B22 | 110g |
| 219081 | PV-8A | 8.000 ~ 8.500 | B19 | B20 | B23 | 110g |
| 219082 | PV-8B | 8.500 ~ 9.000 | B19 | B20 | B24 | 110g |
| 219091 | PV-9A | 9.000 ~ 9.500 | B19 | B20 | B25 | 110g |
| 219092 | PV-9B | 9.500 ~ 10.000 | B19 | B20 | B26 | 110g |

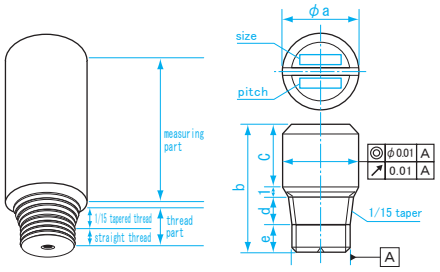
# THREAD PIN GAUGE RA

Suitable when screw holes on workpiece is not chamfered




Rust prevention▶
Zerust Film for Steel
P370

● DIMENSIONS Units: mm




FEATURES

- Threaded portion has 1/15 taper starting at half way point to secure gauge to workpiece
- For measuring threaded hole which is difficult to measure with the existing thread pin gauge (e.g. threaded hole which is difficult to chamfer the opening or processed obliquely to work surface)
- Also suitable for deburring process

※Dimensions are subject to change without notice

| | |
|---|---|
| Accuracy | Runout between measurement part and thread part : Model No. RA○○-1…within 0.01mm<br>Runout between measurement part and thread part : Model No. RA○○-2…within 0.015mm<br>Runout between measurement part and thread part : Model No. RA○○-3…within 0.02mm<br>Accuracy of ϕa: within ±0.005mm<br>Screw : equivalent for JIS for the second grade |
| Material | Stainless Steel (SUS303) |

〈Size List〉

| Order No. | Model No. | Size | a(mm) | b(mm) | c(mm) | d(mm) | e(mm) |
|---|---|---|---|---|---|---|---|
| 250014 | RA204-1 | M2 × P0.4 | 3 | 10.0 | 4.5 | 2.50 | 2.00 |
| 250015 | RA204-2 | M2 × P0.4 | | 25.5 | 20.0 | | |
| 250016 | RA204-3 | M2 × P0.4 | | 35.5 | 30.0 | | |
| 250017 | RA305-1 | M3 × P0.5 | 4 | 12.0 | 5.0 | 3.50 | 2.50 |
| 250018 | RA305-2 | M3 × P0.5 | | 27.0 | 20.0 | | |
| 250019 | RA305-3 | M3 × P0.5 | | 37.0 | 30.0 | | |
| 250020 | RA407-1 | M4 × P0.7 | 5 | 14.0 | 6.0 | | 3.50 |
| 250021 | RA407-2 | M4 × P0.7 | | 28.0 | 20.0 | | |
| 250022 | RA407-3 | M4 × P0.7 | | 38.0 | 30.0 | | |
| 250023 | RA508-1 | M5 × P0.8 | 6 | 16.0 | 7.0 | 4.00 | 4.00 |
| 250024 | RA508-2 | M5 × P0.8 | | 29.0 | 20.0 | | |
| 250025 | RA508-3 | M5 × P0.8 | | 39.0 | 30.0 | | |
| 250026 | RA610-1 | M6 × P1.0 | 7 | 18.0 | 8.0 | 4.00 | 5.00 |
| 250027 | RA610-2 | M6 × P1.0 | | 30.0 | 20.0 | | |
| 250028 | RA610-3 | M6 × P1.0 | | 40.0 | 30.0 | | |
| 250029 | RA8125-1 | M8 × P1.25 | 9 | 19.0 | 8.5 | 4.50 | |
| 250030 | RA8125-2 | M8 × P1.25 | | 30.5 | 20.0 | | |
| 250031 | RA8125-3 | M8 × P1.25 | | 40.5 | 30.0 | | |
| 250032 | RA1015-1 | M10 × P1.5 | 11 | 21.0 | 8.5 | 5.50 | 6.00 |
| 250033 | RA1015-2 | M10 × P1.5 | | 32.5 | 20.0 | | |
| 250034 | RA1015-3 | M10 × P1.5 | | 42.5 | 30.0 | | |
| 250035 | RA1215-1 | M12 × P1.5 | 13 | 23.0 | 8.5 | 6.50 | 7.00 |
| 250036 | RA1215-2 | M12 × P1.5 | | 34.5 | 20.0 | | |
| 250037 | RA1215-3 | M12 × P1.5 | | 44.5 | 30.0 | | |
| 250038 | RA12175-1 | M12 × P1.75 | | 23.0 | 8.5 | | |
| 250039 | RA12175-2 | M12 × P1.75 | | 34.5 | 20.0 | | |
| 250040 | RA12175-3 | M12 × P1.75 | | 44.5 | 30.0 | | |
| 250041 | RA1415-1 | M14 × P1.5 | 15 | 23.5 | 8.5 | | 7.50 |
| 250042 | RA1415-2 | M14 × P1.5 | | 35.0 | 20.0 | | |
| 250043 | RA1415-3 | M14 × P1.5 | | 45.0 | 30.0 | | |
| 250044 | RA1615-1 | M16 × P1.5 | 17 | 23.5 | 8.5 | | |
| 250045 | RA1615-2 | M16 × P1.5 | | 35.0 | 20.0 | | |
| 250046 | RA1615-3 | M16 × P1.5 | | 45.0 | 30.0 | | |
| 250047 | RA1815-1 | M18 × P1.5 | 19 | 24.5 | 8.5 | 7.00 | 8.00 |
| 250048 | RA1815-2 | M18 × P1.5 | | 36.0 | 20.0 | | |
| 250049 | RA1815-3 | M18 × P1.5 | | 46.0 | 30.0 | | |

BLOCK GAUGE
PIN GAUGE
PIN VISE
PIN GAUGE ACCESSORIES
RING GAUGE
PLUG GAUGE
LIMIT GAUGE
THICKNESS GAUGE
TAPER GAUGE
WELDING GAUGE
OTHER GAUGES

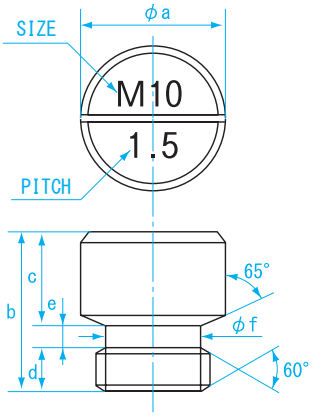
# THREAD PIN GAUGE

## Enables easy threaded hole centering and locating

Rust prevention▶
Zerust Film for Steel
P370

FEATURES
- Easy handling with simple tool
- Enables to indicate the center of threaded hole
- More accurate, economical and easier than other gauges
- Made with stainless steel, prevents the thread pin gauge from rust
- Tapered bottom of the measurement area secures fit with work and allows high accuracy measurement

● DIMENSIONS




| | |
|---|---|
| Accuracy | Runout between measuring head and screw: Below 0.01mm<br>Accuracy of measuring head (size: a): Below ±0.005mm<br>Screw: equivalent for JIS for the second grade |
| Material | Stainless steel (SUS303) |

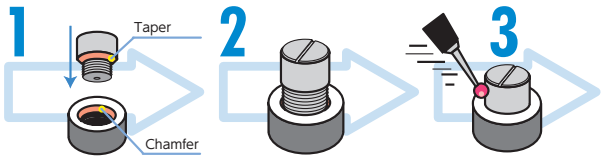
〈Size List〉

| Order No. | Model No. | Size | a(mm) | b(mm) | c(mm) | d(mm) | e(mm) | f(mm) |
|---|---|---|---|---|---|---|---|---|
| 360204 | THP-0204 | M2 × P0.4 | 4 | 9.5 | 6 | 3 | 0.5 | 1.44 |
| 360305 | THP-0305 | M3 × P0.5 | 5 | | | | | 2.30 |
| 360407 | THP-0407 | M4 × P0.7 | 6 | 11 | | 4.3 | 0.7 | 3.02 |
| 360508 | THP-0508 | M5 × P0.8 | 7 | | | | | 3.88 |
| 360607 | THP-06075 | M6 × P0.75 | 8 | 14 | 8 | 5 | 1 | 4.95 |
| 360610 | THP-0610 | M6 × P1.0 | | | | | | 4.60 |
| 360810 | THP-0810 | M8 × P1.0 | 10 | 17 | 10 | 5.5 | 1.5 | 6.60 |
| 360812 | THP-08125 | M8 × P1.25 | | | | | | 6.25 |
| 361010 | THP-1010 | M10 × P1.0 | 12 | 18 | | 6.5 | | 8.60 |
| 361012 | THP-10125 | M10 × P1.25 | | | | | | 8.25 |
| 361015 | THP-1015 | M10 × P1.5 | | | | | | 7.90 |
| 361210 | THP-1210 | M12 × P1.0 | 14 | 19 | | 7.5 | | 10.60 |
| 361212 | THP-12125 | M12 × P1.25 | | | | | | 10.25 |
| 361215 | THP-1215 | M12 × P1.5 | | | | | | 9.90 |
| 361217 | THP-12175 | M12 × P1.75 | | | | | | 9.55 |
| 361415 | THP-1415 | M14 × P1.5 | 16 | 20 | | 8.5 | | 11.90 |
| 361420 | THP-1420 | M14 × P2.0 | | | | 8 | | 11.20 |
| 361615 | THP-1615 | M16 × P1.5 | 18 | | | | | 13.90 |
| 361620 | THP-1620 | M16 × P2.0 | | | | | | 13.20 |
| 361825 | THP-1825 | M18 × P2.5 | 20 | 22 | | 10 | | 14.50 |
| 362025 | THP-2025 | M20 × P2.5 | 22 | | | | | 16.50 |

※ Custom made is also available

### How to use Thread Pin Gauge

●Easily locate threaded hole position with thread pin gauge
CMM can Easily attain the hole center using thread pin gauge



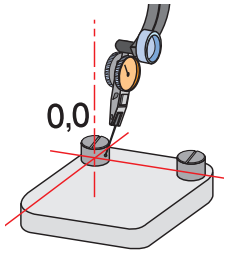

1.Prepare a thread pin gauge the same size as the threaded hole

2.Hand screw the thread pin gauge into the threaded hole

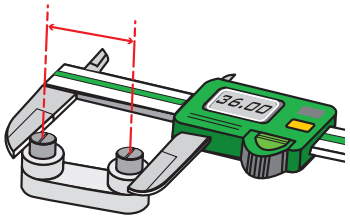
3. Measure!

### Example of use

●Reference position established with two threaded holes




●Pitch measurement between threaded holes



# SCREW POSITION GAUGE

Quick and easy position measuring of screw holes.
The accuracy of measuring is ±3μm.
High-precision screw position measuring to proceed higher quality production and processing.

◇Effective on cost and time reduction.
◇"Knurled handle" will not require any tool for detaching.
◇Point of origin can set by using screw holes.
◇Accurate measurement in fast and cost-cutting method.

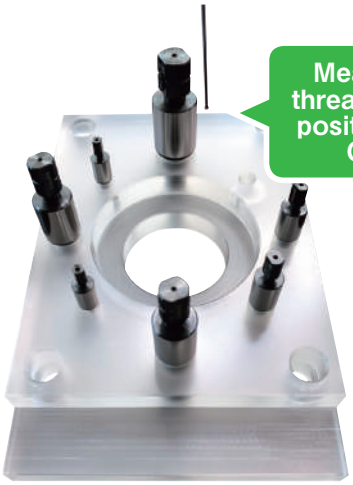
FEATUERS
- The position and pitch of screw holes can be measured with high accuracy
- Fixed with "Knurled handle" to avoid touching the gauge with bare hands
- The bottom of the measured amount of the screw position gauge has an R surface shape, and the screw position gauge is carried to the center of the screw hole

※In order to measure with high accuracy with a screw position gauge, chamfering that is processed at the same time as the screw part is required.

ACCURACY
- The measuring part (pin gauge) is within ± 0.003 mm with respect to the outer diameter, and the coaxiality (run out accuracy) between the threaded part and the measuring part is within 0.01 mm
- The screw grade is equivalent to JIS2 grade (JIS B 0205)

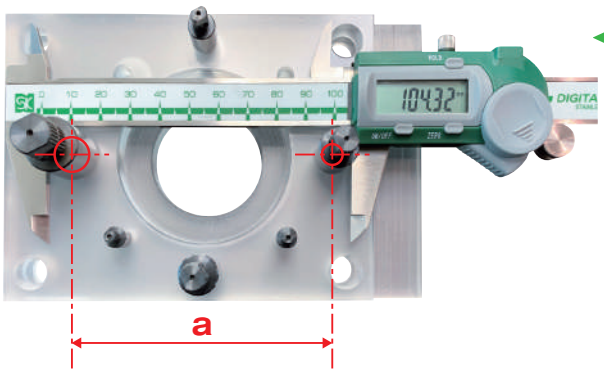
METERIAL
- Gauge steel SKS. The threaded part is machined (non-heat treated).

## Example of use



Measuring threaded hole position with CCM

Measuring threaded hole positon with indicator




Pitch measurement between threaded holes with caliper

**Dimension "a" =Measured value** $- \frac{\text{(Dia. of gauge's measuring part + Dia. of gauge's measuring part)}}{2}$

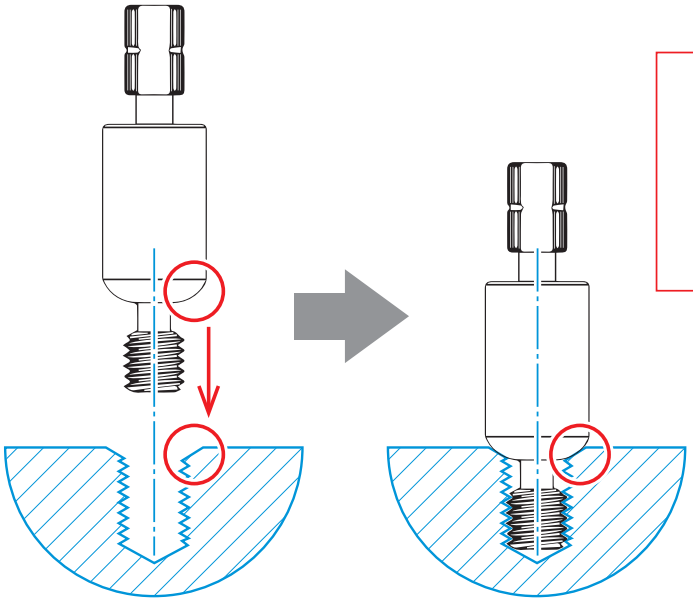
The caliper in the figure shows 104.32 mm.
※ (The screw position gauge sizes shown in the figure are for M6 and M10.)

$$104.32 - \frac{(9+13)}{2} = 93.32$$

If the screw position gauges of the same size are used,
dimension "a" = measured value - (Dia. of gauge's measurement part).
Example) When both screw position gauge sizes are M10:
dimension "a" = 104.32 - 13 = 91.32

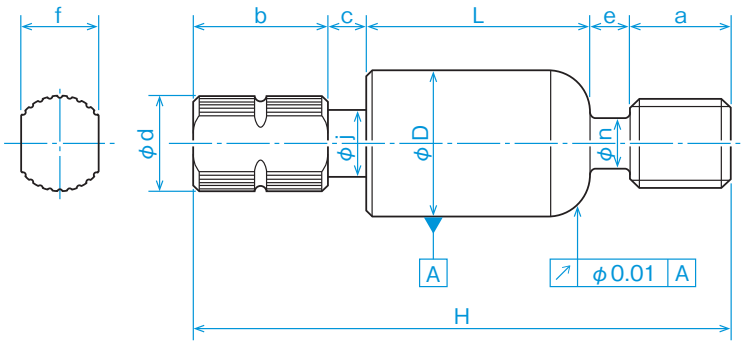
# SCREW POSITION GAUGE

## FEATURES



There is an **R-shaped guide** between measuring part of the gauge and the screw. This guide will lead the gauge to the center of the screw hole by fitting **the chamfer of the screw hole**.

● DIMENSIONS Units: mm




| Order No. | Model No. | Size | H (mm) | a (mm) | ϕn (mm) | e (mm) | ϕD (mm) | L (mm) | f (mm) | ϕd (mm) | b (mm) | ϕj (mm) | c (mm) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 320035 | NPG−03050 | M3×0.5 | 26 | 4 | 2.2 | 2 | 7 | 12 | 3.2 | 4 | 6 | 2.5 | 2 |
| 320047 | NPG−04070 | M4×0.7 | 26 | 4 | 2.2 | 2 | 7 | 12 | 3.2 | 4 | 6 | 2.5 | 2 |
| 320058 | NPG−05080 | M5×0.8 | 33 | 6 | 3 | 2 | 9 | 15 | 4 | 5.5 | 8 | 3.5 | 2 |
| 320061 | NPG−06100 | M6×1.0 | 33 | 6 | 3 | 2 | 9 | 15 | 4 | 5.5 | 8 | 3.5 | 2 |
| 320082 | NPG−08125 | M8×1.25 | 48 | 9 | 4.5 | 3.5 | 13 | 20 | 7 | 8.5 | 12 | 6 | 3.5 |
| 320105 | NPG−10150 | M10×1.5 | 48 | 9 | 4.5 | 3.5 | 13 | 20 | 7 | 8.5 | 12 | 6 | 3.5 |
| 320127 | NPG−12175 | M12×1.75 | 55 | 10 | 6 | 3.5 | 17 | 25 | 10 | 12 | 13 | 8 | 3.5 |

# STEEL RING GAUGE

Master ring gauge for internal diameter measurement. A wide range of sizes are in stock while custom size ring gauge is also available upon request.

## SUB-ZERO (Cryogenic hardened) TREATMENT
## STABILIZATION TREATMENT
## LAPPED FINISH

**Ring gauges are used for zero point adjustment as master gauges for Hall tests, bore gauge, inside micrometers, dial caliper gauge, inner diameter measurement, inside dial comparator gauge, etc**

HOW TO MOVIE


Carbide for durable and long life ▶ Carbide Ring Gauge P64

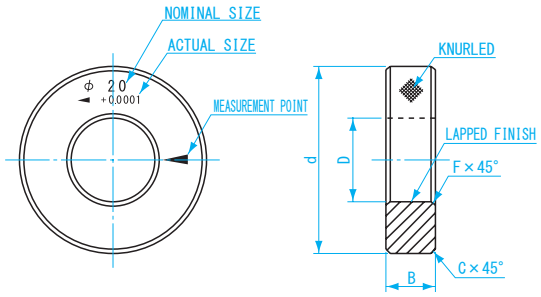
Free from rust and corrosion ▶ Ceramic Ring Gauge P64

Non-slip and easy to handle ▶ Ring Gauge with Protective Cover P65

For Serial No. Management ▶ Laser Marking P114

Rust prevention ▶ Zerust Film for Steel P370

● DIMENSIONS




MATERIAL
- ●Alloy tool steel (SKS3)

FEATURES
- ●Provided with inspection report

SPECIFICATIONS

| Size (mm) | Step (mm) | Out of Roundness (μm) | Diameter Inequality (μm) | Tolerance (μm) | Hardness (HV) |
|---|---|---|---|---|---|
| 1 to 30 | 0.1 step | 0.5 | 1.0 | ± 1.0 | 653 ≀ 772 |
| Over 30 to 50 | | 0.8 | 1.6 | ± 1.5 | |
| Over 50 to 60 | 0.5 step | 1.0 | 2.0 | ± 2.0 | |
| Over 60 to 80 | | | | | |
| Over 80 to 100 | | | | | |
| Over 100 to 200 | 5.0 step | 2.0 | 4.0 | ± 5.0 | |

- ●Surface roughness: Within Ra0.1μm
- ●Squareness: 0.05 /ϕ100
- ●Parallelism: Within 0.015mm

〈Standard Size List〉

| Size (mm) | Step (mm) | |
|---|---|---|
| 1 to 50 | 0.1 step | 1.0・1.1・1.2・1.3・1.4・1.5・1.6・1.7・1.8・1.9・2.0・2.1・2.2・2.3・2.4・2.5・2.6・2.7.....50.0 |
| Over 50 to 100 | 0.5 step | 50.5・51.0・51.5・52.0・52.5・53.0・53.5・54.0・54.5・55.0・55.5・56.0・56.5・57.0・57.5.....100.0 |
| Over 100 to 200 | 5.0 step | 105.0・110.0・115.0・120.0・125.0・130.0・135.0・140.0・145.0・150.0・155.0・160.0・165.0.....200.0 |

Size List ※ Reference value

| Size D (mm) | Outside Diameter d (mm) | Thickness B (mm) | Chamfering for outside diameter C (mm)※ | Chamfering for inside diameter F (mm)※ | Remarks | Weight |
|---|---|---|---|---|---|---|
| 1 to 2.5 | 22 | 4 | 0.4 | 0.3 | Knurled | 10g |
| Over 2.5 to 5 | | 5 | | | | 10g |
| Over 5 to 10 | 32 | 8 | 0.8 | 0.5 | | 50g |
| Over 10 to 15 | 38 | 10 | 1.2 | | | 80g |
| Over 15 to 20 | 45 | 12 | | 1.0 | | 100g |
| Over 20 to 25 | 53 | 14 | | | | 200g |
| Over 25 to 32 | 63 | 16 | 1.5 | | | 300g |
| Over 32 to 40 | 71 | 18 | 2.0 | | | 400g |
| Over 40 to 50 | 85 | 20 | | | | 600~700g |
| Over 50 to 60 | 100 | 24 | | 1.5 | | 0.9~1.1kg |
| Over 60 to 70 | 112 | | | | | 1.1~1.3kg |
| Over 70 to 80 | 125 | | | | | 1.4~1.6kg |
| Over 80 to 90 | 140 | | | | | 1.7~1.9kg |
| Over 90 to 100 | 160 | | | | | 2.3~2.6kg |
| Over 100 to 110 | 180 | 30 | 2.4 | | | 3.7~4.1kg |
| Over 110 to 120 | 190 | 35 | | | | 4.7~5.1kg |
| Over 120 to 130 | 200 | | | | | 5.0~5.5kg |
| Over 130 to 140 | 210 | 38 | | | | 5.7~6.3kg |
| Over 140 to 160 | 230 | 40 | | | | 6.6~8.2kg |
| Over 160 to 180 | 260 | | | 2.0 | | 8.6~ 10kg |
| Over 180 to 200 | 280 | | | | | 9.4~ 11kg |

Sizes available: 1.0 ~ 520.0mm (Please contact us with request)

BLOCK GAUGE
PIN GAUGE
PIN VISE
PIN GAUGE ACCESSORIES
RING GAUGE
PLUG GAUGE
LIMIT GAUGE
THICKNESS GAUGE
TAPER GAUGE
WELDING GAUGE
OTHER GAUGES

# STEEL RING GAUGE LARGE SIZE

T PDI MTO product

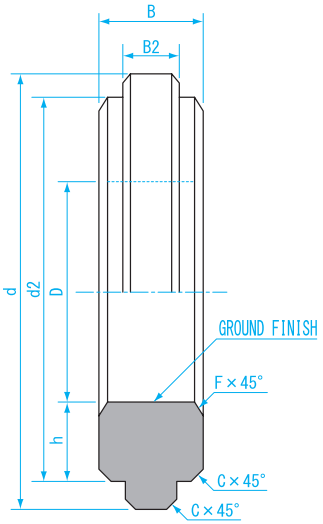
HOW TO MOVIE

A must-see for heavy equipment related companies!
Up to 520mm manufactuable. Custom size ring gauge is also available upon request.

## SUB-ZERO (Cryogenic hardened) TREATMENT
## STABILIZATION TREATMENT

**■Provided with aluminum case**

● DIMENSIONS




MATERIAL
●Alloy tool steel (SKS3)
FEATURES
●Provided with inspection report

SPECIFICATIONS

| Size (mm) | Step (mm) | Out of Roundness (μm) | Diameter Inequality (μm) | Tolerance (μm) | Hardness (HV) |
|---|---|---|---|---|---|
| Over 200 to 230 | 5.0 step | 5.0 | 10.0 | ± 7.0 | 653 ≀ 772 |
| Over 230 to 300 | 10.0 step | | | | |
| Over 300 to 400 | | | | ± 8.0 | |
| Over 400 to 500 | | | | ± 9.0 | |
| Over 500 to 520 | | | | ± 10.0 | |

●Surface roughness: Within Ra0.2μm
●Squareness: 0.1/φ450
●Parallelism: Within 0.025mm

## Size List

※ Reference value

| Size D(mm) | Outside Diameter(mm) d | Outside Diameter(mm) d2 | Thickness(mm) B | Thickness(mm) B2 | h (mm) | Chamfering for outside diameter C(mm)※ | Chamfering for inside diameter F(mm)※ | Remarks | Weight (kg) |
|---|---|---|---|---|---|---|---|---|---|
| Over 200 to 230 | 310 | 250~270 | 45 | 25 | 20 | 2.0 | 2.5 | NOT Knurled | 9~10 |
| Over 230 to 260 | 340 | 280~300 | | | | | | | 11~14 |
| Over 260 to 290 | 370 | 310~330 | | | | | | | 11~13 |
| Over 290 to 320 | 400 | 340~360 | | | | | | | 12~14 |
| Over 320 to 360 | 440 | 380~410 | | | 25 | | | | 14~16 |
| Over 360 to 400 | 480 | 420~450 | | | | | | | 15~18 |
| Over 400 to 450 | 540 | 460~500 | 50 | | | | | | 19~24 |
| Over 450 to 500 | 600 | 510~550 | | | | | | | 23~29 |
| Over 500 to 520 | 660 | 560~600 | | | | | | | 27~33 |

| Order No. | Model No. | Size(mm) |
|---|---|---|
| 420500 | RG-205 | 205.0 |
| 421000 | RG-210 | 210.0 |
| 421500 | RG-215 | 215.0 |
| 422000 | RG-220 | 220.0 |
| 422500 | RG-225 | 225.0 |
| 423000 | RG-230 | 230.0 |
| 424000 | RG-240 | 240.0 |
| 425000 | RG-250 | 250.0 |
| 426000 | RG-260 | 260.0 |
| 427000 | RG-270 | 270.0 |
| 428000 | RG-280 | 280.0 |
| 429000 | RG-290 | 290.0 |
| 430000 | RG-300 | 300.0 |
| 431000 | RG-310 | 310.0 |
| 432000 | RG-320 | 320.0 |
| 433000 | RG-330 | 330.0 |
| 434000 | RG-340 | 340.0 |
| 435000 | RG-350 | 350.0 |

| Order No. | Model No. | Size(mm) |
|---|---|---|
| 436000 | RG-360 | 360.0 |
| 437000 | RG-370 | 370.0 |
| 438000 | RG-380 | 380.0 |
| 439000 | RG-390 | 390.0 |
| 440000 | RG-400 | 400.0 |
| 441000 | RG-410 | 410.0 |
| 442000 | RG-420 | 420.0 |
| 443000 | RG-430 | 430.0 |
| 444000 | RG-440 | 440.0 |
| 445000 | RG-450 | 450.0 |
| 446000 | RG-460 | 460.0 |
| 447000 | RG-470 | 470.0 |
| 448000 | RG-480 | 480.0 |
| 449000 | RG-490 | 490.0 |
| 450000 | RG-500 | 500.0 |
| 451000 | RG-510 | 510.0 |
| 452000 | RG-520 | 520.0 |

# CARBIDE RING GAUGE

PDI

HOW TO MOVIE

Rust prevention▶
Zerust Film for Steel
P370

Made of highly-durable material.
Inner ring made of carbide, highly-durable material.

## LAPPED FINISH

MATERIAL
- Steel with carbide insert

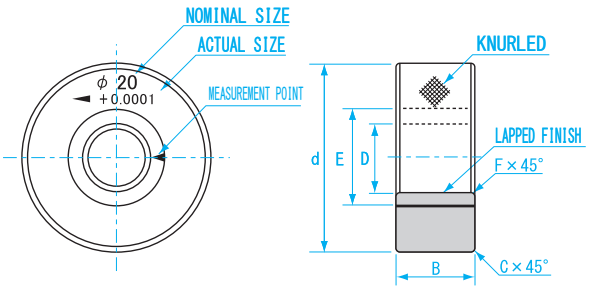
FEATURES
- Durable and long life
- The coefficient of thermal expansion is small so better tolerates temperature changes
- Less likely to be damaged due to high hardness
- Economical - longer span of periodic calibration compared to steel gauge
- Provided with inspection report

SPECIFICATIONS

| Size (mm) | Step (mm) | Out of Roundness (μm) | Diameter Inequality (μm) | Tolerance (μm) | Hardness (HV) |
|---|---|---|---|---|---|
| 1 to 30 | — | 0.5 | 1.0 | ±1 | 1,200 |
| Over 30 to 50 | — | 0.8 | 1.6 | ±1.5 | |

- Surface roughness: Within Ra0.1μm
- Squareness: 0.05/φ100
- Parallelism: Within 0.015mm

● DIMENSIONS




Size List ※ Reference value

| Size D(mm) | Diameter of Carbide part E (mm) | Outside Diameter d (mm) | Thickness B (mm) | Chamfering for outside Diameter C(mm)※ | Chamfering for inside Diameter F(mm)※ |
|---|---|---|---|---|---|
| 1 to 2.5 | 8 | 22 | 4 | 0.4 | 0.3 |
| Over 2.5 to 5 | 11 | | 5 | | |
| Over 5 to 10 | 16 | 32 | 8 | 0.8 | 0.5 |
| Over 10 to 15 | 21 | 38 | 10 | 1.2 | |
| Over 15 to 20 | 28 | 45 | 12 | | 1.0 |
| Over 20 to 25 | 33 | 53 | 14 | | |
| Over 25 to 32 | 40 | 63 | 16 | 1.5 | |
| Over 32 to 40 | 50 | 71 | 18 | 2.0 | |
| Over 40 to 50 | 60 | 85 | 20 | | |

Sizes available: 1.0 ~ 50.0mm (Please contact us with request)

# CERAMIC RING GAUGE

PDI

HOW TO MOVIE

Made of highly-durable material. Less affected by thermal expansion as well as free from rust.
Excellent workability and economy.

## LAPPED FINISH

MATERIAL
- Ceramics (Zirconia)

FEATURES
- Ceramic material is less susceptible to abrasion and aged deterioration than steel
- Free from rust and corrosion, and easy maintenance
- Non-magnetic body
- Does not deform with damage, resists scratches and forming burrs
- Lightweight and easy handling
- Size is laser marked ●Provided with inspection report

Material Data

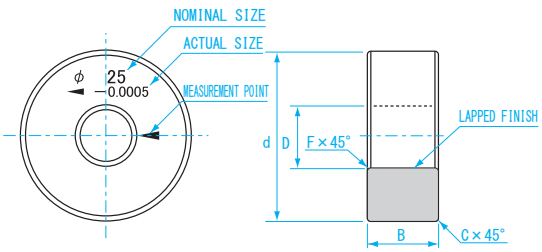
| List | Material | Ceramics (Zirconia) |
|---|---|---|
| Specific Gravity | — | 6 |
| Hardness | HV | 1,250 |
| Bending strength | MPa | 1,000 |
| Young's Modulus | GPa | 200 |
| Coefficient of thermal expansion | $10^{-6}$/K | 9.5 |
| Heat conductivity | W/m·K | 3 |

SPECIFICATIONS

| Size (mm) | Step (mm) | Out of Roundness (μm) | Diameter Inequality (μm) | Tolerance (μm) |
|---|---|---|---|---|
| 3 to 30 | 0.5 step | 0.5 | 1.0 | ±1 |
| Over 30 to 50 | | 0.8 | 1.6 | ±1.5 |

- Surface roughness: Within Ra0.1μm
- Squareness: 0.05/φ100
- Parallelism: Within 0.015mm

● DIMENSIONS




Size List ※ Reference value

| Size D(mm) | Outside Diameter d(mm) | Thickness B(mm) | Chamfering for outside diameter C(mm)※ | Chamfering for inside diameter F(mm)※ |
|---|---|---|---|---|
| 3 to 10 | 32 | 8 | 0.8 | 0.5 |
| Over 10 to 15 | 38 | 10 | 1.2 | |
| Over 15 to 20 | 45 | 12 | | 1.0 |
| Over 20 to 25 | 53 | 14 | | |
| Over 25 to 32 | 63 | 16 | 1.5 | |
| Over 32 to 40 | 71 | 18 | 2.0 | |
| Over 40 to 50 | 85 | 20 | | |

Sizes available: 3.0 ~ 50.0mm (Please contact us with request)

## STEEL RING GAUGE WITH MAINTENANCE LINE

T PDI MTO product

Maintenance line series
ring gauge now available.
Easy checking for gauge wear-out.

Rust prevention▶ Zerust Film for Steel P370

**Custom Sizes Available**
Please contact us for inquiry

MATERIAL
- Alloy tool steel (SKS3)

FEATURES
- Maintenance line on steel ring gauge allows easy checking for gauge wear-out
- When line disappears, wear is more than 1μm
- Available for sizes: 15~50mm (1mm step)
- Provided with inspection report

## RING GAUGE WITH PROTECTIVE COVER

T PDI MTO product

No-slip and easy to handle, will increase productivity

**LAPPED FINISH**

Rust prevention▶ Zerust Film for Steel P370

CERAMIC RING GAUGE (with protective cover)

CARBIDE RING GAUGE (with protective cover)

STEEL RING GAUGE (with protective cover)

MATERIAL
- Protective cover: Anodized aluminum
- Gauge: Steel / Carbide / Ceramic

FEATURES
- A ring gauge embedded in aluminum protective cover
- Covered gauge is easier to handle with dirty hands
- Less susceptible to thermal expansion when holding a gauge by hand
- Protects from chipping when dropped
- Provided with inspection report

SPECIFICATIONS

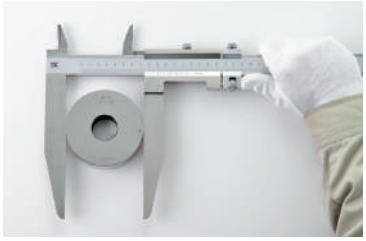
| Size (mm) | Step (mm) | Out of Roundness (μm) | Diameter Inequality (μm) | Tolerance (μm) |
|---|---|---|---|---|
| 1 to 2 (Steel & Carbide only) | 1 step | 0.5 | 1.0 | ±1 |
| Over 2 to 30 | 1 step | 0.5 | 1.0 | ±1 |
| Over 30 to 50 | 1 step | 0.8 | 1.6 | ±1.5 |

- Surface roughness: Within Ra0.1μm

## STEEL RING GAUGE OD MODEL

T PDI MTO product

Available from ϕ 40-400mm.
Simple calibration or 0 adjustment of outside measuring instrument.



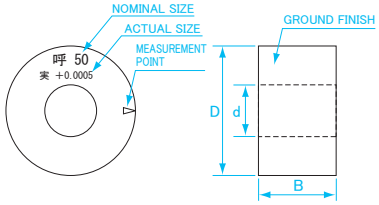
USE
- For quick calibration of micrometer

MATERIAL
- Alloy tool steel (SKS3)

FEATURES
- Custom sizes are available ϕ40~400mm
- Provided with inspection report

SPECIFICATIONS
- Hardness: HV653~772

● DIMENSIONS




Rust prevention▶ Zerust Film for Steel P370

SPECIFICATIONS

| SizeD (mm) | OD tolerance (μm) | Out of Roundness (μm) | Diameter Inequality (μm) | Thickness B (mm) | Hole Diameter d (mm) |
|---|---|---|---|---|---|
| 40 to 50 | ±3 | 1.5 | 3 | 30 | 20 |
| Over 50 to 70 | ±5 | 2.5 | 5 | | 30 |
| Over 70 to 100 | | | | | 40 |
| Over 100 to 150 | ±10 | 5 | 10 | | 50 |
| Over 150 to 200 | | | | | 80 |
| Over 200 to 300 | | | | | 160 |
| Over 300 to 350 | | | | | 200 |
| Over 350 to 375 | | | | | 250 |
| Over 375 to 400 | | | | | |

| Order No. | Model No. | SizeD (mm) | OD tolerance (μm) | Out of Roundness (μm) | Diameter Inequality (μm) | Thickness B (mm) |
|---|---|---|---|---|---|---|
| 470004 | SRO-40 | 40 | ±3 | 1.5 | 3 | 30 |
| 470005 | SRO-50 | 50 | | | | |
| 470006 | SRO-60 | 60 | ±5 | 2.5 | 5 | |
| 470007 | SRO-70 | 70 | | | | |
| 470008 | SRO-80 | 80 | | | | |
| 470009 | SRO-90 | 90 | | | | |
| 470010 | SRO-100 | 100 | | | | |

Sizes available: ϕ 40 ~ 400mm (Please contact us with request)

## SPECIAL SHAPE - MULTIPLE-STEP GAUGE

MTO product

USE
- For quick calibration of micrometers (0~25mm)

MATERIAL
- Alloy tool steel (SKS3)

FEATURES
- OD pitch: 5·10·15·20·25mm integrated type gauge

※Sample image

**Custom Designs Available**

Please contact us for inquiry

## SPECIAL SHAPE - MULTIPLE-STEP GAUGE / OD MODEL

MTO product

USE
- For calibration or 0 adjustment

MATERIAL
- Alloy tool steel (SKS3)

FEATURES
- Size combination is arranged on request

※Sample image

**Custom Designs Available**

Please contact us for inquiry

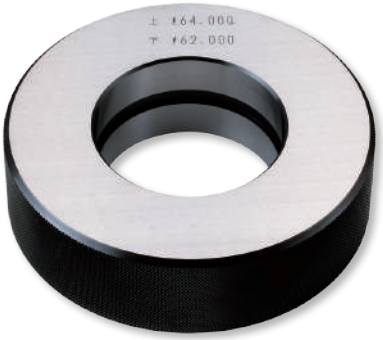
## SPECIAL SHAPE - STEP GAUGE / ID MODEL

MTO product

USE
- For 0 adjustment of dial bore gauge

MATERIAL
- Alloy tool steel (SKS3)

FEATURES
- Size combination is arranged on request



※Sample image

**Custom Sizes Available**

Please contact us for inquiry

## SPECIAL SHAPE - CUT OUT

MTO product

USE
- The special shape allows to hold the ring gauge with a fixture to prevent the gauge from moving

MATERIAL
- Alloy tool steel (SKS3)

※Sample image

**Custom Designs Available**

Please contact us for inquiry

# STEEL LIMIT PLUG GAUGE

PDI

HOW TO MOVIE

## For GO/NOGO inspection of hole diameter

## Gauge SUB-ZERO (Cryogenic hardened) TREATMENT

LP10-H7

Rust prevention▶
Zerust Film for Steel
P370

USE
- For hole diameter inspection

MATERIAL
- Gauge: Alloy tool steel
- Handle: Aluminum

FEATURES
- GO/NOGO gauge for testing fit of shaft in a hole based on maximum and minimum allowable dimensions
- Provided with inspection report

SPECIFICATIONS
- Class H7 for manufacturing
- Hardness HV660~780
- Surface roughness: Within Ra0.2μm

● DIMENSIONS

| Order No. | Model No. | Size | L (mm) | K1 (mm) | K2 (mm) | M (mm) | D (mm) | Weight |
|---|---|---|---|---|---|---|---|---|
| 397003 | LP3-H7 | ϕ 3 | 58.5 | 7 | 3.5 | 4 | 6 | 10g |
| 397004 | LP4-H7 | ϕ 4 | 77 | 10 | 5 | 6 | 8 | 10g |
| 397005 | LP5-H7 | ϕ 5 | | | | | | 10g |
| 397006 | LP6-H7 | ϕ 6 | | | | | | 10g |
| 397007 | LP7-H7 | ϕ 7 | 101 | 12 | 7 | | 9 | 20g |
| 397008 | LP8-H7 | ϕ 8 | | | | | | 20g |
| 397009 | LP9-H7 | ϕ 9 | | | | | | 20g |
| 397010 | LP10-H7 | ϕ10 | | | | | | 30g |
| 397011 | LP11-H7 | ϕ11 | 107 | 13 | | | 12 | 50g |
| 397012 | LP12-H7 | ϕ12 | | | | | | 50g |
| 397013 | LP13-H7 | ϕ13 | | | | | | 60g |
| 397014 | LP14-H7 | ϕ14 | | | | | | 60g |
| 397015 | LP15-H7 | ϕ15 | 119 | 17 | 10 | | 17 | 100g |
| 397016 | LP16-H7 | ϕ16 | | | | | | 100g |
| 397017 | LP17-H7 | ϕ17 | | | | | | 120g |
| 397018 | LP18-H7 | ϕ18 | | | | | | 130g |
| 397019 | LP19-H7 | ϕ19 | | | | | | 180g |
| 397020 | LP20-H7 | ϕ20 | | | | | | 190g |
| 397021 | LP21-H7 | ϕ21 | | | | | | 200g |
| 397022 | LP22-H7 | ϕ22 | | | | | | 200g |
| 397023 | LP23-H7 | ϕ23 | | | | | | 210g |
| 397024 | LP24-H7 | ϕ24 | | | | | | 210g |
| 397025 | LP25-H7 | ϕ25 | 141 | 22 | 13 | 8 | 21 | 250g |
| 397026 | LP26-H7 | ϕ26 | | | | | | 260g |
| 397027 | LP27-H7 | ϕ27 | | | | | | 280g |
| 397028 | LP28-H7 | ϕ28 | | | | | | 290g |
| 397029 | LP29-H7 | ϕ29 | | | | | | 290g |
| 397030 | LP30-H7 | ϕ30 | | | | | | 300g |
| 397031 | LP31-H7 | ϕ31 | 157 | 25 | | 9.5 | 26 | 470g |
| 397032 | LP32-H7 | ϕ32 | | | | | | 480g |
| 397033 | LP33-H7 | ϕ33 | | | | | | 500g |
| 397034 | LP34-H7 | ϕ34 | | | | | | 520g |
| 397035 | LP35-H7 | ϕ35 | | | | | | 540g |
| 397036 | LP36-H7 | ϕ36 | | | | | | 550g |
| 397037 | LP37-H7 | ϕ37 | | | | | | 570g |
| 397038 | LP38-H7 | ϕ38 | | | | | | 590g |
| 397039 | LP39-H7 | ϕ39 | | | | | | 600g |
| 397040 | LP40-H7 | ϕ40 | | | | | | 620g |

Custom size limit gauges are also available on request

# CARBIDE LIMIT PLUG GAUGE

T PDI

HOW TO MOVIE

Durable Carbide plug gauge
with low thermal expansion
and good durability

Rust prevention▶
Zerust Film for Steel
P370

TLP10-H7

● DIMENSIONS

USE
●For hole diameter inspection
MATERIAL
●Gauge: Carbide ●Handle: Aluminum
FEATURES
●GO/NOGO gauge for testing fit of shaft in a hole based on maximum and minimum allowable dimensions
●Excellent wear resistance for 20~30 times longer service life than steel
●The coefficient of thermal expansion ($5\times10^{-6}$ /K) is ½ that of steel, so the changes due to temperature are small
●Less likely to be scratched or damaged due to high hardness
●Economical - longer span of periodic calibration compared to steel gauge
●Provided with inspection report
SPECIFICATIONS
●Class H7 for manufacturing
●Surface roughness: Within Ra0.2μm

| Order No. | Model No. | Standard | L (mm) | K1 (mm) | K2 (mm) | M (mm) | D (mm) | Weight |
|---|---|---|---|---|---|---|---|---|
| 396010 | TLP10-H7 | φ10 | 87 | 10 | 7 | 7 | 10 | 38g |
| 396011 | TLP11-H7 | φ11 | 99 | 12 | 8 | 8 | 12 | 58g |
| 396012 | TLP12-H7 | φ12 | | | | | | 64g |
| 396013 | TLP13-H7 | φ13 | | | | | | 72g |
| 396014 | TLP14-H7 | φ14 | | | | | | 78g |
| 396015 | TLP15-H7 | φ15 | 116 | 16 | 10 | 10 | 14 | 110g |
| 396016 | TLP16-H7 | φ16 | | | | | | 120g |
| 396017 | TLP17-H7 | φ17 | | | | | | 128g |
| 396018 | TLP18-H7 | φ18 | | | | | | 142g |
| 396019 | TLP19-H7 | φ19 | 132 | | 12 | 12 | 17 | 198g |
| 396020 | TLP20-H7 | φ20 | | | | | | 212g |
| 396021 | TLP21-H7 | φ21 | | | | | | 222g |
| 396022 | TLP22-H7 | φ22 | | | | | | 236g |
| 396023 | TLP23-H7 | φ23 | | | | | | 252g |
| 396024 | TLP24-H7 | φ24 | | | | | | 268g |
| 396025 | TLP25-H7 | φ25 | 136 | 18 | 14 | | | 306g |
| 396026 | TLP26-H7 | φ26 | | | | | | 320g |
| 396027 | TLP27-H7 | φ27 | | | | | | 334g |
| 396028 | TLP28-H7 | φ28 | | | | | | 352g |
| 396029 | TLP29-H7 | φ29 | | | | | | 362g |
| 396030 | TLP30-H7 | φ30 | | | | | | 382g |

# CERAMIC LIMIT PLUG GAUGE

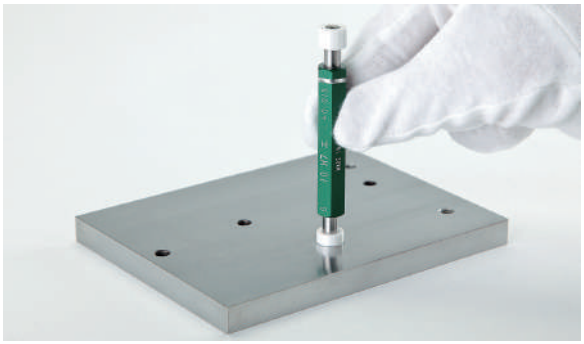
T PDI

HOW TO MOVIE

Ceramic plug gauge
with long service life
for good economic performance

Rust prevention▶
Zerust Film for Steel
P370

CLP10-H7



● DIMENSIONS

USE
●For hole diameter inspection
MATERIAL
●Gauge: Ceramic ●Handle: Aluminum
FEATURES
●GO/NOGO gauge for testing fit of shaft in a hole based on maximum and minimum allowable dimensions
●Ceramic material is less susceptible to abrasion and aged deterioration than steel
●Free from rust and corrosion, and easy maintenance
●Material has coefficient of thermal expansion similar to steel
●Non-magnetic
●Does not deform with damage, resist scratches and forming burrs
●Provided with inspection report
SPECIFICATIONS
●Class H7 for manufacturing
●Surface roughness: Within Ra0.2μm

| Order No. | Model No. | Standard | L (mm) | K1 (mm) | K2 (mm) | M (mm) | D (mm) |
|---|---|---|---|---|---|---|---|
| 399010 | CLP10-H7 | φ10 | 87 | 10 | 7 | 7 | 10 |
| 399011 | CLP11-H7 | φ11 | 99 | 12 | 8 | 8 | 12 |
| 399012 | CLP12-H7 | φ12 | | | | | |
| 399013 | CLP13-H7 | φ13 | | | | | |
| 399014 | CLP14-H7 | φ14 | | | | | |
| 399015 | CLP15-H7 | φ15 | 116 | 16 | 10 | 10 | 14 |
| 399016 | CLP16-H7 | φ16 | | | | | |
| 399017 | CLP17-H7 | φ17 | | | | | |
| 399018 | CLP18-H7 | φ18 | | | | | |
| 399019 | CLP19-H7 | φ19 | 132 | | 12 | 12 | 17 |
| 399020 | CLP20-H7 | φ20 | | | | | |
| 399021 | CLP21-H7 | φ21 | | | | | |
| 399022 | CLP22-H7 | φ22 | | | | | |
| 399023 | CLP23-H7 | φ23 | | | | | |
| 399024 | CLP24-H7 | φ24 | | | | | |
| 399025 | CLP25-H7 | φ25 | 136 | 18 | 14 | | |
| 399026 | CLP26-H7 | φ26 | | | | | |
| 399027 | CLP27-H7 | φ27 | | | | | |
| 399028 | CLP28-H7 | φ28 | | | | | |
| 399029 | CLP29-H7 | φ29 | | | | | |
| 399030 | CLP30-H7 | φ30 | | | | | |

# LIMIT PLUG GAUGE WITH THIN HANDLE

PDI

HOW TO MOVIE

Narrow shaft allows examining diameter of deep holes

## Gauge SUB-ZERO (Cryogenic hardened) TREATMENT

Rust prevention▶
Zerust Film for Steel
P370

SHLP10-H7

USE
- For hole diameter inspection

MATERIAL
- Gauge: Alloy tool steel
- Handle: Stainless

FEATURES
- Handle diameter is smaller than gauge diameter so that the gauge reaches to deeper hole where normal limit plug gauge cannot
- Provided with inspection report

SPECIFICATIONS
- Class H7 for manufacturing
- Surface roughness: Within Ra0.2μm

● DIMENSIONS

| Order No. | Model No. | Standard | L (mm) | $K_1$ (mm) | $K_2$ (mm) | Handle Diameter (mm) | Weight |
|---|---|---|---|---|---|---|---|
| 393503 | SHLP3-H7 | ϕ 3 | 110 | 20 | 20 | ϕ 2 | 4g |
| 393504 | SHLP4-H7 | ϕ 4 | | | | ϕ 3 | 8g |
| 393505 | SHLP5-H7 | ϕ 5 | | | | | 10g |
| 393506 | SHLP6-H7 | ϕ 6 | | | | ϕ 5 | 20g |
| 393507 | SHLP7-H7 | ϕ 7 | | | | | 24g |
| 393508 | SHLP8-H7 | ϕ 8 | | | | | 27g |
| 393509 | SHLP9-H7 | ϕ 9 | | | | | 32g |
| 393510 | SHLP10-H7 | ϕ10 | 120 | | | ϕ 8 | 58g |
| 393511 | SHLP11-H7 | ϕ11 | | | | | 63g |
| 393512 | SHLP12-H7 | ϕ12 | | | | | 69g |
| 393513 | SHLP13-H7 | ϕ13 | | | | | 69g |
| 393514 | SHLP14-H7 | ϕ14 | | | | | 82g |
| 393515 | SHLP15-H7 | ϕ15 | | | | | 89g |
| 393516 | SHLP16-H7 | ϕ16 | 140 | 25 | 25 | ϕ10 | 136g |
| 393517 | SHLP17-H7 | ϕ17 | | | | | 146g |
| 393518 | SHLP18-H7 | ϕ18 | | | | | 157g |
| 393519 | SHLP19-H7 | ϕ19 | | | | | 169g |
| 393520 | SHLP20-H7 | ϕ20 | | | | | 181g |

Custom size limit gauges are also available on request

# LIMIT PLUG GAUGE WITH MAINTENANCE LINE

PDI

Maintenance line series plug gauge now available

## Gauge SUB-ZERO (Cryogenic hardened) TREATMENT

Rust prevention▶
Zerust Film for Steel
P370

**Custom Sizes Available**

Please contact us for inquiry

USE
- For hole diameter inspection

MATERIAL
- Alloy tool steel

FEATURES
- Maintenance line on Plug Gage allows easy checking for gauge wear-out
- When line disappears, wear is more than 1μm
- Provided with inspection report

## CARBIDE LIMIT STEP PLUG GAUGE T PDI

GO/NOGO gauge at one side.
No need to flip over, work efficiency goes up.

Rust prevention▶ Zerust Film for Steel P370

SPTLP-10

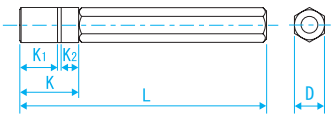
USE
- For hole diameter inspection

MATERIAL
- Gauge: Carbide
- Handle: Aluminum

FEATURES
- GO/NOGO gauge for testing fit of shaft in a hole based on maximum and minimum allowable dimensions
- No need to flip over, work efficiency goes up
- Provided with inspection report

SPECIFICATIONS
- Class H7 for manufacturing
- Surface roughness: Within Ra0.2μm

● DIMENSIONS




| Order No. | Model No. | Standard | L (mm) | K1 (mm) | K2 (mm) | K (mm) | D (mm) |
|---|---|---|---|---|---|---|---|
| 398110 | SPTLP-10 | ϕ10 | 72 | 10 | 5 | 16 | 10 |
| 398111 | SPTLP-11 | ϕ11 | 82 | 12 | 6 | 19 | 12 |
| 398112 | SPTLP-12 | ϕ12 | | | | | |
| 398113 | SPTLP-13 | ϕ13 | | | | | |
| 398114 | SPTLP-14 | ϕ14 | | | | | |
| 398115 | SPTLP-15 | ϕ15 | 95 | 16 | 8 | 25 | 14 |
| 398116 | SPTLP-16 | ϕ16 | | | | | |
| 398117 | SPTLP-17 | ϕ17 | | | | | |
| 398118 | SPTLP-18 | ϕ18 | | | | | |
| 398119 | SPTLP-19 | ϕ19 | 107 | | 10 | 27 | 17 |
| 398120 | SPTLP-20 | ϕ20 | | | | | |
| 398121 | SPTLP-21 | ϕ21 | | | | | |
| 398122 | SPTLP-22 | ϕ22 | | | | | |
| 398123 | SPTLP-23 | ϕ23 | | | | | |
| 398124 | SPTLP-24 | ϕ24 | | | | | |
| 398125 | SPTLP-25 | ϕ25 | 110 | 18 | | 29 | |
| 398126 | SPTLP-26 | ϕ26 | | | | | |
| 398127 | SPTLP-27 | ϕ27 | | | | | |
| 398128 | SPTLP-28 | ϕ28 | | | | | |
| 398129 | SPTLP-29 | ϕ29 | | | | | |
| 398130 | SPTLP-30 | ϕ30 | | | | | |

## CERAMIC LIMIT STEP PLUG GAUGE T PDI

GO/NOGO gauge at one side.
No need to flip over, work efficiency goes up.

Rust prevention▶ Zerust Film for Steel P370

SPCLP-10

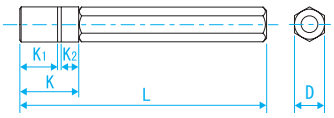
USE
- For hole diameter inspection

MATERIAL
- Gauge: Ceramic
- Handle: Aluminum

FEATURES
- GO/NOGO gauge for testing fit of shaft in a hole based on maximum and minimum allowable dimensions
- No need to flip over, work efficiency goes up
- Provided with inspection report

SPECIFICATIONS
- Class H7 for manufacturing
- Surface roughness: Within Ra0.2μm

● DIMENSIONS




| Order No. | Model No. | Standard | L (mm) | K1 (mm) | K2 (mm) | K (mm) | D (mm) |
|---|---|---|---|---|---|---|---|
| 398010 | SPCLP-10 | ϕ10 | 72 | 10 | 5 | 16 | 10 |
| 398011 | SPCLP-11 | ϕ11 | 82 | 12 | 6 | 19 | 12 |
| 398012 | SPCLP-12 | ϕ12 | | | | | |
| 398013 | SPCLP-13 | ϕ13 | | | | | |
| 398014 | SPCLP-14 | ϕ14 | | | | | |
| 398015 | SPCLP-15 | ϕ15 | 95 | 16 | 8 | 25 | 14 |
| 398016 | SPCLP-16 | ϕ16 | | | | | |
| 398017 | SPCLP-17 | ϕ17 | | | | | |
| 398018 | SPCLP-18 | ϕ18 | | | | | |
| 398019 | SPCLP-19 | ϕ19 | 107 | | 10 | 27 | 17 |
| 398020 | SPCLP-20 | ϕ20 | | | | | |
| 398021 | SPCLP-21 | ϕ21 | | | | | |
| 398022 | SPCLP-22 | ϕ22 | | | | | |
| 398023 | SPCLP-23 | ϕ23 | | | | | |
| 398024 | SPCLP-24 | ϕ24 | | | | | |
| 398025 | SPCLP-25 | ϕ25 | 110 | 18 | | 29 | |
| 398026 | SPCLP-26 | ϕ26 | | | | | |
| 398027 | SPCLP-27 | ϕ27 | | | | | |
| 398028 | SPCLP-28 | ϕ28 | | | | | |
| 398029 | SPCLP-29 | ϕ29 | | | | | |
| 398030 | SPCLP-30 | ϕ30 | | | | | |

## STEEL LIMIT PLUG GAUGE (APV TYPE) T

Reasonable choice - a pair of pin gauges installed in an aluminum holder. Pin gauges are exchangeable in case of worn-out.

Replacement Pin Gauge when wear out▶
Steel Pin Gauge
P41

Rust prevention▶
Zerust Film for Steel
P370

SPG12-H7

USE ●GO/ NOGO plug gauge for hole diameter inspection
MATERIAL ●Body: Aluminum ●Gauge: Steel (SUB-ZERO/ Cryogenic hardened Treatment)
SPECIFICATIONS ●Class H7 for manufacturing

| Order No. | Model No. | Standard | Tolerance Class | Tolerance (μm) |
|---|---|---|---|---|
| 393030 | SPG3-H7 | ϕ 3 | H7 | +10 0 |
| 393040 | SPG4-H7 | ϕ 4 | | +12 0 |
| 393050 | SPG5-H7 | ϕ 5 | | |
| 393060 | SPG6-H7 | ϕ 6 | | |
| 393070 | SPG7-H7 | ϕ 7 | | +15 0 |
| 393080 | SPG8-H7 | ϕ 8 | | |
| 393090 | SPG9-H7 | ϕ 9 | | |
| 393100 | SPG10-H7 | ϕ10 | | |
| 393110 | SPG11-H7 | ϕ11 | | +18 0 |
| 393120 | SPG12-H7 | ϕ12 | | |
| 393130 | SPG13-H7 | ϕ13 | | |
| 393140 | SPG14-H7 | ϕ14 | | |
| 393150 | SPG15-H7 | ϕ15 | | |
| 393160 | SPG16-H7 | ϕ16 | | |
| 393170 | SPG17-H7 | ϕ17 | | |
| 393180 | SPG18-H7 | ϕ18 | | |
| 393190 | SPG19-H7 | ϕ19 | | +21 0 |
| 393200 | SPG20-H7 | ϕ20 | | |

※5mm from each edge is not precision guaranteed

## STEEL LIMIT PLUG GAUGE GO NEW! T

Replacement gauge for the Go side of the Steel Limit Plug Gauge H7 (for manufacturing).
Only GO side where worn-out occurs can be replaced.

USE ●For replacing the Go side of the Steel Limit Plug Gauge H7 (for manufacturing)
MATERIAL ●Steel (SUB-ZERO/ Cryogenic hardened Treatment)
SPECIFICATIONS ●Class H7 for manufacturing

| Order No. | Model No. | Standard | Common body Model No. |
|---|---|---|---|
| NEW! 390043 | SPG3-H7-GO | ϕ 3 | SPG3-H7 |
| NEW! 390044 | SPG4-H7-GO | ϕ 4 | SPG4-H7 |
| NEW! 390045 | SPG5-H7-GO | ϕ 5 | SPG5-H7 |
| NEW! 390046 | SPG6-H7-GO | ϕ 6 | SPG6-H7 |
| NEW! 390047 | SPG7-H7-GO | ϕ 7 | SPG7-H7 |
| NEW! 390048 | SPG8-H7-GO | ϕ 8 | SPG8-H7 |
| NEW! 390049 | SPG9-H7-GO | ϕ 9 | SPG9-H7 |
| NEW! 390050 | SPG10-H7-GO | ϕ10 | SPG10-H7 |
| NEW! 390051 | SPG11-H7-GO | ϕ11 | SPG11-H7 |
| NEW! 390052 | SPG12-H7-GO | ϕ12 | SPG12-H7 |
| NEW! 390053 | SPG13-H7-GO | ϕ13 | SPG13-H7 |
| NEW! 390054 | SPG14-H7-GO | ϕ14 | SPG14-H7 |
| NEW! 390055 | SPG15-H7-GO | ϕ15 | SPG15-H7 |
| NEW! 390056 | SPG16-H7-GO | ϕ16 | SPG16-H7 |
| NEW! 390057 | SPG17-H7-GO | ϕ17 | SPG17-H7 |
| NEW! 390058 | SPG18-H7-GO | ϕ18 | SPG18-H7 |
| NEW! 390059 | SPG19-H7-GO | ϕ19 | SPG19-H7 |
| NEW! 390060 | SPG20-H7-GO | ϕ20 | SPG20-H7 |

※5mm from each edge is not precison guaranteed

## CARBIDE LIMIT PLUG GAUGE (APV TYPE) T

Excellent in abrasion resistance, made of durable carbide

Replacement Pin Gauge when wear out▶
Carbide Pin Gauge
P50

TPG9-H7

USE ●GO/ NOGO plug gauge for hole diameter inspection
MATERIAL ●Body: Aluminum ●Gauge: Carbide
SPECIFICATIONS ●Class H7 for manufacturing

| Order No. | Model No. | Standard | Tolerance Class | Tolerance (μm) |
|---|---|---|---|---|
| 393230 | TPG3-H7 | ϕ 3 | H7 | +10 0 |
| 393240 | TPG4-H7 | ϕ 4 | | +12 0 |
| 393250 | TPG5-H7 | ϕ 5 | | |
| 393260 | TPG6-H7 | ϕ 6 | | |
| 393270 | TPG7-H7 | ϕ 7 | | +15 0 |
| 393280 | TPG8-H7 | ϕ 8 | | |
| 393290 | TPG9-H7 | ϕ 9 | | |
| 393300 | TPG10-H7 | ϕ10 | | |
| 393310 | TPG11-H7 | ϕ11 | | +18 0 |
| 393320 | TPG12-H7 | ϕ12 | | |
| 393330 | TPG13-H7 | ϕ13 | | |
| 393340 | TPG14-H7 | ϕ14 | | |
| 393350 | TPG15-H7 | ϕ15 | | |
| 393360 | TPG16-H7 | ϕ16 | | |
| 393370 | TPG17-H7 | ϕ17 | | |
| 393380 | TPG18-H7 | ϕ18 | | |
| 393390 | TPG19-H7 | ϕ19 | | +21 0 |
| 393400 | TPG20-H7 | ϕ20 | | |

※5mm from each edge is not precision guaranteed

## CERAMIC LIMIT PLUG GAUGE (APV TYPE) T

Excellent stability to aged deterioration, requires low maintenance

Replacement Pin Gauge when wear out▶
Ceramic Pin Gauge
P51

CPG6-H7

USE ●GO/ NOGO plug gauge for hole diameter inspection
MATERIAL ●Body: Aluminum ●Gauge: Ceramic (Zirconia)
SPECIFICATIONS ●Class H7 for manufacturing

| Order No. | Model No. | Standard | Tolerance Class | Tolerance (μm) |
|---|---|---|---|---|
| 393430 | CPG3-H7 | ϕ 3 | H7 | +10 0 |
| 393440 | CPG4-H7 | ϕ 4 | | +12 0 |
| 393450 | CPG5-H7 | ϕ 5 | | |
| 393460 | CPG6-H7 | ϕ 6 | | |
| 393470 | CPG7-H7 | ϕ 7 | | +15 0 |
| 393480 | CPG8-H7 | ϕ 8 | | |
| 393490 | CPG9-H7 | ϕ 9 | | |
| 393500 | CPG10-H7 | ϕ10 | | |

※5mm from each edge is not precision guaranteed

## STEEL LIMIT RING GAUGE

T PDI

Convenient set for inspection by passing directly through splined shafts, etc.
Custom size limit ring gauges are also available upon request

Individual ring gauge▶
Ring Gauge

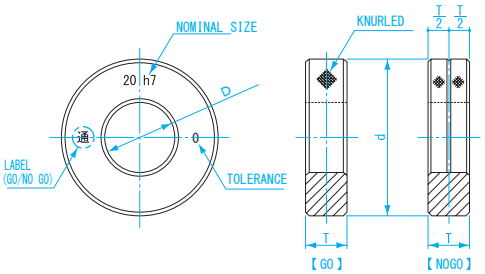
P62 ~65

Rust prevention▶
Zerust Film for Steel

P370

LR21-h7

● DIMENSIONS Units: mm




USE
- ●GO/ NOGO ring gauge for shaft diameter inspection

MATERIAL
- ●Alloy tool steel

FEATURES
- ●A pair of gauges with maximum and minimum limit size to test the compatibility of hole width
- ●Provided with inspection report

SPECIFICATIONS
- ●Class h7 for manufacturing
- ●Hardness: HV653~772

| Order No. | Model No. | Nominal size D(mm) | Outside Diameter d(mm) | Thickness T(mm) | Tolerance (μm) |
|---|---|---|---|---|---|
| 394000 | LR10-h7 | φ10 | 32 | 8 | 0 -15 |
| 394010 | LR11-h7 | φ11 | | | |
| 394020 | LR12-h7 | φ12 | | | |
| 394030 | LR13-h7 | φ13 | 38 | 10 | |
| 394040 | LR14-h7 | φ14 | | | 0 -18 |
| 394050 | LR15-h7 | φ15 | | | |
| 394060 | LR16-h7 | φ16 | | | |
| 394070 | LR17-h7 | φ17 | | | |
| 394080 | LR18-h7 | φ18 | 45 | 12 | |
| 394090 | LR19-h7 | φ19 | | | |
| 394100 | LR20-h7 | φ20 | | | |
| 394110 | LR21-h7 | φ21 | | | |
| 394120 | LR22-h7 | φ22 | | | |
| 394130 | LR23-h7 | φ23 | 53 | 14 | |
| 394140 | LR24-h7 | φ24 | | | 0 -21 |
| 394150 | LR25-h7 | φ25 | | | |
| 394160 | LR26-h7 | φ26 | | | |
| 394170 | LR27-h7 | φ27 | | | |
| 394180 | LR28-h7 | φ28 | 63 | 16 | |
| 394190 | LR29-h7 | φ29 | | | |
| 394200 | LR30-h7 | φ30 | | | |

## STEEL LIMIT RING GAUGE WITH PROTECTIVE COVER

PDI

GO/ NOGO gauge paired by a protective cover.
No risk of loosing one, easy to use.

Individual ring gauge▶
Ring Gauge

P62 ~65

Rust prevention▶
Zerust Film for Steel

P370

HKLR16-h7

USE
- ●GO/ NOGO ring gauge for shaft diameter inspection

MATERIAL
- ●Gauge: Alloy tool steel
- ●Protective cover: Aluminum

FEATURES
- ●GO/ NOGO gauge embedded in aluminum protective cover
- ●Covered gauge is easier to handle with dirty hands
- ●Less susceptible to thermal expansion when holding a gauge by hand
- ●Provided with inspection report

SPECIFICATIONS
- ●Class h7 for manufacturing
- ●Hardness: HV653~772 (Gauge)

| Order No. | Model No. | Nominal size (mm) |
|---|---|---|
| 395005 | HKLR5-h7 | φ 5 |
| 395006 | HKLR6-h7 | φ 6 |
| 395007 | HKLR7-h7 | φ 7 |
| 395008 | HKLR8-h7 | φ 8 |
| 395009 | HKLR9-h7 | φ 9 |
| 395010 | HKLR10-h7 | φ10 |
| 395011 | HKLR11-h7 | φ11 |
| 395012 | HKLR12-h7 | φ12 |
| 395013 | HKLR13-h7 | φ13 |
| 395014 | HKLR14-h7 | φ14 |
| 395015 | HKLR15-h7 | φ15 |
| 395016 | HKLR16-h7 | φ16 |
| 395017 | HKLR17-h7 | φ17 |
| 395018 | HKLR18-h7 | φ18 |
| 395019 | HKLR19-h7 | φ19 |
| 395020 | HKLR20-h7 | φ20 |

# THREAD LIMIT GAUGE (OLD JIS / GPIP Ⅱ・GRIR Ⅱ)

T PDI
(M2~M12)

Essentials for checking screw accuracy.
GO/NOGO gauge for checking accuracy of thread.
This is a OLD JIS standard gauge of Class 2 for inspection.

For Serial No. Management▶ Laser Marking P114
Rust prevention▶ Zerust Film for Steel P370

| Category | for Inspection |
|---|---|
| Thread Plug Gauge, Class 2 | GPIP Ⅱ |
| Thread Ring Gauge, Class 2 | GRIR Ⅱ |

●Thread limit gauge is used to perform GO/NOGO inspection based on the minimum and maximum dimensions prescribed for each screw grade.
For acceptance of a threaded part, GO gauge should thread without any difficulties and NOGO gauge should not thread more than two complete revolutions.

※ The thread category does not represent its quality but represent the position of the acceptance range.
Please select a screw gauge suitable for the product grade.

USE
●For internal/ external screw thread inspection

FEATURES
●Enables to inspect whether threaded parts are within upper / lower limits of the screw's prescribed dimensional precision
●Provided with inspection report

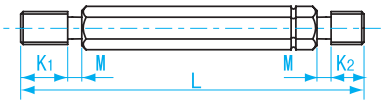
## THREAD LIMIT PLUG GAUGE (OLD JIS FOR INSPECTION CLASS 2 / GPIP Ⅱ)

HOW TO MOVIE

GPIP2-1215

MATERIAL
●Gauge: Alloy tool steel
●Handle: Aluminum

● DIMENSIONS




※ Reference purposes only

| Order No. | Model No. | Nominal size | K1 (mm) | K2 (mm) | M※ (mm) | L※ (mm) |
|---|---|---|---|---|---|---|
| 370204 | GPIP2-0204 | M2 ×P0.4 | 4.5 | 4.5 | 5.5 | 60 |
| 370207 | GPIP2-026045 | M2.6×P0.45 | | | | |
| 370305 | GPIP2-0305 | M3 ×P0.5 | | | | |
| 370306 | GPIP2-03506 | M3.5×P0.6 | 6 | 6 | 6 | 72 |
| 370407 | GPIP2-0407 | M4 ×P0.7 | | | | |
| 370508 | GPIP2-0508 | M5 ×P0.8 | 8 | | | 74 |
| 370607 | GPIP2-06075 | M6 ×P0.75 | | | | |
| 370610 | GPIP2-0610 | M6 ×P1.0 | | | | |
| 370710 | GPIP2-0710 | M7 ×P1.0 | 10 | | 7 | 86 |
| 370810 | GPIP2-0810 | M8 ×P1.0 | 12 | 10 | | 92 |
| 370812 | GPIP2-08125 | M8 ×P1.25 | | | | |
| 371010 | GPIP2-1010 | M10 ×P1.0 | | | | |
| 371012 | GPIP2-10125 | M10 ×P1.25 | | | | |
| 371015 | GPIP2-1015 | M10 ×P1.5 | | | | |
| 371210 | GPIP2-1210 | M12 ×P1.0 | 16 | | 8 | 105 |
| 371212 | GPIP2-12125 | M12 ×P1.25 | | | | |
| 371215 | GPIP2-1215 | M12 ×P1.5 | | | | |
| 371217 | GPIP2-12175 | M12 ×P1.75 | | | | |
| 371420 | GPIP2-1420 | M14 ×P2.0 | 15 | | 6 | 117 |
| 371620 | GPIP2-1620 | M16 ×P2.0 | | | | |
| 371825 | GPIP2-1825 | M18 ×P2.5 | 22 | 15 | | 129 |
| 372025 | GPIP2-2025 | M20 ×P2.5 | | | | |

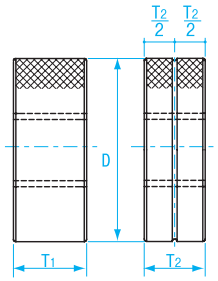
## THREAD LIMIT RING GAUGE (OLD JIS FOR INSPECTION CLASS 2 / GRIR Ⅱ)

HOW TO MOVIE

GRIR2-1620

MATERIAL
●Alloy tool steel

● DIMENSIONS




| Order No. | Model No. | Nominal size | Outside Diameter D (mm) | T1 (mm) | T2 (mm) |
|---|---|---|---|---|---|
| 380204 | GRIR2-0204 | M2 ×P0.4 | 25 | 3 | 3 |
| 380207 | GRIR2-026045 | M2.6×P0.45 | | | |
| 380305 | GRIR2-0305 | M3 ×P0.5 | | 4 | |
| 380407 | GRIR2-0407 | M4 ×P0.7 | | 6 | 4 |
| 380508 | GRIR2-0508 | M5 ×P0.8 | | | |
| 380610 | GRIR2-0610 | M6 ×P1.0 | 30 | 8 | 6 |
| 380710 | GRIR2-0710 | M7 ×P1.0 | | | |
| 380810 | GRIR2-0810 | M8 ×P1.0 | | | |
| 380812 | GRIR2-08125 | M8 ×P1.25 | | | |
| 381010 | GRIR2-1010 | M10 ×P1.0 | 40 | 10 | 8 |
| 381012 | GRIR2-10125 | M10 ×P1.25 | | | |
| 381015 | GRIR2-1015 | M10 ×P1.5 | | | |
| 381210 | GRIR2-1210 | M12 ×P1.0 | | | |
| 381212 | GRIR2-12125 | M12 ×P1.25 | | | |
| 381215 | GRIR2-1215 | M12 ×P1.5 | | | |
| 381217 | GRIR2-12175 | M12 ×P1.75 | | 15 | 10 |
| 381420 | GRIR2-1420 | M14 ×P2.0 | 50 | | |
| 381620 | GRIR2-1620 | M16 ×P2.0 | | | |
| 381825 | GRIR2-1825 | M18 ×P2.5 | | 22 | 15 |
| 382025 | GRIR2-2025 | M20 ×P2.5 | | | |

Custom size limit gauges are also available on request

# THREAD LIMIT GAUGE (OLD JIS / GPWP Ⅱ・GRWR Ⅱ)

PDI (M2～M12)

Essentials for checking screw accuracy.
GO/NOGO gauge for checking accuracy of thread.
This is a OLD JIS standard gauge of Class 2 for manufacturing.

For Serial No. Management▶ Laser Marking P114
Rust prevention▶ Zerust Film for Steel P370

| Category | for Manufacturing |
|---|---|
| Thread Plug Gauge, Class 2 | GPWP Ⅱ |
| Thread Ring Gauge, Class 2 | GRWR Ⅱ |

●Thread limit Gauge is used to perform GO / NOGO inspection based on the minimum and maximum dimensions prescribed for each screw grade.
For acceptance of a threaded part, GO gauge should thread without any difficulties and NOGO should not thread more than two complete revolutions.

※ The thread category does not represent its quality but represent the position of the acceptance range.
Please select a screw gauge suitable for the product grade.

USE
●For Internal/ external screw thread inspection

FEATURES
●Enables to inspect whether threaded parts are within upper/lower limits of the screw's prescribed dimensional precision.
●Provided with inspection report

## THREAD LIMIT PLUG GAUGE (OLD JIS FOR MACHINE WORK CLASS 2 / GPWP Ⅱ)

HOW TO MOVIE

GPWP2-12175

MATERIAL
●Gauge: Alloy tool steel
●Handle: Aluminum

● DIMENSIONS

※ Reference purposes only

| Order No. | Model No. | Nominal Size | K1 (mm) | K2 (mm) | M※ (mm) | L※ (mm) |
|---|---|---|---|---|---|---|
| 470204 | GPWP2-0204 | M2 ×P0.4 | 4.5 | 4.5 | 5.5 | 60 |
| 470207 | GPWP2-026045 | M2.6×P0.45 | | | | |
| 470305 | GPWP2-0305 | M3 ×P0.5 | | | | |
| 470306 | GPWP2-03506 | M3.5×P0.6 | 6 | 6 | 6 | 72 |
| 470407 | GPWP2-0407 | M4 ×P0.7 | | | | |
| 470508 | GPWP2-0508 | M5 ×P0.8 | 8 | | | 74 |
| 470607 | GPWP2-06075 | M6 ×P0.75 | | | | |
| 470610 | GPWP2-0610 | M6 ×P1.0 | | | | |
| 470710 | GPWP2-0710 | M7 ×P1.0 | 10 | | 7 | 86 |
| 470810 | GPWP2-0810 | M8 ×P1.0 | 12 | 10 | | 92 |
| 470812 | GPWP2-08125 | M8 ×P1.25 | | | | |
| 471010 | GPWP2-1010 | M10 ×P1.0 | | | | |
| 471012 | GPWP2-10125 | M10 ×P1.25 | | | | |
| 471015 | GPWP2-1015 | M10 ×P1.5 | | | | |
| 471210 | GPWP2-1210 | M12 ×P1.0 | 16 | | 8 | 105 |
| 471212 | GPWP2-12125 | M12 ×P1.25 | | | | |
| 471215 | GPWP2-1215 | M12 ×P1.5 | | | | |
| 471217 | GPWP2-12175 | M12 ×P1.75 | | | | |
| 471420 | GPWP2-1420 | M14 ×P2.0 | 15 | | 6 | 117 |
| 471620 | GPWP2-1620 | M16 ×P2.0 | | | | |
| 471825 | GPWP2-1825 | M18 ×P2.5 | 22 | 15 | | 129 |
| 472025 | GPWP2-2025 | M20 ×P2.5 | | | | |

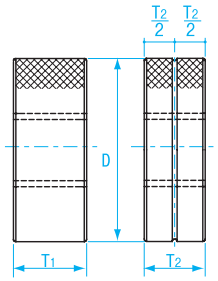
## THREAD LIMIT RING GAUGE (OLD JIS FOR MACHINE WORK CLASS 2 / GRWR Ⅱ)

HOW TO MOVIE

GRWR2-1620

MATERIAL
●Alloy tool steel

● DIMENSIONS




| Order No. | Model No. | Nominal Size | Outside Diameter D (mm) | T1 (mm) | T2 (mm) |
|---|---|---|---|---|---|
| 300204 | GRWR2-0204 | M2 ×P0.4 | 25 | 3 | 3 |
| 300207 | GRWR2-026045 | M2.6×P0.45 | | | |
| 300305 | GRWR2-0305 | M3 ×P0.5 | | 4 | |
| 300407 | GRWR2-0407 | M4 ×P0.7 | | 6 | 4 |
| 300508 | GRWR2-0508 | M5 ×P0.8 | | | |
| 300610 | GRWR2-0610 | M6 ×P1.0 | 30 | 8 | 6 |
| 300710 | GRWR2-0710 | M7 ×P1.0 | | | |
| 300810 | GRWR2-0810 | M8 ×P1.0 | | | |
| 300812 | GRWR2-08125 | M8 ×P1.25 | | | |
| 301010 | GRWR2-1010 | M10 ×P1.0 | 40 | 10 | 8 |
| 301012 | GRWR2-10125 | M10 ×P1.25 | | | |
| 301015 | GRWR2-1015 | M10 ×P1.5 | | | |
| 301210 | GRWR2-1210 | M12 ×P1.0 | | | |
| 301212 | GRWR2-12125 | M12 ×P1.25 | | | |
| 301215 | GRWR2-1215 | M12 ×P1.5 | | | |
| 301217 | GRWR2-12175 | M12 ×P1.75 | | 15 | 10 |
| 301420 | GRWR2-1420 | M14 ×P2.0 | 50 | | |
| 301620 | GRWR2-1620 | M16 ×P2.0 | | | |
| 301825 | GRWR2-1825 | M18 ×P2.5 | | 22 | 15 |
| 302025 | GRWR2-2025 | M20 ×P2.5 | | | |

Custom size limit gauges are also available on request

# THREAD LIMIT PLUG GAUGE (ISO TYPE JIS / GPNP)

T (M2~M12) PDI

HOW TO MOVIE

Essentials for checking screw accuracy.
GO/NOGO gauge for checking accuracy of thread.
While the original JIS gauge has two classifications of NOGO gauge (; for Inspection and for Manufacturing), there is no classification in ISO type JIS gauge 0.

For Serial No. Management ▶ Laser Marking P114
Rust prevention ▶ Zerust Film for Steel P370

| Catetory | Standard・Class |
|---|---|
| Thread Plug, Class 2 | GPNP-6H |

●Thread limit Gauge is used to perform GO/NOGO inspection based on the minimum and maximum dimensions prescribed for each screw grade.
For acceptance of a threaded part, GO gauge should thread without any difficulties and NOGO should not thread more than two complete revolutions.

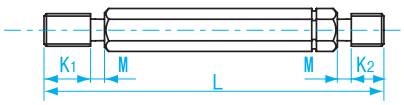
※ The thread category does not represent its quality but represent the position of the acceptance range.
Please select a screw gauge suitable for the product grade.

USE
●For Internal / external screw thread inspection
FEATURES
●Enables to inspect whether threaded parts are within upper/lower limits of the screw's prescribed dimensional precision.
●Provided with inspection report

## THREAD LIMIT PLUG GAUGE (ISO TYPE JIS / GPNP)

GPNP-12175I

● DIMENSIONS




Material
●Gauge: Alloy tool steel
●Handle: Aluminum

※ Reference purposes only

| Order No. | Model No. | Nominal Size | K1 (mm) | K2 (mm) | M ※ (mm) | L ※ (mm) |
|---|---|---|---|---|---|---|
| 326024 | GPNP-0204I | M 2 × P0.4 | 4.5 | 4.5 | 5.5 | 60 |
| 326035 | GPNP-0305I | M 3 × P0.5 | | | | |
| 326036 | GPNP-03506I | M 3.5 × P0.6 | 6 | 6 | 6 | 72 |
| 326047 | GPNP-0407I | M 4 × P0.7 | | | | |
| 326058 | GPNP-0508I | M 5 × P0.8 | 8 | | | 74 |
| 326060 | GPNP-06075I | M 6 × P0.75 | | | | |
| 326061 | GPNP-0610I | M 6 × P1.0 | | | | |
| 326071 | GPNP-0710I | M 7 × P1.0 | 10 | | 7 | 86 |
| 326080 | GPNP-0810I | M 8 × P1.0 | 12 | 10 | | 92 |
| 326081 | GPNP-08125I | M 8 × P1.25 | | | | |
| 326099 | GPNP-1010I | M10 × P1.0 | | | | |
| 326100 | GPNP-10125I | M10 × P1.25 | | | | |
| 326101 | GPNP-1015I | M10 × P1.5 | | | | |
| 326118 | GPNP-1210I | M12 × P1.0 | 16 | | 8 | 105 |
| 326119 | GPNP-12125I | M12 × P1.25 | | | | |
| 326120 | GPNP-1215I | M12 × P1.5 | | | | |
| 326121 | GPNP-12175I | M12 × P1.75 | | | | |

# THREAD PLUG GAUGE NEW!

A specially designed thread gauge with an insertion guide at the tip for pre-hole GO inspection!
Equipped with a hexagonal bit, it can be used by attaching it to electric drill drivers.

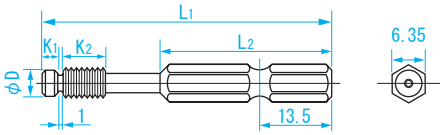
GP2H-08125

USE
- For thread hole GO inspection and pre-thread hole GO inspection

MATERIAL
- Gauge: Alloy tool steel

FEATURES
- A thread plug gauge designed exclusively for GO inspection
- Specially designed with an insertion guide gauge at the tip, enabling simultaneous confirmation of pre-hole and threaded hole GO inspection, improving inspection efficiency
- The shank section features a 6.35mm hexagonal bit, allowing attachment to electric drill drivers. Significantly reduces measurement time compared to manual inspection.
  ※For safety, use electric drill drivers with low torque.
  (Recommended torque value: 1 N·m or less)

● DIMENSIONS Units : mm




*Reference values

| Order No. | Model No. | Nominal Dimension | D (mm) | $K_1$ (mm) | $K_2$ (mm) | $L_1$ ※ (mm) | $L_2$ ※ (mm) |
|---|---|---|---|---|---|---|---|
| NEW! 390101 | GP2H-0305 | M3 ×P0.5 | 2.459 | 1.5 | 4.5 | 47 | 32.95 |
| NEW! 390102 | GP2H-0407 | M4 ×P0.7 | 3.242 | 2 | 6 | 49.5 | 32.65 |
| NEW! 390103 | GP2H-0508 | M5 ×P0.8 | 4.134 | 3 | 8 | 54.5 | 32.25 |
| NEW! 390104 | GP2H-0610 | M6 ×P1.0 | 4.917 | | | | |
| NEW! 390105 | GP2H-08125 | M8 ×P1.25 | 6.647 | 5 | 12 | 63.5 | 31.5 |
| NEW! 390106 | GP2H-1015 | M10×P1.5 | 8.376 | | | | |
| NEW! 390107 | GP2H-12175 | M12×P1.75 | 10.106 | 7 | 16 | 75.5 | 31 |

# TAP GAUGE FOR NOGO

Rust prevention▶ Zerust Film for Steel P370

Thread gauge and pilot hole size pin gauge in one product.
Checking pilot hole diameter with its upper limit.

GP2N-0610

Pass Condition

USE
- Checking NG for large tap hole

MATERIAL
- Gauge: Steel ●Handle: Aluminum

FEATURES
- One side thread plug gauge, one side pin gauge for pilot hole confirmation

| Order No. | Model No. | Nominal Size |
|---|---|---|
| 390211 | GP2N-0305 | M3×P0.5 |
| 390212 | GP2N-0407 | M4×P0.7 |
| 390213 | GP2N-0508 | M5×P0.8 |
| 390214 | GP2N-0610 | M6×P1.0 |
| 390215 | GP2N-08125 | M8×P1.25 |

Replacement thread / pin gauge available

# TAP GAUGE FOR GO

Rust prevention▶ Zerust Film for Steel P370

Thread gauge and pilot hole size pin gauge in one product.
Checking pilot hole diameter with its lower limit.

GP2G-0610

Pass Condition

USE
- Checking NG for small tape hole

MATERIAL
- Gauge: Steel ●Handle: Aluminum

FEATURES
- One side thread plug gauge, one side pin gauge for pilot hole confirmation

| Order No. | Model No. | Nominal Size |
|---|---|---|
| 390221 | GP2G-0305 | M3×P0.5 |
| 390222 | GP2G-0407 | M4×P0.7 |
| 390223 | GP2G-0508 | M5×P0.8 |
| 390224 | GP2G-0610 | M6×P1.0 |
| 390225 | GP2G-08125 | M8×P1.25 |

Replacement thread / pin gauge available

## TAP HOLE CHECKING GAUGE SET NEW!

Easily and accurately confirm thread pre-hole diameters with pin gauges!
A set of 8 pins with percentage of thread engagement ranging from 100% to 65%.

THC-0204

USE
- For confirming thread pre-hole diameters as specified in JIS B 1004.

MATERIAL
- Steel (Sub-zero treated for ϕ2.700mm and above)

FEATURES
- Ensures that the thread pre-holes in processed workpieces comply with specifications.
- Dimensions are based on percentage of thread engagement calculations as per JIS B 1004.
- Includes a total of 8 pins with percentage of thread engagement from 100% to 65%.
- High-precision pin gauges enable accurate confirmation.

SPECIFICATIONS
- Pin Gauge: Steel Pin Gauge AA

*For accuracy and detailed specifications, please refer to the Steel Pin Gauge AA Series.

| Order No. | Model No. | Compatible Thread Diameter | Gauge Size (mm) [percentage of thread engagement] | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | 100% | 95% | 90% | 85% | 80% | 75% | 70% | 65% |
| NEW! 390231 | THC-0204 | M2×P0.4 | 1.57 | 1.59 | 1.61 | 1.63 | 1.65 | 1.67 | 1.70 | 1.72 |
| NEW! 390232 | THC-0305 | M3×P0.5 | 2.46 | 2.49 | 2.51 | 2.54 | 2.57 | 2.59 | 2.62 | 2.65 |
| NEW! 390233 | THC-0407 | M4×P0.7 | 3.24 | 3.28 | 3.32 | 3.36 | 3.39 | 3.43 | 3.47 | 3.51 |
| NEW! 390234 | THC-0508 | M5×P0.8 | 4.13 | 4.18 | 4.22 | 4.26 | 4.31 | 4.35 | 4.39 | 4.44 |
| NEW! 390235 | THC-0610 | M6×P1.0 | 4.92 | 4.97 | 5.03 | 5.08 | 5.13 | 5.19 | 5.24 | 5.30 |
| NEW! 390236 | THC-08125 | M8×P1.25 | 6.65 | 6.71 | 6.78 | 6.85 | 6.92 | 6.98 | 7.05 | 7.12 |
| NEW! 390237 | THC-1015 | M10×P1.5 | 8.38 | 8.46 | 8.54 | 8.62 | 8.70 | 8.78 | 8.86 | 8.94 |

## BALL GAP GAUGE

Small hole gauge to check right position or gap when assembling parts

Rust prevention▶
Zerust Film for Steel
P370

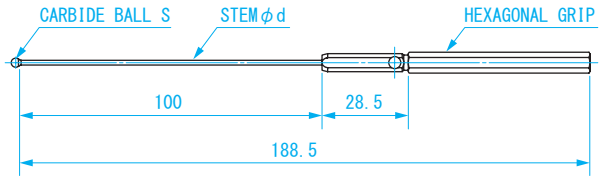
USE
- For gap measurement
- Suitable for measuring shallow groove and curbed inner pipes

MATERIAL
- Gauge head: Carbide
- Stem/Grip: Stainless steel

FEATURES
- Stainless steel spring. Flexible shaft and able to bend
- Easy to check right position or gap when assembling parts

SPECIFICATIONS
- Gauge Accuracy: Sphericity 0.005mm
  Tolerance ±0.005mm

●DIMEMSIONS Units: mm




| Order No. | Model No. | Ball size S (mm) | Stem diameter d (mm) |
|---|---|---|---|
| 112000 | BTS-020 | ϕ2.0 | 1.0 |
| 112001 | BTS-021 | ϕ2.1 | 1.6 |
| 112002 | BTS-022 | ϕ2.2 | |
| 112003 | BTS-023 | ϕ2.3 | |
| 112004 | BTS-024 | ϕ2.4 | |
| 112005 | BTS-025 | ϕ2.5 | |
| 112006 | BTS-026 | ϕ2.6 | |
| 112007 | BTS-027 | ϕ2.7 | |
| 112008 | BTS-028 | ϕ2.8 | |
| 112009 | BTS-029 | ϕ2.9 | |
| 112010 | BTS-030 | ϕ3.0 | |
| 112011 | BTS-031 | ϕ3.1 | |
| 112012 | BTS-032 | ϕ3.2 | |
| 112013 | BTS-033 | ϕ3.3 | |
| 112014 | BTS-034 | ϕ3.4 | |
| 112015 | BTS-035 | ϕ3.5 | |
| 112016 | BTS-036 | ϕ3.6 | |
| 112017 | BTS-037 | ϕ3.7 | |
| 112018 | BTS-038 | ϕ3.8 | |
| 112019 | BTS-039 | ϕ3.9 | |
| 112020 | BTS-040 | ϕ4.0 | |
| 112021 | BTS-041 | ϕ4.1 | 2.3 |
| 112022 | BTS-042 | ϕ4.2 | |
| 112023 | BTS-043 | ϕ4.3 | |
| 112024 | BTS-044 | ϕ4.4 | |
| 112025 | BTS-045 | ϕ4.5 | |

| Order No. | Model No. | Ball size S (mm) | Stem diameter d (mm) |
|---|---|---|---|
| 112026 | BTS-046 | ϕ4.6 | 2.3 |
| 112027 | BTS-047 | ϕ4.7 | |
| 112028 | BTS-048 | ϕ4.8 | |
| 112029 | BTS-049 | ϕ4.9 | |
| 112030 | BTS-050 | ϕ5.0 | |
| 112031 | BTS-051 | ϕ5.1 | |
| 112032 | BTS-052 | ϕ5.2 | |
| 112033 | BTS-053 | ϕ5.3 | |
| 112034 | BTS-054 | ϕ5.4 | |
| 112035 | BTS-055 | ϕ5.5 | |
| 112036 | BTS-056 | ϕ5.6 | |
| 112037 | BTS-057 | ϕ5.7 | |
| 112038 | BTS-058 | ϕ5.8 | |
| 112039 | BTS-059 | ϕ5.9 | |
| 112040 | BTS-060 | ϕ6.0 | |
| 112041 | BTS-061 | ϕ6.1 | |
| 112042 | BTS-062 | ϕ6.2 | |
| 112043 | BTS-063 | ϕ6.3 | |
| 112044 | BTS-064 | ϕ6.4 | |
| 112045 | BTS-065 | ϕ6.5 | |
| 112046 | BTS-066 | ϕ6.6 | |
| 112047 | BTS-067 | ϕ6.7 | |
| 112048 | BTS-068 | ϕ6.8 | |
| 112049 | BTS-069 | ϕ6.9 | |
| 112050 | BTS-070 | ϕ7.0 | |

# BALL GAP GAUGE

## Small hole gauge to check right position or gap when assembling parts

BTP-050

USE

●For gap measurement ●Suitable for measuring shallow groove and curbed inner pipes

MATERIAL

●Gauge head: Carbide ●Stem: Stainless steel ●Grip: ABS

FEATURES

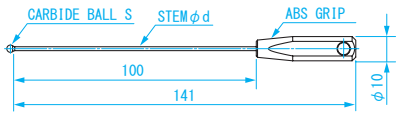
●Stainless steel spring. Flexible shaft and able to bend

●Easy to check right position or gap when assembling parts

SPECIFICATIONS

●Gauge Accuracy: Sphericity 0.005mm Tolerance ±0.005mm

●DIMEMSIONS Units: mm




| Order No. | Model No. | Ball size S (mm) | Stem diameter d (mm) |
|---|---|---|---|
| 112051 | BTP-020 | ϕ2.0 | 1.0 |
| 112052 | BTP-021 | ϕ2.1 | 1.6 |
| 112053 | BTP-022 | ϕ2.2 | |
| 112054 | BTP-023 | ϕ2.3 | |
| 112055 | BTP-024 | ϕ2.4 | |
| 112056 | BTP-025 | ϕ2.5 | |
| 112057 | BTP-026 | ϕ2.6 | |
| 112058 | BTP-027 | ϕ2.7 | |
| 112059 | BTP-028 | ϕ2.8 | |
| 112060 | BTP-029 | ϕ2.9 | |
| 112061 | BTP-030 | ϕ3.0 | |
| 112062 | BTP-031 | ϕ3.1 | |
| 112063 | BTP-032 | ϕ3.2 | |
| 112064 | BTP-033 | ϕ3.3 | |
| 112065 | BTP-034 | ϕ3.4 | |
| 112066 | BTP-035 | ϕ3.5 | |
| 112067 | BTP-036 | ϕ3.6 | |
| 112068 | BTP-037 | ϕ3.7 | |
| 112069 | BTP-038 | ϕ3.8 | |
| 112070 | BTP-039 | ϕ3.9 | |
| 112071 | BTP-040 | ϕ4.0 | |
| 112072 | BTP-041 | ϕ4.1 | 2.3 |
| 112073 | BTP-042 | ϕ4.2 | |
| 112074 | BTP-043 | ϕ4.3 | |
| 112075 | BTP-044 | ϕ4.4 | |
| 112076 | BTP-045 | ϕ4.5 | |

| Order No. | Model No. | Ball size S (mm) | Stem diameter d (mm) |
|---|---|---|---|
| 112077 | BTP-046 | ϕ4.6 | 2.3 |
| 112078 | BTP-047 | ϕ4.7 | |
| 112079 | BTP-048 | ϕ4.8 | |
| 112080 | BTP-049 | ϕ4.9 | |
| 112081 | BTP-050 | ϕ5.0 | |
| 112082 | BTP-051 | ϕ5.1 | |
| 112083 | BTP-052 | ϕ5.2 | |
| 112084 | BTP-053 | ϕ5.3 | |
| 112085 | BTP-054 | ϕ5.4 | |
| 112086 | BTP-055 | ϕ5.5 | |
| 112087 | BTP-056 | ϕ5.6 | |
| 112088 | BTP-057 | ϕ5.7 | |
| 112089 | BTP-058 | ϕ5.8 | |
| 112090 | BTP-059 | ϕ5.9 | |
| 112091 | BTP-060 | ϕ6.0 | |
| 112092 | BTP-061 | ϕ6.1 | |
| 112093 | BTP-062 | ϕ6.2 | |
| 112094 | BTP-063 | ϕ6.3 | |
| 112095 | BTP-064 | ϕ6.4 | |
| 112096 | BTP-065 | ϕ6.5 | |
| 112097 | BTP-066 | ϕ6.6 | |
| 112098 | BTP-067 | ϕ6.7 | |
| 112099 | BTP-068 | ϕ6.8 | |
| 112100 | BTP-069 | ϕ6.9 | |
| 112101 | BTP-070 | ϕ7.0 | |

# BALL GAP GAUGE SHAPE MEMORY NEW!

## Small hole gauge to check right position or gap when assembling parts

Check Shape memory in the video!

BNTP-050

USE

●For gap measurement ●Suitable for measuring shallow groove and curbed inner pipes

MATERIAL

●Gauge head: Carbide ●Stem: Shape memory alloy ●Grip: ABS

FEATURES

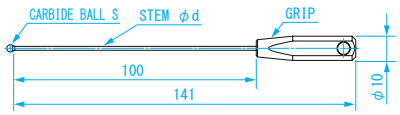
●The stem is made of a shape memory alloy, allowing it to return to its original shape after bending and measuring

●Easy to check right position for gap when assembling parts

SPECIFICATIONS

●Gauge Accuracy: Sphericity 0.005mm Tolerance ±0.005mm

●DIMEMSIONS Units : mm




| Order No. | Model No. | Ball size S (mm) | Stem diameter d (mm) |
|---|---|---|---|
| NEW! 112102 | BNTP-020 | ϕ2.0 | 1.6 |
| NEW! 112103 | BNTP-021 | ϕ2.1 | |
| NEW! 112104 | BNTP-022 | ϕ2.2 | |
| NEW! 112105 | BNTP-023 | ϕ2.3 | |
| NEW! 112106 | BNTP-024 | ϕ2.4 | |
| NEW! 112107 | BNTP-025 | ϕ2.5 | |
| NEW! 112108 | BNTP-026 | ϕ2.6 | |
| NEW! 112109 | BNTP-027 | ϕ2.7 | |
| NEW! 112110 | BNTP-028 | ϕ2.8 | |
| NEW! 112111 | BNTP-029 | ϕ2.9 | |
| NEW! 112112 | BNTP-030 | ϕ3.0 | |
| NEW! 112113 | BNTP-031 | ϕ3.1 | |
| NEW! 112114 | BNTP-032 | ϕ3.2 | |
| NEW! 112115 | BNTP-033 | ϕ3.3 | |
| NEW! 112116 | BNTP-034 | ϕ3.4 | |
| NEW! 112117 | BNTP-035 | ϕ3.5 | |
| NEW! 112118 | BNTP-036 | ϕ3.6 | |
| NEW! 112119 | BNTP-037 | ϕ3.7 | |
| NEW! 112120 | BNTP-038 | ϕ3.8 | |
| NEW! 112121 | BNTP-039 | ϕ3.9 | |
| NEW! 112122 | BNTP-040 | ϕ4.0 | |
| NEW! 112123 | BNTP-041 | ϕ4.1 | 2.3 |
| NEW! 112124 | BNTP-042 | ϕ4.2 | |
| NEW! 112125 | BNTP-043 | ϕ4.3 | |
| NEW! 112126 | BNTP-044 | ϕ4.4 | |
| NEW! 112127 | BNTP-045 | ϕ4.5 | |

| Order No. | Model No. | Ball size S (mm) | Stem diameter d (mm) |
|---|---|---|---|
| NEW! 112128 | BNTP-046 | ϕ4.6 | 2.3 |
| NEW! 112129 | BNTP-047 | ϕ4.7 | |
| NEW! 112130 | BNTP-048 | ϕ4.8 | |
| NEW! 112131 | BNTP-049 | ϕ4.9 | |
| NEW! 112132 | BNTP-050 | ϕ5.0 | |
| NEW! 112133 | BNTP-051 | ϕ5.1 | |
| NEW! 112134 | BNTP-052 | ϕ5.2 | |
| NEW! 112135 | BNTP-053 | ϕ5.3 | |
| NEW! 112136 | BNTP-054 | ϕ5.4 | |
| NEW! 112137 | BNTP-055 | ϕ5.5 | |
| NEW! 112138 | BNTP-056 | ϕ5.6 | |
| NEW! 112139 | BNTP-057 | ϕ5.7 | |
| NEW! 112140 | BNTP-058 | ϕ5.8 | |
| NEW! 112141 | BNTP-059 | ϕ5.9 | |
| NEW! 112142 | BNTP-060 | ϕ6.0 | |
| NEW! 112143 | BNTP-061 | ϕ6.1 | |
| NEW! 112144 | BNTP-062 | ϕ6.2 | |
| NEW! 112145 | BNTP-063 | ϕ6.3 | |
| NEW! 112146 | BNTP-064 | ϕ6.4 | |
| NEW! 112147 | BNTP-065 | ϕ6.5 | |
| NEW! 112148 | BNTP-066 | ϕ6.6 | |
| NEW! 112149 | BNTP-067 | ϕ6.7 | |
| NEW! 112150 | BNTP-068 | ϕ6.8 | |
| NEW! 112151 | BNTP-069 | ϕ6.9 | |
| NEW! 112152 | BNTP-070 | ϕ7.0 | |

# FEELER GAUGE (WIDE TYPE)

※板厚0.005mmを除く

Essential for assembly and adjustment.
A wide type of feeler gauge is now available.

12.7mm wide (normal) type▶ Feeler Gauge P79~80
Multiple sizes in one product▶ Thickness Gauge P81~84
Rust prevention▶ Zerust Film for Steel P370

Can be cut to necessary size

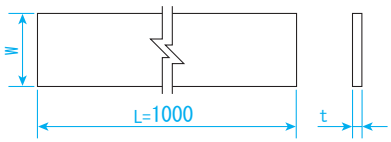
USE
- For measurement of gap width
- For assemble or adjustment of automotive engine components or other machinery

MATERIAL
- Stainless steel (SUS304)【RoHS Compliant】

FEATURES
- Can be cut to necessary size
- Convenient cardboard storage box
- Made of stainless steel, rust resistant

SPECIFICATIONS
- Leaf Length: 1m
- Case Size: 80×88×40mm(30mm width)
  90×90×60mm(50mm width)

● DIMENSIONS Units: mm




■ Leaf Width (W) : 30mm

| Order No. | Model No. | Thickness (t) (mm) | Thickness Accuracy (t) (mm) |
|---|---|---|---|
| 007391 | SFG30-005-1 | 0.005 | ±0.0005 |
| 007392 | SFG30-01-1 | 0.01 | ±0.001 |
| 007393 | SFG30-02-1 | 0.02 | ±0.002 |
| 007394 | SFG30-03-1 | 0.03 | ±0.003 |
| 007395 | SFG30-04-1 | 0.04 | ±0.004 |
| 007396 | SFG30-05-1 | 0.05 | ±0.005 |
| 007397 | SFG30-06-1 | 0.06 | ±0.006 |
| 007398 | SFG30-08-1 | 0.08 | ±0.008 |
| 007399 | SFG30-10-1 | 0.1 | ±0.01 |

■ Leaf Width (W) : 50mm

| Order No. | Model No. | Thickness (t) (mm) | Thickness Accuracy (t) (mm) |
|---|---|---|---|
| 007400 | SFG50-005-1 | 0.005 | ±0.0005 |
| 007401 | SFG50-01-1 | 0.01 | ±0.001 |
| 007402 | SFG50-02-1 | 0.02 | ±0.002 |
| 007403 | SFG50-03-1 | 0.03 | ±0.003 |
| 007404 | SFG50-04-1 | 0.04 | ±0.004 |
| 007405 | SFG50-05-1 | 0.05 | ±0.005 |
| 007406 | SFG50-06-1 | 0.06 | ±0.006 |
| 007407 | SFG50-08-1 | 0.08 | ±0.008 |
| 007408 | SFG50-10-1 | 0.1 | ±0.01 |

# FEELER GAUGE (SFG SERIES)

※板厚0.005mmを除く

Essential for assembly and fitting work. Made of rust-resistant stainless steel.
Can be used by cutting only the necessary size.

USE
- For measurement of gap width

MATERIAL
- Leaf thickness: 0.01mm Stainless steel SUS301H
  0.005·0.02~0.30mm Stainless steel SUS304H

FEATURES
- For assemble or adjustment of automotive engine components or other machinery. Can be cut to necessary size.

SPECIFICATIONS
- Leaf width: 12.7mm
- Leaf hardness: HV300 and above
- Case Size: 77×77×22mm
  115×115×22mm (Order No: 007434~007439)

Wide width type▶ Feeler Gauge (Wide type) P79
Multiple sizes in one product▶ Thickness Gauge P81~84
Rust prevention▶ Zerust Film for Steel P370

| Order No. | Model No. | Size | Leaf Thickness (mm) | Leaf Length (mm) | Accuracy (mm) | Weight (incl. case) |
|---|---|---|---|---|---|---|
| 007245 | SFG-005-1 | 0.005×1m | 0.005 | 1 | ±0.004 | 34g |
| 007251 | SFG-01-1 | 0.01×1m | 0.01 | | | 34g |
| 007252 | SFG-02-1 | 0.02×1m | 0.02 | | | 35g |
| 007381 | SFG-03-1 | 0.03×1m | 0.03 | | ±0.005 | 36g |
| 007382 | SFG-04-1 | 0.04×1m | 0.04 | | | 37g |
| 007383 | SFG-05-1 | 0.05×1m | 0.05 | | | 38g |
| 007384 | SFG-06-1 | 0.06×1m | 0.06 | | | 39g |
| 007385 | SFG-07-1 | 0.07×1m | 0.07 | | | 40g |
| 007386 | SFG-08-1 | 0.08×1m | 0.08 | | | 41g |
| 007387 | SFG-09-1 | 0.09×1m | 0.09 | | | 42g |
| 007388 | SFG-10-1 | 0.10×1m | 0.10 | | ±0.006 | 43g |
| 007431 | SFG-15-1 | 0.15×1m | 0.15 | | ±0.012 | 50g |
| 007432 | SFG-20-1 | 0.20×1m | 0.20 | | | 55g |
| 007433 | SFG-30-1 | 0.30×1m | 0.30 | | ±0.015 | 65g |
| 007421 | SFG-01-3 | 0.01×3m | 0.01 | 3 | ±0.004 | 36g |
| 007422 | SFG-02-3 | 0.02×3m | 0.02 | | | 39g |
| 007423 | SFG-03-3 | 0.03×3m | 0.03 | | | 42g |
| 007424 | SFG-04-3 | 0.04×3m | 0.04 | | ±0.005 | 45g |
| 007425 | SFG-05-3 | 0.05×3m | 0.05 | | | 48g |

| Order No. | Model No. | Size | Leaf Thickness (mm) | Leaf Length (mm) | Accuracy (mm) | Weight (incl. case) |
|---|---|---|---|---|---|---|
| 007426 | SFG-06-3 | 0.06×3m | 0.06 | 3 | ±0.005 | 51g |
| 007427 | SFG-07-3 | 0.07×3m | 0.07 | | | 54g |
| 007428 | SFG-08-3 | 0.08×3m | 0.08 | | | 57g |
| 007429 | SFG-09-3 | 0.09×3m | 0.09 | | | 60g |
| 007430 | SFG-10-3 | 0.10×3m | 0.10 | | ±0.006 | 63g |
| 007434 | SFG-15-3 | 0.15×3m | 0.15 | | ±0.012 | 130g |
| 007435 | SFG-20-3 | 0.20×3m | 0.20 | | | 145g |
| 007436 | SFG-30-3 | 0.30×3m | 0.30 | | ±0.015 | 175g |
| 007411 | SFG-01-5 | 0.01×5m | 0.01 | 5 | ±0.004 | 38g |
| 007412 | SFG-02-5 | 0.02×5m | 0.02 | | | 43g |
| 007413 | SFG-03-5 | 0.03×5m | 0.03 | | ±0.005 | 48g |
| 007414 | SFG-04-5 | 0.04×5m | 0.04 | | | 53g |
| 007415 | SFG-05-5 | 0.05×5m | 0.05 | | | 58g |
| 007416 | SFG-06-5 | 0.06×5m | 0.06 | | | 63g |
| 007417 | SFG-07-5 | 0.07×5m | 0.07 | | | 68g |
| 007418 | SFG-08-5 | 0.08×5m | 0.08 | | | 73g |
| 007419 | SFG-09-5 | 0.09×5m | 0.09 | | | 78g |
| 007420 | SFG-10-5 | 0.10×5m | 0.10 | | ±0.006 | 83g |
| 007437 | SFG-15-5 | 0.15×5m | 0.15 | | ±0.012 | 160g |
| 007438 | SFG-20-5 | 0.20×5m | 0.20 | | | 185g |
| 007439 | SFG-30-5 | 0.30×5m | 0.30 | | ±0.015 | 235g |

# FEELER GAUGE (FG SERIES)

T

Essential for assembly and fitting work.
Can be used by cutting only the necessary size.

USE
- For measurement of gap width

MATERIAL
- Carbon tool steel (Hardened) (equivalent to SK7)

FEATURES
- For assemble or adjustment of automotive engine components or other machinery. Can be cut to necessary size.

SPECIFICATIONS
- Leaf width: 12.7mm
- Leaf hardness: HV320 and above

※White powder remains on the surface of the product is antirust agent

Case package

Wide width type▶
Feeler Gauge (Wide type)
P79

Multiple sizes in one product▶
Thickness Gauge
P81 ~84

Rust prevention▶
Zerust Film for Steel
P370

Plastic bag package

| Order No. | Model No. | Size (mm) | Leaf Width (mm) | Leaf Length (m) | Accuracy (mm) | Case size (mm) | Weight (Including case) |
|---|---|---|---|---|---|---|---|
| 007253 | FG-03-1 | 0.03x1m | 0.03 | 1 | ±0.005 | Case package 77×77×22 | 36g |
| 007254 | FG-04-1 | 0.04x1m | 0.04 | | | | 37g |
| 007255 | FG-05-1 | 0.05x1m | 0.05 | | | | 38g |
| 007256 | FG-06-1 | 0.06x1m | 0.06 | | | | 39g |
| 007257 | FG-07-1 | 0.07x1m | 0.07 | | | | 40g |
| 007258 | FG-08-1 | 0.08x1m | 0.08 | | | | 41g |
| 007259 | FG-09-1 | 0.09x1m | 0.09 | | | | 42g |
| 007260 | FG-10-1 | 0.10x1m | 0.10 | | | | 43g |
| 007261 | FG-11-1 | 0.11x1m | 0.11 | | ±0.01 | | 44g |
| 007262 | FG-12-1 | 0.12x1m | 0.12 | | | | 45g |
| 007263 | FG-13-1 | 0.13x1m | 0.13 | | | | 46g |
| 007264 | FG-14-1 | 0.14x1m | 0.14 | | | | 47g |
| 007265 | FG-15-1 | 0.15x1m | 0.15 | | | | 48g |
| 007266 | FG-16-1 | 0.16x1m | 0.16 | | | | 49g |
| 007267 | FG-17-1 | 0.17x1m | 0.17 | | | | 50g |
| 007268 | FG-18-1 | 0.18x1m | 0.18 | | | | 51g |
| 007269 | FG-19-1 | 0.19x1m | 0.19 | | | | 52g |
| 007270 | FG-20-1 | 0.20x1m | 0.20 | | | | 53g |
| 007275 | FG-25-1 | 0.25x1m | 0.25 | | | | 58g |
| 007280 | FG-30-1 | 0.30x1m | 0.30 | | | | 63g |
| 007282 | FG-35-1 | 0.35x1m | 0.35 | | ±0.012 | Case package 115×115×22 | 121g |
| 007284 | FG-40-1 | 0.40x1m | 0.40 | | | | 126g |
| 007286 | FG-45-1 | 0.45x1m | 0.45 | | | | 133g |
| 007287 | FG-50-1 | 0.50x1m | 0.50 | | | | 138g |
| 007289 | FG-60-1 | 0.60x1m | 0.60 | | ±0.02 | Plastic bag package | 64g |
| 007291 | FG-70-1 | 0.70x1m | 0.70 | | | | 72g |
| 007292 | FG-80-1 | 0.80x1m | 0.80 | | | | 84g |
| 007293 | FG-90-1 | 0.90x1m | 0.90 | | | | 92g |
| 007294 | FG-00-1 | 1.00x1m | 1.00 | | | | 101g |
| 007303 | FG-03-3 | 0.03x3m | 0.03 | 3 | ±0.005 | Case package 77×77×22 | 42g |
| 007304 | FG-04-3 | 0.04x3m | 0.04 | | | | 45g |
| 007305 | FG-05-3 | 0.05x3m | 0.05 | | | | 48g |
| 007306 | FG-06-3 | 0.06x3m | 0.06 | | | | 51g |
| 007307 | FG-07-3 | 0.07x3m | 0.07 | | | | 54g |
| 007308 | FG-08-3 | 0.08x3m | 0.08 | | | | 57g |
| 007309 | FG-09-3 | 0.09x3m | 0.09 | | | | 60g |
| 007310 | FG-10-3 | 0.10x3m | 0.10 | | | | 63g |
| 007311 | FG-11-3 | 0.11x3m | 0.11 | | ±0.01 | | 66g |
| 007312 | FG-12-3 | 0.12x3m | 0.12 | | | | 69g |
| 007313 | FG-13-3 | 0.13x3m | 0.13 | | | | 72g |
| 007314 | FG-14-3 | 0.14x3m | 0.14 | | | | 75g |
| 007315 | FG-15-3 | 0.15x3m | 0.15 | | | Case package 115×115×22 | 130g |
| 007317 | FG-20-3 | 0.20x3m | 0.20 | | | | 145g |
| 007318 | FG-25-3 | 0.25x3m | 0.25 | | | | 160g |
| 007319 | FG-30-3 | 0.30x3m | 0.30 | | | | 176g |
| 007321 | FG-35-3 | 0.35x3m | 0.35 | | ±0.012 | Plastic bag package | 107g |
| 007323 | FG-40-3 | 0.40x3m | 0.40 | | | | 140g |
| 007325 | FG-45-3 | 0.45x3m | 0.45 | | | | 156g |
| 007326 | FG-50-3 | 0.50x3m | 0.50 | | | | 170g |
| 007328 | FG-60-3 | 0.60x3m | 0.60 | | ±0.02 | | 208g |
| 007330 | FG-70-3 | 0.70x3m | 0.70 | | | | 234g |
| 007331 | FG-80-3 | 0.80x3m | 0.80 | | | | 270g |
| 007332 | FG-90-3 | 0.90x3m | 0.90 | | | | 293g |
| 007333 | FG-00-3 | 1.00x3m | 1.00 | | | | 320g |
| 007343 | FG-03-5 | 0.03x5m | 0.03 | 5 | ±0.005 | Case package 77×77×22 | 48g |
| 007344 | FG-04-5 | 0.04x5m | 0.04 | | | | 53g |
| 007345 | FG-05-5 | 0.05x5m | 0.05 | | | | 58g |
| 007346 | FG-06-5 | 0.06x5m | 0.06 | | | | 63g |
| 007347 | FG-07-5 | 0.07x5m | 0.07 | | | | 68g |
| 007348 | FG-08-5 | 0.08x5m | 0.08 | | | | 73g |
| 007349 | FG-09-5 | 0.09x5m | 0.09 | | | | 78g |
| 007350 | FG-10-5 | 0.10x5m | 0.10 | | | | 83g |
| 007351 | FG-11-5 | 0.11x5m | 0.11 | | ±0.01 | | 88g |
| 007352 | FG-12-5 | 0.12x5m | 0.12 | | | | 93g |
| 007353 | FG-13-5 | 0.13x5m | 0.13 | | | | 98g |
| 007354 | FG-14-5 | 0.14x5m | 0.14 | | | | 103g |
| 007355 | FG-15-5 | 0.15x5m | 0.15 | | | Case package 115×115×22 | 161g |
| 007357 | FG-20-5 | 0.20x5m | 0.20 | | | | 185g |
| 007358 | FG-25-5 | 0.25x5m | 0.25 | | | Plastic bag package | 157g |
| 007359 | FG-30-5 | 0.30x5m | 0.30 | | | | 184g |
| 007361 | FG-35-5 | 0.35x5m | 0.35 | | ±0.012 | | 211g |
| 007363 | FG-40-5 | 0.40x5m | 0.40 | | | | 232g |
| 007365 | FG-45-5 | 0.45x5m | 0.45 | | | | 259g |
| 007366 | FG-50-5 | 0.50x5m | 0.50 | | | | 282g |
| 007368 | FG-60-5 | 0.60x5m | 0.60 | | ±0.02 | | 345g |
| 007370 | FG-70-5 | 0.70x5m | 0.70 | | | | 389g |
| 007371 | FG-80-5 | 0.80x5m | 0.80 | | | | 449g |
| 007372 | FG-90-5 | 0.90x5m | 0.90 | | | | 487g |
| 007373 | FG-00-5 | 1.00x5m | 1.00 | | | | 532g |

# THICKNESS GAUGE

HOW TO MOVIE

Suitable for measuring slight gaps where it is difficult to do with other measuring instruments

*Each of leaf can be detached by unscrewing the clasp (except 172 series)

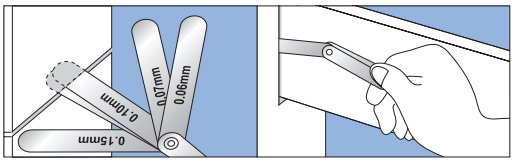

For cutting necessary size▶ Feeler Gauge P79～80

Replaceable leaf▶ Thickness Gauge Leaf P83

Rust-resistant type▶ Stainless Thickness Gauge P84

Rust prevention▶ Zerust Film for Steel P370

65M




※Leaves can be combined for a wide range of measurements

USE
- ●For measurement of gap width

MATERIAL
- ●Carbon tool steel (Hardened)

FEATURES
- ●Enables precise inspection by inserting the gauge into the gap between two flat surfaces
- ●Suitable for measuring gap between piston and cylinder of automotive engine

SPECIFICATIONS
- ●Leaf width: 12.7mm
- ※White powder remains on the surface of the product is antirust agent

ACCURACY

| Leaf thickness (mm) | Tolerance (mm) |
|---|---|
| 0.01～0.06 | ±0.005 |
| 0.07～0.10 | ±0.01 |
| 0.11～0.35 | ±0.015 |
| 0.40～0.60 | ±0.02 |
| 0.70～3.00 | ±0.035 |

| Order No. | Model No. | Leaf Length (mm) | Pieces/ Set | Nominal Size (mm) | Weight |
|---|---|---|---|---|---|
| 111032 | 172MA | 75 | 9 | 0.04 0.05 0.06 0.07 0.08 0.10 0.15 0.20 0.30 | 30g |
| 111033 | 172MB | 100 | | | 30g |
| 111034 | 172MC | 150 | | | 50g |
| 110970 | 172MD | 230 | | | 70g |
| 110971 | 172ME | 300 | | | 90g |
| 110972 | 100MR | 100 | 10 | 0.03 0.04 0.05 0.08 0.10 0.15 0.20 0.25 0.30 0.40 | 40g |
| 110973 | 150MR | 150 | | | 60g |
| 110974 | 100MK | 100 | 10 | 0.01 0.02 0.03 0.04 0.05 0.06 0.07 0.08 0.09 0.10 | 30g |
| 110975 | 150MK | 150 | | | 40g |
| 111038 | 60M | 75 | 19 | 0.03 0.04 0.05 0.06 0.07 0.08 0.09 0.10 0.15 0.20 0.25 0.30 0.35 0.40 0.45 0.50 0.70 0.80 1.00 | 60g |
| 111039 | 100MY | 100 | | | 80g |
| 111040 | 150MY | 150 | | | 120g |
| 111035 | 65M | 75 | 25 | 0.03 0.04 0.05 0.06 0.07 0.08 0.09 0.10 0.11 0.12 0.13 0.14 0.15 0.20 0.25 0.30 0.35 0.40 0.45 0.50 0.60 0.70 0.80 0.90 1.00 | 80g |
| 111036 | 100MZ | 100 | | | 100g |
| 111037 | 150MZ | 150 | | | 150g |
| 111031 | 72M | 75 | 12 | 0.04 0.05 0.06 0.07 0.08 0.10 0.15 0.20 0.30 1.00 2.00 3.00 | 70g |
| 111044 | 100MT | 100 | | | 100g |
| 111045 | 150MT | 150 | | | 140g |
| 110976 | 100ML | 100 | 19 | 0.01 0.02 0.03 0.04 0.05 0.06 0.07 0.08 0.09 0.10 0.20 0.30 0.40 0.50 0.60 0.70 0.80 0.90 1.00 | 80g |
| 110977 | 150ML | 150 | | | 120g |
| 110978 | 80M | 75 | 13 | 0.03 0.04 0.05 0.06 0.07 0.08 0.10 0.15 0.20 0.30 1.00 2.00 3.00 | 60g |
| 111046 | 100MX | 100 | | | 90g |
| 111047 | 150MX | 150 | | | 140g |
| 111048 | 100MH | 100 | 10 | 0.10 0.20 0.30 0.40 0.50 0.60 0.70 0.80 0.90 1.00 | 80g |
| 111049 | 150MH | 150 | | | 110g |


BLOCK GAUGE
PIN GAUGE
PIN VISE
PIN GAUGE ACCESSORIES
RING GAUGE
PLUG GAUGE
LIMIT GAUGE
THICKNESS GAUGE
TAPER GAUGE
WELDING GAUGE
OTHER GAUGES

# THICHNESS GAUGE WITH COLOR SLEEVE

HOW TO MOVIE

Same accuracy as regular THICKNESS GAUGE
with three different color options - white, black and green

*Each of leaf can be detached by unscrewing the clasp (except 172 series)


For cutting necessary size▶ Feeler Gauge P79 ~80

Replaceable leaf▶ Thickness Gauge Leaf P83

Rust-resistant type▶ Stainless Thickness Gauge P84

Rust prevention▶ Zerust Film for Steel P370

CS-65M (White)

CS-65M (Black)

CS-65M (Green)

USE
- For measurment of gap width

MATERIAL
- Carbon tool steel (Hardened)

FEATURES
- Enables precise inspection by inserting the gauge into the gap between two flat surfaces
- Suitable for measuring gap between piston and cylinder of automotive engine

SPECIFICATIONS
- Leaf width: 12.7mm

※White powder remains on the surface of the product is anti-rust agent

ACCURACY

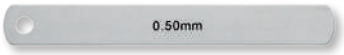
| Leaf Thickness (mm) | Tolerance (mm) |
|---|---|
| 0.01~0.06 | ±0.005 |
| 0.07~0.10 | ±0.01 |
| 0.11~0.35 | ±0.015 |
| 0.40~0.60 | ±0.02 |
| 0.70~3.00 | ±0.035 |

| Order No. | Model No. | Leaf Length (mm) | Pieces/ Set | Size (mm) | Weight |
|---|---|---|---|---|---|
| 110601 | CS-172MA (W) | 75 | 9 | 0.04 0.05 0.06 0.07 0.08 0.10 0.15 0.20 0.30 | 30g |
| 110602 | CS-172MA (B) | | | | |
| 110603 | CS-172MA (G) | | | | |
| 110604 | CS-172MB (W) | 100 | | | 30g |
| 110605 | CS-172MB (B) | | | | |
| 110606 | CS-172MB (G) | | | | |
| 110607 | CS-172MC (W) | 150 | | | 50g |
| 110608 | CS-172MC (B) | | | | |
| 110609 | CS-172MC (G) | | | | |
| 110616 | CS-100MR (W) | 100 | 10 | 0.03 0.04 0.05 0.08 0.10 0.15 0.20 0.25 0.30 0.40 | 40g |
| 110617 | CS-100MR (B) | | | | |
| 110618 | CS-100MR (G) | | | | |
| 110619 | CS-150MR (W) | 150 | | | 60g |
| 110620 | CS-150MR (B) | | | | |
| 110621 | CS-150MR (G) | | | | |
| 110622 | CS-100MK (W) | 100 | 10 | 0.01 0.02 0.03 0.04 0.05 0.06 0.07 0.08 0.09 0.10 | 30g |
| 110623 | CS-100MK (B) | | | | |
| 110624 | CS-100MK (G) | | | | |
| 110625 | CS-150MK (W) | 150 | | | 40g |
| 110626 | CS-150MK (B) | | | | |
| 110627 | CS-150MK (G) | | | | |
| 110628 | CS-60M (W) | 75 | 19 | 0.03 0.04 0.05 0.06 0.07 0.08 0.09 0.10 0.15 0.20 0.25 0.30 0.35 0.40 0.45 0.50 0.70 0.80 1.00 | 60g |
| 110629 | CS-60M (B) | | | | |
| 110630 | CS-60M (G) | | | | |
| 110631 | CS-100MY (W) | 100 | | | 80g |
| 110632 | CS-100MY (B) | | | | |
| 110633 | CS-100MY (G) | | | | |
| 110634 | CS-150MY (W) | 150 | | | 120g |
| 110635 | CS-150MY (B) | | | | |
| 110636 | CS-150MY (G) | | | | |
| 110637 | CS-65M (W) | 75 | 25 | 0.03 0.04 0.05 0.06 0.07 0.08 0.09 0.10 0.11 0.12 0.13 0.14 0.15 0.20 0.25 0.30 0.35 0.40 0.45 0.50 0.60 0.70 0.80 0.90 1.00 | 80g |
| 110638 | CS-65M (B) | | | | |
| 110639 | CS-65M (G) | | | | |
| 110640 | CS-100MZ (W) | 100 | | | 100g |
| 110641 | CS-100MZ (B) | | | | |
| 110642 | CS-100MZ (G) | | | | |
| 110643 | CS-150MZ (W) | 150 | | | 150g |
| 110644 | CS-150MZ (B) | | | | |
| 110645 | CS-150MZ (G) | | | | |
| 110646 | CS-72M (W) | 75 | 12 | 0.04 0.05 0.06 0.07 0.08 0.10 0.15 0.20 0.30 1.00 2.00 3.00 | 70g |
| 110647 | CS-72M (B) | | | | |
| 110648 | CS-72M (G) | | | | |
| 110649 | CS-100MT (W) | 100 | | | 100g |
| 110650 | CS-100MT (B) | | | | |
| 110651 | CS-100MT (G) | | | | |
| 110652 | CS-150MT (W) | 150 | | | 140g |
| 110653 | CS-150MT (B) | | | | |
| 110654 | CS-150MT (G) | | | | |
| 110655 | CS-100ML (W) | 100 | 19 | 0.01 0.02 0.03 0.04 0.05 0.06 0.07 0.08 0.09 0.10 0.20 0.30 0.40 0.50 0.60 0.70 0.80 0.90 1.00 | 80g |
| 110656 | CS-100ML (B) | | | | |
| 110657 | CS-100ML (G) | | | | |
| 110658 | CS-150ML (W) | 150 | | | 120g |
| 110659 | CS-150ML (B) | | | | |
| 110660 | CS-150ML (G) | | | | |
| 110661 | CS-80M (W) | 75 | 13 | 0.03 0.04 0.05 0.06 0.07 0.08 0.10 0.15 0.20 0.30 1.00 2.00 3.00 | 60g |
| 110662 | CS-80M (B) | | | | |
| 110663 | CS-80M (G) | | | | |
| 110664 | CS-100MX (W) | 100 | | | 90g |
| 110665 | CS-100MX (B) | | | | |
| 110666 | CS-100MX (G) | | | | |
| 110667 | CS-150MX (W) | 150 | | | 140g |
| 110668 | CS-150MX (B) | | | | |
| 110669 | CS-150MX (G) | | | | |
| 110670 | CS-100MH (W) | 100 | 10 | 0.10 0.20 0.30 0.40 0.50 0.60 0.70 0.80 0.90 1.00 | 80g |
| 110671 | CS-100MH (B) | | | | |
| 110672 | CS-100MH (G) | | | | |
| 110673 | CS-150MH (W) | 150 | | | 110g |
| 110674 | CS-150MH (B) | | | | |
| 110675 | CS-150MH (G) | | | | |

# THICKNESS GAUGE LEAF

HOW TO MOVIE

For cutting necessary size▶ Feeler Gauge P79 ~80
Rust prevention▶ Zerust Film for Steel P370




S100-05

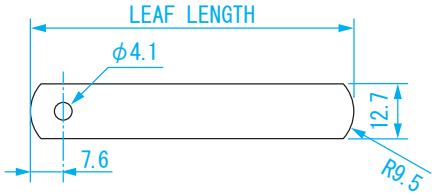
S150-10

MATERIAL
- Carbon tool steel (Hardened)

SPECIFICATIONS
- Leaf width: 12.7mm

※White powder remains on the surface of the product is anti-rust agent

●DIMEMSIONS Units : mm




ACCURACY

| Leaf Thickness (mm) | Tolerance (mm) |
|---|---|
| 0.01~0.06 | ±0.005 |
| 0.07~0.10 | ±0.01 |
| 0.11~0.35 | ±0.015 |
| 0.40~0.60 | ±0.02 |
| 0.70~3.00 | ±0.035 |

■ Leaf Length: 75mm

| Order No. | Model No. | Thickness (mm) |
|---|---|---|
| 110733 | S075-003 | 0.03 |
| 110734 | S075-004 | 0.04 |
| 110735 | S075-005 | 0.05 |
| 110736 | S075-006 | 0.06 |
| 110737 | S075-007 | 0.07 |
| 110738 | S075-008 | 0.08 |
| 110739 | S075-009 | 0.09 |
| 110740 | S075-01 | 0.10 |
| 110741 | S075-011 | 0.11 |
| 110742 | S075-012 | 0.12 |
| 110743 | S075-013 | 0.13 |
| 110744 | S075-014 | 0.14 |
| 110745 | S075-015 | 0.15 |
| 110746 | S075-02 | 0.20 |
| 110747 | S075-025 | 0.25 |
| 110748 | S075-03 | 0.30 |
| 110749 | S075-035 | 0.35 |
| 110750 | S075-04 | 0.40 |
| 110751 | S075-045 | 0.45 |
| 110752 | S075-05 | 0.50 |
| 110753 | S075-06 | 0.60 |
| 110754 | S075-07 | 0.70 |
| 110755 | S075-08 | 0.80 |
| 110756 | S075-09 | 0.90 |
| 110757 | S075-10 | 1.00 |

■ Leaf Length: 100mm

| Order No. | Model No. | Thickness (mm) |
|---|---|---|
| 110801 | S100-001 | 0.01 |
| 110802 | S100-002 | 0.02 |
| 110803 | S100-003 | 0.03 |
| 110804 | S100-004 | 0.04 |
| 110805 | S100-005 | 0.05 |
| 110806 | S100-006 | 0.06 |
| 110807 | S100-007 | 0.07 |
| 110808 | S100-008 | 0.08 |
| 110809 | S100-009 | 0.09 |
| 110810 | S100-01 | 0.10 |
| 110841 | S100-011 | 0.11 |
| 110842 | S100-012 | 0.12 |
| 110843 | S100-013 | 0.13 |
| 110844 | S100-014 | 0.14 |
| 110845 | S100-015 | 0.15 |
| 110811 | S100-02 | 0.20 |
| 110846 | S100-025 | 0.25 |
| 110812 | S100-03 | 0.30 |
| 110847 | S100-035 | 0.35 |
| 110813 | S100-04 | 0.40 |
| 110848 | S100-045 | 0.45 |
| 110814 | S100-05 | 0.50 |
| 110815 | S100-06 | 0.60 |
| 110816 | S100-07 | 0.70 |
| 110817 | S100-08 | 0.80 |
| 110818 | S100-09 | 0.90 |
| 110819 | S100-10 | 1.00 |
| 110849 | S100-20 | 2.00 |
| 110850 | S100-30 | 3.00 |

■ Leaf Length: 150mm

| Order No. | Model No. | Thickness (mm) |
|---|---|---|
| 110820 | S150-001 | 0.01 |
| 110821 | S150-002 | 0.02 |
| 110822 | S150-003 | 0.03 |
| 110823 | S150-004 | 0.04 |
| 110824 | S150-005 | 0.05 |
| 110825 | S150-006 | 0.06 |
| 110826 | S150-007 | 0.07 |
| 110827 | S150-008 | 0.08 |
| 110828 | S150-009 | 0.09 |
| 110829 | S150-01 | 0.10 |
| 110851 | S150-011 | 0.11 |
| 110852 | S150-012 | 0.12 |
| 110853 | S150-013 | 0.13 |
| 110854 | S150-014 | 0.14 |
| 110855 | S150-015 | 0.15 |
| 110830 | S150-02 | 0.20 |
| 110856 | S150-025 | 0.25 |
| 110831 | S150-03 | 0.30 |
| 110857 | S150-035 | 0.35 |
| 110832 | S150-04 | 0.40 |
| 110858 | S150-045 | 0.45 |
| 110833 | S150-05 | 0.50 |
| 110834 | S150-06 | 0.60 |
| 110835 | S150-07 | 0.70 |
| 110836 | S150-08 | 0.80 |
| 110837 | S150-09 | 0.90 |
| 110838 | S150-10 | 1.00 |
| 110859 | S150-20 | 2.00 |
| 110860 | S150-30 | 3.00 |

# THICKNESS GAUGES WITH GRADUATION

HOW TO MOVIE

Rust prevention▶ Zerust Film for Steel P370

Easy to see amount of insertion.
Thickness gauge leaf with graduation.

S100-05M

S150-05M

USE
- For measurement of gap width

MATERIAL
- Carbon tool steel (Hardened)

FEATURES
- Enables to see insertion amount by adding graduation to the existing thickness gauges
- Stepped length of linear graduations by 1mm for easy-to-read

SPECIFICATIONS
- Leaf width: 12.7mm

※White powder remains on the surface of the product is anti-rust agent

| Order No. | Model No. | Thickness (mm) | Leaf Length (mm) | Max. Measurable Length (mm) | Thickness Tolerance (mm) | Graduation Accuracy (mm) |
|---|---|---|---|---|---|---|
| 110692 | S100-01M | 0.1 | 100 | 37 | ±0.01 | ±0.2 |
| 110700 | S100-05M | 0.5 | | | ±0.02 | |
| 110702 | S150-01M | 0.1 | 150 | 57 | ±0.01 | |
| 110710 | S150-05M | 0.5 | | | ±0.02 | |

# STAINLESS THICKNESS GAUGE

HOW TO MOVIE

For cutting necessary size▶
Feeler Gauge
P79 ~80

## Rust-resistant stainless steel type now available

*Each of leaf can be detached by unscrewing the clasp

S172MB

S172MA

S172MC

USE
- For measurement of gap width

MATERIAL
- Stainless steel (SUS304H)

FEATURES
- Rust-resistant stainless steel leaf
- Accurate inspection can be done by inserting into a fine gap between two planes where difficult to measure
- It is an indispensable measuring tools for automotive distance measurement of piston and cylinder of engine
- Leaf width: 12.7mm

ACCURACY

| Leaf thickness (mm) | Tolerance (mm) |
|---|---|
| 0.04~0.10 | ±0.005 |
| 0.15~0.30 | ±0.015 |

| Order No. | Model No. | Leaf Length (mm) | Pieces /set | Size (mm) | Weight |
|---|---|---|---|---|---|
| 110681 | S172MA | 75 | 9 | 0.04 0.05 0.06 0.07 0.08 0.10 0.15 0.20 0.30 | 23g |
| 110682 | S172MB | 100 | | | 28g |
| 110683 | S172MC | 150 | | | 41g |

# STAINLESS THICKNESS GAUGE LEAF

HOW TO MOVIE

For cutting necessary size▶
Feeler Gauge
P79 ~80

SS-100-030

SS-150-030

MATERIAL
- Stainless steel (SUS304H)
- Leaf width: 12.7mm

ACCURACY

| Leaf size (mm) | Tolerance (mm) |
|---|---|
| 0.04~0.10 | ±0.005 |
| 0.15~0.30 | ±0.015 |

■ Leaf Length: 100mm

| Order No. | Model No. | Thickness (mm) |
|---|---|---|
| 110764 | SS-100-004 | 0.04 |
| 110765 | SS-100-005 | 0.05 |
| 110766 | SS-100-006 | 0.06 |
| 110767 | SS-100-007 | 0.07 |
| 110768 | SS-100-008 | 0.08 |
| 110770 | SS-100-010 | 0.10 |
| 110771 | SS-100-015 | 0.15 |
| 110772 | SS-100-020 | 0.20 |
| 110773 | SS-100-030 | 0.30 |

■ Leaf Length: 150mm

| Order No. | Model No. | Thickness (mm) |
|---|---|---|
| 110777 | SS-150-004 | 0.04 |
| 110778 | SS-150-005 | 0.05 |
| 110779 | SS-150-006 | 0.06 |
| 110780 | SS-150-007 | 0.07 |
| 110781 | SS-150-008 | 0.08 |
| 110783 | SS-150-010 | 0.10 |
| 110784 | SS-150-015 | 0.15 |
| 110785 | SS-150-020 | 0.20 |
| 110786 | SS-150-030 | 0.30 |

## TAPER GAUGE

Quick size measurement of groove and gap

TPG-270A

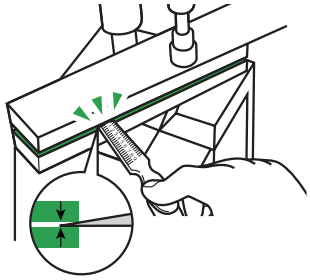
TPG-270B

HOW TO MOVIE

For measuring narrower gap▶ Thickness Gauge P81 ~84

Rust prevention▶ Zerust Film for Steel P370

Graduation shows the gap width



USE
- For measurement of groove and gap etc.

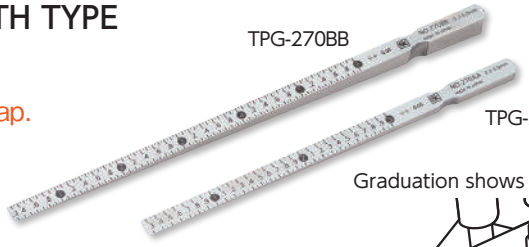
MATERIAL
- Carbon steel for machine structual use (Non-hardened)

FEATURES
- Each number marked on the gauge shows gauge thickness of its point which enables to measure width of inner gap
- Satin finish
- Packed in plastic carrying case

| Order No. | Model No. | Standard | Measuring Range (mm) | Accuracy (mm) | Graduation (mm) | Taper Angle | Full Length H×W (mm) | Weight |
|---|---|---|---|---|---|---|---|---|
| 007000 | TPG-270A | 270A | 0.3~4 | ±0.04 | 0.05 | 1°54′33″ | 158×12 | 95g |
| 007001 | TPG-270B | 270B | 0.4~6 | ±0.04 | 0.05 | 2°51′45″ | 158×12 | 95g |

## TAPER GAUGE NARROW WIDTH TYPE

Narrow width type.
Quick size measurement of groove and gap.
For use as a height adjustment jig.



TPG-270BB

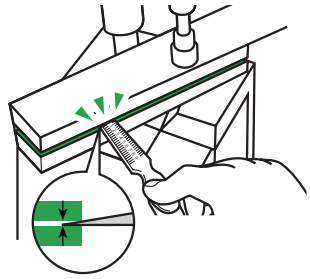
TPG-270AA

HOW TO MOVIE

For measuring narrower gap▶ Thickness Gauge P81 ~84

Rust prevention▶ Zerust Film for Steel P370

Graduation shows the gap width



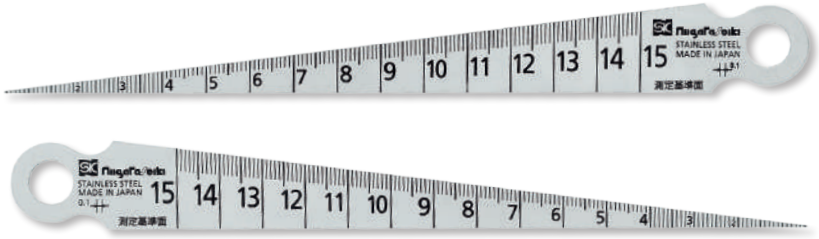
USE
- For measurement of groove and gap etc.

MATERIAL
- Carbon steel for machine structual use (Non-hardened)

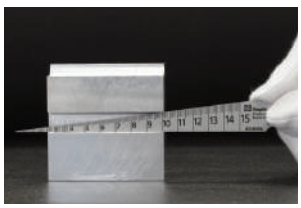
FEATURES
- Each number marked on the gauge shows gauge thickness of its point which enables to measure width of inner gap
- Satin finish
- Packed in plastic carrying case

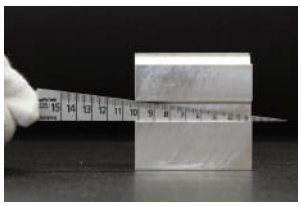
| Order No. | Model No. | Standard | Measuring Range (mm) | Accuracy (mm) | Graduation (mm) | Taper Angle | Full Length H×W (mm) | Weight |
|---|---|---|---|---|---|---|---|---|
| 007002 | TPG-270AA | 270AA | 0.3~3 | ±0.04 | 0.05 | 1°54′33″ | 127.5×6 | 18g |
| 007003 | TPG-270BB | 270BB | 0.3~6 | ±0.04 | 0.05 | 2°51′45″ | 160 ×6 | 38g |

## RIGHT ANGLE TAPER GAUGE



HOW TO MOVIE





USE
- For measurement of groove and gap etc.

MATERIAL
- Hardened stainless steel ●Hardness: HV480

FEATURES
- Taper gauge specialized in inner width measurements.
  One side of gauge rests secure along with the workpiece for a stable measurement.
- The scale is designed to be read easily from the side when the gap to be measured is not visible from above

| Order No. | Model No. | Measuring Range (mm) | Accuracy (mm) | Graduation (mm) | Taper Angle | Full Length (mm) | Thickness (mm) | Weight |
|---|---|---|---|---|---|---|---|---|
| 007004 | TPG-700T | 1~15 | ±0.05 | 0.1 | 7° 9′ 10″ | 148.5 | 1.2 | 10g |

# TAPER GAUGE

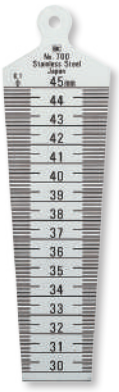
Quick size measurement of groove and gap

HOW TO MOVIE

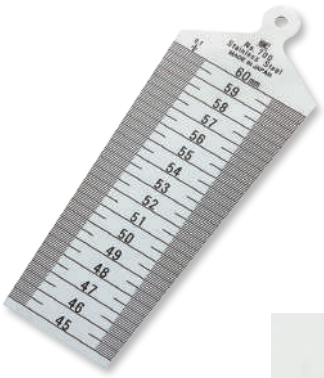
For measuring narrower gap▶
Pin Gauge
P41

TPG-700A

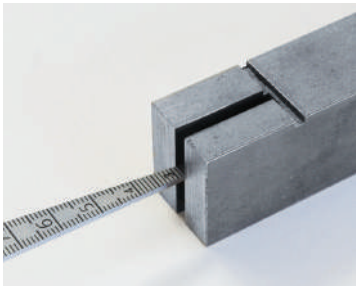
TPG-700B



TPG-700C



TPG-700D



Measurement of gap width

USE
- For measurement of groove, gap, hole diameter etc.

MATERIAL
- Hardened stainless steel
- Hardness: HV480

FEATURES
- Satin finish

| Order No. | Model No. | Standard | Measuring Range (mm) | Accuracy (mm) | Graduation (mm) | Taper Angle | Overall Length (mm) | Thickness (mm) | Weight |
|---|---|---|---|---|---|---|---|---|---|
| 007010 | TPG-700A | #700 1-15 | 1～15 | ± 0.05 | 0.1 | 7° 9′ 10″ | 148.5 | 1.2 | 10g |
| 007011 | TPG-700B | #700 15-30 | 15～30 | ± 0.05 | 0.1 | 7° 9′ 10″ | 153 | 1.2 | 40g |
| 007012 | TPG-700C | #700 30-45 | 30～45 | ± 0.05 | 0.1 | 7° 9′ 10″ | 159 | 1.2 | 60g |
| 007013 | TPG-700D | #700 45-60 | 45～60 | ± 0.05 | 0.1 | 7° 9′ 10″ | 161.5 | 1.2 | 80g |

# SHORT TAPER GAUGE SET/ SINGLE PART

No need to cut-off the existing taper gauge.
Suitable for measuring shallow gap

HOW TO MOVIE

TPG-511

TPG-0515S

USE
- For measurement of groove, gap, hole diameter etc.

MATERIAL
- Stainless steel
- Hardness: HV300

FEATURES
- Suitable for measuring shallow gap
- With ball chain
- TPG-0515S is a set of 0.5～7.0mm, 5.0～11.0mm and 9.0～15.0mm

| Order No. | Model No. | Measuring Range (mm) | Accuracy (mm) | Graduation (mm) | Taper Angle | Overall Length (mm) | Thickness (mm) | Weight |
|---|---|---|---|---|---|---|---|---|
| 111422 | TPG-057 | 0.5～ 7.0 | ± 0.2 | 0.1 | 7° 9′ 10″ | 72.8 | 1.2 | 6g |
| 111423 | TPG-511 | 5.0～11.0 | | | | 68.8 | | 9g |
| 111424 | TPG-915 | 9.0～15.0 | | | | | | 11g |
| 111425 | TPG-0515S | 0.5～15.0 | | | | 72.8 | | 20g |

## TAPER GAUGE

HOW TO MOVIE

### With a PC clip case for easy carrying

USE
- For measurement of groove, gap, hole diameter etc.

MATERIAL
- Hardened stainless steel
- Hardness: HV480

FEATURES
- Satin finish
- Back side- scale graduated and hole diameter conversion table
- Pocket clip style carrying case
- Front - Width scale, Back - Length scale

Perfect for carrying in shirt pocket

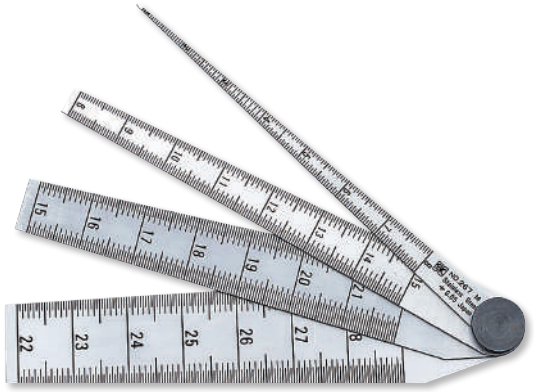
Wide Measuring Range 1-29mm▶ Taper Gauge TPG-267M P87
Slide case for convenient carrying▶ Slide Taper Gauge P87
Made of polycarbonate▶ Plastic Taper Gauge KAIDAN P89
130mm scale set▶ Taper Gauge with Scale P90

| Order No. | Model No. | Standard | Measuring Range (mm) | Accuracy (mm) | Graduation (mm) | Taper Angle | Full Length (mm) | Thickness (mm) | Weight |
|---|---|---|---|---|---|---|---|---|---|
| 007008 | TPG-700AC | #700 1-15 with Plastic case | 1～15 | ± 0.05 | 0.1 | 7° 9′ 10″ | 148.5 | 1.2 | 10g |

## TAPER GAUGE

HOW TO MOVIE

### Four different sizes of gauges in one set, enables to measure 1 ～ 29mm gap



USE
- For measurement of groove, gap, hole diameter etc.

MATERIAL
- Hardened stainless steel
- Hardness: HV480

FEATURES
- Satin finish
- Number of leafs: 4 pieces（1～8mm, 8～15mm, 15～22mm, 22～29mm）

| Order No. | Model No. | Standard | Measuring Range (mm) | Accuracy (mm) | Graduation (mm) | Full Length (mm) | Thickness (mm) | Weight |
|---|---|---|---|---|---|---|---|---|
| 007030 | TPG-267M | 267M | 1～29 | ±0.05 | 0.05 | 144 | 1.2 | 80g |

## SLIDE TAPER GAUGE

HOW TO MOVIE

### Clip-type slide case for safe and convenient carrying

USE
- For measurement of groove, gap, hole diameter etc.

MATERIAL
- Hardened stainless steel
- Hardness: HV480

FEATURES
- Satin finish
- Clip-type slide case for safe and convenient carrying
- Gauge tip is rounded for safety
- Slide into case for storage

Clip-style slide case

Perfect for carrying in shirt pocket

| Order No. | Model No. | Standard | Measuring Range (mm) | Accuracy (mm) | Graduation (mm) | Taper Angle | Thickness (mm) | Weight |
|---|---|---|---|---|---|---|---|---|
| 007201 | TPG-700SL | 700SL | 1～9 | ±0.1 | 0.1 | 7°9′10″ | 0.5 | 20g |

# TAPER GAUGE KAIDAN

HOW TO MOVIE

Made of polycarbonate▶
Plastic Taper Gauge KAIDAN
P89

New stepped millimeter graduation prevents misreading

FRONT

BACK

USE
- For measurement of groove, gap, hole diameter etc.

MATERIAL
- Hardened stainless steel
- Hardness: HV480

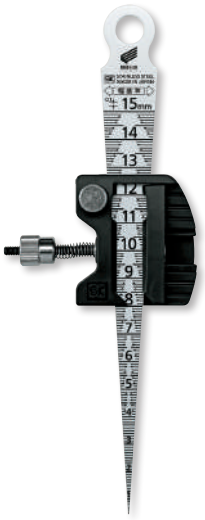
FEATURES
- Increasing height of each mark makes it easier for eye to distinguish 0.1mm steps
- Sequential number style can be read directly without checking the surrounding numbers, 0.2mm point markings
- Satin finish
- Front: width scale
- Back: length scale with a conversion table

| Order No. | Model No. | Standard | Measuring Range (mm) | Accuracy (mm) | Graduation (mm) | Taper Angle | Full Length (mm) | Thickness (mm) | Weight |
|---|---|---|---|---|---|---|---|---|---|
| 007211 | TPG-700AKD | #700 | 1～15 | ± 0.05 | 0.1 | 7° 9′ 10″ | 148.5 | 1.0 | 10g |

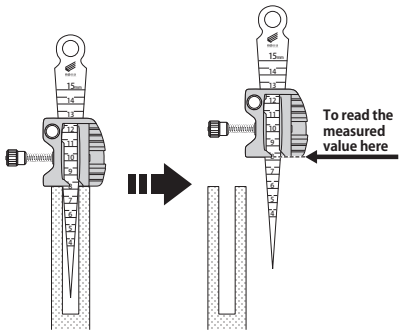
# TAPER GAUGE STOPPER/ TAPER GAUGE KAIDAN WITH STOPPER

HOW TO MOVIE

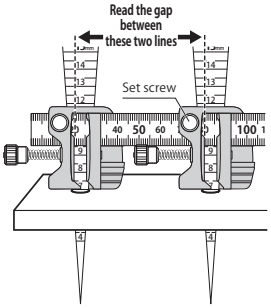
Capable of retaining the measuring position of Taper gauge.
Useful when reading scale in a hard-to-see environment.


TPG-700AKDS

TGS-15



For measurement in a hard-to-see environment or prevention of misreading.



Simple center-to-center measurement is possible by combination use of taper gauge, stopper (2pcs each) and a ruler.
※For same flat surface and same hole diameter

USE
- When measuring hole diameter or groove width with a taper gauge, the measured value is retained even in a measurement environment where it is difficult to check the measured value
- For prevention of parallax by reading scale of taper gauge and end face position of taper gauge stopper

MATERIAL
- ABS

FEATURES
- Retaining force of the taper gauge can be changed with the adjusting screw
- Simple center-to-center measurement is possible by combination use of taper gauge, stopper (2pcs each) and a 15cm ruler

SPECIFICATIONS
- Applicable taper gauge: Measuring range 1～15mm, Thickness 1.0・1.2mm (Standard #700 type)
- Applicable ruler: Length 150mm, Width 15mm, Thickness 0.5mm (JIS straight metal ruler 150mm)
- Taper gauge useable range: 1～14mm
- When measuring center-to-center ···Applicable hole diameter: $\phi$2～14mm
  ···Center-to-center measuring range: 60～140mm
  ···Measurement accuracy: Approx. 0.5mm

| Order No. | Model No. | Configuration | Weight |
|---|---|---|---|
| 007214 | TGS-15 | STOPPER | 16g |
| 007215 | TPG-700AKDS | STOPPER + TAPER GAUGE KAIDAN TPG-700AKD (SET) | 26g |

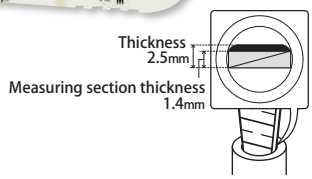
## PLASTIC TAPER GAUGE KAIDAN

HOW TO MOVIE

Polycarbonate material allows scratch-free contact to measuring objects

TPG-800KD

TPG-800WKD



Stepped millimeter graduation prevents misreading

can put in a pocket

USE
- For measurement of groove, gap, hole diameter etc.

MATERIAL
- Polycarbonate

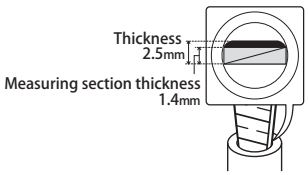
FEATURES
- Made by polycarbonate that does not easily scratch work
- Clip design

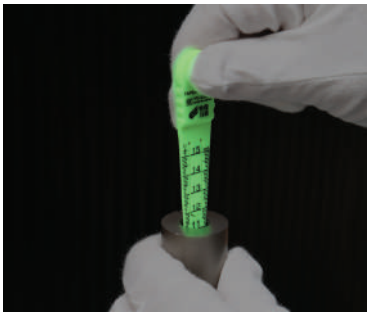
| Order No. | Model No. | Body Color | Measuring Range (mm) | Accuracy (mm) | Graduation (mm) | Full Length (mm) | Measuring Section Thickness (mm) | Weight |
|---|---|---|---|---|---|---|---|---|
| 007212 | TPG-800KD | Black | 1~15 | ±0.2 | 0.1 | 158 | 1.4 | 5g |
| 007216 | TPG-800WKD | White | | | | | | |

## PLASTIC TAPER GAUGE KAIDAN GLOW TYPE

HOW TO MOVIE

High visibility in the dark



USE
- For measurement of groove, gap, hole diameter etc.

MATERIAL
- Polycarbonate

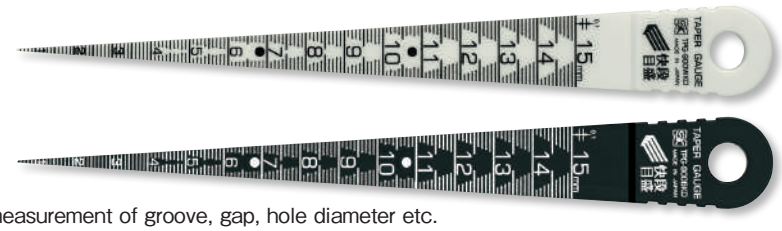
FEATURES
- Stores light in bright places and grows in dark places
- Made by polycarbonate that does not easily scratch work
- Clip design

| Order No. | Model No. | Measuring Range (mm) | Accuracy (mm) | Graduation (mm) | Full Length (mm) | Measuring Section Thickness (mm) | Weight |
|---|---|---|---|---|---|---|---|
| 007213 | TPG-800GKD | 1~15 | ±0.2 | 0.1 | 158 | 1.4 | 5g |

## PLASTIC TAPER GAUGE KAIDAN

HOW TO MOVIE

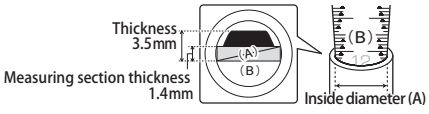
By separating the gauges point to point, the length can be adjusted to measure shallow holes and gaps



USE
- For measurement of groove, gap, hole diameter etc.

MATERIAL
- Polycarbonate

FEATURES
- Gauges can be separated and connected to each other
- Made by polycarbonate that does not easily scratch work



Can be separated/ connected freely for shallow hole measurement

| Order No. | Model No. | Body Color | Measuring Range (mm) | Accuracy (mm) | Graduation (mm) | Full Length (mm) | Measuring Section Thickness (mm) | Weight |
|---|---|---|---|---|---|---|---|---|
| 007218 | TPG-900WKD | White | 1~15 | ±0.2 | 0.1 | 158 | 1.4 | 5g |
| 007219 | TPG-900BKD | Black | | | | | | |

## PLASTIC TAPER GAUGE WITH KAIDAN RULER

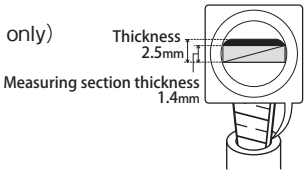
HOW TO MOVIE

Convenient set, taper gauge with ruler. Polycarbonate material allows scratch-free contact to measureing objects.

USE
- For measurement of groove, gap, hole diameter etc.

MATERIAL
- Taper gauge: Polycarbonate
- Scale: Acrylic

FEATURES
- Convenient set, taper gauge TPG-800WKD with 130mm ruler
- With a clip-shaped slit (Taper gauge only)
- Can be used as individula proudcts by detaching the connecting part.




| Order No. | Model No. | Weight |
|---|---|---|
| 007217 | 800SWKD | 12g |

| | Measuring Range (mm) | Accuracy (mm) | Graduation (mm) | Full Length (mm) | Measuring Section Thickness (mm) |
|---|---|---|---|---|---|
| Taper Gauge | 1～ 15 | ±0.2 | 0.1 | 158 | 1.4 |
| Scale | 0～130 | ±0.2 | 1 | 160 | – |

## TAPER GAUGE WITH KAIDAN SCALE

HOW TO MOVIE

Convenient set, taper gauge with ruler.
New stepped millimeter graduation prevents misreading.

Stepped graduation for easy reading ▶ TAPER GAUGE KAIDAN P88
Stepped graduation for easy reading ▶ Stainless Steel Ruler KAIDAN P302

USE
- For measurement of groove, gap, hole diameter and length

MATERIAL
- Hardened stainless steel

FEATURES
- Convenient set, taper gauge 700A with 130mm scale. Folds safely with pocket clip, easy to carry
- 130mm scale with 1mm Kaidan graduation on the back for convenient use
- Satin finish

With pocket clip, easy to carry

| Order No. | Model No. | Weight |
|---|---|---|
| 007205 | 700SKD | 25g |

| | Measuring Range (mm) | Accuracy (mm) | Graduation (mm) | Full Length (mm) | Taper Angle |
|---|---|---|---|---|---|
| Taper Gauge | 1～ 15 | ±0.05 | 0.1 | 148.5 | 7°9′10″ |
| Scale | 0～130 | ±0.20 | 1 | 155 | – |

## TAPER GAUGE

HOW TO MOVIE

Convenient set, taper gauge with ruler.
With a clip for storing in a pocket.

USE
- For measurement of groove, gap, hole diameter and length

MATERIAL
- Hardened stainless steel

FEATURES
- Convenient set, taper gauge 700A with 130mm scale. Folds safely with pocket clip, easy to carry
- Satin finish

With pocket clip, easy to carry

| Order No. | Model No. | Standard | Weight |
|---|---|---|---|
| 007200 | TPG-700S | 700S | 25g |

| | Measuring Range (mm) | Accuracy (mm) | Graduation (mm) | Full Length (mm) | Taper Angle |
|---|---|---|---|---|---|
| Taper Gauge | 1～ 15 | ±0.05 | 0.1 | 148.5 | 7°9′10″ |
| Scale | 0～130 | ±0.20 | 0.5 | 155 | – |

# CIRCULAR TAPER GAUGE WITH GREEN COLOR GRIP

HOW TO MOVIE

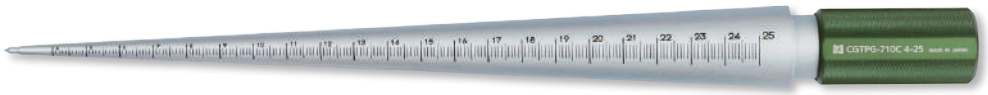
Green colored grip type is now available for the popular circular taper gauge

For measuring narrower gap▶
Pin Gauge
P41

Rust prevention▶
Zerust Film for Steel
P370

CGTPG-710A

CGTPG-710B



CGTPG-710C

USE
- For measurement of groove, gap, hole and tube diameter etc.

MATERIAL
- Gauge: Carbon tool steel (CCTPG-710A), Carbon steel for machine structual use (CCTPG-710B & 710C)
- Grip: Anodized aluminum

FEATURES
- Silver finish
- With a vinyl case for convenient storage

| Order No. | Model No. | Standard | Measuring Range (mm) | Accuracy (mm) | Graduation (mm) | Taper Angle | Full Length (mm) | Weight |
|---|---|---|---|---|---|---|---|---|
| 007103 | CGTPG-710A | 710A | 1～ 6 | ± 0.05 | 0.1 | 5° 44′ | 93 | 11g |
| 007104 | CGTPG-710B | 710B | 4～15 | ± 0.05 | 0.1 | 5° 44′ | 175 | 115g |
| 007105 | CGTPG-710C | 710C | 4～25 | ± 0.05 | 0.1 | 5° 44′ | 290 | 470g |

# CIRCULAR TAPER GAUGE WITH GREEN COLOR CASE

HOW TO MOVIE

Green colored grip type is now available for the popular circular taper gauge

Rust prevention▶
Zerust Film for Steel
P370

CCTPG-715A

USE
- For measurement of groove, gap, hole and tube diameter etc.

MATERIAL
- Gauge: Carbon tool steel
- Case: Anodized aluminum

FEATURES
- Comes with a cap for gauge tip protection
- With a vinyl case for convenient storage

| Order No. | Model No. | Standard | Measuring Range (mm) | Accuracy (mm) | Graduation (mm) | Taper Angle | Full Length (mm) | Weight |
|---|---|---|---|---|---|---|---|---|
| 007152 | CCTPG-715A | 715A | 0.1～3 | ± 0.05 | 0.1 | 5° 43′ 29″ | 118.5 | 18g |
| 007153 | CCTPG-715B | 715B | 1 ～6 | ± 0.05 | 0.1 | 5° 43′ 29″ | 168 | 46g |

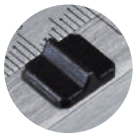
# WELDING GAUGES NEW! (007524)

T

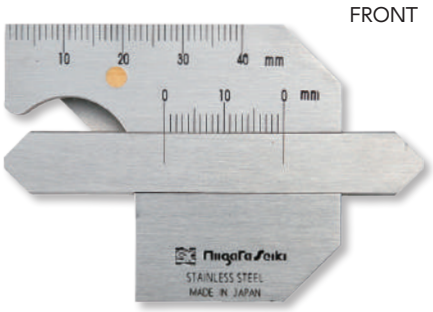
Essential for welding process! It is Bead height gauge.
A wide variety of welding measurements in one gauge

Function comparison▶
Welding Gauge Chart
P104 ～105

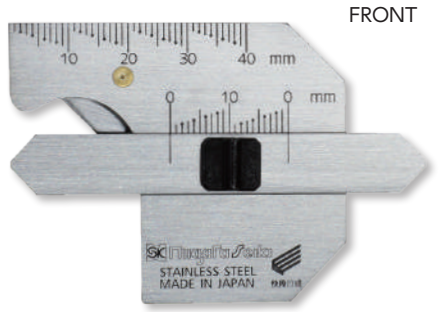
Equipped with a finger hook for comfortable operation even while wearing gloves: WG-1FKD



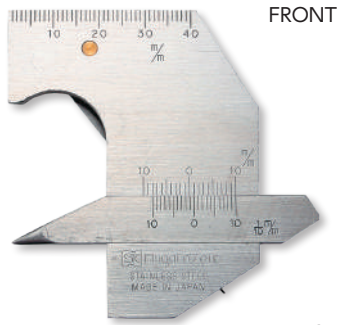
Support for undercut measurement: WG-2 (L)



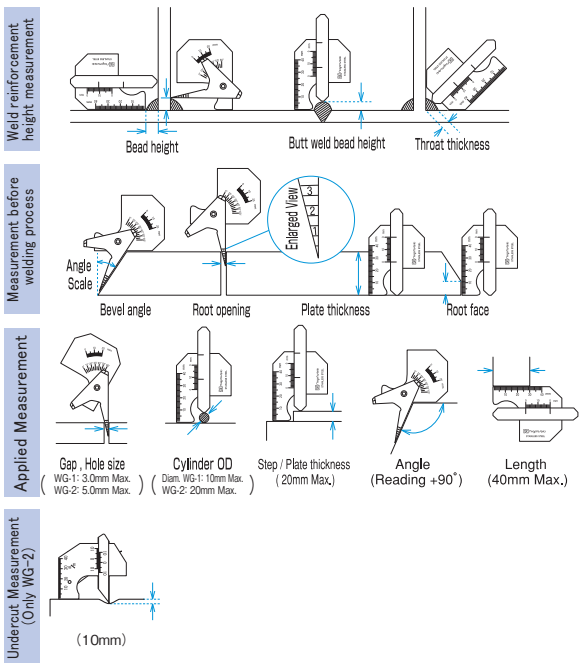

WG-1 (M)




WG-1FKD

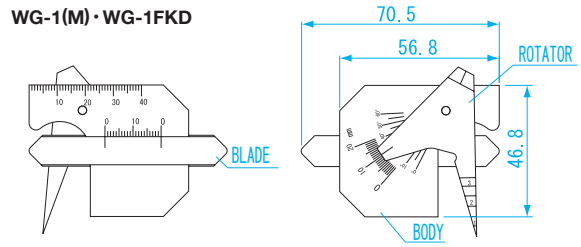



WG-2 (L)

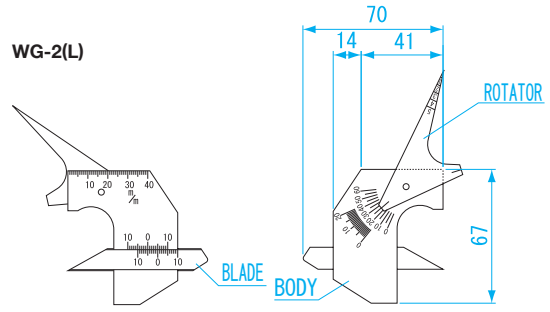



● DIMENSIONS Units: mm

**WG-1(M)・WG-1FKD**




**WG-2(L)**




USE
- For measuring fillet weld, bead weld, etc.

MATERIAL
- Stainless steel

FEATURES
- Efficient for welding and quality control
- Tough and portable (with a vinyl case)

| Order No. | Model No. | Measurement Accuracy for Throat Thickness of Fillet Weld | Bevel Angle Accuracy | Accuracy | Weight |
|---|---|---|---|---|---|
| 007502 | WG-1 (M) | ± 0.4mm | ± 0.7° | ± 0.4mm | 79g |
| NEW! 007524 | WG-1FKD | ± 0.4mm | | | 80g |
| 007503 | WG-2 (L) | ± 0.2mm | | | 91g |

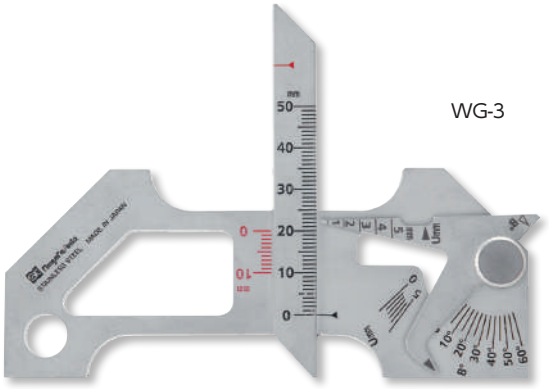
BLOCK GAUGE
PIN GAUGE
PIN VISE
PIN GAUGE ACCESSORIES
RING GAUGE
PLUG GAUGE
LIMIT GAUGE
THICKNESS GAUGE
TAPER GAUGE
WELDING GAUGE
OTHER GAUGES

# WELDING GAUGE

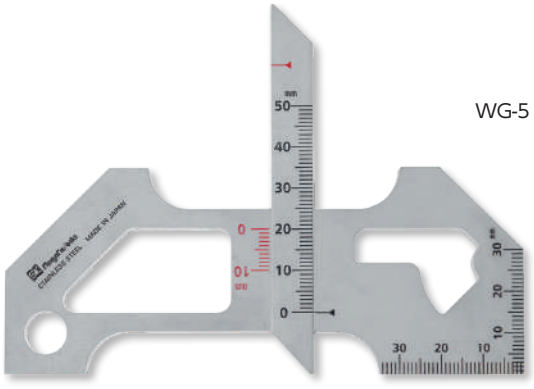
Gauges with new features added to existing welding gauge line-up.
Measure weld reinforcement height up to 50mm.
(※In bead height and throat thickness)

Function comparison▶
Welding Gauge Chart
P104
～105

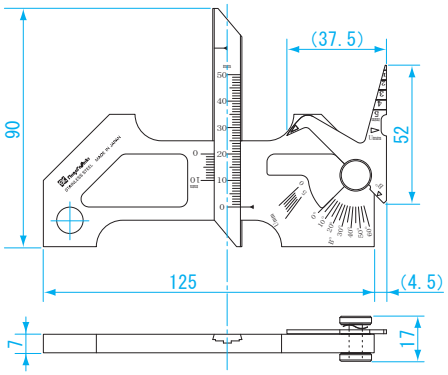
WG-3



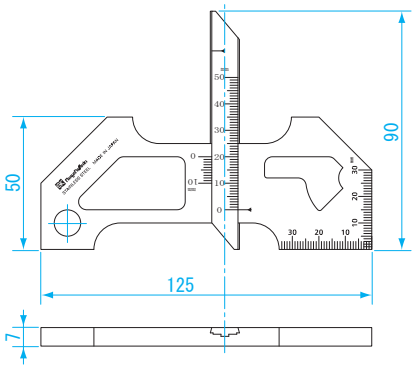
WG-5



● DIMENSIONS Units: mm




● DIMENSIONS Units: mm




USE
- ●Measurement of size and alignment of bead, gap size, undercut, etc.

MATERIAL
- ●Stainless Steel

FEATURES
- ●Speed up and streamline the quality control of welding
- ●Measures weld reinforcement height up to 50mm
- ●Wide base for stability during measurements
- ●Pivoting gauge provides a variety of measurement functions
- ●Silver finish is ideal for reduced reflection when photographing measurements
- ●Translucent case for easy confirmation of contents

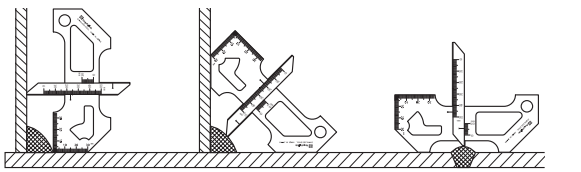
USE
- ●Measurement of size and alignment of bead

MATERIAL
- ●Stainless steel

FEATURES
- ●Speed up and streamline the quality control of welding
- ●Measures weld reinforcement height up to 50mm
- ●Wide base for stability during measurements
- ●Silver finish is ideal for reduced reflection when photographing measurements
- ●Translucent case for easy confirmation of contents

## ■ Measurement Functions

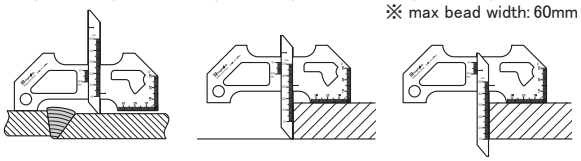
WG-3, WG-5 capabilities



①Fillet leg length measurement (0～50mm)

②Fillet throat height measurement (0～50mm)

③Weld reinforcement height measurement (0～10mm)
※ max bead width: 60mm

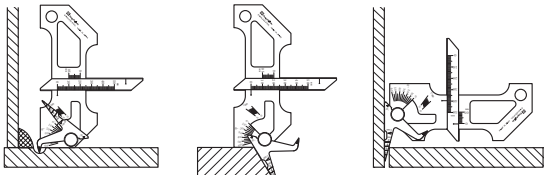


④Step height measurement (0～50mm)
※max bead width: 53mm

⑤Depth and step measurement (0～50mm)

⑥Thickness measurement (0～35mm)

WG-3 only

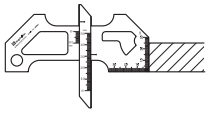


⑦Undercut measurement (0～5mm)

⑧Bevel angle measurement (0～60°)

⑨Root gap measurement (0.5～5mm)

WG-5 only



⑩Thickness measurement (0～30mm)

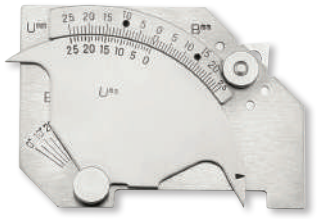
| Order No. | Model No. | Weight |
|---|---|---|
| 007506 | WG-3 | 198g |
| 007507 | WG-5 | 187g |

# WELDING GAUGE

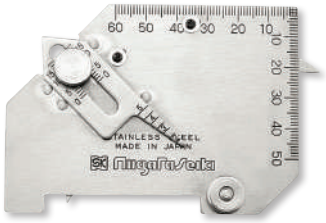
T

Essential for welding process. A wide variety of welding measurements in one gauge.

Function comparison▶
Welding Gauge Chart
P104
～105

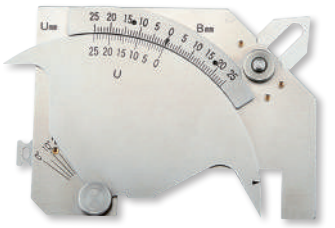


FRONT

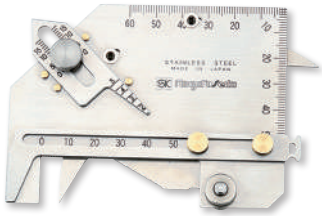


BACK

WGU-7M



FRONT

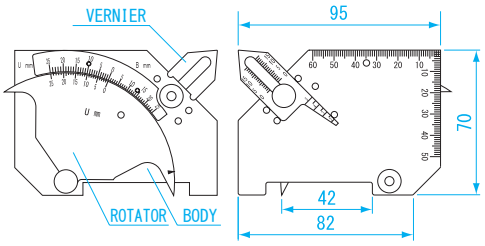


BACK

WGU-8M

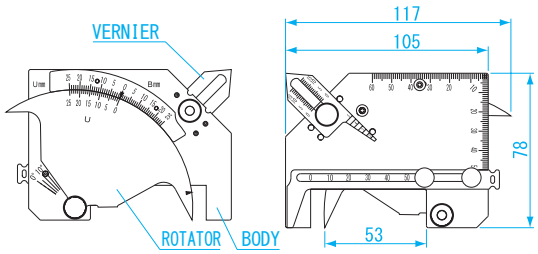
## ● DIMENSIONS

Units: mm




## ● DIMENSIONS

Units: mm




### USE

●For wide of variety welding measurements

Undercut depth / Groove angle / Inconsistent level
Height of fillet weld & bead weld / Throat thickness of fillet
Root opening / Plate thickness

### MATERIAL

●Stainless steel

### FEATURES

●For a wide variety of welding measurements
●Very convenient to the welding process involving steel frame assembly such as general welding, ship building, bridge construction, etc.
●Easy reading scale
●With a vinyl case for easy carrying

### USE

●For wide of variety welding measurements

Undercut depth / Groove angle / Inconsistent level
Height of fillet weld & bead weld / Throat thickness of fillet
Root opening / Plate thickness / External diameter of circular workpiece / Width of bead weld

### MATERIAL

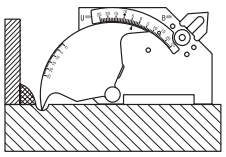
●Stainless steel

### FEATURES

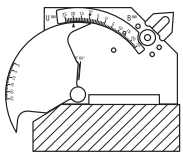
●Additional function for measurement of external diameter of circular workpiece, swelling of pressure welding of reinforcing iron and width of bead weld
●Bead stride width: 53mm
●Bevel angle range: 0-70°
●With a vinyl case for easy carrying

## ■ MEASUREMENT FUNCTION

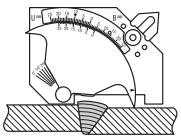
**WGU-7M,WGU-8M, WGU-9M common functions**



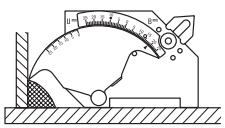
① Undercut depth
(0～25mm)



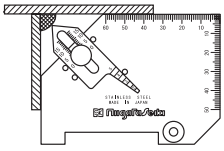
② Bevel angle
(WGU-7M: 0～60°)
(WGU-8M・WGU-9M: 0～70°)



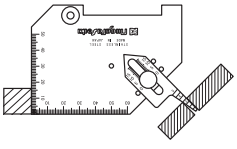
③ Bead striding width (WGU-7M: 42mm)
(WGU-8M・WGU-9M: 53mm)
Step difference (0～25mm)



④ Height of fillet &
bead weld (0～25mm)

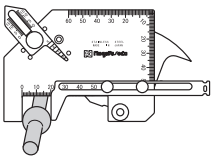


⑤ Throat thickness of
fillet weld (0～15mm)

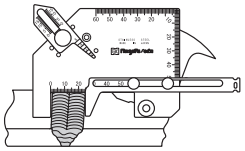


⑥ Root opening (2～5mm)
⑦ Plate thickness (scale)

**WGU-8M, WGU-9M common functions**



⑧ External diameter of circular workpiece
WGU-8M: up to 30mm
WGU-9M: up to 40mm



⑨ Width of bead weld (0～50mm)

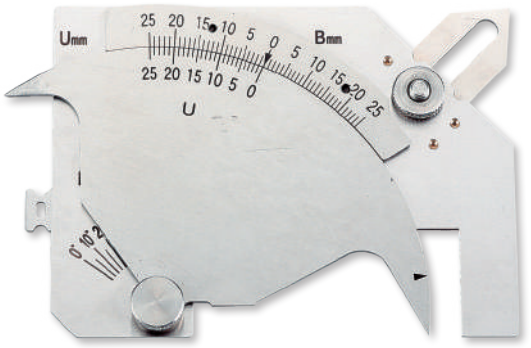
| Order No. | Model No. | Weight |
|---|---|---|
| 007513 | WGU-7M | 118g |
| 007514 | WGU-8M | 155g |

BLOCK GAUGE
PIN GAUGE
PIN VISE
PIN GAUGE ACCESSORIES
RING GAUGE
PLUG GAUGE
LIMIT GAUGE
THICKNESS GAUGE
TAPER GAUGE
WELDING GAUGE
OTHER GAUGES

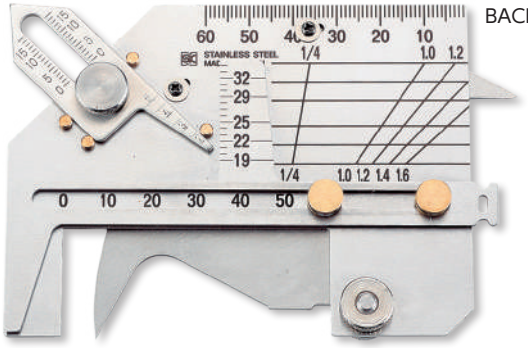
# WELDING GAUGE

Essential for welding process. A wide variety of welding measurements in one gauge.

Function comparison▶
Welding Gauge Chart
P104 ～105




FRONT




BACK

USE

●For a wide variety of welding measurements

Undercut depth / Groove angle / Inconsistent level
Height of fillet weld & bead weld / Throat thickness of fillet
Root opening / Plate thickness / External diameter of circular workpiece / Width of bead weld

MATERIAL

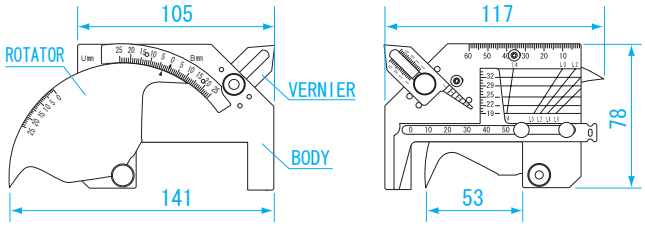
●Stainless steel

FEATURES

●Additional functions for measurement of
- external diameter of circular workpiece
- swelling of pressure welded reinforcing iron
- width of bead weld

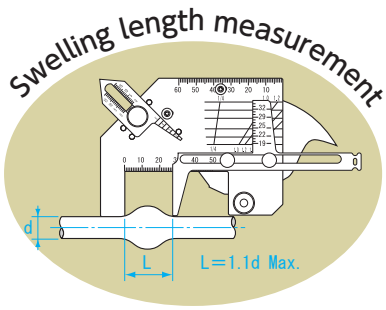
●Bead stride width: 53mm
●Bevel angle range: 0-70°
●Higher accuracy undercut measurement function
●With a vinyl case for easy carrying

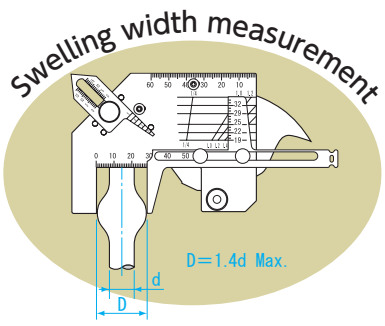
● DIMENSIONS Units: mm

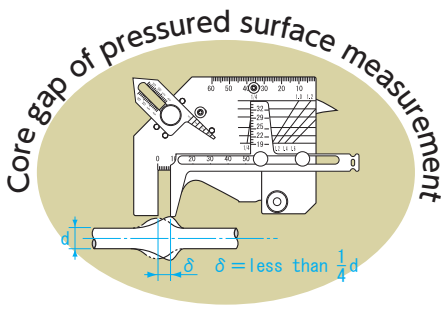



## Additional functions

Provides quick way to measure the diameter of welded rebar to insure proper dimensions of weld seam.
Scale marked for material diameter (ϕ19, 22, 25, 29, 32) corresponding to various rebar diameters, and amount of expansion (1/4, 1.0～1.6). You can quickly find the ratio by reading the intersection of the two scale lines.



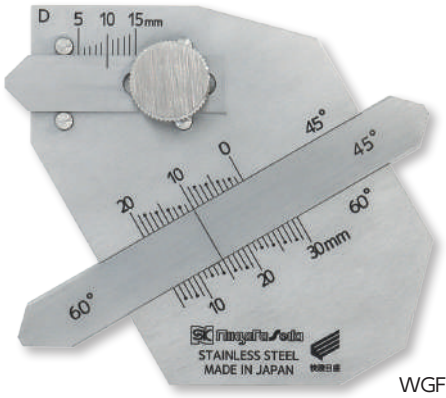




※ Please also refer to "MEASUREMENT FUNCTIONS" on Page 94 to see other functions

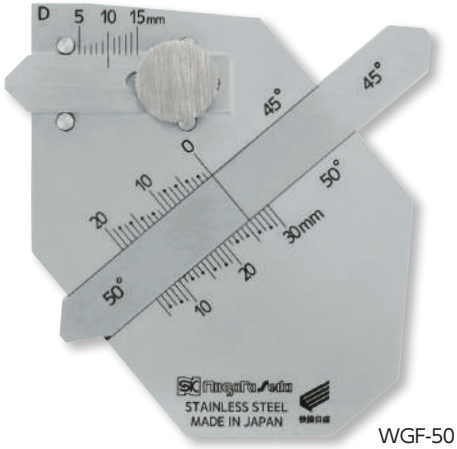
| Order No. | Model No. | Rebar diameter (mm) | Expansion | Weight |
|---|---|---|---|---|
| 007515 | WGU-9M | ϕ 19～35 | 1/4、1.0～1.6 | 155g |

# WELDING GAUGES NEW!

60° ・50° beveled deformed fillet weld supports throat thickness measuremenet.
New Welding gauges standard developped from the voices in measurement sites.

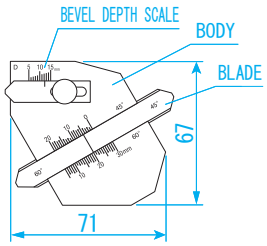



WGF-60

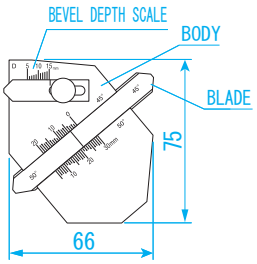


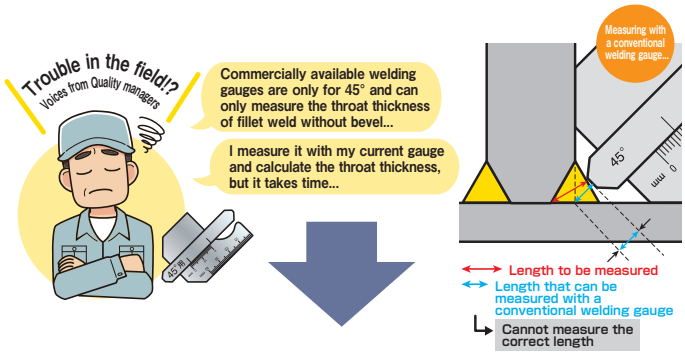

WGF-50

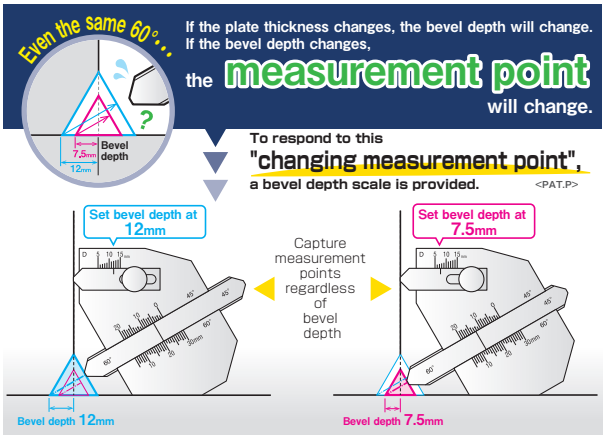
● DIMENSIONS Units: mm




● DIMENSIONS Units: mm




**In response to customer requests, we have developped welding gauges for deformed fillet welding with 60° and 50° bevels.**

USE
- ●Throat thickness of fillet weld
- ●Throat Thickness Measurement for Bevelled Irregular Fillet Welds

MATERIAL
- ●Stainless steel

FEATURES
- ●A new standard model welding gauge designed based on feedback from measurement sites, compatible with irregular fillet welds with groove.
- ●Supports throat thickness measurement for fillet welds with grooves, eliminating the need to calculate throat thickness after measuring with standard welding gauges.
- ●By rotating the body 180°, it is also possible to measure the throat thickness of standard fillet welds without grooves.
- ●If the plate thickness changes, the bevel depth will change. A bevel depth scale is provided to accommodate changing measurement points that cannot be measured by angle alone.
- ●Portable(with vinyl case)

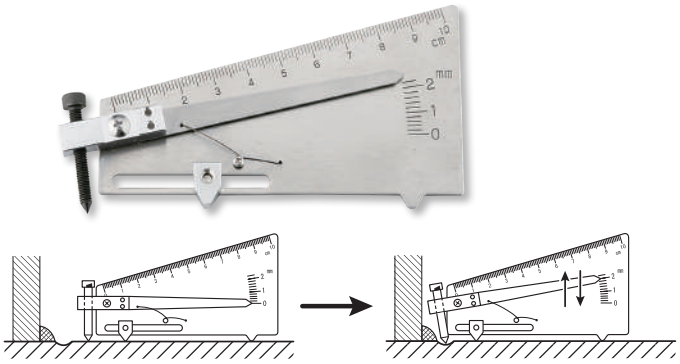
SPECIFICATIONS
- ●Throat Thickness Measuring Range: Bevel Groove … 5~30mm
  Fillet … 0~20mm
- ●Groove Depth Range: 5~14.5mm ●Minimum reading: 1mm ●Accuracy of length: ±0.4mm

| Order No. | Model No. | Applicable angle | Weight |
|---|---|---|---|
| NEW! 007522 | WGF-60 | Bevel angle 60°・No bevel (45°) | 130g |
| NEW! 007523 | WGF-50 | Bevel angle 50°・No bevel (45°) | 140g |

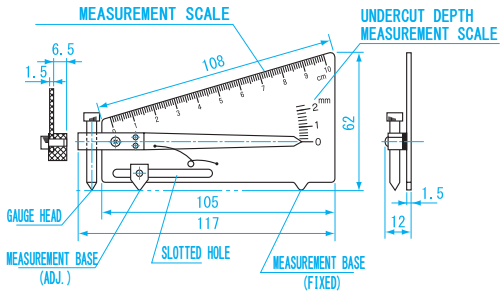
# WELDING GAUGE

Essential for welding process. Specialized for undercut depth measurement.

Function comparison▶ Welding Gauge Chart P104 ～105
Precise depth measurement▶ GAP CALIPER P191 ～196



● DIMENSIONS Units: mm




USE
- ●Exclusive use for undercut measurement

MATERIAL
- ●Stainless steel

FEATURES
- ●Easy to measure depth and length of undercut
- ●Capable of 0 adjustment with screw type of gauge head
- ●With a vinyl case for easy carrying

SPECIFICATIONS
- ●Measuring Range
  Depth: 0 ～ 2.0mm (Minimum reading: 0.2mm, Accuracy: ± 0.1mm)
  Length: 0 ～ 10cm
- ●Width of measurement base: Approx 40mm

### Zero Adjustment

1. Set the position of the Adjustable Contact Point for measurement on flat area of base material.
2. Hold the gauge to a flat surface, insuring that the two Contact Points and the Gauge Head are in contact with the surface. Loosen the Gauge Head Set-Screw using a standard screwdriver.
3. Rotate the Gauge Head to adjust the Undercut Depth reading to "0". Once set to "0", tighten the Gauge Head Set-Screw to secure the Gauge Head.

### Measurement

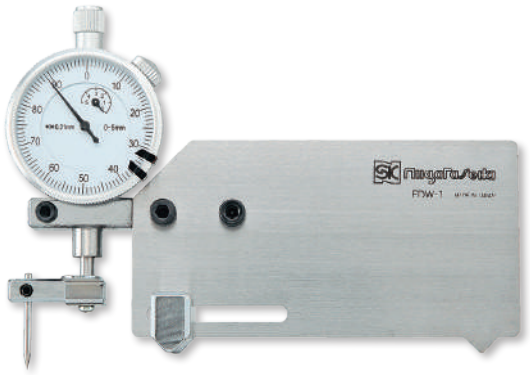
4. After setting the 0-Point, position the Gauge Head to the center of the undercut.
5. Pointer will show the undercut depth.

| Order No. | Model No. | Weight |
|---|---|---|
| 007521 | WGU-2S | 100g |

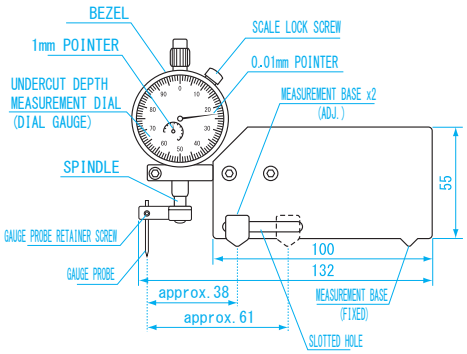
# WELDING GAUGE

Essential for welding process. Dial gauge type.
Specialized for undercut measurement.

Function comparison▶ Welding Gauge Chart P104 ～105
Precise depth measurement▶ GAP CALIPER P191 ～196
Exchangeable dial gauge▶ DIAL GAUGE SMALL TYPE P242



● DIMENSIONS Units: mm



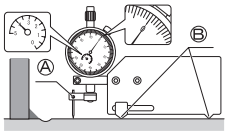

USE
- ●Exclusive use for undercut measurement

MATERIAL
- ●Stainless steel

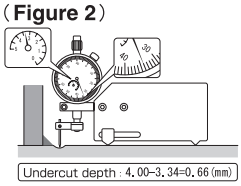
FEATURES
- ●Easy and accurate to measure depth and length of undercut
- ●Dial gauge type performs more precise measurement
- ●Three point support for stable measurement

SPECIFICATIONS
- ●Measuring Range: 0～4.00mm
- ●Minimum reading: 0.01mm
- ●Accuracy: ±0.04mm
- ●Width of measurement base: Approx 23mm

(Figure 1)




(Figure 2)




### Zero Adjustment

Recommended to be performed on a flat surface such as a surface plate

①Loosen GAUGE PROBE RETAINER SCREW using hex key
②Place Welding Gauge on surface insuring all three points of MEASUREMENT BASE are making contact (2x ADJ. 1x FIXED) and push on SPINDLE shaft. When 1mm POINTER indicates 4.00mm, tighten GAUGE PROBE RETAINER SCREW. (Insure that probe tip is in contact with the surface plate)

### Measurement

①Place the gauge on a flat surface and rotate BEZEL to indicate 0.01mm. (Figure 1)
②Place PROBE tip on weld undercut point to be measured. (Figure 2)
③Undercut value is obtained by subtracting Dial Gauge reading from 4.00mm

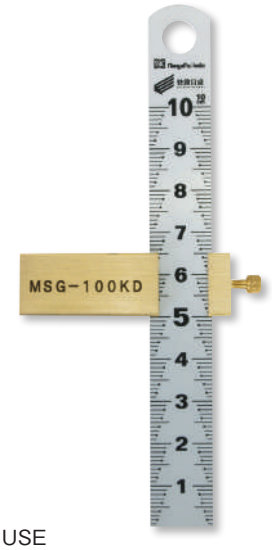
| Order No. | Model No. | Weight |
|---|---|---|
| 007520 | FDW-1 | 192g |

# MULTI STEP GAUGE KAIDAN

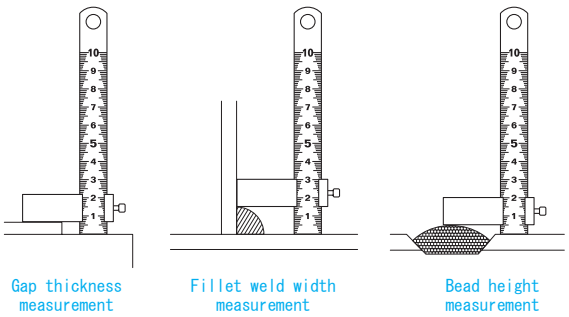
T

Function comparison▶
Welding Gauge Chart
P104
～105

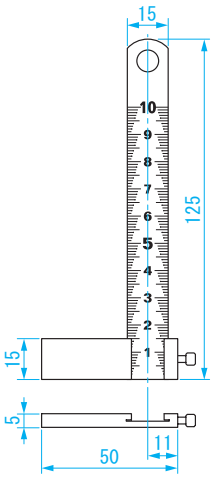
For measurement of steps of machinery, jigs and structures.
Vertical scale for easy reading.




● Example of use




● DIMEMSIONS Units: mm




USE
●For measurement of steps of machinery, jigs and structures
MATERIAL
●Scale: Stainless steel ●Dips: Brass
FEATURES
●Vertical scale for easy reading
●Stepped length of linear graduations by 1mm for easy-to-read

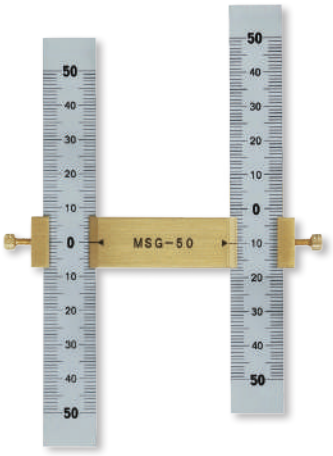
| Order No. | Model No. | Measurement Range (mm) | Accuracy (mm) | Graduation (mm) | Weight |
|---|---|---|---|---|---|
| 111401 | MSG-100KD | 0～100 | ±0.15 | 1 | 32g |

# MULTI STEP GAUGE

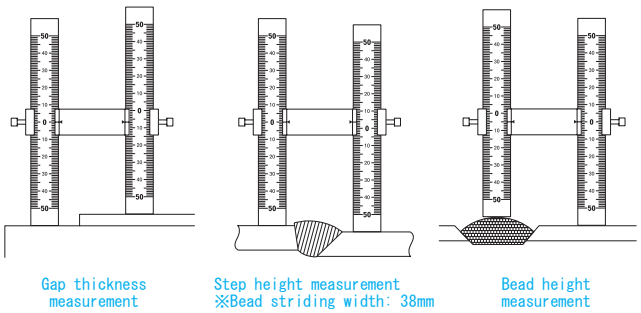
T

Function comparison▶
Welding Gauge Chart
P104
～105

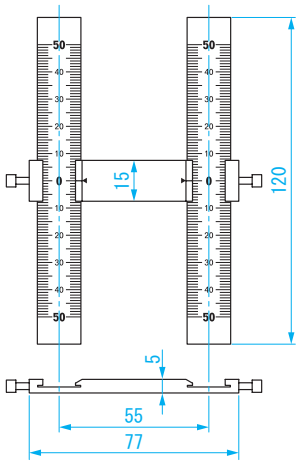
For measurement of steps of machinery, jigs and structures.
Vertical scale for easy reading.




● Example of use




● DIMEMSIONS Units: mm




USE
●For measurement of steps of machinery, jigs and structures
MATERIAL
●Scale: Stainless steel ●Dips: Brass
FEATURES
●Vertical scale for easy reading

| Order No. | Model No. | Measurement Range (mm) | Accuracy (mm) | Graduation (mm) | Weight |
|---|---|---|---|---|---|
| 111402 | MSG-50 | -50～+50 | ±0.15 | 1 | 51g |

# DIGITAL WELDING GAUGE

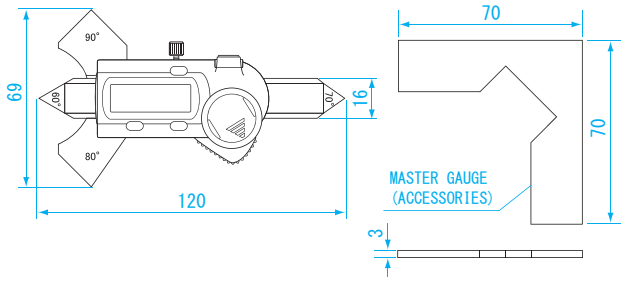
T PDI O

Bluetooth BOX (separately sold) can be attached.
Essential for welding process.
Digital welding gauge specialized for measuring fillet weld and bead weld height.

Integrated software for measuring instruments ▶ SK-LOG P24 ～27
Wireless data output ▶ Bluetooth BOX for Calipers P168
Function comparison ▶ Welding Gauge Chart P104 ～105

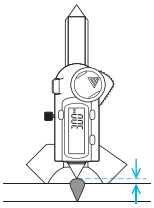
**Provided with zero setting master gauge**

● DIMENSIONS Units: mm

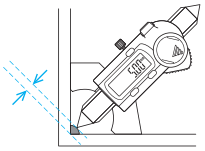



USE
●For measuring the size of fillet weld and bead weld
MATERIAL
●Stainless steel
FEATURES
●Bluetooth BOX (separately sold) can be attached
●Easy to read with digital display
●Master gauge included
●Hold function
●Auto power off function (after approx. 20 min)
●With a plastic case
SPECIFICATIONS
●Throat thickness: 20mm
●Bead height: 10mm
●Bevel angle: 60°, 70°, 80°, 90° (Accuracy: ±2°)
POWER
●One CR2032 (lithium) battery included for testing

Weld reinforcement height measurement

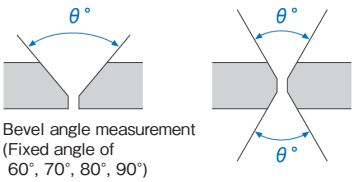


Bead height
Maximum measurement
10mm



Throat thickness
Maximum measurement
20mm

Measurement before welding process




Bevel angle measurement
(Fixed angle of
60°, 70°, 80°, 90°)

※ Quantization Error (± 1 digit) not included

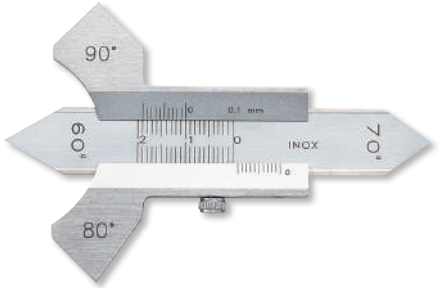
| Order No. | Model No. | Resolution (mm) | Accuracy※ (mm) | Weight |
|---|---|---|---|---|
| 007527 | GDCS-20WG | 0.01 | ± 0.03 | 130g |

# WELDING GAUGE

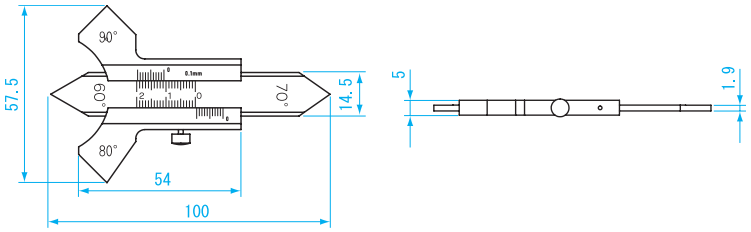
T O

Essential for welding process.
Analog type welding gauge specialized for measuring fillet weld and bead weld height.

Function comparison ▶ Welding Gauge Chart P104 ～105

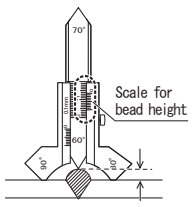



● DIMENSIONS Units: mm

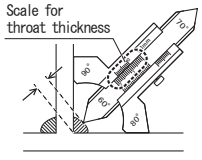



USE
●For measuring the size of fillet weld and bead weld
MATERIAL
●Stainless steel
FEATURES
●Made of stainless steel, corrosion resistant
●Bevel angle: 60°, 70°, 80°, 90°
●With a vinyl case for easy carrying
SPECIFICATIONS
●Fillet weld: 11mm
●Bead weld: 8mm
●Accuracy: ±0.2mm
●Minimum reading: 0.1mm

Weld Bead Measurement

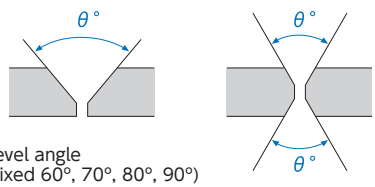



Bead height
Maximum measurement 8mm




Throat thickness
Maximum measurement 11mm

Measurement Before Welding




Bevel angle
(Fixed 60°, 70°, 80°, 90°)

| Order No. | Model No. | Weight |
|---|---|---|
| 007516 | AWG-10 | 60g |

# ANGLE LIMIT GAUGE

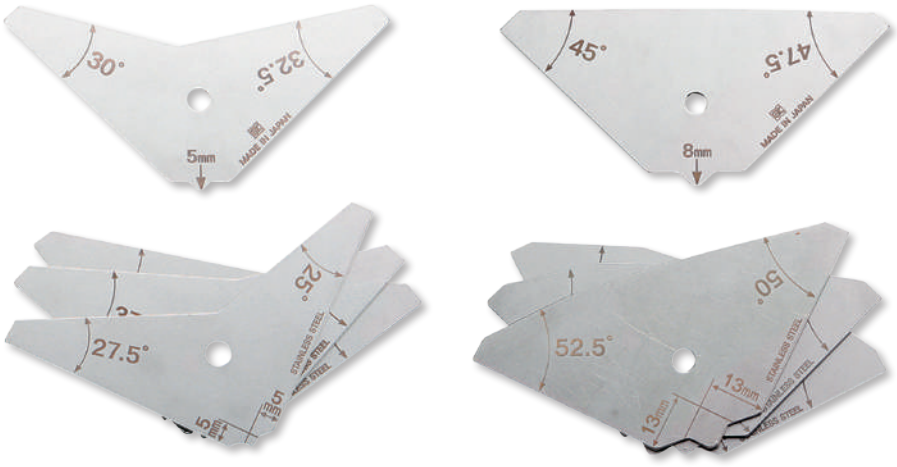
T

Essential for welding process.
This is a limit gauge for measuring joint gap angle and butt joint gap angle.

Function comparison▶
Welding Gauge Chart
P104 ～105

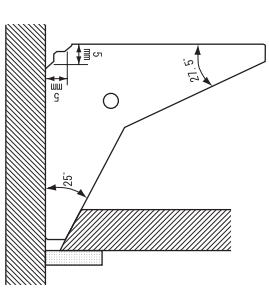
Groove angle measurement▶
Angle Gauge
P103

Inner angle measurement▶
Inside Protractor
P160

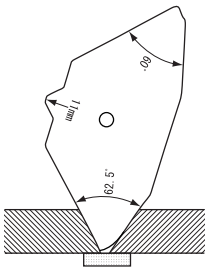



WAL2542　　WAL4562

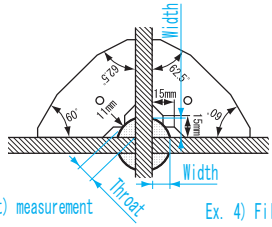
● Example of use




Ex. 1) Joint gap angle (inside) measurement




Ex. 2) Butt joint gap angle measurement




Ex. 3) Fillet weld (throat) measurement　　Ex. 4) Fillet weld width measurement

USE
- For measuring bevel angle of T-joint (interior angle), bevel angle of facing joint (interior angle), leg length (height), and throat thickness of fillet weld

MATERIAL
- Stainless steel

FEATURES
- Indication of size limit for easy judgement (angle step by 2.5°, throat thickness step by 1mm)
- The leg length is the allowable limit dimension at the measured throat thickness dimension
- The most frequently used dimensions are selected as the gauge sizes
- Provided with plastic case and ball chain

SPECIFICATIONS

| Model No. | | WAL2542 | | | | WAL4562 | | | |
|---|---|---|---|---|---|---|---|---|---|
| Blank No. | | 1 | 2 | 3 | 4 | 1 | 2 | 3 | 4 |
| Outline Dimension (mm) | Overall width | 92 | | | | 92 | | | |
| | Overall height | 46 | 45 | 44 | 43 | 43 | 44 | 45 | 46 |
| | Plate thickness | 1.5 | | | | 1.5 | | | |
| Material/ Finish | | SUS304 /barrel semi-gloss finish | | | | SUS304/ barrel semi-gloss finish | | | |
| Measurement Value Indication | Angle degree (Both side) | 25° | 30° | 35° | 40° | 45° | 50° | 55° | 60° |
| | | 27.5° | 32.5° | 37.5° | 42.5° | 47.5° | 52.5° | 57.5° | 62.5° |
| | Throat thickness (Front) | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
| | Leg Length (Back) | 5 | 7 | 8 | 10 | 11 | 13 | 14 | 15 |
| Accuracy | | Fillet weld·Reinforcement±0.1mm/ Angle ±1° | | | | Fillet weld·Reinforcement±0.1mm/ Angle ±1° | | | |

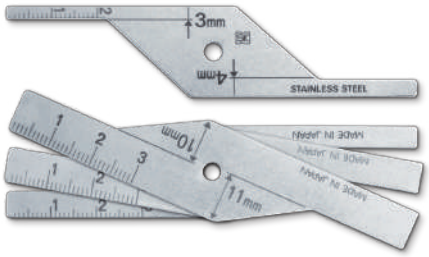
| Order No. | Model No. | Weight |
|---|---|---|
| 007550 | WAL2542 | 100g |
| 007551 | WAL4562 | 120g |

BLOCK GAUGE
PIN GAUGE
PIN VISE
PIN GAUGE ACCESSORIES
RING GAUGE
PLUG GAUGE
LIMIT GAUGE
THICKNESS GAUGE
TAPER GAUGE
WELDING GAUGE
OTHER GAUGES

# ROOT LIMIT GAUGE

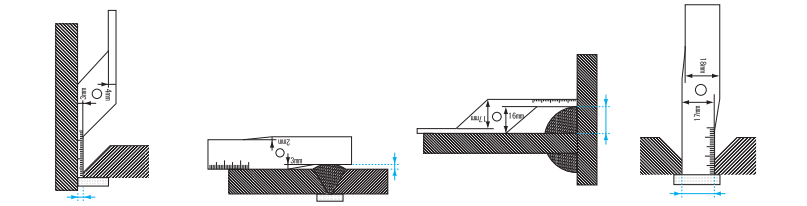
Essential for welding process.
Limit gauge for measuring root gap of T-joint, facing joint and so on

Function comparison▶
Welding Gauge Chart
P104
～105




WRL310

● Example of use



Ex. 1) T-joint root thickness measurement　Ex. 2) Butt joint reinforcement height measurement　Ex. 3) Fillet weld width measurement　Ex. 4) Butt joint root thickness measurement

USE
- ●Use for measuring root gap of T-joint or facing joint, leg length (height) of fillet weld and excess weld and height of facing joint

MATERIAL
- ●Stainless steel

FEATURES
- ●Measure with 1mm interval
- ●The measurement result of root thickness will be indicated on the scale
- ●The most frequently used dimensions are selected as the gauge sizes
- ●Provided with plastic case and ball chain

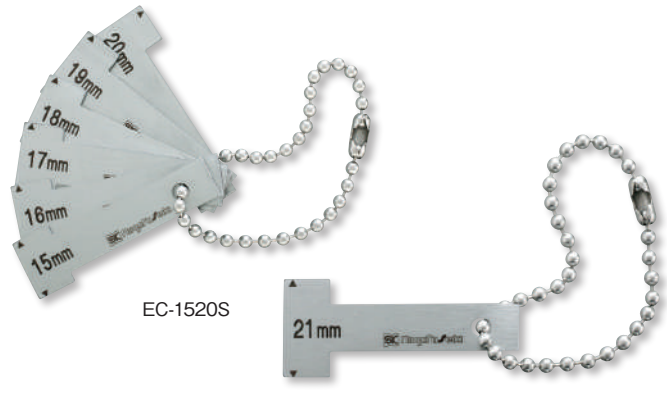
| Order No. | Model No. | Weight |
|---|---|---|
| 007560 | WRL310 | 60g |
| 007561 | WRL1118 | 90g |

SPECIFICATIONS

| Model No. | | WRL310 | | | | WRL1118 | | | |
|---|---|---|---|---|---|---|---|---|---|
| Blank No. | | 1 | 2 | 3 | 4 | 1 | 2 | 3 | 4 |
| Outline dimension (mm) | Overall width | 90 | | | | 90 | | | |
| | Overall height | 20 | | | | 20 | | | |
| | Plate thickness | 2 | | | | 2 | | | |
| Material/ Finish | | SUS304/ barrel semi-gloss finish | | | | SUS304/ barrel semi-gloss finish | | | |
| Measurement Value Indication | Root gap (Front) | 3·4 | 5·6 | 7·8 | 9·10 | 11·12 | 13·14 | 15·16 | 17·18 |
| | Leg length·height (Back) | 16·17 | 14·15 | 12·13 | 10·11 | 8·9 | 6·7 | 4·5 | 2·3 |
| | Root side (Front) | 20 | | | | 20 | | | |
| | Plate thickness | 30 | | | | 30 | | | |
| Accuracy | | ±0.1mm | | | | ±0.1mm | | | |

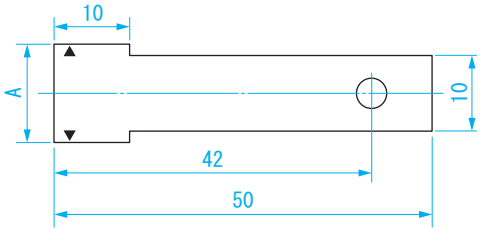
# WELDING ELECTRODE GAUGE SET / SINGLE PART

Quick measurement for height of welding electrode




EC-1520S　EC-21

● DIMEMSIONS　Units: mm




USE
- ●Use for measuring height of welding electrode

MATERIAL
- ●Stainless steel

SPECIFICATIONS
- ●Accuracy: ±0.2mm
- ●Thickness: 1mm
- ●With ball chain

## ■ Set

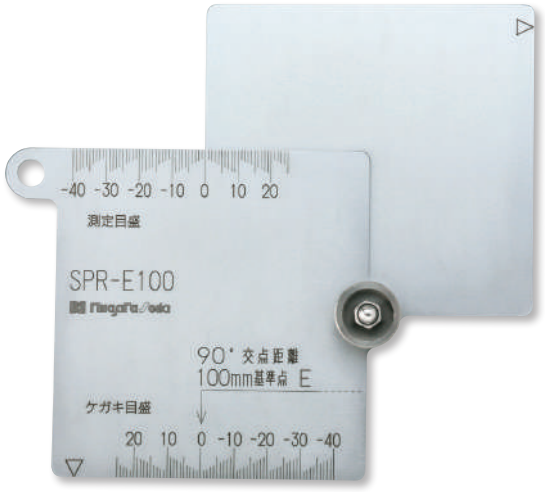
| Order No. | Model No. | Size A (mm) | Weight |
|---|---|---|---|
| 111419 | EC-1015S | 10・11・12・13・14・15 | 26g |
| 111420 | EC-1520S | 15・16・17・18・19・20 | 28g |
| 111421 | EC-2025S | 20・21・22・23・24・25 | 31g |

## ■ Single Part

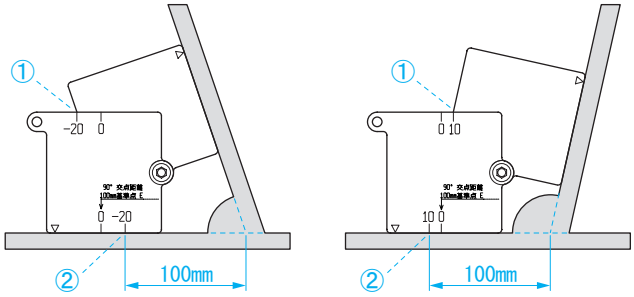
| Order No. | Model No. | Size A (mm) | Weight |
|---|---|---|---|
| 111403 | EC-10 | 10 | 6.7g |
| 111404 | EC-11 | 11 | 6.8g |
| 111405 | EC-12 | 12 | 6.8g |
| 111406 | EC-13 | 13 | 6.9g |
| 111407 | EC-14 | 14 | 7.0g |
| 111408 | EC-15 | 15 | 7.1g |
| 111409 | EC-16 | 16 | 7.2g |
| 111410 | EC-17 | 17 | 7.2g |
| 111411 | EC-18 | 18 | 7.3g |
| 111412 | EC-19 | 19 | 7.4g |
| 111413 | EC-20 | 20 | 7.5g |
| 111414 | EC-21 | 21 | 7.5g |
| 111415 | EC-22 | 22 | 7.6g |
| 111416 | EC-23 | 23 | 7.7g |
| 111417 | EC-24 | 24 | 7.8g |
| 111418 | EC-25 | 25 | 7.8g |

## STEALTH POINT READER

The length measurement from welded corners.
Can determine the position of the reference point（100 mm）from the corner hidden in fillet.



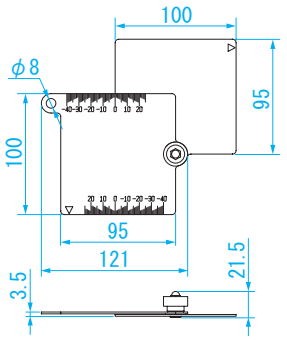

● Example of use




①Read the value from the measuring scale where the two plates intersect

②Confirm the same point as ① and the value read from step ① indicates the point 100mm from the corner

● DIMEMSIONS Units: mm




USE
- ●For measuring the length from the welded corner

FEATURES
- ●Can determine the position of the reference point（100 mm）from the corner hidden in fillet
- ●With a vinyl case for convenient storage

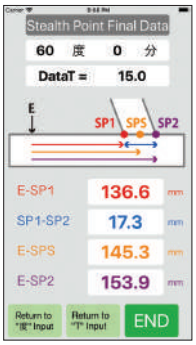
MATERIAL
- ●Stainless steel

| Order No. | Model No. | Usage Range (intersection angle) | Accuracy (mm) | Weight |
|---|---|---|---|---|
| 007571 | SPR-E100 | 60°～120° | ± 0.5 | 240g |

## STEALTH POINT READER

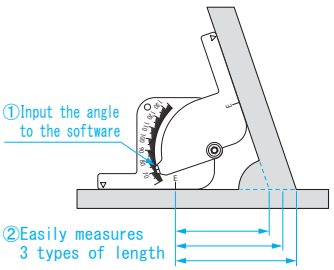
For measuring the length from the welded corner.
Dedicated application software for free and it can be easily measured the distance from the reference point to the welding point.

※Download the app by the method described in the instruction manual that comes with the product.

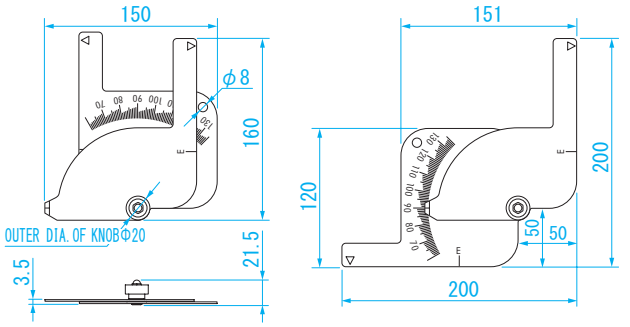



< Image of application >

● Example of use




● DIMENSIONS Units: mm




USE
- ●For measuring the length from the welded corner

MATERIAL
- ●Stainless steel

FEATURES
- ●Dedicated application software for free and it can be easily measured the distance from the reference point to the welding point
- ●With a vinyl case for convenient storage

Supported OS
- ●iPhone: iOS 10.0 or later / Android: Android 4.4 or later

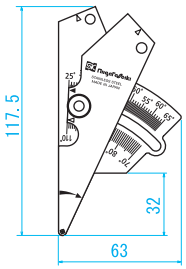
| Order No. | Model No. | Usage Range (intersection angle) | Angle Measurement Accuracy | Accuracy（welding point distance from reference point）(mm) | Weight |
|---|---|---|---|---|---|
| 007572 | SPR-S | 60° ～ 135° | ± 0.5° | ± 0.7 (85° or more)<br>± 1.1 (less than 85°) | 270g |

# ANGLE GAUGE

T

Specialized for angle measurement of grooves with minimum reading 0.5°

● DIMENSIONS Units: mm




USE
- ●Butt angle measurement and gap angle measurement

MATERIAL
- ●Stainless steel

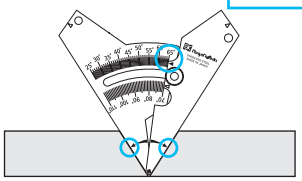
FEATURES
- ●Measurement of butt joint gap angle
- ●Sharpened tip enables measurement for root gap of 0mm, or when sheet thickness is less than 15mm
- ●Minimum reading 0.5°, large graduation for easy reading
- ●T-joint gap angle can be measured avoiding weld buildup
- ●Non-reflective satin finish for better ligibility

SPECIFICATIONS
- ●Solid and convenient carrying (provided with plastic carrying case)
- ●Bevel angle: 25~65° (minimum graduation: 0.5°)
- ●Angle of cross weld part: 70~110°

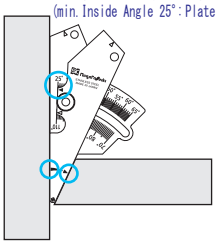
● Example of use

Example 1) Butt joint gap angle measurement (max. inside angle 65°: plate thickness :30mm)

・How to read the value
Examples 1) & 2)
Angle between ◀ ▶ marks indicated at ◀

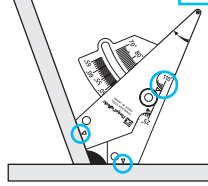


Example 2) T-joint gap angle measurement (min. Inside Angle 25°: Plate Thickness: 30mm)

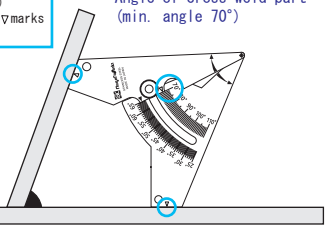


Example 3) Angle of cross weld part (max. angle 110°)

How to read the value
Examples 3) & 4)
Angle between ◁ ▽ marks indicated at ▷



Example 4) Angle of cross weld part (min. angle 70°)



SPECIFICATIONS

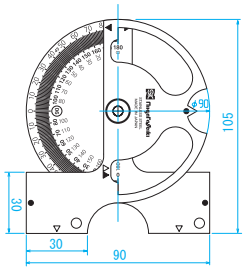
| Order No. | Model No. | Accuracy | Weight |
|---|---|---|---|
| 007518 | WGA-65 | ± 0.5° | 73.5g |

# ANGLE PROTRACTOR

T

Specialized for angle measurement.
Three measurement points enable multiple angle measurements.

● DIMENSIONS Units: mm




USE
- ●Measuring angles for sheet metal bending, welding flanges and butt joints, openings and bevels, scissors plates, etc.

MATERIAL
- ●Stainless steel

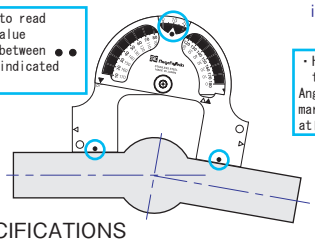
FEATURES
- ●Enables a wide range of angle measurements before and after welding process
- ●Direct measurement can be done without interference from swelling or weld bead
- ●Can measure sheet metal bends and outside angle measurements
- ●Non-reflective satin finish for better ligibility
- ●Solid and convenient carrying (provided with plastic case)

SPECIFICATIONS
- ●Bevel angle: Scissors angle 30~130° (minimum graduation: 1°)
- ●Bending angle and angle of butt weld joint: 0~90°
- ●Stud and beam angle after welding: 0~180°

● Example of use

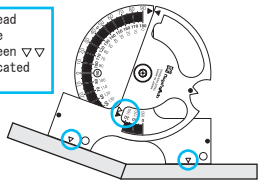
Example 1) Angle measurement of bent butt weld (0~90°: example indicates 10°)

・How to read the value
Angle between ● ● marks indicated at ●



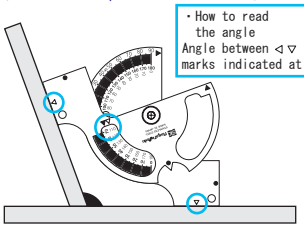
Example 2) Angle measurement of bent Flange and metal plate (0~180°: example indicates 160° (20°))

・How to read the value
Angle between ▽ ▽ marks indicated at ▷



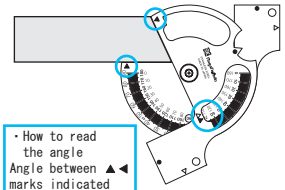
Example 3) Angle of cross weld part (0~180°: example indicates 110°)

・How to read the angle
Angle between ◁ ▽ marks indicated at ▷



Example 4) Plate bevel angle (30~130°: example indicates 65°)

・How to read the angle
Angle between ▲ ◀ marks indicated at ▶

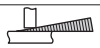
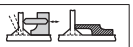
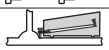
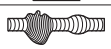


SPECIFICATIONS

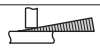
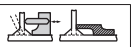
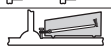
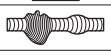
| Order No. | Model No. | Accuracy of angle | Weight |
|---|---|---|---|
| 007519 | AP-130 | ± 0.5° | 100g |

## ● Measurement function and List

※ Measures dimension of weld, relative amount must be calculated

| Process | No. | Categories | Figures | WG-1(M) WG-1FKD | WG-2(L) | WG-3 | WG-5 | WGU-7M | WGU-8M | WGU-9M | WGF-60 | WGF-50 | WGU-2S |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Machining and Assembly (Before welding) | 1 | T joint Gap |  | ○ | ○ | ○ | – | ○ | ○ | ○ | – | – | – |
| | 2 | Lap joint Gap | | ○ | ○ | ○ | – | ○ | ○ | ○ | – | – | – |
| | 3 | Misalignment of Butt weld | | ○ | ○ | ○ | – | ○ | ○ | ○ | – | – | – |
| | 4 | Root Openings | | ○ | ○ | ○ | – | ○ | ○ | ○ | – | – | – |
| | 5 | Root gap of T-joint | | – | – | – | – | – | – | – | – | – | – |
| | 6 | Root Face | | ○ | ○ | ○ | ○ | ○ | ○ | ○ | – | – | ○ |
| | 7 | Bevel Angle | | ○ | ○ | ○ | – | ○ | ○ | ○ | – | – | – |
| | 8 | Groove angle | | – | – | – | – | – | – | – | – | – | – |
| | 9 | T-joint gap angle | | – | – | – | – | – | – | – | – | – | – |
| | 10 | Edg Misalignment | | ○ | ○ | ○ | ○ | ○ | ○ | ○ | – | – | – |
| After Welding | 11 | Leg length (height) of Fillet Weld |  | ○ | ○ | ○ | ○ | ○ | ○ | ○ | – | – | – |
| | 12 | Throat Thickness of Fillet Weld | | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ (60° ・ 45°) | ○ (50° ・ 45°) | – |
| | 13 | Height of Butt weld Overlay | | ○ | ○ | ○ | ○ | ○ | ○ | ○ | – | – | – |
| | 14 | Height of T- joint weld Overlay | | ○ | ○ | ○ | ○ | ○ | ○ | ○ | – | – | – |
| | 15 | Undercut |  | – | ○ | ○ | – | ○ | ○ | ○ | – | – | ○ |
| | 16 | Misalignment of Butt Weld | | – | ○ | ○ | ○ | ○ | ○ | ○ | – | – | – |
| | 17 | Bending angle and angle of butt weld joint | | – | – | – | – | – | – | – | – | – | – |
| | 18 | Angle of Cross weld part | | – | – | – | – | – | – | – | – | – | – |
| | 19 | Stud angle after welding | | – | – | – | – | – | – | – | – | – | – |
| | 20 | Irregularity of Bead Surface |  | – | – | – | – | – | ○ | ○ | – | – | – |
| Pressure welding | 21 | Swelling diameter | | – | – | – | – | – | △※ | ○ | – | – | – |
| | 22 | Swelling length | | – | – | – | – | – | △※ | ○ | – | – | – |
| | 23 | Misalignment of Pressured Surface | | – | – | – | – | – | △※ | ○ | – | – | – |
| | 24 | Bending angle | | – | – | – | – | – | – | – | – | – | – |

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SPECIFICATIONS | | Material | Stainless steel Plate thickness: 4.3mm | | Stainless steel Plate thickness 7mm Satin finish | | Stainless steel Plate thickness: 1.5mm | | | Stainless steel Plate thickness: 4.3mm | Stainless steel Plate thickness: 1.5mm |
| | | Scale | 40mm | | – | 30・35mm | 50・60mm | | 60mm | – | 100mm |
| | | Height of Bead Weld | 10mm | | 10mm | | 25mm | | | – | – |
| | | Height of Fillet Weld | Blade : 20mm Rotator : 20mm | Blade : 10mm Rotator : 20mm | 50mm | | 25mm | | | – | – |
| | | Throat thickness of fillet weld | 10mm | | 50mm | | 15mm | | | With bevel…5 ～ 30mm No bevel…0 ～ 20mm | – |
| | | Undercut depth | – | 10mm Minimum read 0.1 | 10mm | – | 25mm | | | – | 2mm (Accuracy ± 0.1mm) |
| | | Root Opening | 0.5 ～ 3mm | 1 ～ 5mm | 0.5 ～ 5mm | – | 2 ～ 5mm | | | – | – |
| | | Welding Bar Diameter | 10mm | | 10mm | | – | 30mm | 40mm | – | – |
| | | Width of Bead Weld | – | | – | | – | 0 ～ 50mm | | – | – |
| | | Length Accuracy | ± 0.4mm | ± 0.2mm (Gap measurement ± 0.4mm) | ± 0.4mm | | ± 0.6mm | | | ± 0.4mm | ± 0.6mm |
| | | Beveling(groove) angle | 0 ～ 60° Minimum reading value : 5° | | 0 ～ 60° Minimum reading value : 5° | – | 0 ～ 60° Minimum reading value : 5° | 0 ～ 70° Minimum reading value : 5° | | – | – |
| | | Bending angle and angle of butt weld joint | – | | – | | – | | | – | – |
| | | Stud and beam angle after welding | – | | – | | – | | | – | – |
| | | Angle Accuracy | ± 0.7° | | ± 0.7° | – | ± 2° | | | – | – |

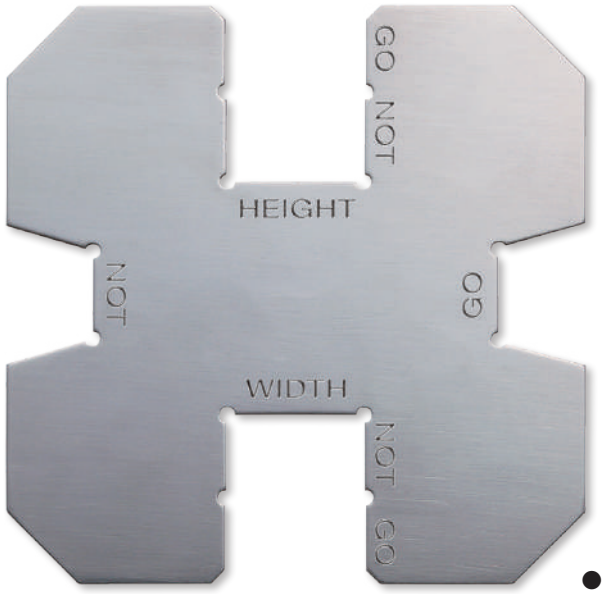
| Process | No. | Categories | Figures | FDW-1 | WRL310 WRL1118 | WAL2542 WAL4562 | AWG-10 | GDCS-20WG | WGA-65 | AP-130 | MSG-100KD | MSG-50 | TAPER GAUGE |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Machining and Assembly (Before welding) | 1 | T joint Gap |  | – | ○ | – | – | – | – | – | – | – | ○ |
| | 2 | Lap joint Gap | | – | ○ | – | – | – | – | – | – | – | ○ |
| | 3 | Misalignment of Butt weld | | – | ○ | – | – | – | – | – | – | – | ○ |
| | 4 | Root Openings | | – | ○ | – | – | – | – | – | – | – | ○ |
| | 5 | Root gap of T-joint | | – | ○ | – | – | – | – | – | – | – | – |
| | 6 | Root Face | | – | ○ | – | – | – | – | – | – | – | – |
| | 7 | Bevel Angle | | – | – | – | – | – | – | ○ | – | – | – |
| | 8 | Groove angle | | – | – | ○ | ○ | ○ | ○ | – | – | – | – |
| | 9 | T-joint gap angle | | – | – | ○ | – | – | ○ | – | – | – | – |
| | 10 | Edg Misalignment | | – | – | – | – | – | – | – | – | – | – |
| After Welding | 11 | Leg length (height) of Fillet Weld |  | – | ○ | ○ | – | – | – | – | ○ | – | – |
| | 12 | Throat Thickness of Fillet Weld | | – | – | ○ | ○ | ○ | – | – | – | – | – |
| | 13 | Height of Butt weld Overlay | | – | ○ | – | ○ | ○ | – | – | ○ | ○ | – |
| | 14 | Height of T- joint weld Overlay | | – | ○ | – | ○ | ○ | – | – | ○ | – | – |
| | 15 | Undercut |  | ○ | – | – | – | – | – | – | – | – | – |
| | 16 | Misalignment of Butt Weld | | – | – | – | – | – | – | – | – | ○ | – |
| | 17 | Bending angle and angle of butt weld joint | | – | – | – | – | – | – | ○ | – | – | – |
| | 18 | Angle of Cross weld part | | – | – | – | – | – | ○ | ○ | – | – | – |
| | 19 | Stud angle after welding | | – | – | – | – | – | ○ | ○ | – | – | – |
| | 20 | Irregularity of Bead Surface |  | – | – | – | – | – | – | – | – | – | – |
| Pressure welding | 21 | Swelling diameter | | – | – | – | – | – | – | – | – | – | – |
| | 22 | Swelling length | | – | – | – | – | – | – | – | – | – | – |
| | 23 | Misalignment of Pressured Surface | | – | – | – | – | – | – | – | – | – | – |
| | 24 | Bending angle | | – | – | – | – | – | – | ○ | – | – | – |

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SPECIFICATIONS | | Material | Stainless steel Plate thickness : 1.5mm | Stainless steel Plate thickness : 2mm | Stainless steel Plate thickness : 1.5mm | Stainless steel Thickness : Body : 5mm, Blade:1.9mm | Stainless steel Thickness : Body : 5.7mm Blade : 3.2mm | Stainless steel Plate thickness : 1.5mm Satin finish | | Stainless steel Brass | Stainless steel Brass | – |
| | | Scale | – | 20mm | – | – | | – | | 10cm | 50-0-50mm | – |
| | | Height of Bead Weld | – | 10 ~ 17mm fixed (1mm step)<br>2 ~ 9mm fixed (1mm step) | – | 8mm | 10mm | – | | 10cm (Width: Approx. 3cm) | 100mm (Width: Approx. 38mm) | – |
| | | Height of Fillet Weld | – | 10 ~ 17mm fixed (1mm step)<br>2 ~ 9mm fixed (1mm step) | 5・7・8・10mm fixed<br>11・13・14・15mm fixed | – | | – | | 10cm (Width: Approx. 3cm) | – | – |
| | | Throat thickness of fillet weld | – | – | 4 ~ 7mm fixed (1mm step)<br>8 ~ 11mm fixed (1mm step) | 11mm | 20mm | – | | – | – | – |
| | | Undercut depth | 4mm (Accuracy ± 0.04mm) | – | – | – | | – | | – | – | – |
| | | Root Opening | – | 3 ~ 10mm fixed (1mm step)<br>11 ~ 18mm fixed (1mm step) | – | – | | – | | – | – | – |
| | | Welding Bar Diameter | – | – | – | – | | – | | – | – | – |
| | | Width of Bead Weld | – | – | – | – | | – | | – | – | – |
| | | Length Accuracy | – | ± 0.1mm | ± 0.1mm | ± 0.2mm | ± 0.03mm | – | | – | – | – |
| | | Beveling (groove) angle | – | – | 25・27.5・30・32.5<br>35・37.5・40・42.5° fixed<br>45・47.5・50・52.5<br>55・57.5・60・62.5° fixed | 60・70・80・90° fixed | | 25 ~ 65° Minimum reading value : 0.5° | Bevel angle 30 ~ 130° Minimum reading value : 1° | – | – | – |
| | | Bending angle and angle of butt weld joint | – | – | – | – | | – | 0 ~ 90° | – | – | – |
| | | Stud and beam angle after welding | – | – | – | – | | 70 ~ 110° | 0 ~ 180° | – | – | – |
| | | Angle Accuracy | – | – | ± 1° | – | | ± 0.5° | | – | – | – |

# GASKET LIMIT GAUGE

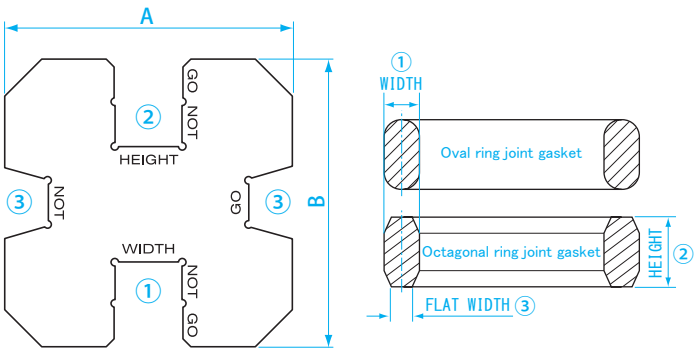
T MTO product

Limit gauge for GO/NOGO testing of ring joint gaskets.
Various ring numbers are supported.




GST-1

● DIMENSIONS




Units: mm

| Model No. | Outer size | | Applicable Gasket Specification | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | ① Width | | ② Height | | ③ Flat width | |
| | A | B | GO | NOT | GO | NOT | GO | NOT |
| GST-1 | 80 | 80 | 11.33 | 10.93 | 16.20 | 15.20 | 7.95 | 7.55 |
| GST-2 | 80 | 80 | 12.90 | 12.50 | 18.00 | 17.00 | 8.86 | 8.46 |
| GST-3 | 80 | 80 | 16.08 | 15.68 | 21.10 | 20.10 | 10.69 | 10.29 |
| GST-4 | 120 | 120 | 19.25 | 18.85 | 24.40 | 23.40 | 12.52 | 12.12 |
| GST-5 | 120 | 120 | 22.42 | 22.02 | 27.40 | 26.40 | 15.01 | 14.61 |
| GST-6 | 140 | 140 | 25.60 | 25.20 | 32.30 | 31.30 | 17.50 | 17.10 |
| GST-7 | 140 | 140 | 28.78 | 28.38 | 35.60 | 34.60 | 20.01 | 19.61 |

USE
- ●Limit gauge for GO/NOGO testing of ring joint gaskets
  (Oval ring joint gasket can be tested its width only.
  Octagonal ring joint gasket can be tested its width, height and flat width.)

MATERIAL
- ●Stainless steel (Thickness: 1.5mm)

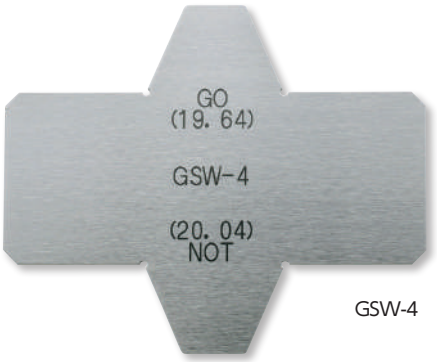
SPECIFICATIONS
- ●GO/NOGO standard conforms to JPI-7S-23
- ●Gasket width accuracy: ±0.20mm
- ●Gasket height accuracy: ±0.5mm

| Order No. | Model No. | Applicable Gasket Specification | | | | Weight |
|---|---|---|---|---|---|---|
| | | Compatible Gasket No. | Common size | Octagonal gasket | | |
| | | | Gasket Width (mm) | Gasket Height (mm) | Octagonal Flat Width (mm) | |
| 007478 | GST-1 | 21,23,24,26,27,30,31,34,35,37, 39,41,44,45,49,53,57,61,65,69, 82,84,92,99 | 11.13 | 15.7 | 7.75 | 60g |
| 007479 | GST-2 | 28,32,46,73 | 12.70 | 17.5 | 8.66 | 60g |
| 007480 | GST-3 | 38,50,54,62,66,77,86,87 | 15.88 | 20.6 | 10.49 | 55g |
| 007481 | GST-4 | 42,47,70,74,88,89,93,94,95 | 19.05 | 23.9 | 12.32 | 140g |
| 007482 | GST-5 | 51,58,96,97,98 | 22.22 | 26.9 | 14.81 | 133g |
| 007483 | GST-6 | 63,78 | 25.40 | 31.8 | 17.30 | 170g |
| 007484 | GST-7 | 55,67,71,100 | 28.58 | 35.1 | 19.81 | 167g |

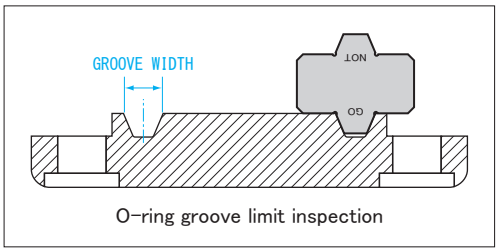
# GASKET LIMIT GAUGE

MTO product

Limit gauge for GO/NOGO testing of O-ring groove width.
Various ring numbers are supported.




GSW-4



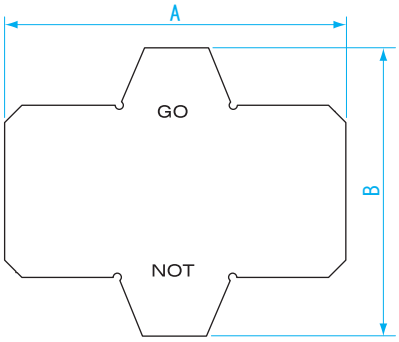

O-ring groove limit inspection

USE
- Limit gauge for measuring width of O-ring groove

MATERIAL
- Stainless steel (Thickness: 1.5mm)

SPECIFICATIONS
- GO/NOGO standard conforms to JPI-7S-23
- Groove width accuracy: ±0.20mm
- Angle accuracy: ±0.5°

● DIMENSIONS




Units: mm

| Model No. | A | B |
|---|---|---|
| GSW-1 | 40 | 35 |
| GSW-2 | 40 | 35 |
| GSW-3 | 60 | 50 |
| GSW-4 | 60 | 50 |
| GSW-5 | 80 | 60 |
| GSW-6 | 80 | 60 |
| GSW-7 | 80 | 70 |

| Order No. | Model No. | Applicable O-ring groove Specification | | | | Weight |
|---|---|---|---|---|---|---|
| | | Compatible O-Ring No. | Groove Width (mm) | GO (mm) | NOT (mm) | |
| 007471 | GSW-1 | 21,23,24,26,27,30,31,34,35,37, 39,41,44,45,49,53,57,61,65,69, 82,84,92,99 | 11.91 | 11.71 | 12.11 | 11g |
| 007472 | GSW-2 | 28,32,46,73 | 13.49 | 13.29 | 13.69 | 11g |
| 007473 | GSW-3 | 38,50,54,62,66,77,86,87 | 16.66 | 16.46 | 16.86 | 22g |
| 007474 | GSW-4 | 42,47,70,74,88,89,93,94,95 | 19.84 | 19.64 | 20.04 | 22g |
| 007475 | GSW-5 | 51,58,96,97,98 | 23.01 | 22.81 | 23.21 | 35g |
| 007476 | GSW-6 | 63,78 | 26.97 | 26.77 | 27.17 | 35g |
| 007477 | GSW-7 | 55,67,71,100 | 30.18 | 29.98 | 30.38 | 40g |

# GASKET LIMIT GAUGE

MTO product

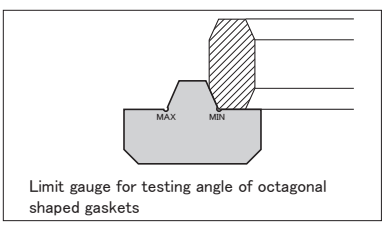
Limit gauge for GO/NOGO testing of angle for octagonal ring joint gaskets

OG-2

USE
- Limit gauge for GO/NOGO testing of angle for octagonal ring joint gaskets

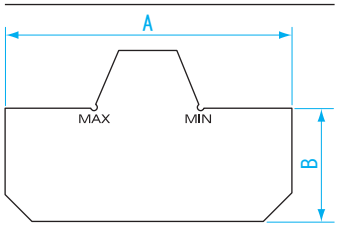
MATERIAL
- Stainless steel

SPECIFICATIONS
- Angle standard conforms to JPI-7S-23
- Thickness: 1.5mm
- Dimensional tolerance of angle: ±0.5°




Limit gauge for testing angle of octagonal shaped gaskets

● DIMENSIONS



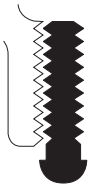

| Order No. | Model No. | Width A (mm) | Height B (mm) | MAX | MIN | Weight |
|---|---|---|---|---|---|---|
| 007485 | OG-1 | 50 | 20 | 23° 30' | 22° 30' | 10g |
| 007486 | OG-2 | 60 | 27 | 23° 30' | 22° 30' | 18g |

# PITCH GAUGE

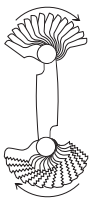
Screw pitch can be easily checked by simply following the external thread pitch

For screw inspection▶ Thread Limit Gauge P73 ~75
Rust prevention▶ Zerust Film for Steel P370

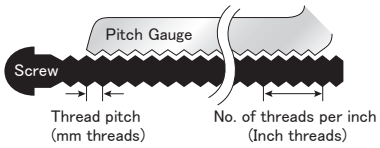
W26



Screw thread measurement



Sliding type




USE
- Use for measuring screw pitch

MATERIAL
- Carbon steel for machine structural use

FEATURES
- Pitch is marked on leaf

| Order No. | Model No. | Indication Unit | Number of Leaves | Pitch Size | Thread angle | Weight |
|---|---|---|---|---|---|---|
| 110961 | M28 | mm | 28 | 0.25 0.3 0.35 0.4 0.45 0.5 0.55 0.6 0.65<br>0.7 0.75 0.8 0.85 0.9 1 1.1 1.2 1.25 1.3<br>1.4 1.5 1.6 1.7 1.75 1.8 1.9 2 2.5 | 60° | 40g |
| 110962 | W26 | inch | 26 | 4 41/2 5 6 7 8 9 10 11 12<br>13 14 16 18 19 20 22 24 25 26<br>28 30 32 40 48 60 | 55° | 40g |

# CENTER GAUGE

Gauge for inspecting angles of tool bits and tool edges

Maintenance for drill tip angle▶ Drill Tip Gauge P110 ~111
Rust prevention▶ Zerust Film for Steel P370

SG-60M

USE
- Fish tail thread gauge for inspection of the angle of lathe center, angle of the tool for screw cutting, etc.

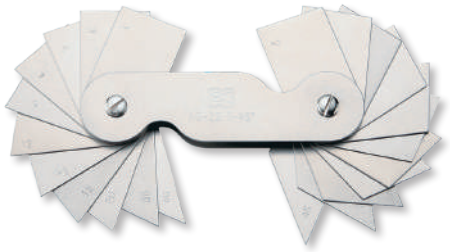
MATERIAL
- Carbon steel for machine structural use

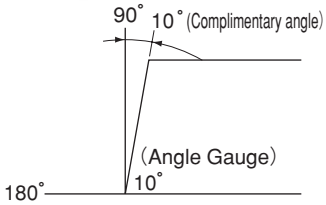
FEATURES
- Can check angles of tool bits and tool edges
- With a vinyl case for easy carrying

| Order No. | Model No. | Angle | Graduation | Accuracy | Weight |
|---|---|---|---|---|---|
| 007541 | SG-60M | 60° | 0~25mm<br>0.5mm step, 1mm step | ±1° | 10g |
| 007542 | SG-55I | 55° | 0~1inch<br>1/14 inch step, 1/20 inch step | ±1° | 10g |

# ANGLE GAUGE

Essential for welding process.
Gauge for internal angle inspection.






USE
- Use for inspection of internal angle

MATERIAL
- Stainless steel

FEATURES
- 11 leaves on each side, range of 1°~45°
- The angle marked on each leaf is complementary angle
- With a vinyl case for easy carrying

| Order No. | Model No. | Graduation | Accuracy | Weight |
|---|---|---|---|---|
| 110931 | AG-22 | 1 2 3 4 5 6 7 8 9<br>10 12 14 14.5 15 16<br>18 20 25 30 35 40 45° | ±20' | 200g |

## RADIUS GAUGE

For dies, canning and welding process. Easy to check the radius curve of workpiece.

USE
- For checking the radius curve of workpieces, dies, jigs, and wooden molds, etc.

MATERIAL
- Cold rolled steel

FEATURES
- Concave and convex shape leaves are stored in both side.
- Suitable for radius carve measuring of circular groove

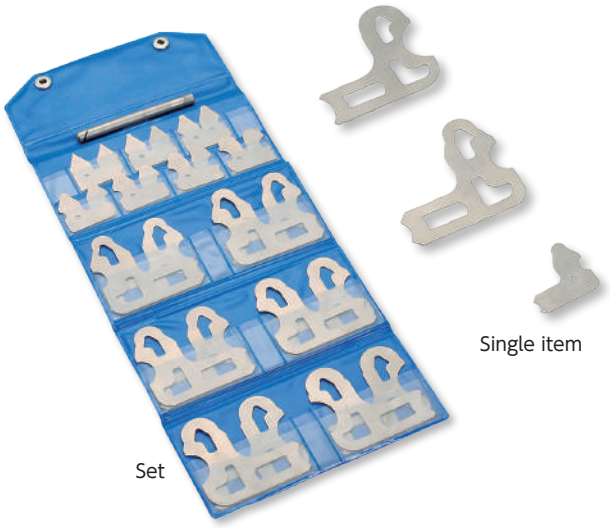
RG-34F

| Order No. | Model No. | Number of Leaves per Set | Details of Radius Dimension (mm) | Accuracy (mm) | Weight |
|---|---|---|---|---|---|
| 110924 | RG-34F | 34 | 1.0～ 3.0 (0.25 step)<br>3.5～ 7.0 (0.5 step) | 1.0～3.0:±0.03<br>3.5～7.0:±0.04 | 80g |
| 110925 | RG-32F | 32 | 7.5～15.0 (0.5 step) | ±0.04 | 160g |
| 110926 | RG-30F | 30 | 15.5～20.0 (0.5 step)<br>21.0～25.0 (1.0 step) | 15.5～23.0:±0.04<br>24.0、25.0:±0.05 | 250g |

## RADIUS GAUGE (Set / Single part)

(RG-26S)

For dies, canning and welding process. Easy to check the radius curve of workpiece.


Set

Single item

USE
- For checking radius curve of dies, jigs and wooden mold etc.

MATERIAL
- Stainless steel

FEATURES
- Each size is separated, suitable for measuring difficult to access parts

### SPECIFICATIONS (Radius gauge set)

| Order No. | Model No. | Pieces per Set | Detail of Radius Dimension (mm) |
|---|---|---|---|
| 110875 | RG-26S | 26 | 0.5～13.0(0.5step) |

| Accuracy (mm) | Weight |
|---|---|
| ±0.1 | 290g |

### SPECIFICATIONS (Single part)

| Order No. | Model No. | Detail of Radius Dimension (mm) |
|---|---|---|
| 110881 | RGL-05 | 0.5 |
| 110882 | RGL-10 | 1.0 |
| 110883 | RGL-15 | 1.5 |
| 110884 | RGL-20 | 2.0 |
| 110885 | RGL-25 | 2.5 |
| 110886 | RGL-30 | 3.0 |
| 110887 | RGL-35 | 3.5 |
| 110888 | RGL-40 | 4.0 |
| 110889 | RGL-45 | 4.5 |
| 110890 | RGL-50 | 5.0 |
| 110891 | RGL-55 | 5.5 |
| 110892 | RGL-60 | 6.0 |
| 110893 | RGL-65 | 6.5 |
| 110894 | RGL-70 | 7.0 |
| 110895 | RGL-75 | 7.5 |
| 110896 | RGL-80 | 8.0 |
| 110897 | RGL-85 | 8.5 |
| 110898 | RGL-90 | 9.0 |
| 110899 | RGL-95 | 9.5 |
| 110900 | RGL-100 | 10.0 |
| 110901 | RGL-105 | 10.5 |
| 110902 | RGL-110 | 11.0 |
| 110903 | RGL-115 | 11.5 |
| 110904 | RGL-120 | 12.0 |
| 110905 | RGL-125 | 12.5 |
| 110906 | RGL-130 | 13.0 |

## DRILL TIP GAUGE

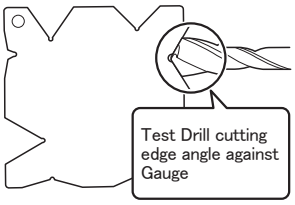
T

Suitable for checking angle of drill-tip after grinding

USE
- Use for checking angle of drill-tip after grinding (60° 70° 90° 118° 125° 135° 150° 160°)

MATERIAL
- Stainless steel

FEATURES
- 8 types of edge angle gauges are useful when grinding
- 2mm scale to measure length of drill tip
- Provided with ball chain




| Order No. | Model No. | Product Dimension W×H×D(mm) | Accuracy | Weight |
|---|---|---|---|---|
| 007531 | DPG-A | 77×77×1 | ±1.5° | 44g |

## DRILL TIP GAUGE

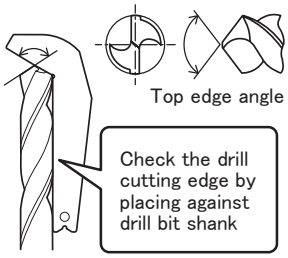
T

Suitable for measuring drill-tip after grinding

USE
- Use for measuring drill-tip after grinding (118°)

MATERIAL
- Stainless steel

FEATURES
- Confirms drill tip edge angle after grinding
- Provided with ball chain




| Order No. | Model No. | Product Dimension L×D(mm) | Accuracy | Weight |
|---|---|---|---|---|
| 007532 | DPG-118 | 90×0.5 | ±1.5° | 10g |

## DRILL POINT GAUGE

T

Suitable for checking angle of drill-tip after grinding

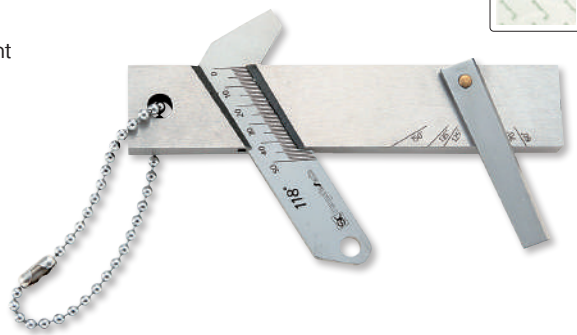
Rust prevention▶
Zerust Film for Steel
P370

USE
- Maintenance management of drilling work
- For measuring drill-tip angle, eccentricity of chisel edge and lip height

MATERIAL
- Main scale･rotor: Stainless steel
- Base: Carbon tool steel

FEATURES
- Clearly marked scale for quick reading
- Rotating tip angle gauge (Marking at 60° 70° 90° 125° 135° 150°)
- Provided with ball chain

SPECIFICATIONS
- Tip angle: 118°
- Drill edge length: 3~45mm




| Order No. | Model No. | Product Dimension (mm) | Accuracy | Weight |
|---|---|---|---|---|
| 007535 | DP-118 | Base:22×110×8<br>Rotator:7.5×50×2<br>Main Scale:68×9 | ±1.5° | 160g |

## SLIDING DRILL POINT GAUGE

Suitable for checking angle of drill-tip after grinding

USE
- Maintenance management of drill point angle

MATERIAL
- Stainless steel

FEATURES
- Use for measuring the drill tip edge length range of 3～40mm

SPECIFICATIONS
- Tip angle: 118°
- Drill edge length: 3～40mm

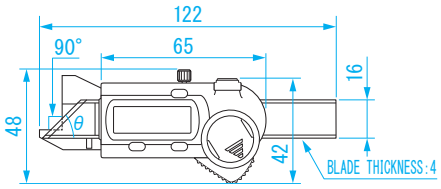
| Order No. | Model No. | Accuracy | Weight |
|---|---|---|---|
| 007536 | S-118 | ±1.5° | 120g |

## DIGITAL VERNIER CALIPER FOR CHAMFER MEASURING NEW!

Compatible with the optional Bluetooth BOX!
Accurately measures difficult-to-measure chamfer dimensions digitally.

GDCP-45C8

● DIMENSIONS Units: mm



Separate Master MCM-4

USE
- For measuring chamfer dimensions.

MATERIAL
- Stainless steel

FEATURES
- Suitable for measuring chamfer dimensions at 45°or 30°.
- Using a 30° caliper to measure the 30° side allows for conversion to the 60° side
- The ruler contact thickness is 0.3mm, making it extremely thin and enabling measurements of chamfers inside cylindrical surfaces (cylindrical inner diameter φ9mm or larger)
- A master for calibration (MCM-4) is available to assist with reference adjustment when the main body wears out (sold separately)
- Bluetooth BOX (separately sold) can be attached.
- Display hold function ●Auto power off function (after approx. 20 min)

POWER SUPPLY
- One CR2032 (lithium) battery included for testing

*Excludes quantization error (± 1 count).

| Order No. | Model No. | Ruler Tip Angle θ | Measuring Range Chamfer Dimensions (mm) | Minimum Reading Value (mm) | Maximum Permissible Error (mm)* | Weight |
|---|---|---|---|---|---|---|
| NEW! 151313 | GDCP-45C8 | 45° | 0-8 | 0.01 | ±0.05 | 110g |
| NEW! 151314 | GDCP-30C8 | 30° | | | | 110g |

●Master for Digital Chamfer Measuring Caliper

| Order No. | Model No. | Base Dimension (mm) | Compatible Model No. | MATERIAL | Size (mm) | Weight |
|---|---|---|---|---|---|---|
| NEW! 151317 | MCM-4 | 4.00 | GDCP-45C8、GDCP-30C8 | Stainless steel | W25×L25×D5 | 25g |

## CHAMFER MEASURING GAUGE

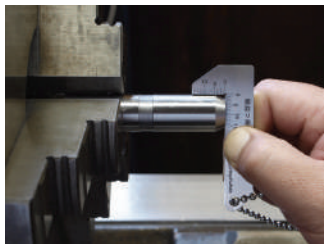
Easy size measurement and inspection of machined surfaces

USE
- Use for measuring the size of all kinds of chamfer

MATERIAL
- Stainless steel

FEATURES
- Measure chamfer circumference of workpiece on lathe
- For milling, measure hole chamfer on workpiece
- Provided with ball chain

SPECIFICATIONS
- Measuring range: 0～15C ●Minimum reading: 0.5mm



| Order No. | Model No. | Product Dimension (mm) | Accuracy (mm) | Weight |
|---|---|---|---|---|
| 006990 | CMG-10 | Overall Length 71.3 × Thickness 2 Side Length 14 | ±0.25 | 20g |

## PROFILE GAUGE

Complex shapes can be contoured

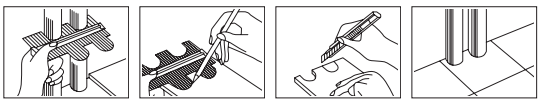
USE
- Contour gauge for recording the cross-sectional shape of a surface

MATERIAL
- Pin material: Stainless steel

FEATURES
- Pins are thin and can easily record a smooth curve

SPECIFICATIONS
- Active Length: 150mm

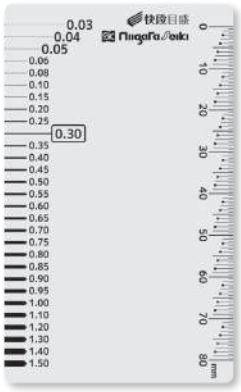
**Example of Use**

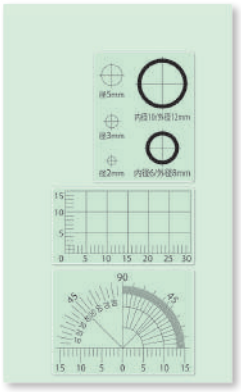


1. Push profile gauge against desired sample
2. Transfer profile to workpiece
3. Cut workpiece to shape
4. A perfect fit made easy

| Order No. | Model No. | Product Dimension (mm) | Weight |
|---|---|---|---|
| 011440 | CG-100S | 155×84 | 210g |

## CRACK GAUGE KAIDAN CLEAR CARD





Sticker included

USE
- Crack measurement of wall, foundation etc.

MATERIAL
- Polyester

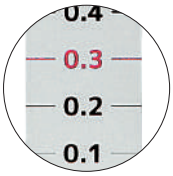
FEATURES
- Measuring width and length of crack
- Supplied with sticker for angle and diameter measurement
- Flexible, transparent polyester material makes it easy to use
- Portable (business card size)

| Order No. | Model No. | Product Dimension (mm) | Weight |
|---|---|---|---|
| 111263 | CM-CKD | 91×55 | 1g |

## CRACK GAUGE WITH KAIDAN SCALE TYPE

0.3mm marked in red.
For measuring cracks.

FRONT



BACK

USE
- Crack measurement of wall, foundation etc.

MATERIAL
- Stainless steel

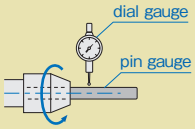
FEATURES
- 0.3mm marked in red, easy to distinguish defect or cracks
- Stepped length of linear graduations by 1mm for easy-to-read on back
- Satin finished

| Order No. | Model No. | Measurement Range of Crack Gauge (mm) | Measurement Range of Metal Scale (mm) | Weight |
|---|---|---|---|---|
| 111262 | CM-SKD | 0.1~2.0 | 0~150 | 10g |

# HOW TO USE PIN GAUGE

## Measuring Tool Checking

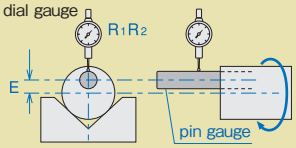
## Center Runout Measurement



## Hole eccentricity Measurement

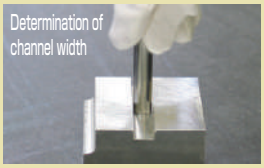
$R_1$··· Max. reading of dial gauge
$R_2$··· Min. reading of dial gauge

$$E=\frac{R_1-R_2}{2}$$




## Dovetail Measurement

## Determination of channel width

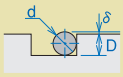


Key way and etc

## Groove depth measurement

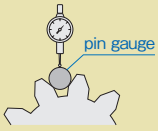
$\delta$··· Dial gauge reading

$$D=d-\delta$$



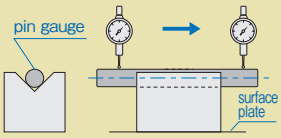

## Gear tooth measurement

Dial gauge measurement

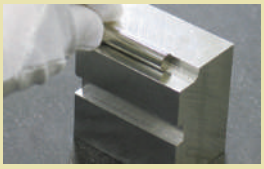



## Measuring V groove parallelism

Dial gauge measurement

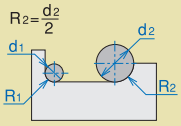



## Radius measurement



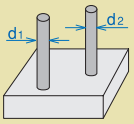
$$R_1=\frac{d_1}{2}$$

$$R_2=\frac{d_2}{2}$$

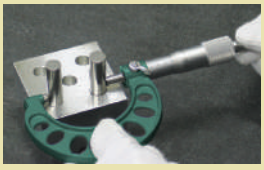



## Hole diameter measurement

GO / No-Go Pin Gauges also available

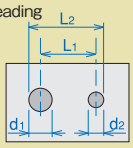



## Measurement between holes



$d_1$・$d_2$··· Pin Gauge diameters
$L_2$··· Micrometer reading

$$L_1=L_2-\frac{d_1+d_2}{2}$$




## Mill tool positioning

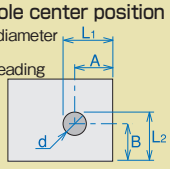
## Measurement of hole position, parallelism

### Measuring hole center position

d··· Pin Gauge diameter
$L_1$・$L_2$··· Dial gauge reading

$$A=L_1-\frac{d}{2}$$

$$B=L_2-\frac{d}{2}$$

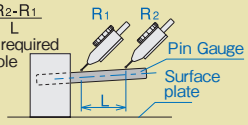



### Slope of hole (parallelism measurement)

$R_1$・$R_2$··· Dial gauge reading

$$\text{Slope}=\frac{R_2-R_1}{L}$$

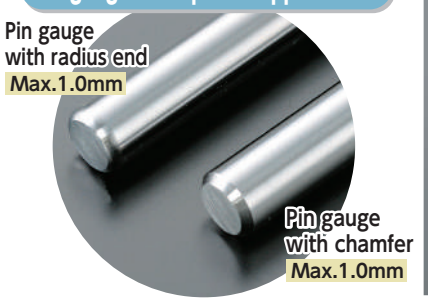
Repeat as required for each hole

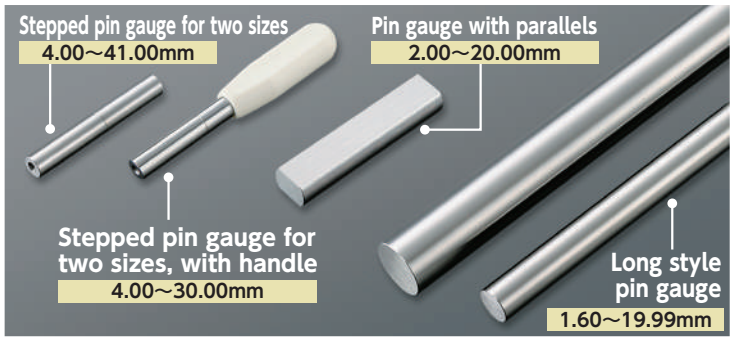


# SPECIAL SHAPES

## Custom shape pin gauges available upon request

### Pin gauges for special applications

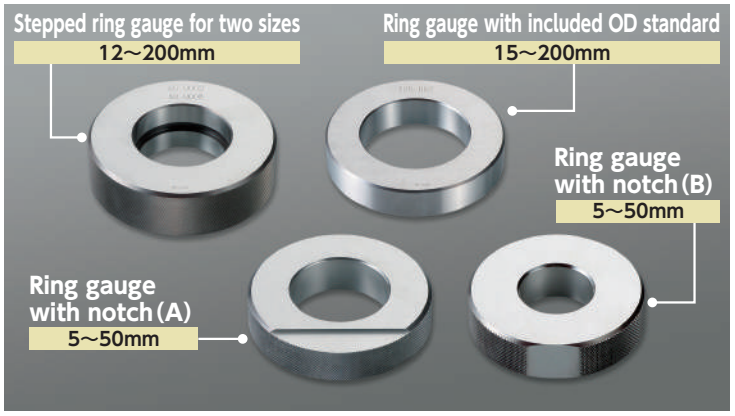



## Custom Ring gauges. Stepped gauges, special shapes available upon request.

### Ring gauges for special applications

**Custom marking also available**




## Please feel free to contact us for any inquiry

※Some items cannot be manufactured depending on conditions. Please contact us for details.

## LASER MARKING

### Custom marking for gauge control and identification

#### Laser Marking for Ring Gauge

Number of characters: Up to 23 characters with a ring gauge size of $\phi$30.0mm
(example) Please inquire the maximum number of characters of other size

| Order No. | Model No. | Delivery time |
|---|---|---|
| 499991 | RGLM | 15 business days after receiving order |

#### Laser Marking for Plug Gauge Handle

Number of characters: Up to 15 characters

| Order No. | Model No. | Delivery time |
|---|---|---|
| 499992 | GPLM | 15 business days after receiving order |

# VARIOUS GAUGES

## In addition to the existing gauge products, more gauges are added to the line-up

## SNAP GAUGE

STEEL TYPE

CARBIDE TYPE

Snap gauge is used to test diameter and thickness/ width of cylindrical parts such as shaft.
The entrance of snap gauge is GO gauge. Lower the gauge vertically onto the test item.
The width of the gauge gets smaller as passing the GO gauge. This area is NOGO gauge.
When the gauges stops at this NOGO gauge position, the test item is accepted.
In testing with snap gauge, the gauge is lowered by its own weight.
There are two types of snap gauges.
・STEEL TYPE - Only the measurement area is quenched
・CARBIDE TYPE - Carbide material is attached to the measurement area
Please choose a suitable type according to the frequency of use or other factors.

## CUSTOM SHAPE LIMIT PLUG GAUGE

Production of limit plug gauge with custom size or custom shape is also possible.

**Please feel free to contact us for any inquiry**

# VARIOUS GAUGES

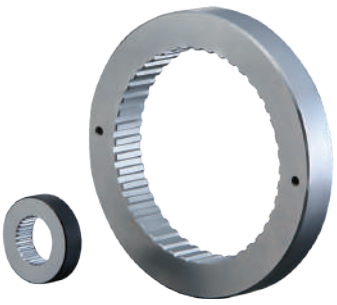
## TAPER PLUG/ RING GAUGE

Taper gauge is used to check taper ratio of tapered hole or shaft.
Generally comprised of a taper plug gauge and a taper ring gauge, the connected pair forms a standard gauge.
However, this gauge can also be manufactured with a notch in order to identify this product's standard stopping position on the end face.

●How to use taper gauges
For inspecting tapered products by taper gauge. Generally the inspection of the tapered hole is done at the base of the standard line of the large end of the taper plug gauge or at the end face of the taper plug gauge.
The inspection of the taper shaft is generally done at the small end of the end face.
Pass or fail is determined by the amount of deviation from the hole of the product or end face of the shaft.
In addition, the taper is inspected by contact.
To conduct the inspection by contact, apply a light coat of Prussian blue or light cinnabar evenly on the surface of the plug, and insert it in the tapered hole, then turn the plug a little and remove.
As good contact of taper the applied blue or light cinnabar is removed from the gauge.
Furthermore to perform satisfactory inspection of contact, the following precautions should be noted.

①Clean the gauge and product well, removing any accumulated dust.
②Apply Prussian blue or light cinnabar evenly over the gauge. It is necessary to apply it thoroughly before it changes into a lighter color.
③Be careful to avoid scraping the gauge and product against each other or putting the gauge in only halfway.
④Under normal conditions, hold or anchor the plug in an upright position, then tug the ring about 1/8 while pressing down lightly with even force, then replace it.
⑤Separate the gauge and product gently. Be careful not to scrape this time as well.
Contact can also be used for between gauge inspections.

## SPLINE GAUGE



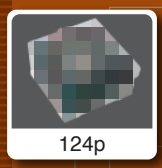
Spline gauge is used for pass/ fail judgment of the size, shape or posture of spline shaped work such as automobiles and aircraft parts.
Using "GO" and "NOGO" of special spline shape threading gauge, pass or fail is easily distinguished.
This gauge can be used for a variety of purposes, including in-process or intermediate inspection at manufacturing site or final inspection at QC department.

**Please feel free to contact us for any inquiry**

BLOCK GAUGE
PIN GAUGE
PIN VISE
PIN GAUGE ACCESSORIES
RING GAUGE
PLUG GAUGE
LIMIT GAUGE
THICKNESS GAUGE
TAPER GAUGE
WELDING GAUGE
OTHER GAUGES

# ANGLE

122p

123p

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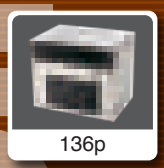
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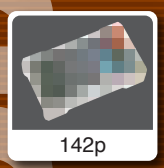
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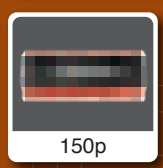
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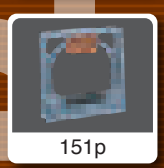
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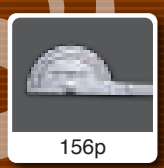
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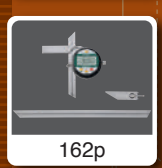

162p

# ■ HIGH PRECISON LEVEL LEVELNIC SERIES/ DIGITAL PROTRACTOR WITH DATA OUTPUT FUNCTION

△ : Available with restrictions on unit functions　– : Not supported or other options are available

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Product image** | | | | | | | | | | | | |
| **Product name・Model No.** | | | LEVELNIC DL-SXY | LEVELNIC DL-SXYW-S | LEVELNIC DL-SXYW-S (HID) | LEVELNIC DL-mXY | LEVELNIC DL-S4W Series | LEVELNIC DL-S4W (HID) | LEVELNIC DL-S3 Series | LEVELNIC L-TYPE DL-S3L | LEVELNIC EL-01A Series | LEVELNIC DL-S2W Series |
| **Reference page** | | | 122 | 123 | 123 | 124 | 125 | 125 | 126 | 127 | 127 | 128 |
| **Minimum reading** | | | 0.001mm/m | 0.001mm/m | 0.001mm/m | 0.01mm/m | 0.001mm/m・0.0001° | 0.001mm/m・0.0001° | 0.001mm/m・0.0001° | 0.001mm/m・0.0001° | ± 0.2mm/m (1div. 0.01mm/m) ± 1mm/m (1div. 0.05mm/m) ± 2mm/m (1div. 0.1mm/m) | 0.001mm/m・0.0001° |
| **Measuring range** | | | ± 5.000mm/m | ± 5.000mm/m | ± 5.000mm/m | ± 5.00mm/m | ± 5.00mm/m・± 0.286° | ± 5.00mm/m・± 0.286° | ± 5.00mm/m・± 0.286° | ± 5.00mm/m・± 0.286° | | ± 5.000mm/m・± 0.2865° |
| **Wireless data output※** | | | ○ (Sensor to display) | ○ (Receiver unit included) | ○ (Built-in Bluetooth) | – (Optional unit available) | ○ (Receiver unit included) | ○ (Built-in Bluetooth) | – (Optional unit available) | – (Optional unit available) | – | ○ (Receiver unit included) |
| **Wired data output※** | | | ○ (Cable and display included) | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ (Analog voltage output) | – |
| **Display measured value** | | | △ (Use with wireless OFF) | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | – |
| Software for LEVELNIC | Integrated software for measuring instruments SK-LOG | P24 ～ 25 | ○ (Lite ver. included) | ○ (Lite ver. included) | △ (Wired output only) | ○ | ○ | △ (Wired output only) | ○ | ○ | – | ○ |
| | Straightness software ST | P139 | △ (for use in single-axis measurement) | – | – | △ (for use in single-axis measurement) | ○ | △ (Wired output only) | ○ | ○ | – | ○ |
| | Flatness software FL | P139 | △ (for use in single-axis measurement) | – | – | △ (for use in single-axis measurement) | ○ | △ (Wired output only) | ○ | ○ | – | ○ |
| | Data recording software LEVELOG | P140 | △ (for use in single-axis measurement) | – | – | △ (for use in single-axis measurement) | ○ | △ (Wired output only) | ○ | ○ | – | ○ |
| | Multi-data recording software LEVELOG-M | P140 | △ (for use in single-axis measurement) | – | – | △ (for use in single-axis measurement) | ○ | △ (Wired output only) | ○ | ○ | – | ○ |
| | Data transfer software L-LOG | P140 | △ (for use in single-axis measurement) | – | – | △ (for use in single-axis measurement) | ○ | △ (Wired output only) | ○ | ○ | – | ○ |
| Wireless connection unit | Bluetooth BOX DTW-DL01 | P134 | △ (1-axis measurement use, mounting plate not supported) | – | – | △ (for use in single-axis measurement) | △ (Mounting plate not supported) | △ (Mounting plate not supported) | ○ | △ (Mounting plate not supported) | – | – |
| | LEVELNIC wireless adapter DL-BW/ DL-BW (USB) | P134 | ○ (Use in self-supporting) | – | ○ (Use in self-supporting) | ○ (Use in self-supporting) | – | ○ (Use in self-supporting) | ○ | ○ | – | – |
| | LEVELNIC wireless adapter DL-BW2 (USB) | P135 | △ (Mounting plate not supported) | – | △ (Mounting plate not supported) | △ (Mounting plate not supported) | – | △ (Mounting plate not supported) | ○ | △ (Mounting plate not supported) | – | – |
| | LEVELNIC wireless adapter DL-EX | P135 | △ (Mounting plate not supported) | △ (Mounting plate not supported) | – | △ (Mounting plate not supported) | △ (Mounting plate not supported) | – | ○ | △ (Mounting plate not supported) | – | – |
| Wired connection cable | PC connection cable DL-P7 | P135 | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | – | – |
| | PC connection cable DL-P6 | P135 | ○ (Included) | ○ | ○ | ○ | ○ | ○ | ○ | ○ | – | – |
| | Connection cable for LEVELNIC EL EL-K2 | P135 | – | – | – | – | – | – | – | – | ○ | – |
| Other options | L-type base for LEVELNIC DL-SL | P132 | – | – | – | – | ○ | ○ | ○ | – | – | ○ |
| | L-type base for LEVELNIC DL-mL | P132 | – | – | – | – | – | – | – | – | – | – |
| | Display DL-D6F | P132 | – | – | – | △ (for use in single-axis measurement) | △ (Wired use) | △ (Wired use) | ○ | ○ | – | △ (USE receiver not compatible) |
| | Display DL-D6FXY | P132 | – | △ (Wired output use) | △ (Wired output use) | ○ | △ (Wired use) | △ (Wired use) | ○ | ○ | – | △ (USE receiver not compatible) |
| | Transmitter/ Display set DL-D5 | P133 | – | – | – | △ (for use in single-axis measurement) | △ (Wired use) | △ (Wired use) | ○ | ○ | – | – |
| | LEVELNIC Display DL-D4 | P133 | – | – | – | △ (for use in single-axis measurement) | △ (Wired use) | △ (Wired use) | ○ | ○ | – | △ (USE receiver not compatible) |
| | LEVELNIC Data collection adapter DL-ADP | P136 | △ (for use in single-axis measurement) | – | – | △ (for use in single-axis measurement) | △ (Wired use) | △ (Wired use) | ○ | ○ | – | △ (USE receiver not compatible) |
| | LEVELNIC SD logger 3 DT-MCK3-XS-SK | P136 | ○ | △ (Wired output use) | △ (Wired output use) | ○ | △ (Wired use) | △ (Wired use) | ○ | ○ | – | – |
| | LEVELNIC Base with adjustable pitch LP-200/ LP-300 | P137 | – | – | – | – | ○ | ○ | ○ | – | ○ | ○ |
| | Aluminum case for LEVELNIC LV-CS3 | P137 | – | – | – | – | ○ (Included) | ○ (Included) | ○ (Included) | – | – | – |
| | Aluminum case for LEVELNIC LV-CM1 | P137 | – | – | – | – | – | – | – | – | – | – |
| | Aluminum case for LEVELNIC LV-C2W | P137 | – | – | – | – | – | – | – | – | – | ○ (Included) |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| LEVELNIC DL-mini | LEVELNIC DL-m4 | LEVELNIC DL-m4M | LEVELNIC DL-m5 | LEVELNIC DL-m5W | DIGITAL PROTORACTOR DP-45XYS | DIGITAL PROTORACTOR DP-80XYH | DIGITAL PROTORACTOR DP-90XYM | DIGITAL PROTORACTOR DP-60XYB | DIGITAL PROTORACTOR DP-10XY | DIGITAL PROTORACTOR DP-10S・10D セット | DIGITAL PROTORACTOR DP-180 | BEBEL BOX BB-180W |
| 129 | 130 | 130 | 131 | 131 | 142 | 142 | 143 | 143 | 144 | 145 | 147 | 149 |
| 0.01mm/m | 0.01mm/m | 0.01mm/m | 0.01mm/m | 0.01mm/m | 0.001° (0.01mm/m) | 0.001° (0.01mm/m) | 0.01° (0.1mm/m) | 0.01° (0.1mm/m) | 0.01° (When sensor mode: 0.002°) | 0.01° (When sensor mode: 0.002°) | 0.01° | 0.1° |
| ± 9.99mm/m | ± 5.00mm/m | ± 5.00mm/m | ± 5.00mm/m | ± 5.00mm/m | ± 45° | ± 80° | ± 90° | ± 60° | ± 9.99° | ± 9.99° | ± 180° | ± 180° |
| – (Optional unit available) | – (Optional unit available) | – | – (Optional unit available) | ○ (Receiver unit included) | ○ (Built-in Bluetooth・Wi-Fi) | | | | – | ○ (Sensor to display) | – | ○ (Built-in Bluetooth) |
| ○ | ○ | ○ | ○ | ○ | USB Type-C cable | | | | ○ (Cable included) | ○ (Cable included) | ○ (Cable included) | – |
| ○ | ○ | – | ○ | ○ | ○ | ○ | ○ | ○ | ○ | – | ○ | ○ |
| ○ (Supported by DL-m3 selection) | ○ | ○ (Supported by DL-m3 selection) | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| ○ (Supported by DL-m3 selection) | ○ (Supported by DL-m3 selection) | ○ (Supported by DL-m3 selection) | ○ (Supported by DL-m3 selection) | ○ (Supported by DL-m3 selection) | – | – | – | – | – | – | – | – |
| ○ (Supported by DL-m3 selection) | ○ (Supported by DL-m3 selection) | ○ (Supported by DL-m3 selection) | ○ (Supported by DL-m3 selection) | ○ (Supported by DL-m3 selection) | – | – | – | – | – | – | – | – |
| ○ (Supported by DL-m3 selection) | ○ (Supported by DL-m3 selection) | ○ (Supported by DL-m3 selection) | ○ (Supported by DL-m3 selection) | ○ (Supported by DL-m3 selection) | – | – | – | – | – | – | – | – |
| ○ (Supported by DL-m3 selection) | ○ (Supported by DL-m3 selection) | ○ (Supported by DL-m3 selection) | ○ (Supported by DL-m3 selection) | ○ (Supported by DL-m3 selection) | – | – | – | – | – | – | – | – |
| ○ (Supported by DL-m3 selection) | ○ (Supported by DL-m3 selection) | ○ (Supported by DL-m3 selection) | ○ (Supported by DL-m3 selection) | ○ (Supported by DL-m3 selection) | – | – | – | – | – | – | – | – |
| △ (Mounting plate not supported) | ○ | – | ○ | ○ | – | – | – | – | – | – | – | – |
| ○ (Use in self-supporting) | ○ (Use in self-supporting) | – | ○ (Use in self-supporting) | – | – | – | – | – | ○ (Use in self-supporting) | ○ (Use in self-supporting) | – | – |
| △ (Mounting plate not supported) | △ (Mounting plate not supported) | – | △ (Mounting plate not supported) | – | – | – | – | – | △ (Mounting plate not supported) | △ (Mounting plate not supported) | – | – |
| △ (Mounting plate not supported) | △ (Mounting plate not supported) | – | △ (Mounting plate not supported) | △ (Mounting plate not supported) | – | – | – | – | △ (Mounting plate not supported) | △ (Mounting plate not supported) | – | – |
| ○ | ○ | – | ○ | ○ | – | – | – | – | ○ | ○ | – | – |
| ○ | ○ | – | ○ | ○ | – | – | – | – | ○ (Included) | ○ (Included) | – | – |
| – | – | – | – | – | – | – | – | – | – | – | – | – |
| – | – | – | ○ | ○ | – | – | – | – | – | – | – | – |
| – | ○ | – | – | – | – | – | – | – | – | – | – | – |
| ○ | ○ | – | ○ | △ (Wired use) | – | – | – | – | – | – | – | – |
| ○ | ○ | – | ○ | △ (Wired use) | – | – | – | – | – | – | – | – |
| △ (The 3rd decimal place is always 0) | △ (The 3rd decimal place is always 0) | – | △ (The 3rd decimal place is always 0) | △ (The 3rd decimal place is always 0 when using wired output) | – | – | – | – | – | – | – | – |
| ○ | ○ | – | ○ | △ (Wired use) | – | – | – | – | – | – | – | – |
| ○ | ○ | – | ○ | △ (Wired use) | – | – | – | – | – | – | – | – |
| ○ | ○ | – | ○ | △ (Wired use) | – | – | – | – | – | – | – | – |
| – | – | – | ○ | ○ | – | – | – | – | – | – | – | – |
| – | – | – | – | – | – | – | – | – | – | – | – | – |
| – | – | – | – | – | – | – | – | – | – | – | – | – |
| – | – | – | – | – | – | – | – | – | – | – | – | – |

# ■ ANGLE MEASUREMENT SPECIFICATIONS SUMMARY

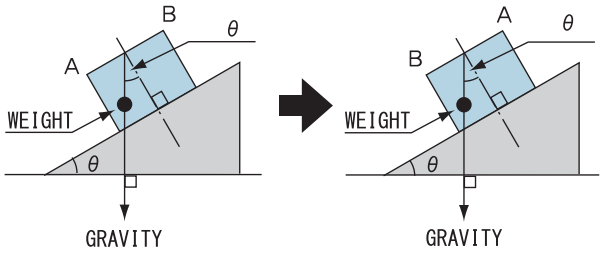
※ Refer to the page listed for each item for detailed specifications

| | Product Name | Model No. | Measuring Range | Minimum Reading | Page |
|---|---|---|---|---|---|
| DIGITAL LEVEL | LEVELNIC | DL-SXY | ± 5.000mm/m | 0.001mm/m | 122 |
| | LEVELNIC | DL-SXYW-S・DL-SXYW-S(HID) | ± 5.000mm/m | 0.001mm/m | 123 |
| | LEVELNIC | LEVELNIC DL-mXY | ± 5.00 mm/m | 0.01mm/m | 124 |
| | LEVELNIC | DL-S4W SERIES・DL-S41W(HID) | ± 5.00mm/m・± 0.286° | 0.001mm/m・0.0001° | 125 |
| | LEVELNIC | DL-S3 SERIES・DL-S3L | ± 5.00mm/m・± 0.286° | 0.001mm/m・0.0001° | 126・127 |
| | LEVELNIC | DL-S2W SERIES | ± 5.000mm/m・± 0.2865° | 0.001mm/m・0.0001° | 128 |
| | LEVELNIC | DL-mini | ± 9.99mm/m | 0.01mm/m | 129 |
| | LEVELNIC | DL-m4・DL-m4M | ± 5.00 mm/m | 0.01mm/m | 130 |
| | LEVELNIC | DL-m5・DL-m5W | ± 5.00 mm/m | 0.01mm/m | 131 |
| LEVEL | LEVELNIC | EL-01A SERIES | ± 0.2mm/m<br>± 1mm/m<br>± 2mm/m | 0.01mm/m<br>0.05mm/m<br>0.1mm/m | 127 |
| DIGITAL PROTRACTOR | DIGITAL PROTRACTOR | DP-45XYS | ± 45° | 0.001°・0.01mm／m | 142 |
| | DIGITAL PROTRACTOR | DP-80XYH | ± 80° | 0.001°・0.01mm／m | 142 |
| | DIGITAL PROTRACTOR | DP-90XYM | ± 90° | 0.01°・0.1mm／m | 143 |
| | DIGITAL PROTRACTOR | DP-60XYB | ± 60° | 0.01°・0.1mm／m | 143 |
| | DIGITAL PROTRACTOR | DP-10XY SERIES | ± 9.99° | 0.01° (When sensor mode: 0.002°) | 144 |
| | DIGITAL PROTRACTOR | DP-10S・10D SET SERIES | ± 9.99° | 0.01° (When sensor mode: 0.002°) | 145 |
| | DIGITAL LEVEL SENSOR | DP-10M SERIES | ± 9.998° | 0.002° | 145 |
| | DIGITAL PROTRACTOR | DP-50 | ± 50° | 0.1° | 146 |
| | DIGITAL PROTRACTOR | DP-90G EX | ± 90° | 1mm/m・0.05°・0.1% | 146 |
| | DIGITAL PROTRACTOR | DP-180 | ± 180° | 0.01° | 147 |
| | BEVEL BOX | BB-180 SERIES | ± 180° | 0.1° | 148・149 |
| ANGLE METER | LEVEL METER KAIDAN | LM-90KDS・LM-90KD | 0 ～ 90° | 1° | 152 |
| | DIAL SLANT RULE KAIDAN | DSR-180KD・DSRM-180KD | 0 ～ 180° | 1° | 152 |
| | LEVEL MATE | LM-360 | 0 ～ 360° | 1° | 152 |
| | LEVEL POINT M | LP-360 | 0 ～ 360° | 1° | 153 |
| PROTRACTOR | PROTRACTOR No.15 | PRT-15 | 180° | 1° | 156 |
| | PROTRACTOR No.19 Satin finish | PRT-19 | 180° | 1° | 156 |
| | PROTRACTOR No.19 Polished finish | PRT-19S | 180° | 1° | 156 |
| | PROTRACTOR No.19 2 blades | PRT-19SW | 180° | 1° | 156 |
| | PROTRACTOR No.19A | PRT-19A | 180° | 1° | 157 |
| | PROTRACTOR No.19B | PRT-19B | 180° | 1° | 157 |
| | PROTRACTOR No.182 | PRT-182S | 180° | 1° | 157 |
| | PROTRACTOR No.183 | PRT-183S | 180° | 1° | 157 |
| | PROTRACTOR KAIDAN No.19 | PRT-19KD | 180° | 1° | 158 |
| | PROTRACTOR KAIDAN No.30 | PRT-30KD | 180° | 1° | 158 |
| | PROTRACTOR No.30 | PRT-30S | 180° | 1° | 158 |
| | PROTRACTOR No.101 | PRT-101S | 180° | 1° | 158 |
| | PROTRACTOR No.300 | PRT-300S・PRT-300SW | 180° | 0.5° | 159 |
| | PROTRACTOR No.400 | PRT-400S・PRT-400SW | 180° | 0.5° | 159 |
| | PROTRACTOR No.600 | PRT-600S・PRT-600SW | 180° | 0.5° | 159 |
| | PROTRACTOR No.1000 | PRT-1000S・PRT-1000SW | 180° | 0.5° | 159 |
| | PROTRACTOR No.192 | PRT192-90S・120S<br>PRT192-90S2・120S2 | 180° | 1° | 159 |
| | PROTRACTOR No.192 | PRT192-200S・250S・300S<br>PRT192-200S2・250S2・300S2 | 180° | 0.5° | 159 |
| | PROTRACTOR No.193 | PRT193-90・120・150 | 360° | 1° | 160 |
| | PROTRACTOR No.193 | PRT193-200・250・300 | 360° | 0.5° | 160 |
| | INSIDE PROTRACTOR | IP-90 | 10°～ 90° | 1° | 160 |
| | DIGITAL UNIVERSAL PROTRACTOR | DUP-360AN | 360° | 1′・0.01° | 162 |
| ANGLE GAUGE | ANGLE GAUGE | WGA-65 | 25 ～ 65°・70 ～ 110° | 0.5°・1° | 161 |
| | ANGLE PROTRACTOR | AP-130 | 30 ～ 130°・0 ～ 90°・0 ～ 180° | 1° | 161 |

# LEVELNIC PRINCIPLES OF OPERATION

## The role of "0 adjustment", and "1/2 adjustment".

Levelnic, like every level, is an instrument which is sensitive to its position relative to earth's gravity. The operation is as follows. We can show how we determine true horizontal using the following method. On a slope, put a board with a weight suspended by a string. The weight will hang at an angle of $\theta$ from a line perpendicular to the slope. If the board is rotated 180° , the weight will hang at the same angle $\theta$ from a line perpendicular to the slope. Without having an absolute reference, we can determine the angle 2 $\theta$ by rotating our instrument 180° and measuring the total change in angle relative our perpendicular reference. We can thereby determine $\theta$ if we divide by two. Also notice that the angle of the slope relative to true horizontal is also $\theta$ . If we set zero with the level on a slope, when we rotate the level 180° the reading will be twice the actual angle of the slope. If we then adjust the slope of the surface being measured (the device under test) until the angle reading is reduced to 1/2 of that value, the surface will be horizontal. Conversely, some desire having an absolute standard only because of confusion or misunderstanding regarding the above process.




※ The following series are computer built-in type with one-touch 0 and 1/2 adjustment.

- DL-SXY series
- DL-S4W series
- DL-S3 series
- DL-m series
- DP-10XY series
- DP-10S・10D sets series
- Separate system

## Zero point set

Levelnic does not have true horizontal reference built in. When it is turned on, the first number that appears is not necessarily referenced to true horizontal. If you need to reference true horizontal, you will have to set a zero point each time you turn it on. Once the zero point is correctly set, each measurement is properly reference to true horizontal, eliminating any possible errors from the deviation of zero point. To set zero point a " 0 adjust" and "1/2 adjust" operation must be performed.

**A) To compare slope of different surfaces**

① Place levelnic on an inclined surface.
② When display stabilizes press "0 adjust" and "0" will be displayed.
For comparison purposes a zero point has been set which is not true horizontal.

**B) If zero point is set to true horizontal**

① Place the levelnic on the surface to be adjusted to horizontal.
② Adjust surface until display stabilizes to zero.
The surface is level.

**C) If you are unsure if a surface is horizontal**

① Place the levelnic on the surface.
② When display stabilizes press "0 adjust" and "0" will be displayed.
③ Rotate the levelnic 180° and put in the same spot.
④ When display stabilizes press "1/2 adjust", and display will be halved.
Zero is now set to true horizontal.

To set the zero point precisely, there should be minimal slope in the roll direction (perpendicular to the measurement axis), so please set the level in two directions (X, Y) to set zero.

## Handling instruction for Levelnic

- Levelnic is a precision instrument. Please handle with care and avoid shock such as bumping or dropping.
- Before use, the levelnic base and the surface to be measured should be wiped clean of any dirt or oil using a paper towel or cloth dampened with ligroin or alcohol.
- There should be no temperature difference between levelnic and surface being measured. In general, precision measurements should be done in a temperature controlled environment.
- After use, the levelnic base should be coated with an anti-rust oil to protect from corrosion.

# LEVELNIC DL-SXY

T PDI

The popular 2-axis simultaneous measurement model!
With a wireless handy display for checking the measurements at a distance.

## ■ High precision Digital Level Resolution 0.001mm/m
## ■ Stainless steel base for easier maintenance

DL-SXYW

DL-DXYW

<Image of connecting>

Wired output
(DL-P6 included) ※4

Data management with software SK-LOG
*SK-LOG Lite version, connectable to only 1 device is included.

Integrated software for measuring instruments ▶
SK-LOG
P24 ～27

For flatness and straightness calculation ▶
Levelnic Measurement Software
P138 ～141

USE

- Accuracy measurement of machine tools

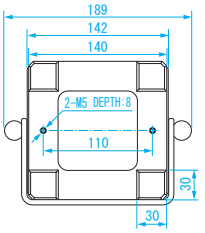
MATERIAL

- Sensor body: Aluminum ● Sensor base: Stainless steel ● Display: ABS, Acrylic resin

FEATURES

- Capable to measure 2-axis in X and Y direction at the same time
- Sensor and Display are connected wireless, can read measurements at a distance
- There is no wireless interference even when multiple units are used at the same time
- When the Sensor radio is turned off, the measured value is displayed on the Sensor display window, and the tilt can be measured by itself
- With a large LCD display
- Up to 42 sets (84) of measured data can be saved in the Display's internal memory Checking or outputting the saved data later is possible
- The Display can be connected to PC with its external signal output
- Custom-made base can be attached to the threaded screw holes (M5 x P0.8) at the bottom base

● DIMENSIONS (BASE) Units: mm




| Order No. | Model No. |
|---|---|
| 010124 | DL-SXY |

SPECIFICATIONS

| | |
|---|---|
| Model Name | Set: DL-SXY (Individual model name Sensor: DL-SXYW / Display: DL-SXYW) |
| Measuring Range | ± 5.000 mm/m ("Error" is displayed when the value exceeds the measuring range) |
| Minimum Reading | 0.001 mm/m |
| Operating Temperature | 0 ～ 40℃ |
| Reading Accuracy ※1 | Operating temperature 17 ～ 23℃ ± 0.85%rdg (within ± 1.999mm/m) or repeatability, whichever is greater<br>± 1.0%rdg (over ± 2mm/m)<br>Operating temperature 0 ～ 40℃ ± 2.6%rdg (within ± 1.999mm/m) or repeatability, whichever is greater<br>± 2.7%rdg (over ± 2mm/m) |
| Repeatability | Within ± 0.005mm/m |
| XY Orthogonal Accuracy | 1% or Repeatability, whichever is greater |
| Measurement Interval | Approx. 1.1 sec. |
| Output Signal | DL-SXYW → DL-DXYW Built-in wireless (Bluetooth Class1 ※3, Communication distance: 30 ～ 50m)<br>DL-DXYW→ PC Wired, Conforms to RS-232C ※4 |
| Power Source | DL-SXYW AA battery × 2, AC adapter (DC3V output・AC100V ～ 240V)<br>DL-DXYW AA battery × 2, AC adapter (DC3V output・AC100V ～ 240V) |
| Run Time (continuous use with alkaline batteries) ※2 | DL-SXYW Approx. 20 hrs. (When communicating, for alkaline battery)<br>Approx. 6 hrs. (When waiting to communicate, for alkaline battery)<br>Approx. 40 hrs. (When use without communication, for alkaline battery)<br>DL-DXYW Approx. 25 hrs. (For alkaline battery) |
| Dimensions | DL-SXYW L145 × W189 × H100mm<br>DL-DXYW L154 × W96 × H38mm (without silicon cover)<br>L158 × W105 × H48mm (with silicon cover) |
| Dimensions (base) | L140 × W140mm (stainless steel) |
| Weight | DL-SXYW 3.6kg (incl. batteries) / DL-DXYW 0.5kg (incl. silicon cover and batteries) |
| Accessories | ● Carrying case ● Warranty・Instruction manual・Inspection report<br>● AC adapter (DC3V output・AC100V ～ 240V) × 2 ● AA battery × 4<br>● Recording software (SK-LOG Lite version) ● PC connection cable (DL-P6) ※4 |

※ 1 : %rdg (percent reading) indicates percentage of the reading.
± 0.85% rdg can contain an error of ± 0.0085mm/m if the reading is 1.000mm/m.
※ 2 : May vary depending on usage conditions such as temperature. AA rechargeable batteries with a nominal 1.2V can also be used, however due to the characteristics of the discharge voltage curve, please note that the time from being displayed of "B: CHK" (DL-SXYW) or "S: CHK"/ "D: CHK" (DL-DXYW) to the battery's runout is short.
※ 3 : Our Bluetooth system qualification is with TELEC (Japan), FCC (U.S.A), CE (EU) and KCC (South Korea).
※ 4 : PC without D-SUB9 pin port (RS-232C) requires USB serial transmitter (optional).

# LEVELNIC DL-SXYW-S SERIES

PDI

2-axis measurement sensor single-use device.
Able to be used for both outputting measured values by PC and by main unit.

Integrated software for measuring instruments ▶
SK-LOG
P24 ～27

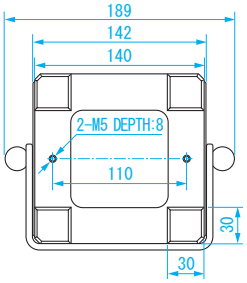
## ■ High precision Digital Level 0.001mm/m display

## ■ Able to send measuring data to i-OS and andoid smart phone and tablet

※DL-SXYW-S (HID)

DL-SXYW-S

● DIMENSIONS (BASE) Units: mm




USE
- ●Accuracy measurement of machine tools

MATERIAL
- ●Sensor body: Aluminum
- ●Sensor base: Stainless steel
- ●Display: ABS, Acylic resin

FEATURES
- ●Capable to measure 2-axis in X and Y directions with one unit
- ●Supports both wireless output and wired output
- ●No wireless interference between multiple units use
- ●The measured value is displayed on the sensor display, and the inclination can be measured by single unit
- ●Screw hole (M5) is provided on the bottom level surface, and special bases and jigs can be attached

SPECIFICATIONS

| Model Name | DL-SXYW-S | DL-SXYW-S (HID) |
|---|---|---|
| Features | ・Bluetooth is pre-connected with included Wireless Receiving unit (RS-232C) | ・Connected by Bluetooth HID to tablet and smart phone for keyboard use<br>・Device name is able to be identified by its individual number<br>・Output data includes device name to prevent receiving mistakes |
| Measuring Range | ± 5.000 mm/m (Error will be displayed when overload) | |
| Minimum Reading | 0.001 mm/m | |
| Operating Temperature | 0 ～ 40℃ | |
| Accuracy※1 | Operating temperature 17 ～ 23℃ ± 0.85% rdg (within ± 1.999mm/m) or repeatability, whichever is greater<br>± 1.0% rdg (above ± 2mm/m)<br>Operating temperature 0 ～ 40℃ ± 2.6% rdg (within ± 1.999mm/m) or repeatability, whichever is greater<br>± 2.7% rdg (above ± 2mm/m) | |
| Repeatability | Within ± 0.005mm/m | |
| XY Orthogonal Accuracy | 1% or Repeatability, whichever is greater | |
| Measurement Interval | Approx. 1.1 sec. | |
| Output Signal | Built-in wireless (Bluetooth Class1※3, Communication distance: 30 ～ 50m) / Wired RS-232C | Built-in wireless (Bluetooth Class2※3, Communication distance: 10 ～ 20m) / Wired RS-232C |
| Power Source | AA battery × 2, AC adapter (DC3V・AC100V ～ 240V) | |
| Run Time (continuous use)※2 | Approx. 20 hrs. (Wireless ON - communicating, Alkaline battery)<br>Approx. 6 hrs. (Wireless ON - waiting to communicate, Alkaline battery)<br>Approx. 40 hrs. (Wireless OFF, Alkaline battery) | Approx. 20 hrs. (Wireless ON, Alkaline battery)<br>Approx. 40 hrs. (Wireless OFF, Alkaline battery) |
| Dimensions | L145 × W189 × H100mm | |
| Dimensions (base) | L140 × W140mm (Stainless steel) | |
| Accessories | ● Wireless receiving unit for PC (USB Type-A)<br>● Carrying case ● Warranty・Instruction manual・Inspection report<br>● AC adaptor (DC3V output・AC100V ～ 240V) × 1<br>● AA battery × 2 ● Recording software (SK-LOG Lite ver.) | ● Carrying case ● Warranty・Instruction manual・Inspection report<br>● AC adaptor (DC3V output・AC100V ～ 240V) × 1<br>● AA battery × 2 |

※ 1 : %rdg (percent reading) indicates percentage of the reading.
± 0.85% rdg can contain an error of ± 0.0085mm/m if the reading is 1.000mm/m.
※ 2 : May vary depending on usage conditions such as temperature.
1.2V rechargeable AA battery may also be used but it will show "B: CHK" on display in short term.
※ 3 : Our Bluetooth system qualification is with TELEC (Japan), FCC (U.S.A), CE (EU) and KCC (South Korea).

| Order No. | Model No. | Weight |
|---|---|---|
| 010129 | DL-SXYW-S | 3.6kg |
| 010130 | DL-SXYW-S(HID) | 3.6kg |

# LEVELNIC DL-mXY

T PDI

Compact m series model with capability of 2-axis simultaneous measurement.
Possible to output data signals for data recordings.

Integrated software for measuring instruments ▶
SK-LOG
P24 ～27

For flatness and straightness calculation ▶
Levelnic Measurement Software
P138 ～141

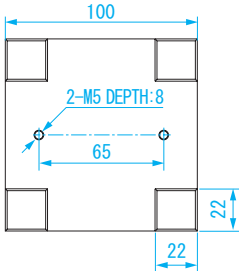
## ■ High precision Digital Level 0.01mm/m display

USE
- Accuracy measurement of machine tools

MATERIAL
- Sensor body: Aluminum
- Sensor base: Cast Iron

FEATURES
- Compact XY 2-axis measuring instrument, 14mm lower than DL-m3
- RS-232C output available for SK-LOG data transfer use
- Able to use straightness and flatness software at 1 axis mode
- The measured value is displayed on the sensor display, and the inclination can be measured by single unit
- Screw hole (M5) is provided on the bottom level surface, and special bases and jigs can be attached

● DIMENSIONS (BASE) Units: mm




SPECIFICATIONS

| | |
|---|---|
| Measuring Range | ± 5.00 mm/m |
| Minimum Reading | 0.01 mm/m |
| Operating Temperature | 0 ～ 40℃ |
| Accuracy※1 | Operating temperature 17 ～ 23℃ ± 0.02mm/m or ± 3% rdg whichever is larger (0 ～± 1.99mm/m)<br>± 4% rdg (± 2 ～± 5mm/m)<br>Operating temperature 0 ～ 40℃ ± 0.02mm/m or ± 5% rdg whichever is larger (0 ～± 1.99mm/m)<br>± 6% rdg (± 2 ～± 5mm/m) |
| Repeatability | Within ± 0.01mm/m |
| XY Orthogonal Accuracy | 1% or Repeatability, whichever is greater |
| Measurement Interval | Approx. 0.8 ～ 0.9 sec. |
| Output Signal | RS-232C |
| Power Source | AA battery × 2 |
| Run Time (continuous use)※2 | [Display back light- OFF] Zinc-carbon battery Approx. 50 hrs. (approx. 30 hrs. with signal output)<br>Alkaline battery Approx. 100 hrs. (approx. 70 hrs. with signal output)<br>[Display back light- ON] Zinc-carbon battery Approx. 13 hrs (approx. 10 hrs. with signal output)<br>Alkaline battery Approx. 40 hrs. (approx. 25 hrs. with signal output) |
| Dimensions | L105 × W104 × H59mm (base: L100 × W100mm) |
| Accessories | ● Carrying case ● Warranty・Instruction manual・Inspection report ● AA battery × 2 |

※ 1 : %rdg (percent reading) indicates percentage of the reading.
± 3% rdg can contain an error of ± 0.03mm/m if the reading is 1.00mm/m.
※ 2 : May vary depending on usage conditions such as temperature.

| Order No. | Model No. | Weight |
|---|---|---|
| 010126 | DL-mXY | 1.4kg |

# Levelnic DL-S4W series

PDI

Built-in-wireless.
Measurement value can be checked both on PC screen and the device's display panel.

## ■ High precision Digital Level Resolution 0.001mm/m Switchable Type : Wireless use / Cable use
## ■ Stainless steel base for easier maintenance (DL-S4W SUS)

DL-S4W

Integrated software for measuring instruments▶ SK-LOG P24 ～27
For vertical measurement▶ L-type Base DL-SL P132
For setting a fixed pitch▶ Levelnic Base with Adjustable Pitch P137
For flatness and straightness calculation▶ Levelnic Measurement Software P138 ～141
Rust prevention▶ Zerust Film for Steel P370

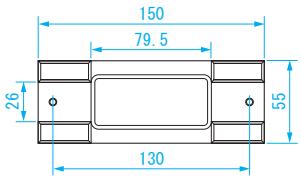
DL-S4W SUS

USE
- ●High precision leveling of machine tools and surface plates, straightness and flatness measurement.

MATERIAL
- ●Body: Aluminum

FEATURES
- ●Wireless data transmission
- ●Measurement value can be displayed and recorded on PC screen during leveling work by using included receiver and software
- ●Switchable between wireless / wired for saving of electricity and long-time use
- ●Once USB receiver unit is inserted, the driver will be recognized automatically
- ●Two rechargeable batteries included. While one battery is being charged, the unit can be used with the other battery.
- ●Custom-made base can be attached to the threaded screw holes (M5×P0.8) at the bottom base

● DIMENSIONS (BASE) Units: mm




SPECIFICATIONS

| Model Name | DL-S4W ／ DL-S4W SUS ／ DL-S4W-E | DL-S4W(HID) |
|---|---|---|
| Features | ・Bluetooth is pre-connected to the included receiver unit (USB) | ・Connected by Bluetooth HID to tablet and smart phone for keyboard use<br>・Device name is able to be identified by its individual number<br>・Output data includes device name to prevent receiving mistakes |
| Measuring Range※1 | ± 5.00mm/m ± 0.286° | |
| Minimum Reading | 0.001mm/m 0.0001° (within ± 1.999mm/m)<br>0.01mm/m 0.001° (over ± 2mm) | |
| Operating Temperature | 0～40℃ | |
| Accuracy※2 | Operating temperature 17～23℃ ± 0.85% rdg (within ± 1.999mm/m) or repeatability, whichever is greater<br>± 1.0% rdg (above ± 2mm/m)<br>Operating temperature 0～40℃ ± 2.6% rdg (within ± 1.999mm/m) or repeatability, whichever is greater<br>± 2.7% rdg (above ± 2mm/m) | |
| Repeatability | Within ± 0.005mm/m ～ ± 0.0003° | |
| Output Signal | Conforms to RS-232C, wired<br>Built-in wireless (Bluetooth Class1※4, Communication distance: 30～50m) | Conforms to RS-232C, wired<br>Built-in wireless (Bluetooth Class2※4, Communication distance: 10～20m) |
| Power Source | 9V dry cell 1pc<br>8.4V 006P type rechargeable battery 1pc<br>Included AC adapter (DC9V output・AC100V～240V) | |
| Run Time (continuous use)※3 | Zinc-carbon battery: Approx.12 hrs. (wireless use approx. 3 hrs)<br>Alkaline battery: Approx. 30 hrs. (wireless use approx.10 hrs)<br>Rechargeable battery: Approx. 10 hrs. (wireless use approx.10 hrs) | Zinc-carbon battery: Approx.12 hrs. (wireless use approx. 2 hrs)<br>Alkaline battery: Approx. 30 hrs. (wireless use approx. 8 hrs)<br>Rechargeable battery: Approx. 10 hrs. (wireless use approx. 3 hrs) |
| Dimensions | L158 × W61 × H107mm (Base: L150 × W55mm) | |
| Accessories | ● Carrying case ● Warranty・Instruction manual・Inspection report<br>● AC adaptor (DC9V output・AC 100V～240V)<br>● 8.4v 006P type rechargeable battery 2 pcs<br>● Battery charger ● Dedicated display software for DL-S4W<br>● USB receiver unit (USB Type-A) | ● Carrying case ● Warranty・Instruction manual・Inspection report<br>● AC adaptor (DC9V output・AC 100V～240V)<br>● 8.4v 006P type rechargeable battery 2 pcs<br>● Battery charger |

※1 : For DEG ( ° ) Display mode, "0 (Zero)" before the decimal point is not displayed.
For 0.001mm/m (0.0001° ) display mode, maximum reading which can be displayed is less than ± 1.999mm/m ( ± 0.1145° ).
※2 : %rdg percent reading the percentage of displayed value.
※3 : May vary depending upon measurment conditions.
※4 : Our Bluetooth system qualification is with TELEC (Japan), FCC (U.S.A), CE (EU) and KCC (South Korea).

| Order No. | Model No. | Software Language | Base Material | Weight |
|---|---|---|---|---|
| 010053 | DL-S4W | Japanese・English | Cast iron | 2.0kg |
| 010111 | DL-S4W SUS | Japanese | Stainless steel SUS303 | 2.0kg |
| 010131 | DL-S4W(HID) | | Cast iron | 2.0kg |

# LEVELNIC DL-S3 SERIES

PDI

Why not make measurement easier and quicker
than with the bubble tube method?
Numerical measurement with a resolution
of 0.001 mm/m and no data reading error!
Please feel free to contact us if you have any questions.

## ■ High precision Digital Level
## ■ Resolution 0.001mm/m
## ■ Rechargable Battery (DL-S3C / DL-S3C SUS)
## ■ Stainless steel base type that not requires rust prevention maintenance (DL-S3 SUS / DL-S3C SUS)

DL-S3

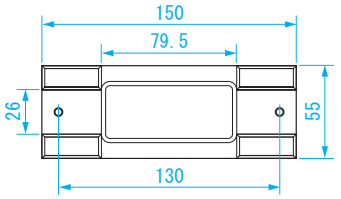
Integrated software for measuring instruments▶ SK-LOG P24 ～27
For vertical measurement▶ L-type Base P132
For wireless communication▶ Wireless Adapter P134
For display measured value for two connections▶ Transmitter and display set P132
For setting a fixed pitch▶ Levelnic Base with Adjustable Pitch P137
For flatness and straightness calculation▶ Levelnic Measurement Software P138 ～141
Rust prevention▶ Zerust Film for Steel P370

USE
- High precision leveling of machine tools and surface plates. Straightness, flatness and vertical measurement.

MATERIAL
- Body: Aluminum

FEATURES
- Easy to fix the datum point, divide measurement value into halves with one-touch operation (with "0" cal. switch, 1/2 cal. switch)
- Measurement value can be output with RS232 signal
- Custom-made base can be attached to the threaded screw holes (M5 × P0.8) at the bottom base
- DL-S3C is rechargeable type. It can be charged when not in use.

● DIMENSIONS (BASE) Units: mm




SPECIFICATIONS

| Model No. | DL-S3/DL-S3 SUS | DL-S3C/DL-S3C SUS |
|---|---|---|
| Measuring Range※1 | ± 5.00mm/m・± 0.286° | |
| Minimum Reading | 0.001mm/m・0.0001° (0～± 2mm/m・0～± 0.115°)<br>0.01mm/m・0.001° | |
| Operating Temperature | 0～40℃ | |
| Accuracy ※2 | Operating temperature17～23℃ ± 0.85%rdg (0～± 1.999mm/m・0～± 0.1145°) or repeatability, whichever is greater<br>± 1.0%rdg (± 2～± 5mm/m・± 0.115°～± 0.286°)<br>Operating temperature 0～40℃ ± 2.6%rdg (0～± 1.999mm/m・0～± 0.1145°) or repeatability, whichever is greater<br>± 2.7%rdg (± 2～± 5mm/m・± 0.115°～± 0.286°) | |
| Repeatability | Within ± 0.005mm/m・± 0.0003° | |
| Output Signal | Conforms to RS-232C | |
| Charging time | – | 12 hrs. (when fully charged) |
| Power Source | 9V dry cell 1pc<br>AC adapter (DC9V output・AC100V～240V) included | 8.4V 006P type rechargeable battery 1pc |
| Run time (continuous use) ※3 | Zinc-carbon cell: Approx. 10 hrs.<br>Alkaline cell: Approx. 20 hrs. | 12 hrs. charge: Approx. 9 hrs.<br>8 hrs. charge: Approx. 6 hrs.<br>4 hrs. charge: Approx. 2 hrs. |
| Dimensions | L172 × W65 × H129mm (base dimension: L150 × W55mm) | |
| Accessories | ● Shock resistant aluminum case<br>● Warranty・Instruction manual・Inspection report<br>● AC adapter (DC9V output・AC100V～240V)<br>● 9V dry cell | ● Shock resistant aluminum case<br>● Warranty・Instruction manual・Inspection report<br>● AC adapter (DC15V output・AC100V～240V)<br>● 8.4V 006P type rechargeable battery 1pc |

※1: For DEG (°) Display mode, "0 (Zero)" before the decimal point is not displayed.
For 0.001mm/m (0.0001°) display mode, maximum reading which can be displayed is less than ± 1.999mm/m (± 0.1145°).
※2: % rdg indicates the percentage of displayed value
※3: May vary depending upon measurement conditions

| Order No. | Model No. | Battery Type | Base Material | Weight |
|---|---|---|---|---|
| 010013 | DL-S3 | 9V dry cell | Cast iron | 2.2kg |
| 010030 | DL-S3C | Ni-MH battery | | 2.2kg |
| 010112 | DL-S3 SUS | 9V dry cell | Stainless steel SUS303 | 2.2kg |
| 010113 | DL-S3C SUS | Ni-MH battery | | 2.2kg |
| 010018 | DL-S3V | 9V dry cell | Cast iron V groove base | 2.2kg |

With V groove base - available on request
- Model : DL-S3V
- Tolerance : Within 0.1mm/m ( on condition that the bubble in the sub-bubble tube is within the base line)
- Tolerance Between Flat and V Groove : Within 0.05mm/m
- Angle of V Groove : 130° ( for cylindrical objects up to ϕ 65mm )

## LEVELNIC DL-S3L

PDI

LEVELNIC DL-S3 with magnetic L-type base.
Magnetic base enables Z-axis measurement in addition to X-axis and Y-axis.
Super-strong magnet allows column measurement of machine tools and other equipment.

Integrated software for measuring instruments ▶
SK-LOG
P24 ～27
For flatness and straightness calculation ▶
Levelnic Measurement Software
P138 ～141

USE
- ●High precision leveling of machine tools and surface plates. Straightness, flatness and vertical measurement.

MATERIAL
- ●DL-S3 / Body: Aluminum　Base: Cast iron
- ●L-type base: Cast iron

FEATURES
- ●Quick digital display of the measured value
- ●Measurement value can be output with RS-232 signal
- ●L-type magnetic base enables vertical (Z-axis) measurement
- ●With 130°V groove

POWER
- ●9V dry cell 1pc　●AC adapter (DC9V output・AC100V～240V)

ACCESSORIES
- ●Shock resistant aluminum case
- ●Warranty・Instruction manual・Inspection report
- ●AC adapter (DC9V output・AC100V～240V)
- ●9V dry cell

Please refer to DL-S3 (P126) for detailed specifications for this unit

| Order No. | Model No. | Base Squareness (mm) | Weight |
|---|---|---|---|
| 010027 | DL-S3L | Within ± 0.04 | 5.5kg |

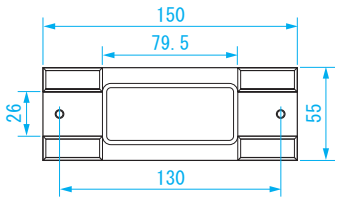
## LEVELNIC EL-01A SERIES

PDI

High-sensitive (0.01mm/m). Pendulum type level with analog output.
Data can be recorded by connecting the dedicated connection cable to an analog recorder.

### ■ High precision Analog Level Resolution 0.01mm/m

● DIMENSIONS (BASE)　Units: mm




USE
- ●Leveling of machine tools and surface plates. Straightness and flatness measurements.

MATERIAL
- ●Body: Aluminum

FEATURES
- ●Quicker response than bubble level　●Sensitivity is switchable in three steps
- ●Connectible directly to commonly-available analog recorder through analog output
- ●Custom-made base can be attached to the threaded screw holes (M5 × P0.8) at the bottom base

SPECIFICATIONS

| | | | |
|---|---|---|---|
| Sensitivity | Ⅰ: 1Division = 0.01mm/m<br>Ⅱ: 1Division = 0.05mm/m<br>Ⅲ: 1Division = 0.1mm/m | Measuring Range (3 Range) | ± 0.2mm/m (1Division 0.01mm/m)<br>± 1mm/m (1Division 0.05mm/m)<br>± 2mm/m (1Division 0.1mm/m) |
| Operating Temperature | 0 ～ 40℃ | | |
| Pointing Error | Within ± 0.5 Division | Repeatability Accuracy | Within ± 0.005mm/m |
| Output SIgnal | Analog output<br>± 200mV F.S. (for all range)<br>Connectible load resistance: No less than 100 Ω | | |
| Power Source | 9V dry cell 1 pc<br>AC adapter (DC9V output・AC100V ～ 240V) included | Run time (continuous use) | Zinc-carbon cell: Approx. 25 hrs.<br>Alkaline cell: Approx. 50 hrs.<br>※ May vary depending upon measurement condition |
| Base Dimension | L150 × W85 × H195mm　※ Excluding Handle (dimension: L150 × W55mm) | | |
| Accessories | ● Shock resistant aluminum case　● Warranty・Instruction manual・Inspection report<br>● AC adapter (DC9V output・AC100V ～ 240V)　● 9V dry cell | | |

| Order No. | Model No. | Base Material | Weight |
|---|---|---|---|
| 010005 | EL-01A | Cast iron | 2.9kg |
| 010116 | EL-01A SUS | Stainless steeel SUS303 | 2.9kg |

### ■ For Levelnic EL connection cable

More informations : P135

USE
- ●Connects to analog recorder with analog output of EL-01A

# LEVELNIC DL-S2W SERIES

PDI

Wireless Data transmission. Same specification as DL-S3, and wireless system equipped.
The maximum longitudinal coverage is 50 ～ 100m.

## ■ High precision Digital Level Resolution 0.001mm/m (Wireless by Bluetooth)
## ■ Stainless steel base type that not requires rust prevention maintenance (DL-S2W SUS / DL-S2W (USB) SUS)

DL-S2W

Integrated software for measuring instruments▶
SK-LOG
P24 ～27

For vertical measurement▶
L-type Base
P132

For setting a fixed pitch▶
Levelnic Base with Adjustable Pitch
P137

For flatness and straightness calculation▶
Levelnic Measurement Software
P138 ～141

Rust prevention▶
Zerust Film for Steel
P370

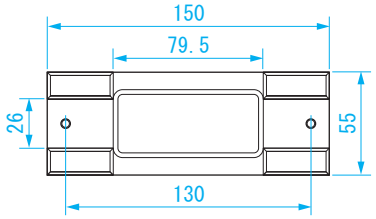
USE
- ●High precision leveling of machine tools and surface plates.
  Straightness, flatness and vertical measurement.

MATERIAL
- ●Body: Aluminum

FEATURES
- ●Wireless data transmission
- ●Wireless type Levelnic, useful for leveling and tilt measurement;
  -In overhead location
  -In places where the cable can not reach
- ●PC screen becomes display of Levelnic
  -Measurement data can be displayed on PC, using receiver and data display software
- ●Custom-made base can be attached to the threaded screw holes (M5 × P0.8) at the bottom base

※This model does not have display on the unit.
PC or display unit is required for display the measured values.

● DIMENSIONS (BASE) Units : mm




SPECIFICATIONS

| | | |
|---|---|---|
| Measuring Range | | ± 5.000mm/m・± 0.2865° (Angle display with DL-S2W dedicated software) |
| Minimum Reading | | 0.001mm/m・0.0001° |
| Operating Temperature | | 0 ～ 40℃ |
| Accuracy ※1 | | Operating temperature 17 ～ 23℃ ± 0.85% rdg (0 ～± 1.999mm/m, 0 ～± 0.1145°) or repeatability, whichever is greater<br>± 1.0% rdg (± 2 ～± 5mm/m, ± 0.1146 ～± 0.2865°)<br>Operating temperature 0 ～ 40℃ ± 2.6% rdg (0 ～± 1.999mm/m, 0 ～± 0.1145°) or repeatability, whichever is greater<br>± 2.7% rdg (± 2 ～± 5mm/m, ± 0.1146 ～± 0.2865°) |
| Repeatability | | Within ± 0.005mm/m・± 0.0003° |
| Radio System | | Bluetooth Class1 ※2 |
| Power Source | | 9V dry cell 1 pc<br>(nominal voltage 8.4V rechargeable battery can also be used)<br>AC adapter (DC9V output・AC100V ～ 240V) included |
| Run time (Continuous use) | | Alkaline dry cell: Approx. 10 hrs<br>(nominal voltage 8.4V rechargeable battery: Approx. 3 ～ 4 hrs.)<br>※ May vary depending upon measurement conditions |
| Dimensions | | L173 × W59 × H147mm (H: up to top of antenna)<br>(base dimensions: L150 × W55mm) |
| Accessories | DL-S2W, DL-S2W SUS DL-S2W-E | ● Shock resistant aluminum case ● Warranty・Instruction manual・Inspection report<br>●AC adapter (DC9V output・AC100V ～ 240V) ●9V dry cell ● Receiving unit (9-pin D-SUB)<br>● Power source cable for wireless unit ●Dedicated software for DL-S2W |
| | DL-S2W (USB) SUS DL-S2W (USB) | ● Shock resistant aluminum case ● Warranty・Instruction manual・Inspection report<br>●AC adapter (DC9V output・AC100V ～ 240V) ●9V dry cell<br>● Receiving unit (USB Type) ●Dedicated software for DL-S2W |

※ 1: % rdg indicates percentage of displayed value
※ 2: Our Bluetooth system qualification is with TELEC (Japan), FCC (U.S.A), CE (EU), KCC (South Korea)

| Order No. | Model No. | Receiving Unit Type | Software Language | Base Material | Weight |
|---|---|---|---|---|---|
| 010017 | DL-S2W | D-SUB9 | Japanese・English | Cast iron | 2.1kg |
| 010054 | DL-S2W(USB) | USB Type-A | Japanese | | 2.1kg |
| 010114 | DL-S2W SUS | D-SUB9 | | Stainless steel SUS303 | 2.1kg |
| 010115 | DL-S2W (USB) SUS | USB Type-A | | | 2.1kg |

LEVELNIC
DIGITAL PROTRACTOR
PRECISION LEVEL
ANGLE METER
LEVEL
PROTRACTOR

# LEVELNIC DL-mini NEW!

T PDI

The lightest and Smallest Levelnic ever made.
This light weight level is suitable for measuring weight effective work.

Integrated software for measuring instruments ▶
SK-LOG

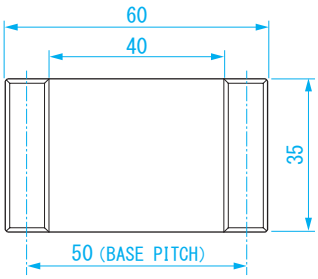
P24 ～27

For flatness and straightness calculation ▶
Levelnic Measurement Software

P138 ～141

## ■ High Precision Digital Level 0.01 mm/m display

● DIMENSIONS (BASE) Units : mm




USE
- ●Leveling of surface plates and machine tools

MATERIAL
- ●Body : Stainless
- ●Panel : acrylic

FEATURES
- ●Ultra-compact and highly portable
- ●wide measuring range of ± 9.99 mm/m
- ●Base measurement pitch is 50mm to allow continious chain-measuring
- ●will not be influences by its self weight

SPECIFICATIONS

| | |
|---|---|
| Measuring Range | ± 9.99mm/m |
| Minimum Reading | 0.01mm/m |
| Operating Temperature | 0 ～ 40℃ |
| Accuracy ※1 | ± 0.03mm/m (at 17 ～ 23° C) or ± 3%rdg (0 ～± 1.99mm/m)<br>± 4%rdg (± 2 ～± 9.99mm/m)<br>± 0.03mm/m (at 0 ～ 40° C) or ± 7%rdg (0 ～± 1.99 mm/m)<br>± 8%rdg (± 2 ～± 9.99mm/m) |
| Repeatability | Within ± 0.03mm/m |
| Measurement Cycle | Approx. 0.5 ～ 0.68 seconds |
| Output Signal | As per RS-232C |
| Power Source | AAA battery × 1pcs |
| Continious use operation hours ※2 | Manganese Battery approx. 20 hrs. ( when signal output approx. 12 hrs )<br>Alkaline Battery approx. 50 hrs. ( when signal output approx. 30 hrs ) |
| Dimensions | L62 × W35 × H36mm (Base : L60 × W35mm) |
| Accessories | ● Storage Case<br>● Warranty・Instruction Manual・Inspection Report<br>● AAA battery × 1pcs |

※ 1 : %rdg (percent reading) is Reading accuracy percentage.
± 3 %rdg may include a ± 0.03mm/m torelance when reading accuracy is 1.00 mm/m.
※ 2 : depends on condition and climate temperature.

| Order No. | Model No. | Weight |
|---|---|---|
| NEW! 010133 | DL-mini | 290g |

# LEVELNIC DL-m4

T PDI

Compact digital level with 0.01mm/m resolution.
Equipped with jig fixing screw holes as standard.

Integrated software for measuring instruments▶ SK-LOG P24 ～27
For vertical measurement▶ L-type Base DL-mL P132
For flatness and straightness calculation▶ Levelnic Measurement Software P138 ～141
Rust prevention▶ Zerust Film for Steel P370

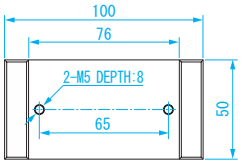
## ■ High precision Digital Level 0.01mm/m display

USE
- ●High precision leveling of machine tools and surface plates, straightness and flatness measurement

MATERIAL
- ●Case: Aluminum　Base: Cast Iron

FEATURES
- ●14mm lower than DL-m3, compact and light weight
- ●Equipped with jig fixing screw holes as standard
- ●With RS-232C output for straightness and flatness software use

● DIMENSIONS (BASE)　Units: mm




SPECIFICATIONS

| | | | |
|---|---|---|---|
| Measuring Range | ± 5.00 mm/m | | |
| Minimum Reading | 0.01 mm/m | | |
| Operating Temperature | 0 ～ 40℃ | | |
| Accuracy※1 | Operating temperature 17 ～ 23℃ ± 0.02mm/m or ± 3% rdg whichever is greater (0 ～± 1.99mm/m)<br>± 4% rdg (± 2 ～± 5mm/m)<br>Operating temperature 0 ～ 40℃ ± 0.02mm/m or ± 5% rdg whichever is greater (0 ～± 1.99mm/m)<br>± 6% rdg (± 2 ～± 5mm/m) | | |
| Repeatability | Within ± 0.01mm/m | Measurement Interval | Approx. 0.5 ～ 0.6 sec. |
| Output Signal | Wired RS-232C | Power Source | AA battery × 2 |
| Run Time (continuous use)※2 | Zinc-carbon battery Approx. 100 hrs. (approx. 50 hrs. with signal output)<br>Alkaline battery Approx. 200 hrs. (approx. 100 hrs. with signal output) | | |
| Dimensions | L105 × W50 × H59mm (base: L100 × W50mm) | | |
| Accessories | ● Carrying case ● Warranty・Instruction manual・Inspection report ● AA battery × 2 | | |

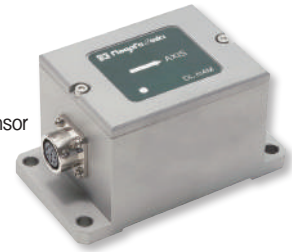
※ 1 : %rdg (percent reading) indicates percentage of the reading.
± 3% rdg can contain an error of ± 0.03mm/m if the reading is 1.00mm/m.
※ 2 : May vary depending on usage conditions such as temperature.

| Order No. | Model No. | Weight |
|---|---|---|
| 010125 | DL-m4 | 770g |

# LEVELNIC DL-m4M NEW!

T

To be used as a installed tilt sensor for all kinds of machinery

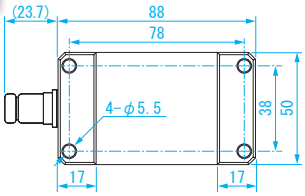


USE
- ●Can be fixed to machine tools or structures to measure inclination or as a control sensor

MATERIAL
- ●Body : Stainless (SUS430)

FEATURES
- ●Unit base and case are in integrated dustproof structure
  SUS430 is used for rust prevention and to consider steel expansion coefficient
- ●Basic reference point setting(0 call and 1/2 call)are with switch input and with command input
- ●Continuous output and single output are able to be switched by command input

●DIMENSIONS (BASE)　Units: mm




SPECIFICATIONS

| | | | |
|---|---|---|---|
| Measuring Range | ± 5.00 mm/m | | |
| Minimum Reading Value | 0.01 mm/m | | |
| Operating Temperature Range | 0 ～ 40℃ | | |
| Reading Accuracy※1 | ± 0.02° (at 17 ～ 23° C) or ± 3 %rdg (0 ～± 1.99 mm/m)<br>± 4 %rdg ( ± 2 ～± 5 mm/m)<br>± 0.02° (at 0 ～ 40° C) or ± 5 %rdg (0 ～± 1.99 mm/m)<br>± 6 %rdg ( ± 2 ～± 5 mm/m) | | |
| Repeatability | Within ± 0.01 mm/m | Power Source | DC9 ～ 24V (Current consumption approx. 20 mA) |
| Accessories | ● Connector plug ● Warranty・Instruction Manual | | |

※ 1 : %rdg (percent reading) is Reading accuracy percentage.
± 3 %rdg may include a ± 0.03 mm/m torelance when reading accuracy is 1.00 mm/m.
※ Cable connector ( plug ) installed. cable is to be self-made by purchaser.

| Order No. | Model No. | Weight |
|---|---|---|
| NEW! 010134 | DL-m4M | 720g |

# LEVELNIC DL-m5/DL-m5W

PDI

Lowest height in the m series of 56mm.
Able to be used for both outputting measured values by PC and by main unit.

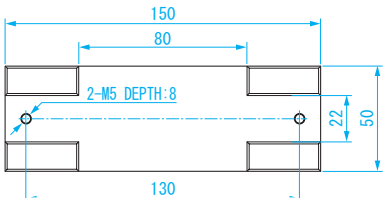
Integrated software for measuring instruments▶ SK-LOG P24 ～27
For vertical measurement▶ L-type Base DL-SL P132
For flatness and straightness calculation▶ Levelnic Measurement Software P138 ～141
For setting a fixed pitch▶ Levelnic Base with Adjustable Pitch P137
Rust prevention▶ Zerust Film for Steel P370

## ■ High precision Digital Level 0.01mm/m display

## ■ Switchable Type : Wireless use / Cable use (DL-m5W)

DL-m5W

● DIMENSIONS (BASE) Units: mm




USE
- ●High precision leveling of machine tools and surface plates, straightness and flatness measurement

MATERIAL
- ●Case: Aluminum Base: Cast Iron

FEATURES
- ●Lowest height 56mm type in the m series
- ●With RS-232C output for straightness and flatness software use
- ●Jig fixing screw holes and dimensions are as same as DL-S3 and DL-S4W.
- ●Standard equipped wireless system. Wireless and cable output to be chosen.(DL-m5W)

SPECIFICATIONS

| Model Name | DL-m5 | DL-m5W (built-in wireless) |
|---|---|---|
| Measuring Range | ± 5.00 mm/m | |
| Minimum Reading | 0.01 mm/m | |
| Operating Temperature | 0 ～ 40℃ | |
| Accuracy※1 | Operating temperature 17 ～ 23℃ ± 0.02mm/m or ± 3% rdg whichever is greater (0 ～± 1.99mm/m) ± 4% rdg (± 2 ～± 5mm/m)<br>Operating temperature 0 ～ 40℃ ± 0.02mm/m or ± 5% rdg whichever is greater (0 ～± 1.99mm/m) ± 6% rdg (± 2 ～± 5mm/m) | |
| Repeatability | Within ± 0.01mm/m | |
| Measurement Interval | Approx. 0.5 ～ 0.6 sec. | |
| Output Signal | Wired RS-232C | Built-in wireless (Bluetooth Class1※3, Communication distance: 30 ～ 50m) Wired RS-232C |
| Power Source | AA battery × 2 | |
| Run Time (continuous use)※2 | Zinc-carbon battery Approx. 100 hrs. (approx. 50 hrs. with signal output) Alkaline battery Approx. 200 hrs. (approx. 100 hrs. with signal output) | Zinc-carbon battery Approx. 50 hrs. (approx. 30 hrs. with cable output) (approx. 8 hrs. with wireless output) Alkaline battery Approx. 100 hrs. (approx. 70 hrs. with cable output) (approx. 20 hrs. with wireless output) |
| Dimensions | L155 × W50 × H56mm (base: L150 × W50mm) | |
| Accessories | ● Carrying case ● Warranty・Instruction manual・Inspection report ● AA battery × 2 | ● Wireless receiver unit for PC (USB Type-A) ● Carrying case ● Warranty・Instruction manual・Inspection report ● AA battery × 2 |

※ 1 : %rdg (percent reading) indicates percentage of the reading.
± 3% rdg can contain an error of ± 0.03mm/m if the reading is 1.00mm/m.
※ 2 : May vary depending on usage conditions such as temperature.
※ 3 : Our Bluetooth system qualification is with TELEC (Japan), FCC (U.S.A), CE (EU) and KCC (South Korea).

| Order No. | Model No. | Weight |
|---|---|---|
| 010127 | DL-m5 | 1.0kg |
| 010128 | DL-m5W | 1.0kg |

# L-TYPE BASE FOR LEVELNIC

LEVELNIC equipped with L-type base enables measurement in Z-axis in addition to X-axis and Y-axsis

Rust prevention▶
Zerust Film for Steel
P370

DL-SL

DL-mL

USE
- ●L-type base for Levelnic

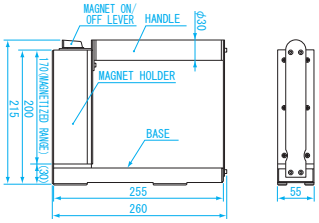
MATERIAL
- ●Cast iron

FEATURES
- ●Vertical (Z-axis) measurement is available by applicable Levelnic mounted on
- ●L-type magnetic base enables vertical (Z axis) measurement (DL-SL)
- ●With 130°V groove

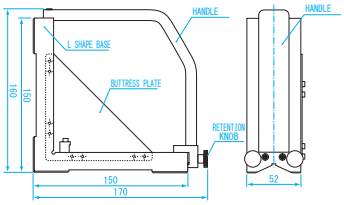
Applicable Levelnic
- DL-SL… ●DL-S4Wseries・DL-S3series・DL-S2Wseries, DL-m5, DL-m5W
- DL-mL… ●DL-m4

ACCESSORIES
- DL-SL… ●Shock resistant aluminum case・Instruction manual・M5 x 25 cap screw・L-type Wrench
- DL-mL… ●Shock resistant aluminum case・Instruction manual

● DIMENSIONS (DL-SL) Units: mm




● DIMENSIONS (DL-mL) Units: mm




※ Base does not have magnetic capability

| Order No. | Model No. | Base Squareness (mm) | Weight |
|---|---|---|---|
| 010028 | DL-SL | Within ± 0.04 | 4.9kg |
| 010022 | DL-mL | Within ± 0.035 | 1.9kg |

# DISPLAY NEW!

Displays LEVELNIC measurements at hand.
Measurement values can be recorded directly in the device, eliminating the need for handwritten notes.

DL-D6F

DL-D6FXY

Refer to P118-119 for compatible models

USE
- ●For displaying and recording LEVELNIC measurements with RS-232C signal output.

MATERIAL
- ●Case: ABS ●Panel: Acrylic ●Rubber Cover: Silicone rubber

FEATURES
- ●Compatible with LEVELNIC equipped with RS-232C signal output.
- ●Measurement data can be transferred to software for straightness and flatness analysis after measurement (supported in single-axis display mode).
- ●When combined with the DL-S2W (D-SUB 9-pin receiver unit model), it becomes a wireless sensor + display separate system.

SPECIFICATIONS

| MODEL | DL-D6F | DL-D6FXY |
|---|---|---|
| FEATURES | For single axis only | For single axis and for double axis |
| Display range | As per connected Levelnic | As per connected Levelnic ※1 ( within ± 9.999 mm/m ) |
| Reading Accuracy | As per connected Levelnic | |
| Display cycle | As per connected Levelnic | |
| Data Recording | Maximum 84 records | Maximum 42 records ( single axis 42 records ) |
| Operating Temperature Range | 0 to 40° C | |
| Input Signal※2 | Single Axis Levelnic RS-232C | Double Axis Levelnic RS-232C<br>Single Axis Levelnic RS-232C |
| Output Signal | As per RS-232C | |
| Power Source | AA battery x 2 pcs. AC adapter (DC 3V putput) | |
| Continuous Usage Time※3 | Approx. 55hours (cable coonected use. Alkaline battery)<br>Approx. 9hours (D-SUB9 receiver unit use. Alkaline battery) | |
| Dimensions | L142 × W76 × H38mm(without outer rubber cover)<br>L147 × W85 × H48mm(with outer rubber cover) | L152 × W96 × H38mm(without outer rubber cover)<br>L156 × W105 × H48mm(with outer rubber cover) |
| Accessories | AC adapter (DC 3V putput) ・AA battery x 2 pcs・Instrauction Manual | |

※ 1: Does not support DL-S3 / DL-S4W DEG (angle measurement) units. ※ 2: Cannot be used on Levelnic equipped with USB type receiver.
※ 3: Depends on condition and climate temperature. Nominal 1.2V AAbatteries could be used, but as from the battery discharge voltage curve characteristics the battery life is short after "CHK" shown on disaplay.

| Order No. | Model No. | Weight |
|---|---|---|
| NEW! 010047 | DL-D6F | 370g |
| NEW! 010132 | DL-D6FXY | 460g |

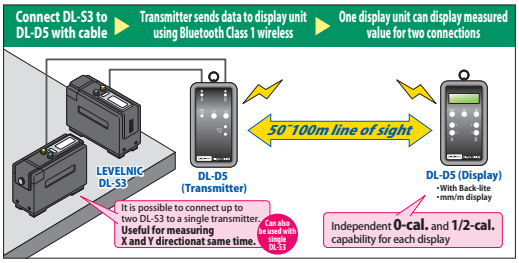
## TRANSMITTER / DISPLAY SET

For displaying measurements from two DL-S3 series products in one handy device at the same time.
Suitable for X and Y direction measurement.

USE
- Transmit and display measurements for up to two Levelnic DL-S3 series products

MATERIAL
- Body :ABS resin
- Cover :Silicon rubber

FEATURES
- Simultaneous display of two connected DL-S3 series products. Useful for measuring X and Y directions.
- Eases installation of large machine tools by allowing multiple operators to work at same time
- Measured data is more easily visible, especially when used in locations which are remote or have low clearance height
- Since transmitter and receiver are a paired set, there is no need to set up after purchase -- it can be used immediately




Refer to P118-119 for compatible models

SPECIFICATIONS

| | Transmitter | Display |
|---|---|---|
| Input | Levelnic DL-S3 series external signal (×2) | – |
| Display | – | 16 char × 2 lines<br>character size = L4.9 × W2.5mm with backlight |
| Wireless | Bluetooth Class1 ※1 | |
| Communication Range | 50 ~ 100m line-of-sight (depending on conditions) | |
| Operating Temperature | 0 ~ 40℃ | |
| Power Source | 2 × AA battery (can also use commercially available rechargeable batteries) | |
| Operating life (continuous use) | Communicating with display device: Approx. 17 hrs.<br>attempting communication with display: Approx. 3 hrs. | Alkaline cells: Approx. 8 hrs. |
| Dimensions | L144 × W76 × D27mm (including lanyard ring)<br>(when mounted in silicone cover: L147 × W81 × D35mm) | |
| Accessories | 2 × connecting cable (approx. 80cm length)<br>2 × AA battery, silicone cover | 2 × AA battery, silicone cover |

※ 1: Our Bluetooth system qualification is with TELEC (Japan), FCC (U.S.A), CE (EU), KCC (South Korea)
※ 2: Including batteries and silicone cover

| Order No. | Model No. | Weight |
|---|---|---|
| 010043 | DL-D5 | 290g each ※2 |

## LEVELNIC DISPLAY

Can display data at a distance.
Check value of the Levelnic mounted on high places and on machine tools at hand.
The work for two can be done by one person.

Combination example with DL-S2W

USE
- Levelnic measurement data display

MATERIAL
- Body: Stainless steel

FEATURES
- Can divide measurement value into half with one-touch operation (DL-S2W series only)

Refer to P118-119 for compatible models

| Order No. | Model No. | Weight |
|---|---|---|
| 010024 | DL-D4 | 330g |

SPECIFICATIONS

| | |
|---|---|
| Display Range | As per Levelnic spec. |
| Minimum Reading | As per Levelnic spec. |
| Operating Temperature | 0 ~ 40℃ |
| Input Signal | Conforms to RS-232C (Levelnic digital output signal only) |
| Power Source | 9V dry cell (nominal voltage 8.4V rechargeable battery can also be used) / AC adapter (included) |
| Run time (continuous use) | With wireless connection: Alkaline cell: Approx. 5 hrs.<br>With cable connection: Alkaline cell: Approx. 60 hrs.<br>※ May vary depending upon measurement conditions |
| Dimensions | L116 × W62 × H48mm |
| Accessories | AC adaptor (DC9V output・AC100V ~ 240V), 9V dry cell, instruction manual |

# BLUETOOTH BOX

Integrated software for measuring instruments▶ SK-LOG P24 ～27
For flatness and straightness calculation▶ Levelnic Measurement Software P138 ～141

Attach Bluetooth Box to applicable levelnic for wireless data transmitting.
Can be functioned in any countries by using Bluetooth dongle.

USE
- Wireless data transmitting is available by attaching to applicable Levelnics

MATERIAL
- Body: Aluminum
- Switch Panel: ABS

FEATURES
- RS-232C output signal from Levelnic is transmitted by Bluetooth
- Can be used in any country with a locally available dongle
- Eliminating cables greatly improves work efficiency
- Answer back function: DATA LED blinks to let you know when recording is completed on the PC

Mounting example to DL-S3

Refer to P118-119 for compatible models

SPECIFICATIONS

| | | | |
|---|---|---|---|
| Input | Levelnic RS-232C signal only | | |
| Wireless | Bluetooth ※ Class depends on USB dongle | | |
| Applicable USB Dongle adaptor | Bluetooth 3.0 and higher, SPP profile, USB Type-A | | |
| Power Source | Lithium polymer battery (chargeable with USB charging cable) | | |
| Run time (continuous use) | Approx. 7 hrs. | Charging | Approx. 2 hrs. |
| Dimensions | L82 × W35 × H24mm | | |
| Accessories | Dedicated software (SK-LOG Lite version), Data cable, USB charging cable, mounting plate, Bluetooth USB dongle adapter Class 1(Japan Only), Instruction manual | | |

| Order No. | Model No. | Weight |
|---|---|---|
| 152036 | DTW-DL01 | 80g |

# LEVELNIC WIRELESS ADAPTER DL-BW / DL-BW (USB)

Allows communicating with Levelnic using Bluetooth.
Wireless range of 50-100mm line-of-sight.

USE
- Wireless adapter for Levelnic

MATERIAL
- Body: Stainless

FEATURES
- The RS232C output signal is transmitted using Bluetooth wireless
- Eliminating cables greatly improves work efficiency

Mounting example to DL-S3C

Refer to P118-119 for compatible models

SPECIFICATIONS

| | |
|---|---|
| Input | Levelnic RS-232C signals (Levelnic use only) |
| Wireless | Bluetooth Class1 ※1 |
| Power Source | AA battery 6 pcs (rechargeable batteries can be used) |
| Run time (continuous use) | Alkaline cell: Approx. 70 hrs. / Zinc-carbon cell: Approx. 30 hrs. 1700mAh rechargeable battery: Approx. 45 hrs.<br>※ May vary depending upon measurement conditions |
| Dimensions | L143 × W50 × H173mm (including trasmission unit) |
| Accessories | Mounting parts, receiving unit, USB power cable for receiving unit (DL-BW only), AA battery × 6, instruction manual |

※ A small thermal printer can not be used
※ 1: Our Bluetooth system qualification is with TELEC (Japan), FCC (U.S.A), CE (EU), KCC (South Korea)

| Order No. | Model No. | Receiving Unit Type | Weight |
|---|---|---|---|
| 010038 | DL-BW | D-SUB9 | 530g |
| 010055 | DL-BW (USB) | USB Type-A | 530g |

## LEVELNIC WIRELESS ADAPTER DL-BW2(USB)/DL-EX

Comapct wireless adaptor for DL-S3 series.
DL-EX is able to send measuring data to i-OS and andoid smart phone and tablet.

DL-BW2 (USB)

Mounting example to DL−S3

Refer to P118-119 for compatible models

USE
- Wireless data transfer for DL-S3

MATERIAL
- Case: ABS
- Securing bracket: Stainless steel

FEATURES
- Transfer the output signal (RS-232C) form Levelnic by Bluetooth wireless
- Improved cableless workability by wireless system

SPECIFICATIONS

| Model Name | DL-BW2(USB) | DL-EX |
|---|---|---|
| Features | ・Pre-connected with attached receiver unit | ・Connected by Bluetooth HID to tablet and smart phone for keyboard use<br>・Device name is able to be identified by its individual number<br>・Output data includes device name to prevent receiving mistakes |
| Input | Levelnic RS-232C signal | |
| Wireless | Bluetooth Class1 ※1 | Bluetooth Class2 ※1 |
| Communicaion Distance | 30 ～ 50m | 10 ～ 20m |
| Power Source | AA battery × 2　(able to use rechargeable battery) | |
| Run Time (continuous use)※2 | Alkaline battery　Approx. 20 hrs. (Wireless ON - continuous use)<br>Alkaline battery　Approx. 10 hrs. (Wireless OFF) | Alkaline battery　Approx. 30 hrs. (Wireless ON - continuous use)<br>Alkaline battery　Approx. 40 hrs. (Wireless OFF)<br>Zinc-carbon battery Approx. 10 hrs. (Wireless ON - continuous use)<br>Zinc-carbon battery Approx. 13 hrs. (Wireless OFF) |
| Dimensions | L93 × W67 × H34mm | |
| Accessories | Wireless receiver unit for PC (USB Type-A), Signal cable, AA battery × 2, Instruction manual | Signal cable, AA battery × 2, Instruction manual |

※ 1 : Our Bluetooth system qualification is with TELEC (Japan), FCC (U.S.A), CE (EU) and KCC (South Korea).
※ 2 : May vary depending on usage conditions such as temperature.

| Order No. | Model No. | Weight |
|---|---|---|
| 010057 | DL-BW2(USB) | 140g |
| 010056 | DL-EX | 140g |

## CONNECTION CABLE NEW!

DL-P6

DL-P7

USE
- For connecting LEVELNIC to a computer.

Refer to P118-119 for compatible models

| Order No. | Model No. | Size | LEVELNIC-Side Connection Connector | Computer-Side Connection Connector |
|---|---|---|---|---|
| 010040 | DL-P6 | ϕ 3mm × 5m | 3.5mm stereo plug | 9-pin D-SUB |
| NEW! 010049 | DL-P7 | | | USB Type-A<br>Includes Type-C conversion cable |

## CONNECTION CABLE / EL-K2

USE
- Connects to analog recorder with analog output of EL-01A

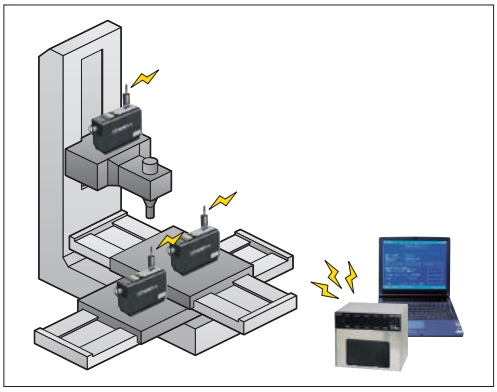
FEATURES
- Connects the signal output terminal of the Levelnic EL-01A to the signal terminal of the analog recorder

SPECIFICATIONS
- Length: ϕ3 × 5m
- Recorder: Banana plug
- Levelnic: M3 plug

| Order No. | Model No. | Weight |
|---|---|---|
| 010082 | EL-K2 | 150g |

# LEVELNIC DATA SYSTEM

Enables data display and saving of up to eight Levelnic with one PC



Example using multiple units
with Bluetooth wireless communication

Refer to P118-119 for compatible models

USE
- For data management of multiple Levelnics

MATERIAL
- Body: Stainless steel

FEATURES
- Eight Levelnics can be connected at once
- Data display & recording software included (auto capture function)

| Order No. | Model No. | Software Language | Weight |
|---|---|---|---|
| 010037 | DL-ADP | Japanese | 1.6kg |
| 010089 | DL-ADP-E | English | 1.6kg |

SPECIFICATIONS

| | |
|---|---|
| Input | D-SUB (9 pins, male)<br>RS-232C compliant, 8 inputs (for Levelnic connection only)<br>1200 baud, 1 stop bit, no parity, no handshaking) |
| Output | D-SUB (9 pins, male) ※<br>RS-232C compliant, 1 output (PC connection)<br>9600 baud, 1 stop bit, no parity<br>Hardware flow control |
| Operating Temperature | 0 ~ 40℃ |
| Power Source | AC100V adapter (DC9V output・AC 100V ~ 240V)<br>AA batteries 6 pcs (rechargeable battery can also be used)<br>※ Run time depends on number of Levelnics |
| Dimensions | W180 × H150 × D130mm |
| Accessories | Data recording software, RS-232C cross cable※, AC adaptor (DC9V output 100V), AA battery × 6, instruction manual |

※ PC without D-USB pin port (RS-232C) requires USB serial transmitter (optional)

# LEVELNIC SD LOGGER 3

Measured value is recorded directly on SD card.
Loading data automatically at a specific interval by script function.

USE
- To record measured value by Levelnic

FEATURES
- Measured value can be recorded on SD card without PC
- To record data on sites that PC is not suitable
- Recorded data by text format can be used with other software
- Loading data automatically at a specific interval by script written in advance on SD card
- Paperless by saving data on SD card

Refer to P118-119 for compatible models

SPECIFICATIONS

| | |
|---|---|
| Input | Levelnic RS-232C signal |
| SD card | SD / SDHC Max. 32GB |
| Power | AC adaper (DC9V output・AC 100V ~ 240V) included |
| Dimensions | W120 × D100 × H39mm |

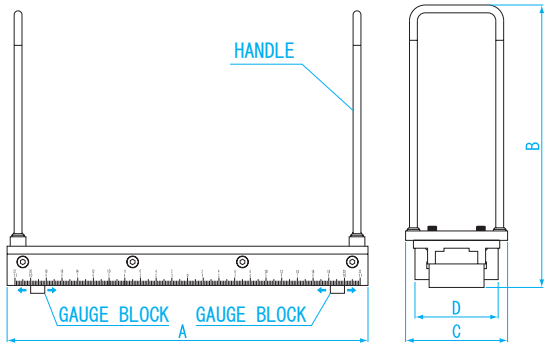
| Order No. | Model No. | Weight |
|---|---|---|
| 010044 | DT-MCK3-XS-SK | 170g |

## LEVELNIC BASE WITH ADJUSTABLE PITCH

By attaching Levelnic to this base, any desired measurement pitch can be set

LP-300

● DIMENSIONS




USE
- ●Setting a fixed pitch for straightness and flatness measurements

MATERIAL
- ●Carbon steel for machine structural use

FEATURES
- ●Applicable levelnic: DL-S4W series, DL-S3 series, DL-S2W series, DL-S2, DL-m5, DL-m5W, EL-01A series
- ●The base is graduated in mm and enables setting measurement pitch
- ●Measuring face consists of 2 pcs of 15mm Gauge block

Units: mm

| Model No. | A | B | C | D |
|---|---|---|---|---|
| LP-200 | 230 | 180 | 65 | 55 |
| LP-300 | 330 | 180 | 65 | 55 |

| Order No. | Model No. | Measurement pitch range (mm) | Weight |
|---|---|---|---|
| 010020 | LP-200 | 50 ~ 200 | 1.8kg |
| 010021 | LP-300 | 50 ~ 300 | 2kg |

## CARRYING CASE FOR LEVELNIC

Shock resistant aluminum case for Levelnic. Suitable for storage and carrying.

LV-CS3

LV-CM1

USE
- ●Carrying case for Levelnic
  (Levelnic is a precision instrument, we recommend that you use a carrying case)

MATERIAL
- ●Body: Aluminum
- ●Inside: Urethane foam

FEATURES
- ●Applicable levelnic:
  LV-CS3: DL-S4W series, DL-S3 series, DL-S2, DL-S1
  LV-CM1: DL-m4
  LV-C2W: DL-S2W series
- ●Shock protection during transport

| Order No. | Model No. | Dimensions (mm) ※ Without handle | Weight |
|---|---|---|---|
| 010025 | LV-CS3 | 362 × 235 × 185 | 1.50kg |
| 010026 | LV-CM1 | 250 × 215 × 150 | 0.97kg |
| 010034 | LV-C2W | 362 × 235 × 185 | 1.50kg |

# SOFTWARE FOR LEVELNIC

Software for Levelnic.
Simple operation and graphics for easy use and understanding.

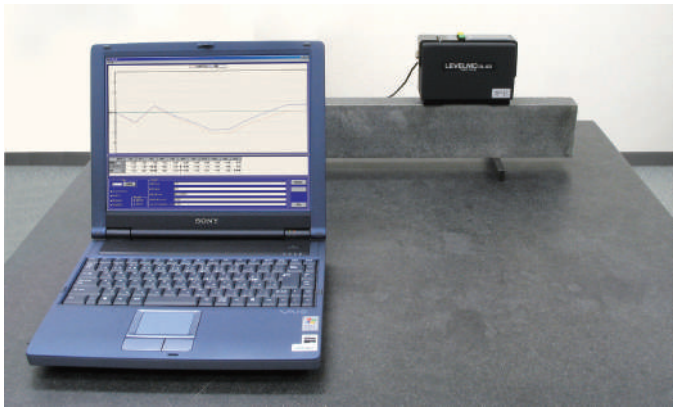
## Straightness measurement computer software (ST)
## Flatness measurement computer software (FL)

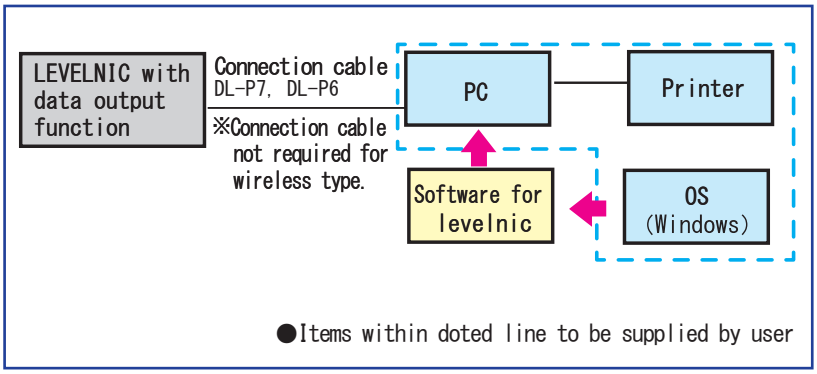
- Greatly reduces measurement time by recording the results for straightness and flatness measurements
- For cabled and wireless system
- Supported OS: Windows XP, Vista, 7, 8, 10, 11※

※ Without LEVELNIC DATA TRANSFER SOFTWARE L-LOG

■ Flatness measurement

■ Straightness measurement while connected to PC








### No need to install the software to PC

Only drag and drop EXE file, and double click to start. Also can be used directly from USB memory.

### Input selection

Data can be manually typed in from any level, including bubble tube type level

### Input signal from Levelnic over RS-232C

With computer connected to the Levelnic output, sequential measurements taken at regular intervals can be used to calculate flatness and straightness for display, printing and storage. (saved measurement data can not be revised)

### Input typed onto keyboard from bubble level for display, calculation and storage

Using a bubble level and keyboard to enter data, sequential measurement taken at regular intervals can be used for calculation, display and storage

### Displacement measurements (μm) typed onto keyboard for display, calculation and storage

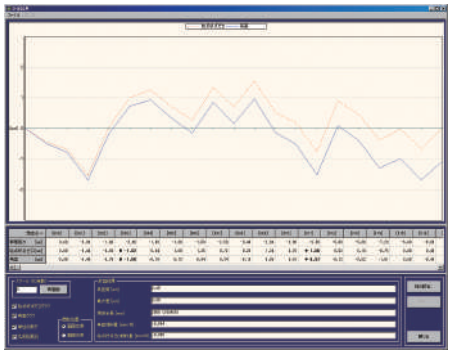
Measurement of displacement from a reference plane made with a linear gauge or dial indicator at regular intervals can be used in place of an electronic angle gauge (goniometer) and entered into keyboard for calculation, display and storage

# LEVELNIC MEASUREMENT SOFTWARE (STRAIGHTNESS SOFTWARE)

## Use to easily calculate straightness when connect to Levelnic with cable or wireless connection

● With Straightness software Levelnic can easily perform the straightness measurements that once required an autocollimator, and for a lower cost

■ Straightness measurement



USE

●Software to perform straightness calculations

FEATURES

●Both wired and wireless capability

●There are no restrictions on the model of the level when using key input.
Bubble tube type can also be used.

SPECIFICATIONS

●Supports: Windows XP, Vista, 7, 8, 10, 11

Refer to P141 for compatible models

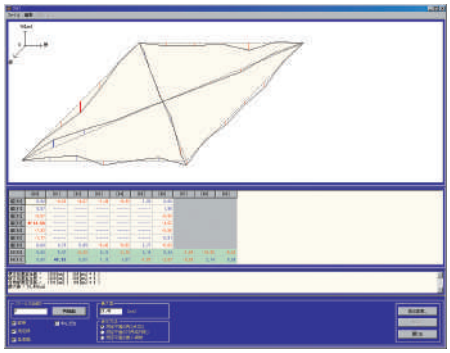
| Order No. | Model No. | Language |
|---|---|---|
| 010066 | ST | Japanese |
| 010070 | ST-E | English |
| 010073 | ST-C | Chinese |

# LEVELNIC MEASUREMENT SOFTWARE (FLATNESS SOFTWARE)

## Use to easily calculate flatness when connect to Levelnic with cable or wireless connection

● With Flatness software Levelnic can easily perform the flatness measurements that once required an autocollimator, and for a lower cost

■ Flatness measurement



USE

●Software to perform flatness calculations

FEATURES

●Both wired and wireless capability

●There are no restrictions on the model of the level when using key input.
Bubble tube type can also be used.

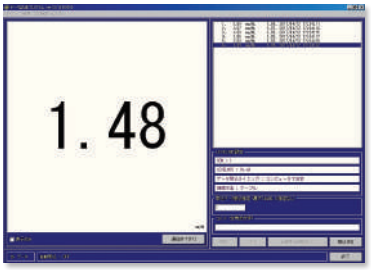
SPECIFICATIONS

●Supports: Windows XP, Vista, 7, 8, 10, 11

Refer to P141 for compatible models

| Order No. | Model No. | Language |
|---|---|---|
| 010065 | FL | Japanese |
| 010069 | FL-E | English |
| 010072 | FL-C | Chinese |

## LEVELNIC DATA RECORDING SOFTWARE (DATA RECORDING SOFTWARE LEVELOG)




USE
- ●Records output data from Levelnic

FEATURES
- ●Levelnic measurements are recorded to text file

SPECIFICATIONS
- ●Supports: Windows XP, Vista, 7, 8, 10, 11

Refer to P141 for compatible models

| Order No. | Model No. | Language |
|---|---|---|
| 010067 | LEVELOG | Japanese |
| 010068 | LEVELOG-E | English |

## LEVELNIC DATA RECORDING SOFTWARE (DATA RECORDING SOFTWARE LEVELOG-M)

For data management of multiple use of Levelnic.
Display and record up to eight data channels.

USE
- ●For displaying measurement values on PC screen and loading its data into PC for up to eight units of Levelnic

FEATURES
- ●Loadable up to 14,400 data points which can be saved as plain text
- ●Selectable data loading - Manual loading / Auto-loading at set time interval

SPECIFICATIONS
- ●Supports: Windows XP, Vista, 7, 8, 10, 11

※ Computer requires COM port or USB port for each connected Levelnic

Refer to P141 for compatible models

| Order No. | Model No. | Language |
|---|---|---|
| 010074 | LEVELOG-M | Japanese |
| 010075 | LEVELOG-M-E | English |

## LEVELNIC DATA TRANSFER SOFTWARE (DATA TRANSFER SOFTWARE L-LOG)

Able to transfer data to Excel and memo pad
for freely edit!

Wireless data output▶
Bluetooth Box(DTW-DL01)
P134

USE
- ●Transfers data measured with the compatible Levelnic and data acquired with the Bluetooth BOX to any software.

FEATURES
- ●Able to transfer data to Excel and memo pad for freely edit
- ●Able to adjust output interval to Excel software and others

SPECIFICATIONS
- ●Supports: Windows XP, Vista, 7, 8, 10, 11

Refer to P141 for compatible models

| Order No. | Model No. |
|---|---|
| 010076 | L-LOG |

# SOFTWARE FOR LEVLNIC COMPATIBLE PRODUCTS

| Product | Series | Product Image | Reference Page | Software for Levelnic: INTEGRATED SOFTWARE FOR MEASURING INSTRUMENTS SK-LOG | STRAIGHTNESS SOFTWARE ST | FLATNESS SOFTWARE FL | DATA RECORDING SOFTWARE LEVELOG | MULTI-DATA RECORDING SOFTWARE LEVELOG-M | DATA TRANSFER SOFTWARE L-LOG | Dedicated software |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 24 ~ 25 | 139 | 139 | 140 | 140 | 140 | – |
| LEVELNIC | DL-SXY | | 122 | ○ (Lite version included) | △ (1-axis measurement only) | △ (1-axis measurement only) | △ (1-axis measurement only) | △ (1-axis measurement only) | △ (1-axis measurement only) | – |
| LEVELNIC | DL-SXYW-S | | 123 | ○ (Lite ver. included) | – | – | – | – | – | – |
| LEVELNIC | DL-SXYW-S (HID) | | 123 | △ (Wired output only) | – | – | – | – | – | – |
| LEVELNIC | DL-mXY | | 124 | ○ | △ (1-axis measurement only) | △ (1-axis measurement only) | △ (1-axis measurement only) | △ (1-axis measurement only) | △ (1-axis measurement only) | – |
| LEVELNIC | DL-S4W Series | | 125 | ○ | ○ | ○ | ○ | ○ | ○ | ○ (Included) |
| LEVELNIC | DL-S4W(HID) | | 125 | △ (Wired output only) | △ (Wired output only) | △ (Wired output only) | △ (Wired output only) | △ (Wired output only) | △ (Wired output only) | – |
| LEVELNIC | DL-S3 Series | | 126 ~ 127 | ○ | ○ | ○ | ○ | ○ | ○ | – |
| LEVELNIC | DL-S2W Series | | 128 | ○ | ○ | ○ | ○ | ○ | ○ | ○ (Included) |
| LEVELNIC | DL-mini | | 129 | ○ (Supported by DL-m3 selection) | ○ (Supported by DL-m3 selection) | ○ (Supported by DL-m3 selection) | ○ (Supported by DL-m3 selection) | ○ (Supported by DL-m3 selection) | ○ (Supported by DL-m3 selection) | – |
| LEVELNIC | DL-m4 | | 130 | ○ | ○ (Supported by DL-m3 selection) | ○ (Supported by DL-m3 selection) | ○ (Supported by DL-m3 selection) | ○ (Supported by DL-m3 selection) | ○ (Supported by DL-m3 selection) | – |
| LEVELNIC | DL-m4M | | 130 | ○ (Supported by DL-m3 selection) | ○ (Supported by DL-m3 selection) | ○ (Supported by DL-m3 selection) | ○ (Supported by DL-m3 selection) | ○ (Supported by DL-m3 selection) | ○ (Supported by DL-m3 selection) | – |
| LEVELNIC | DL-m5 | | 131 | ○ | ○ (Supported by DL-m3 selection) | ○ (Supported by DL-m3 selection) | ○ (Supported by DL-m3 selection) | ○ (Supported by DL-m3 selection) | ○ (Supported by DL-m3 selection) | – |
| LEVELNIC | DL-m5W | | 131 | ○ | ○ (Supported by DL-m3 selection) | ○ (Supported by DL-m3 selection) | ○ (Supported by DL-m3 selection) | ○ (Supported by DL-m3 selection) | ○ (Supported by DL-m3 selection) | – |
| DIGITAL PROTRACTOR | DP-45XYS | | 142 | ○ | – | – | – | – | – | – |
| DIGITAL PROTRACTOR | DP-80XYH | | 142 | ○ | – | – | – | – | – | – |
| DIGITAL PROTRACTOR | DP-90XYM | | 143 | ○ | – | – | – | – | – | – |
| DIGITAL PROTRACTOR | DP-60XYB | | 143 | ○ | – | – | – | – | – | – |
| DIGITAL PROTRACTOR | DP-10XY Series | | 144 | ○ | – | – | – | – | – | ○ (Included) |
| DIGITAL PROTRACTOR | DP-10S・DP-10D SET Series | | 145 | ○ | – | – | – | – | – | ○ (Included) |
| DIGITAL PROTRACTOR | DP-180 | | 147 | ○ | – | – | – | – | – | – |
| BEVEL BOX | BB-180W | | 149 | ○ | – | – | – | – | – | – |

## DIGITAL PROTRACTOR DP-45XYS NEW!

Achieves industry-leading reading accuracy through the adoption of MEMS sensors and proprietary control correction methods.
Features exceptional durability (resistant to temperature, humidity, vibration, and shock), making it easy to carry to work sites.

Integrated software for measuring instruments ▶
SK-LOG
P24 ～27

SPECIFICATIONS

| | |
|---|---|
| Measuring Range | ± 45° |
| Minimum Reading Value | 0.001° (0.01mm/m) |
| Reading Accuracy (at 20℃) | ± 0.003° (within 0.000°～45.000°) |
| Operating Temperature Range | 0 to 40℃ |
| XY Orthogonality Accuracy | 1% |
| Communication Interface | RS-232C, (RS-485, UART, CAN) ※1 |
| Wireless Interface | Bluetooth, BLE(Bluetooth Low Energy)Class1 ※2, Wi-Fi ※3 |
| Display | 2.8-inch color LCD (resistive touch panel)<br>360° high visibility using IPS technology |
| Waterproof and Dustproof Rating | Compliant with IP54 |
| Vibration Resistance | Compliant with IEC/JIS C 60068-2-6 |
| Shock Resistance | Compliant with IEC/JIS C 60068-2-27 |
| Power Supply | Built-in polymer lithium-ion battery |
| Continuous Usage Time ※4 | 12 hours |
| Charging Time | 1.5 hours<br>※ Equipped with rapid charging and battery protection circuit |
| Dimensions | L115 × W66 × H32mm |
| Accessories | ● AC adapter for charging |

USE
- Leveling for semiconductor manufacturing equipment, high-precision machine tools, etc.

MATERIAL
- Case: Plastic
- Base: Aluminum (with magnet)

FEATURES
- Simultaneous 2-axis measurement for X and Y axes
- Equipped with a temperature compensation circuit
- IPS color LCD with a resistive touch panel
- USB Type-C interface for connectivity
- Long operating time (approx 12 hours) powered by LIB battery
- Compatible with SK-LOG integrated measurement software

※ 1: The communication functions in () are available as custom options.
※ 2: Our Bluetooth system qualification is with ANATEL(Brazil),CE (EU), FCC (U.S.A･Canada), IC (Canada),KCC (South Korea),MIC (Japan), NCC (Taiwan)and SRRC (China)
※ 3: Wi-Fi will be supported in a future firmware update.
※ 4: Continuous usage time may vary slightly depending on usage conditions such as ambient temperature.

| Order No. | Model No. | Weight |
|---|---|---|
| NEW! 010109 | DP-45XYS | 300g |

## DIGITAL PROTRACTOR DP-80XYH NEW!

A mid-range model with 1/1000 precision!
Designed for easy portability to work sites with excellent durability (resistant to temperature, humidity, vibration, and shock).

Integrated software for measuring instruments ▶
SK-LOG
P24 ～27

SPECIFICATIONS

| | |
|---|---|
| Measuring Range | ± 80° |
| Minimum Reading Value | 0.001° (0.01mm/m) |
| Reading Accuracy (at 20℃) | ± 0.005° (within 0.000°～20.000° )<br>± 0.008° (within 20.001°～40.000° )<br>± 0.01° (within 40.001°～80.000° ) |
| Operating Temperature Range | 0 to 40℃ |
| XY Orthogonality Accuracy | 1% |
| Communication Interface | RS-232C, (RS-485, UART, CAN) ※1 |
| Wireless Interface | Bluetooth, BLE(Bluetooth Low Energy)Class1 ※2, Wi-Fi ※3 |
| Display | 2.8-inch color LCD (resistive touch panel)<br>※ 360° high visibility using IPS technology |
| Waterproof and Dustproof Rating | Compliant with IP54 |
| Vibration Resistance | Compliant with IEC/JIS C 60068-2-6 |
| Shock Resistance | Compliant with IEC/JIS C 60068-2-27 |
| Power Supply | Built-in polymer lithium-ion battery |
| Continuous Usage Time ※4 | 12 hours |
| Charging Time | 1.5 hours<br>※ Equipped with rapid charging and battery protection circuit |
| Dimensions | L115 × W66 × H32mm |
| Accessories | ● AC adapter for charging |

USE
- Leveling and angle measurement for semiconductor manufacturing equipment, semiconductor testers, inspection jigs, etc.

MATERIAL
- Case: Plastic
- Base: Aluminum (with magnet)

FEATURES
- Simultaneous 2-axis measurement for X and Y axes
- Equipped with a temperature compensation circuit
- IPS color LCD with a resistive touch panel
- USB Type-C interface for connectivity
- Long operating time (approx 12 hours) powered by LIB battery
- Compatible with SK-LOG integrated measurement software

※ 1: The communication functions in () are available as custom options.
※ 2: Our Bluetooth system qualification is with ANATEL(Brazil),CE (EU), FCC (U.S.A･Canada), IC (Canada),KCC (South Korea),MIC (Japan), NCC (Taiwan)and SRRC (China)
※ 3: Wi-Fi will be supported in a future firmware update.
※ 4: Continuous usage time may vary slightly depending on usage conditions such as ambient temperature.

| Order No. | Model No. | Weight |
|---|---|---|
| NEW! 010108 | DP-80XYH | 300g |

## DIGITAL PROTRACTOR DP-90XYM NEW!

A well-balanced standard model with 1/100 precision.
Designed for easy portability to work sites with excellent durability (resistant to temperature, humidity, vibration, and shock).

Integrated software for measuring instruments
SK-LOG
P24 ～27

SPECIFICATIONS

| | |
|---|---|
| Measuring Range | ± 90° |
| Minimum Reading Value | 0.01° (0.01mm/m) |
| Reading Accuracy (at 20℃) | ± 0.03° (within 0.00°～20.00° )<br>± 0.06° (within 20.01°～40.00° )<br>± 0.09° (within 40.01°～90.00° ) |
| Operating Temperature Range | 0 to 40℃ |
| XY Orthogonality Accuracy | 1% |
| Communication Interface | RS-232C, (RS-485, UART)※1 |
| Wireless Interface | Bluetooth, BLE(Bluetooth Low Energy)Class1※2, Wi-Fi※3 |
| Display | 2.8-inch color LCD (resistive touch panel)<br>360° High visibility using IPS technology |
| Waterproof and Dustproof Rating | Compliant with IP54 |
| Vibration Resistance | Compliant with IEC/JIS C 60068-2-6 |
| Shock Resistance | Compliant with IEC/JIS C 60068-2-27 |
| Power Supply | Built-in polymer lithium-ion battery |
| Continuous Usage Time※4 | 10 hours |
| Charging Time | 1.5 hours<br>※ A rapid charging function and battery protection circuit. |
| Dimensions | L115 × W66 × H32mm |
| Accessories | ● AC adapter for charging |

USE
- For leveling of surface plates, machine tools, etc.

MATERIAL
- Case: Plastic
- Base: Aluminum (with magnet)

FEATURES
- Simultaneous 2-axis measurement for X and Y axes
- IPS color LCD with a resistive touch panel
- USB Type-C interface for connectivity
- Long operating time (approx. 10 hours) powered by LIB battery
- Compatible with the SK-LOG integrated measurement software

※ 1: The communication functions in () are available as custom options.
※ 2: Our Bluetooth system qualification is with ANATEL(Brazil),CE (EU), FCC (U.S.A･Canada), IC (Canada),KCC (South Korea),MIC (Japan), NCC (Taiwan)and SRRC (China)
※ 3: Wi-Fi will be supported in a future firmware update.
※ 4: Continuous usage time may vary slightly depending on usage conditions such as ambient temperature.

| Order No. | Model No. | Weight |
|---|---|---|
| NEW! 010107 | DP-90XYM | 300g |

## DIGITAL PROTRACTOR DP-60XYB NEW!

The popular DP-30XY2 has been renewed!
Supports data output via USB Type-C and wireless communication.

Integrated software for measuring instruments
SK-LOG
P24 ～27

SPECIFICATIONS

| | |
|---|---|
| Measuring Range | ± 60° |
| Minimum Reading Value | 0.01° (0.1mm/m) |
| Reading Accuracy (at 20℃) | ± 0.05° (within 0.00°～60.00°) |
| Operating Temperature Range | 0 to 40℃ |
| XY Orthogonality Accuracy | 1% |
| Communication Interface | RS-232C, (RS-485, UART)※1 |
| Wireless Interface | Bluetooth, BLE(Bluetooth Low Energy)Class1※2, Wi-Fi※3 |
| Display | 2.8-inch color LCD (resistive touch panel) |
| Power Supply | Built-in polymer lithium-ion battery |
| Continuous Usage Time※4 | 8 hours |
| Charging Time | 2 hours (with battery protection circuit) |
| Dimensions | L115 × W66 × H32mm |
| Accessories | ● AC adapter for charging |

USE
- Angle measurement for machinery, molds, and jigs and fixtures

MATERIAL
- Case: Plastic
- Base: Aluminum (with magnet)

FEATURES
- Simultaneous 2-axis measurement for X and Y axes
- Equipped with a resistive touch panel color LCD
- USB Type-C interface for connectivity
- Long operating time (approximately 8 hours) powered by a LIB battery
- Compatible with SK-LOG integrated measurement software

※ 1: The communication functions in () are available as custom options.
※ 2: Our Bluetooth system qualification is with ANATEL(Brazil),CE (EU), FCC (U.S.A･Canada), IC (Canada),KCC (South Korea),MIC (Japan), NCC (Taiwan)and SRRC (China)
※ 3: Wi-Fi will be supported in a future firmware update.
※ 4: Continuous usage time may vary slightly depending on usage conditions such as ambient temperature.

| Order No. | Model No. | Weight |
|---|---|---|
| NEW! 010106 | DP-60XYB | 300g |

# DIGITAL PROTRACTOR DP-10XY SERIES

PDI

This two-axis digital inclinometer takes measurements in X and Y direction at same time.
With 0 cal., 1/2 cal. features, can also be used as a level.

Integrated software for measuring instruments ▶
SK-LOG

P24 ～27

Output from sensors can also be displayed or recorded on PC with dedicated software

USE
- Surface plate and machine tool angle of inclination measurement

MATERIAL
- Case: Aluminum
- Base: Aluminum alloy

FEATURES
- Simultaneously measures angle of inclination in X and Y directions making leveling tasks easier
- Display is switchable to show only X, only Y, or XY measurements
- 0-cal. and 1/2 cal. switches allow calibration at the touch of a button.
- In sensor mode, the measurement range is ±9.998° with minimum reading of 0.002° (0-cal. and 1/2 cal. can not be used in this mode). Measured value on angle sensor (built-in) is to be output and shown on PC.
- Back-light display
- Output from sensors can also be displayed and recorded on PC with dedicated software
- Custom-made base can be attached to the threaded screw holes (M5 × P0.8) at the bottom base

SPECIFICATIONS

| | |
|---|---|
| Measuring Range | ± 9.99° |
| Minimum Reading | 0.01° |
| Operating Temperature | 0 ～ 40℃ |
| Accuracy | ± 0.01° (for measuring range less than ± 2°)<br>± 0.05° (for measuring range greater than ± 2°) |
| Repeatability | ± 0.01° |
| XY Orthogonal Accuracy | 1% or repeatability, whichever is greater |
| Response Time (measurement period) | Approx. 2.5s |
| Output SIgnal | Conforms to RS-232C※1 |
| Power | AA battery 2pcs<br>AC Adapter (DC3V output・AC100V ～ 240V) |
| Run Time (continuous use)※2 | Alkaline cells: Approx. 10 hrs. |
| Dimensions | L88 × W85 × H73mm |
| Accessories | ● AC adapter (DC3V output・AC100V ～ 240V) ● AA cells 2pcs ● Shock resistant aluminum case<br>● PC connection cable DL-P6※1 ● Angle calculation software ● Warranty・Instruction manual・Inspection report |

※1: PC without D-USB pin port (RS-232C) requires USB serial transmitter (optional)
※2: It may vary depending on measuring condition

| Order No. | Model No. | Software language | Weight |
|---|---|---|---|
| 010093 | DP-10XY | Japanese | 560g |
| 010086 | DP-10XY-E | English | 560g |

# DIGITAL PROTRACTOR DP-10S・10D SET SERIES

T PDI

Wireless 2-axis digital angle gauge with remote display set.
Capable of simultaneous X and Y measurements.

Integrated software for measuring instruments ▶
SK-LOG
P24 ～27

DP-10S　DP-10D

SPECIFICATIONS

| | |
|---|---|
| Model | Sensor: DP-10S　Display: DP-10D |
| Measuring Range | ± 9.99° |
| Minimum Reading | 0.01° |
| Operating Temperature | 0 ～ 40℃ |
| Accuracy | ± 0.01°　(for measuring range less than ± 2°)<br>± 0.05°　(for measuring range greater than ± 2°) |
| Wireless | Bluetooth Class 1 ※1 |
| Communication Range | 30 ～ 50m |
| Repeatability | ± 0.01° |
| XY Orthogonal Accuracy | 1% or repeatability, whichever is greater |
| Response Time (measurement period) | Approx. 2.5s |
| Output Signal | Conforms to RS-232C (DP-10D) ※2 |
| Power | 2 x AA battery each / AC Adapter (DC3V output・AC100V ~ 240V) included |
| Run Time (continuous use) Alkaline cells | DP-10S: Approx. 10 hrs. (communicating) Approx 4 hrs. (waiting to communicate)<br>DP-10D: Approx. 10 hrs. |
| Dimensions | DP-10S: L85 × W85 × H73mm<br>DP-10D: L145 × W76 × H30mm |
| Weight (Including battery) | DP-10S: 540g　DP-10D: 230g |
| Accessories | ● AC adapter (DC3V output・AC100V ~ 240V) × 2pcs<br>● AA battery × 4pcs　● Shock resistant aluminum case<br>● PC connection cable DL-P6 ※2　● Angle calculation software<br>● Warranty・Instruction manual・Inspection report |

※1: Our Bluetooth system qualification is with TELEC (Japan), FCC (U.S.A), CE (EU), KCC (South Korea)
※2: PC without D-USB pin port (RS-232C) requires USB serial transmitter (optional)

| Order No. | Model No. | Software language |
|---|---|---|
| 010094 | DP-10S・10D/SET | Japanese |
| 010087 | DP-10S・10D/SET-E | English |

USE
- Surface plate and machine tool angle of inclination measurement

MATERIAL
- DP-10S…Case: Aluminum / Base: Aluminum alloy
- DP-10D…Case: ABS

FEATURES
- Simultaneously measures angle of inclination in X and Y directions making leveling tasks easier
- Display is switchable to show only X, only Y, or XY measurements
- 0-cal. and 1/2 cal. switches allow calibration at the touch of a button.
- In sensor mode, the measurement range is ±9.998° with minimum reading of 0.002° (0-cal. and 1/2 cal. can not be used in this mode). Measured value on angle sensor (built-in) is to be output and shown on PC.
- Output from sensors can also be displayed and recorded on PC with dedicated software
- DP-10S has threaded screw holes (M5 × P0.8) at the bottom base for attaching custom-made base to the product

# DIGITAL LEVEL SENSOR DP-10M SERIES

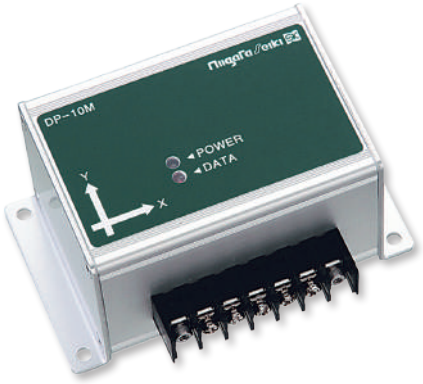
T

Can be used as built in two-axis sensor for OEM equipment

USE
- Sensors for measurement and control of angle of inclination in machine tools, construction machinery, structures, etc.

MATERIAL
- Case: Aluminum

FEATURES
- Simultaneously measures angle of inclination in X and Y directions
- When power applied, angle of inclination is output via RS-232C signal (power and output connection via terminal block)
- Output from sensors can also be displayed or recorded on PC with dedicated software

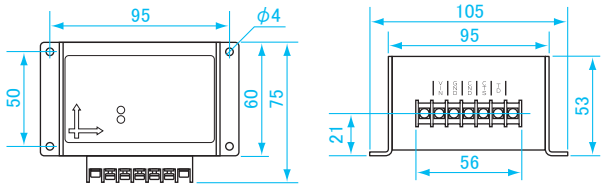



SPECIFICATIONS

| | |
|---|---|
| Measuring Range | ± 9.998° |
| Minimum Reading | 0.002° |
| Operating Temperature | 0 ～ 40℃ |
| Accuracy | ± 0.01°　(for measuring range less than ± 2°)<br>± 0.05°　(for measuring range greater than ± 2°) |
| Repeatability | ± 0.01° |
| XY Orthogonal Accuracy | 1% or repeatability, whichever is greater |
| Response Time (measurement period) | Approx. 2.5s |
| Output Signal | Conforms to RS-232C |
| Power | DC9 to 15V (approx. 70mA) |
| Dimensions | L105 × W75 × H53mm |
| Accessories | ● Angle calculation software<br>● Warranty・Instruction manual<br>● Spade terminal (Y type) 5 pcs |

※: Cable is to be self-made by purchaser.

● DIMENSIONS　Units: mm




| Order No. | Model No. | Software language | Weight |
|---|---|---|---|
| 010096 | DP-10M | Japanese | 270g |
| 010088 | DP-10M-E | English | 270g |

# DIGITAL PROTRACTOR DP-50

PDI

Digital angle measurement.  High precision measurement & quick measurement time.

USE
- For angle of tilt measurement

MATERIAL
- Body: Aluminum

FEATURES
- Digital inclinometer is useful tool for every site
- Slit encoder ensures accuracy and stability
- Zero setting not required
- Zero setting function
- Display hold function
- Measuring face: V grooved (2 sides)
- Magnetic vertical measuring face

SPECIFICATIONS

| | |
|---|---|
| Measuring Range | ± 50° |
| Minimum Reading | 0.1° |
| Accuracy | ± 0.1°  (0 ~ 50°) |
| Repeatability | ± 0.1° |
| Operating Temperature | 0 ~ 50℃ |
| Display  Units | DEG |
| Dimensions | L141 × W47 × H109mm  (excluding protrusions) |
| M5  Mounting Holes | Screw hole spacing: 80mm  (distance from end to screw hole: 11mm) |
| Power Source | 9V dry cell 1pc |
| Run Time  (continuous use) | Alkaline dry cell: Approx. 15 hrs.<br>※ May vary depending upon measurement conditions |
| Accessories | ● Soft case  ● Warranty・Instruction manual・Inspection report  ● 9V dry cell |

| Order No. | Model No. | Weight |
|---|---|---|
| 010091 | DP-50 | 950g |

# DIGITAL PROTRACTOR DP-90G EX

PDI

Digital angle measurement. High precision & quick measurement.

USE
- For inclination measurement

MATERIAL
- Body: Aluminum

FEATURES
- A digital protractor with a wide measurement range (90°) using a liquid sensor
- The display is automatically reversed when the product is turned upside down
- Display unit can be switched between DEG, mm/M or %
- Notification tones for 0°, 90° and for 0%, 0mm/M
- With backlight for easy reading in a dark place (auto light off after approx. 1 min.)
- Display hold function  ●Measuring surface is V grooved with magnet
- Auto power off function (after approx. 6 min.)

SPECIFICATIONS

| | |
|---|---|
| Measuring Range | ± 90° |
| Minimum Reading | Degree: 0.05°  Percentage: 0.1%  Inclination: 1mm/M |
| Reading  Accuracy | ± 0.3°  (0° ~ 90°) |
| Operating Temperature | 0 ~ 50℃ |
| Display Setting Time | Approx. 10 sec. |
| Power Source | 9V dry cell × 1pc |
| Dimensions | L173 × W47 × H68mm  (excluding protrusions) |
| Accessories | ● Soft case  ● Warranty・Instruction manual・Inspection report  ● 9V dry cell battery |

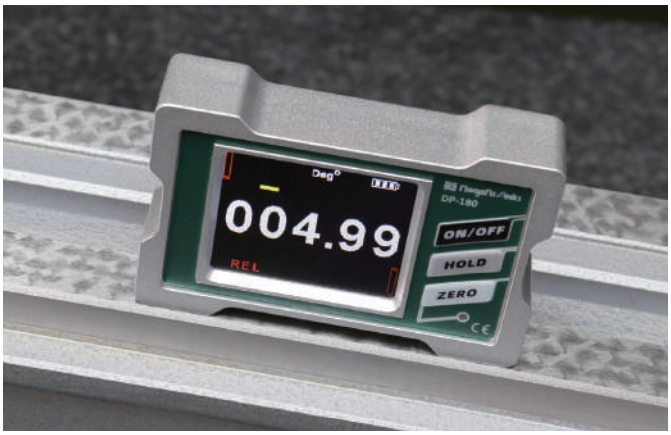
| Order No. | Model No. | Weight |
|---|---|---|
| 010098 | DP-90G EX | 550g |

# DIGITAL PROTRACTOR DP-180

PDI

Compact digital inclinometer with a wide measuring range.
Data output by connecting with the included USB cable.

Integrated software for measuring instruments ▶
SK-LOG
P24 ～27




USE
- For inclination measurement

MATERIAL
- Body: Aluminum

FEATURES
- Zero setting at desired position
- Absolute measurement mode that can store the origin
- Display hold function
- With magnets on measuring surface (bottom & left)
- Data can be sent by connecting a USB cable

SPECIFICATIONS

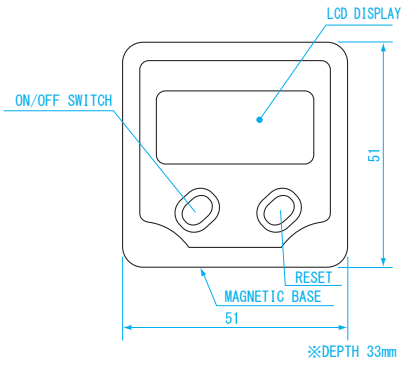
| | | | |
|---|---|---|---|
| Measuring Range | ± 180° | Display Unit | DEG |
| Minimum Reading | 0.01° | Power Source | Litium-ion battery |
| Operating Temperature | 0 ～ 40℃ | Run Time (Continuous use) | Approx. 6 hrs.<br>※ Depending on measurement condition |
| Reading Accuracy | ± 0.05° (when at 20℃) | Dimensions | L83 × W20 × H53mm |
| Repeatability | ± 0.03° | Weight | 125g |
| Accessories | ● USB cable ● AC adapter (for charging・AC100V ～ 240V)<br>● Warranty・Instruction manual・Inspection report | | |

| Order No. | Model No. | Weight |
|---|---|---|
| 010045 | DP-180 | 125g |

## BEVEL BOX　BB-180

Compact design digital inclinometer.
It can be used in small spaces where it could not be installed before.

● DIMENSIONS　Units: mm




USE
- ●For all processes that require precise angle measurement, such as assembly, molding, machining and fixtures

MATERIAL
- ●Aluminum frame, Plastic face/back, magnet on base

FEATURES
- ●Zero-setting at desired position
- ●Auto power off function (after approx. 5 min.)

POWER
- ●One CR2032 (Lithium) battery included for testing

※ Quantization Error ( ± 1 digit ) not included

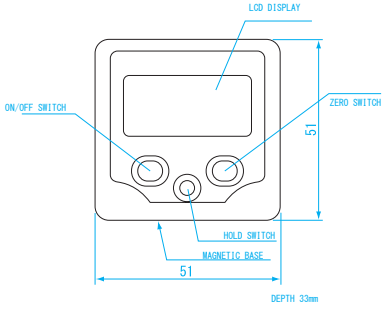
| Order No. | Model No. | Measuring Range | Resolution | Operating Temperature | Accuracy※ | Repeatability | Weight |
|---|---|---|---|---|---|---|---|
| 010101 | BB-180 | ± 180.0° | 0.1° | 5～45℃ | ± 0.2° | 0.1° | 120g |

## BEVEL BOX BB-180A

Compact design digital inclinometer.
It can be used in small spaces where it could not be installed before.

**Absolute measurement mode stores true horizontal**

● DIMENSIONS　Units: mm




USE
- ●For all processes that require precise angle measurement, such as assembly, molding, machining and fixtures

MATERIAL
- ●Body: Aluminum (with magnet on base)

FEATURES
- ●Zero setting at desired position
- ●Absolute measurement mode stores true horizontal
- ●"Hold" button to fix reading on display
- ●Auto power off function (after approx. 5 min.)

POWER
- ●One CR2032 (Lithium) battery included for testing

※ Quantization Error ( ± 1 digit ) not included

| Order No. | Model No. | Measuring Range | Resolution | Operating Temperature | Accuracy※ | Repeatability | Weight |
|---|---|---|---|---|---|---|---|
| 010102 | BB-180A | ± 180.0° | 0.1° | 5～45℃ | ± 0.2° | 0.1° | 170g |

## BEVEL BOX BB-180L

T PDI 0

Compact design digital inclinometer.
It can be used in small spaces where it could not be installed before.

### Large LCD with backlight for easy reading in a dark place

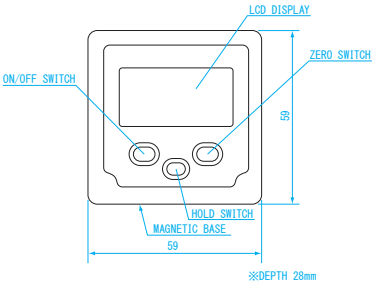
USE
- For all processes that requires precise angle measurement, such as assembly, molding, machining and fixtures

MATERIAL
- Body: ABS Base: Aluminum (with magnet on base)

FEATURES
- Zero setting at desired position
- Absolute measurement mode stores true horizontal
- Large LCD with backlight for easy reading in a dark place
- "Hold" button to fix reading on display
- Auto power off function (after approx. 5 min.)

POWER
- One AAA battery (NOT included in the package)

● DIMENSIONS Units: mm




※1 Quantization Error (± 1 digit) not included ※2 When battery is not installed

| Order No. | Model No. | Measuring Range | Resolution | Operating Temperature | Accuracy※1 | Repeatability | Weight※2 |
|---|---|---|---|---|---|---|---|
| 010103 | BB-180L | ± 180.0° | 0.1° | 5～45° | ± 0.2° | 0.1° | 70g |

## BEVEL BOX BB-180W

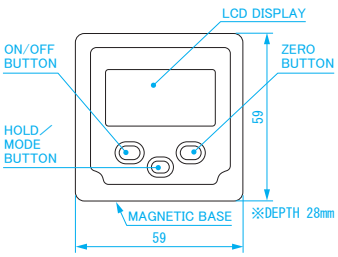
T PDI 0

With Built-in Bluetooth for sending or recording measured value to PC or smart phone.
With functions of backlight ON/OFF setting, and auto power off ON/OFF.

Integrated software for measuring instruments ▶
SK-LOG
P24 ～27

### Built-in Bluetooth type for sending measured value

● DIMENSIONS Units: mm




USE
- A precision angle measuring instrument for installing machines, molds and fixtures, for assembly and for setting reference standard

MATERIAL
- Body: ABS Base: Aluminum (with magnet on base)

FEATURES
- Radio system: Bluetooth4.1 (communication distance within 10m)※
- Zero setting at desired position
- Absolute measurement mode stores true horizontal
- With backlight for easy reading in a dark place (ON/ OFF switchable)
- Display hold function
- Auto power off function (after approx. 5 min.) (ON/ OFF switchable)

POWER
- One AAA battery (Not included in the package)

※Certified with TELEC (JAPAN) and CE (EU). Can also be used in China and Vietnam.

**SK-LOG for smartphone**

Download from the link below

**Android** (Google Play) ※Android 8.0 or later
https://play.google.com/store/apps/details?id=jp.co.niigataseiki.sklog

GET IT ON Google Play
Google Play

**iOS** (App Store) ※iPhone iOS13 or later
https://apps.apple.com/jp/app/id1499031153?mt=8

Download on the App Store
App Store

※The smartphone app can connect only 1 device.
If you wish to connect multiple units, please use SK-LOG STD version of the PC software (sold separately).

**Download free Lite version to check the usability of SK-LOG for PC.**
※Lite version: 1 connected device
Excel cell specification output not available
https://www.niigataseiki.co.jp/software_sklog/

※1 Quantization Error (± 1 digit) not included ※2 When battery is not installed

| Order No. | Model No. | Measuring Range | Resolution | Operation Temperature | Reading Accuracy※1 | Repeatability | Weight※2 |
|---|---|---|---|---|---|---|---|
| 010104 | BB-180W | ± 180° | 0.1° | 5～45℃ | ± 0.2° | 0.1° | 75g |

## PRECISION LEVEL (JIS CLASS A)

T PDI

Rust prevention▶
Zerust Film for Steel
P370

USE
- ●Bubble tube indicates horizontal and measures small inclinations
- ●Precision measurement for machine inspection and leveling

MATERIAL
- ●Base: Special tool steel body (hardened)

FEATURES
- ●JIS B7510
- ●Lapped and polished base
- ●Provided with inspection report

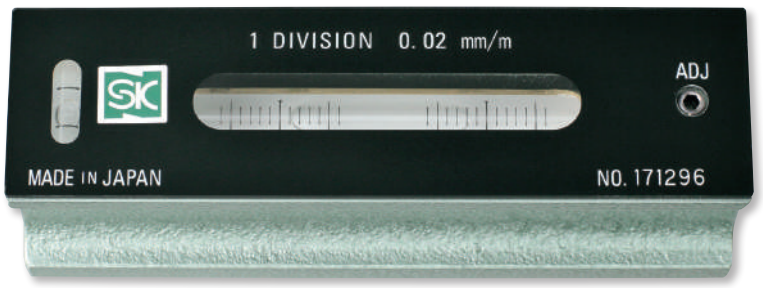
SPECIFICATIONS
- ●Sensitivity: 0.02mm/m
- ●Accuracy of the main bubble Full range accuracy: Less than ±0.5 graduation
  Adjacent accuracy: Less than 0.2 graduation
- ●Parallelism between V groove and base: Within 0.5 graduation
- ●Parallelism on base: Within 0.003mm

| Order No. | Model No. | Standard (mm) | Dimensions L × W × H (mm) | Weight |
|---|---|---|---|---|
| 160001 | FLA-150002 | 150 | 150 × 45 × 49 | 1.3kg |
| 160002 | FLA-200002 | 200 | 200 × 48 × 49 | 1.7kg |
| 160003 | FLA-250002 | 250 | 250 × 48 × 49 | 2.3kg |
| 160004 | FLA-300002 | 300 | 300 × 48 × 49 | 2.8kg |

## GENERAL PURPOSE PRECISION LEVEL

T

Rust prevention▶
Zerust Film for Steel
P370




USE
- ●Bubble tube indicates horizontal and measures small inclinations
- ●For machine installation and general mechanical assembly

MATERIAL
- ●Quality cast iron (FC250)

FEATURES
- ●Quality cast iron (FC250) with lapped finish to maintain precision

SPECIFICATIONS
- ●Sensitivity: 0.02mm/m
- ●Accuracy of the main bubble Full range accuracy: Less than ±2 graduation

| Order No. | Model No. | Standard (mm) | Dimensions L × W × H (mm) | Weight |
|---|---|---|---|---|
| 160005 | FLW-150002 | 150 | 150 × 48 × 47 | 1.3kg |
| 160006 | FLW-200002 | 200 | 200 × 48 × 47 | 1.7kg |
| 160007 | FLW-250002 | 250 | 250 × 48 × 47 | 2.3kg |
| 160008 | FLW-300002 | 300 | 300 × 48 × 47 | 2.8kg |

## SQUARE PRECISION LEVEL (JIS CLASS A)

PDI

USE
- ●Bubble tube indicates horizontal and measures small inclinations
- ●Precision measurement for machine inspection and leveling

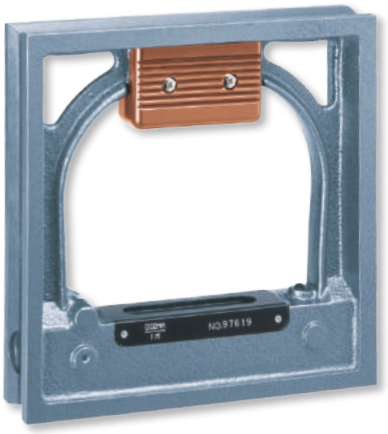
MATERIAL
- ●Cast iron

FEATURES
- ●JIS B7510
- ●Lapped and polished base
- ●Provided with inspection report

SPECIFICATIONS
- ●Sensitivity: 0.02mm/m
- ●Accuracy of the main bubble
  - -Full range of the main bubble: Less than ±0.5 graduation
  - -Adjacent accuracy: Less than 0.2 graduation
- ●Perpendicularity of sides and bottom: Less than 0.015mm/m
- ●Parallelism of V groove and V grooved surface: Less than 0.5 graduation
- ●Parallelism of top and bottom: Less than 0.5 graduation
- ●Flatness of bottom and sides: Less than 0.003mm

| Order No. | Model No. | Standard (mm) | Dimensions L × W × H (mm) | Weight |
|---|---|---|---|---|
| 160009 | SLA-150002 | 150 | 150 × 40 × 150 | 2.1kg |
| 160010 | SLA-200002 | 200 | 200 × 42 × 200 | 3.8kg |
| 160011 | SLA-250002 | 250 | 250 × 50 × 250 | 5.8kg |
| 160012 | SLA-300002 | 300 | 300 × 50 × 300 | 7.5kg |

## GENERAL PURPOSE SQUARE PRECISION LEVEL



USE
- ●Bubble tube indicates horizontal and measures small inclinations
- ●Ideal for machine assembly and general purpose use

MATERIAL
- ●Quality cast iron (FC250)

FEATURES
- ●Quality cast iron (FC250) with lapped finish to maintain precision

SPECIFICATIONS
- ●Sensitivity: 0.02mm/m
- ●Accuracy of the main bubble  Full range accuracy: Less than ±2 graduation

| Order No. | Model No. | Standard (mm) | Dimensions L × W × H (mm) | Weight |
|---|---|---|---|---|
| 160013 | SLW-150002 | 150 | 150 × 42 × 150 | 2.1kg |
| 160014 | SLW-200002 | 200 | 200 × 42 × 200 | 3.8kg |
| 160015 | SLW-250002 | 250 | 250 × 45 × 250 | 5.8kg |
| 160016 | SLW-300002 | 300 | 300 × 45 × 300 | 7.5kg |

## LEVEL METER KAIDAN

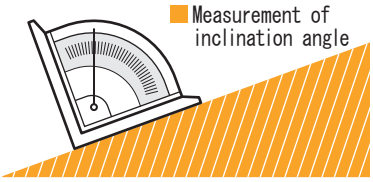
New stepped millimeter graduations prevents misreading.
Analog inclinometer with magnetic base.

USE
- Measurement of inclination angle

MATERIAL
- Body: AS resin
- Cover: Acrylic resin

FEATURES
- Analog dial easier to read than bubble tube type meter
- Stepped length of linear graduations by 1mm for easy-to-read
- Lightweight and handy
- With magnetic base

SPECIFICATIONS
- Measuring range: 0~90˚
- Minimum reading: 1˚
- Accuracy: ±0.5˚




| Order No. | Model No. | Product Type | Magnetic Attraction (Reference Value) | Dimensions H × W × T (mm) | Weight |
|---|---|---|---|---|---|
| 011012 | LM-90KDS | Strong magnet type | 40N | 95 × 95 × 30 | 100g |
| 011013 | LM-90KD | Regular magnet type | 10N | 95 × 95 × 30 | 120g |

## LEVEL MATE

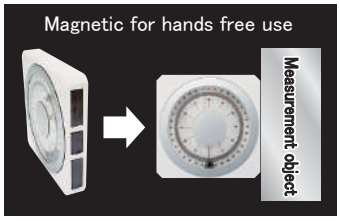
Analog inclinometer with magnet on right vertical surface

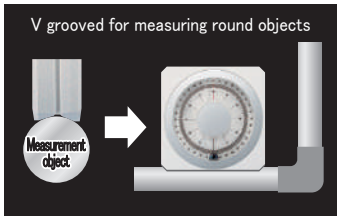
USE
- Tilt angle measurement

MATERIAL
- Plastic

FEATURES
- Setting angles for machine work
- Mechanical assembly, installation
- Miscellaneous plumbing work
- Construction and related work
- V grooved on bottom, magnet on vertical surface

SPECIFICATIONS
- Measuring range: 0~360˚
- Minimum reading: 1˚
- Accuracy: ±0.5˚




| Order No. | Model No. | Dimensions H × W × T (mm) | Weight |
|---|---|---|---|
| 011030 | LM-360 | 110 × 110 × 20 | 140g |

## DIAL SLANT RULE KAIDAN

Analog angle meter with new stepped millimeter graduations that prevents misreading

USE
- Inclination angle measurement

MATERIAL
- Body: ABS
- Cover: Styrol

FEATURES
- Easier to read compared to bubble level
- Kaidan style graduation for easy reading
- Lightweight and handy
- With handle and hook hole

SPECIFICATIONS
- Measuring range: 0~180˚
- Minimum reading: 1˚
- Accuracy: ±0.5˚

DSR-180KD

DSRM-180KD
(with magnet)

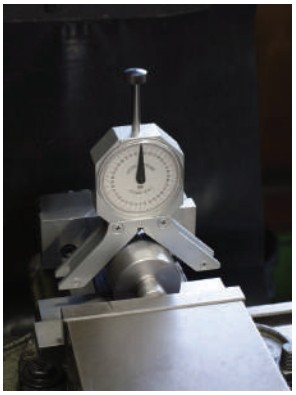
Dual scales for Angle & Inclination measurement

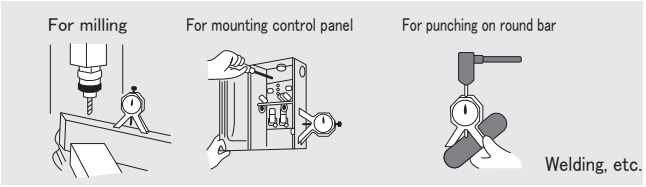
| Order No. | Model No. | Type | Magnetic Attraction (Reference Value) | Dimensions L × H × W (mm) | Weight |
|---|---|---|---|---|---|
| 011002 | DSR-180KD | - | - | 182 × 92 × 20 | 84g |
| 011003 | DSRM-180KD | with magnet | 8N | 182 × 92 × 20 | 86g |

# LEVEL POINT GAUGE

T

## Tilt angle measuring and punching can be done at once





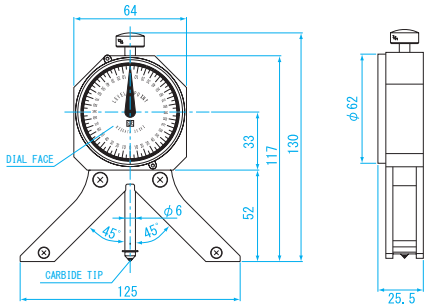

USE
- For measuring tilt angle and punching on round bar

MATERIAL
- Body: Aluminum
- Leg: Steel

FEATURES
- Single touch for direct angle reading
- Can quickly and accurately measure any angle from horizontal to vertical
- Punch end is carbide tipped
- Magnetic feet

SPECIFICATIONS
- Measuring range: 0~360°
- Minimum reading: 1°
- Accuracy: ±1°
- Applicable diameter for V base: φ20~100mm

● DIMENSIONS Units: mm




| Order No. | Model No. | Dimensions H × W × T (mm) | Weight |
|---|---|---|---|
| 011022 | LP-360 | 130 × 125 × 25 | 400g |

# ALUMINUM BUBBLE LEVEL / ALUMINUM BUBBLE LEVEL WITH MAGNET

O

## High quality bubble tube that is Made-in-Japan
## Magnet attached on measuring face (ALM series)

ALM-600

USE
- To measure horizontal and vertical

MATERIAL
- ALUMINUM

FEATURES
- High quality bubble tube that is Made-in-Japan
- V-grooved on measuring face that works great on spherical objects
- Graduation at 1/100, 2/100 inclination value
- Bubble tube for horizontal magnifies for easy reading
- Magnet attached on measuring face (ALM series)
- Scale graduation on both sides

SPECIFICATIONS
- Horizontal bubble tube ··· Sensitivity: 0.35mm/m = 0.0201° Accuracy: ±1.00mm/m = ±0.0573°
- Vertical ·45° bubble tube ··· Sensitivity: 0.50mm/m = 0.0286° Accuracy: ±1.50mm/m = 0.0859°

| Order No. | Model No. | Type | Bubble tube | Length (mm) | Height (mm) | Thickness (mm) | Weight |
|---|---|---|---|---|---|---|---|
| 111212 | ALS-300 | - | Horizontal・Verical・45° | 300 | 56 | 25 | 194g |
| 111213 | ALS-380 | | | 380 | | | 234g |
| 111214 | ALS-450 | | | 450 | | | 270g |
| 111215 | ALS-600 | | | 600 | | | 345g |
| 111216 | ALS-900 | | | 900 | | | 492g |
| 111200 | ALM-150 | With magnet | Horizontal | 150 | | | 164g |
| 111201 | ALM-230 | | Horizontal・Verical | 230 | | | 220g |
| 111202 | ALM-300 | | Horizontal・Verical・45° | 300 | | | 340g |
| 111203 | ALM-380 | | | 380 | | | 380g |
| 111204 | ALM-450 | | | 450 | | | 410g |
| 111205 | ALM-600 | | | 600 | | | 500g |

## BUBBLE LEVEL

CT-70

S-90

CR-24

USE
- Horizontal measurement for construction, installation, and leveling machinery

MATERIAL
- Acrylic resin, aluminum, cast iron

FEATURES
- Horizontal measurement is possible

Sensitivity is a gradient when the bubble starts moving.
Accuracy means that a measured value is at variance within the range of [±accuracy value].

| Order No. | Model No. | Type | Length (mm) | Height (mm) | Thickness (mm) | Sensitivity (mm/m) | Accuracy (mm/m) | Weight |
|---|---|---|---|---|---|---|---|---|
| 011070 | CT-70 | Acrylic resin / Cross | 70 | 25 | 15 | 0.5 | ± 1.5 | 29g |
| 011072 | CR-24 | Acrylic resin / Round | ϕ 24 | - | 10 | | ± 2.5 | 4g |
| 011081 | S-65 | Aluminum / Straight | 65 | 20 | 14 | | | 33g |
| 011082 | S-90 | Aluminum / Straight | 90 | 20 | 14 | | ± 1.5 | 45g |
| 011083 | T-50 | Aluminum / Flat | 50 | 30 | 15 | | | 49g |

## BUBBLE LEVEL WITH STRONG MAGNET (SAFETY)

Bubble level with a carabiner hook and a rope ring to prevent falling and secure safety operation.
Comes with a detachable holder to attach to a belt.

SJL-100W

SJL-150R

With a detachable holder to attach to a belt

USE
- Horizontal, vertical, 45°measurements

MATERIAL
- Body: ABS ●Measuring surface: Aluminum
- Carabiner hook: Stainless steel ●Holder: ABS

FEATURES
- Strong magnetic measuring surface. It does not fall with fine adjustment by a hammer while adsorbing.
- With a carabiner hook and a rope ring to prevent falling
- With a detachable holder to attach to a belt
- V grooved measuring surface for convenient measurement on round objects

SPECIFICATIONS
- Bubble tube sensitivity: 0.50mm/m=0.0286°
- Vial accuracy: Within ±1.50mm/m=±0.0859°
- 2-line acrylic bubble tube with phosphorescent tape
- 360°acrylic spot level for checking

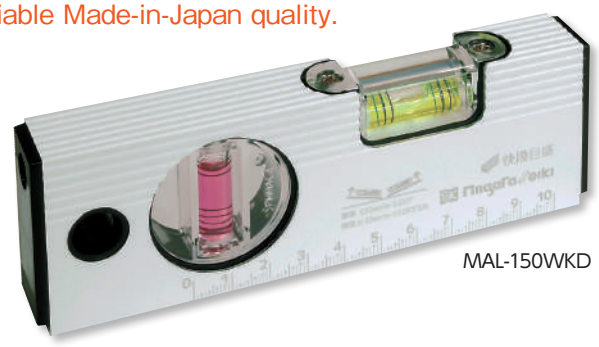
Easy installation, just slide down onto the belt

※ 1 : Holder and ring not included ※ 2 : Holder not included

| Order No. | Model No. | Color | Bubble tube type | Length ※1 (mm) | Height ※1 (mm) | Thickness ※1 (mm) | Weight ※2 |
|---|---|---|---|---|---|---|---|
| 111380 | SJL-100W | White | Horizontal・Vertical | 124 | 47 | 20 | 100g |
| 111381 | SJL-100R | Red | | | | | |
| 111382 | SJL-150W | White | Horizontal・Vertical・45° | 185 | | | 137g |
| 111383 | SJL-150R | Red | | | | | |

## ALUMINUM BUBBLE LEVEL WITH STRONG MAGNET KAIDAN

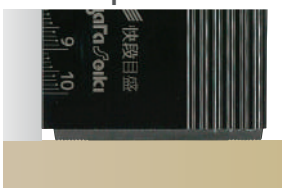
Super strong neodymium magnet at the measuring surface.
Reliable Made-in-Japan quality.




MAL-150WKD

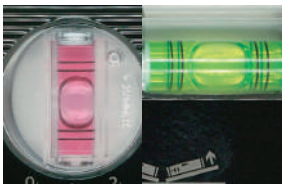
MAL-150BKD

### Flat side protector




Flat side protector for stable measurement upright

### 2 different colors of bubble tubes



Easy-to-distinguish by 2 different colors of vertival tube and horizontal tube

USE
- To measure horizontal and vertical

MATERIAL
- Body: aluminum

FEATURES
- Super strong neodymium magnet on the measuring surface
- Flat side protector for stable measurement upright
- Eesy to distinguish by two different colors for horizontal and vertical tubes
- Luminous tape under bubble tube that is useful in dark
- V grooved on measuring face that works great on spherical objects
- With Kaidan style graduation

SPECIFICATIONS
- Bubble tube sensitivity: 0.50mm/m = 0.0286°
- Accuracy: Less than ±1.00mm/m = ±0.0573°

### V grooved on measuring face

Suitable for spherical objects such as pipe

### Three times as strong as our other levels

Super strong neodymium magnet at the measuring surface.
Suitable for steel work and plant work.

| Order No. | Model No. | Color | Bubble tube type | Length (mm) | Height (mm) | Thickness (mm) | Weight |
|---|---|---|---|---|---|---|---|
| 111353 | MAL-150WKD | White | Horizontal・Vertical | 150 | 50 | 20 | 150g |
| 111354 | MAL-150BKD | Black | | | | | |

## SUPER STRONG MAGNETIC BUBBLE LEVEL

Twice as strong as our other magnetic levels.
It will not fall even if fine adjustments are made with a hammer while it is adsorbed.

USE
- Horizontal, vertical, and 45° measurements

MATERIAL
- Plastic

FEATURES
- Magnetic measuring surface
- V grooved measuring surface for convenient measurement on round objects

SPECIFICATIONS
- Bubble tube sensitivity: 0.50mm/m = 0.0286°
- Vial accuracy: Within ±1.50mm/m = ±0.0859°
- 4-line acrylic bubble tube with phosphorescent tape. 360° acrylic spot level (ML-100KB・ML-100KW).

ML-150KW

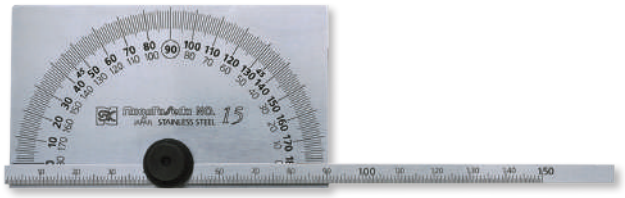
ML-100KB

| Order No. | Model No. | Color | Bubble tube type | Length (mm) | Height (mm) | Thickness (mm) | Weight |
|---|---|---|---|---|---|---|---|
| 111218 | ML-100KB | Black | Horizontal・Vertical | 100 | 47 | 20 | 80g |
| 111219 | ML-100KW | White | | | | | |
| 111220 | ML-150KB | Black | Horizontal・Vertical・45° | 150 | | | 110g |
| 111221 | ML-150KW | White | | | | | |

## PROTRACTOR No.15

HOW TO MOVIE

With sliding graduated blade



USE
- Angle measurement

MATERIAL
- Stainless steel

FEATURES
- Depth measurement is possible with graduated blade

SPECIFICATIONS
- Graduation: 1°
- Maximum angle: 180°
- Accuracy: ±20′
- Protractor size: (H)52mm × (W)90mm × (T)1.2mm
- Blade size: (L)177mm × (T)1.2mm
  150mm ruler (graduation: 0.5mm)

| Order No. | Model No. | Weight |
|---|---|---|
| 008000 | PRT-15 | 80g |

## PROTRACTOR No.19

HOW TO MOVIE

Polished finish with graduated blade

USE
- Angle measurement

MATERIAL
- Stainless steel

FEATURES
- Polished finish

SPECIFICATIONS
- Graduation: 1°
- Maximum angle: 180°
- Accuracy: ±20′
- Protractor size: φ90mm × (T)1.2mm
- Blade size: (L)204mm × (T)1.2mm

| Order No. | Model No. | Weight |
|---|---|---|
| 008001 | PRT-19 | 81g |

## PROTRACTOR No.19

HOW TO MOVIE

Two blades type for measuring sharp angles

USE
- Angle measurement

MATERIAL
- Stainless steel

FEATURES
- Satin finish
- Can measure acute angle down to 10°

SPECIFICATIONS
- Graduation: 1°
- Maximum angle: 180°
- Accuracy: ±20′
- Size: φ90mm × (T)1.2mm
- Blade size: (L)204 × (T)1.2mm

| Order No. | Model No. | Weight |
|---|---|---|
| 008002 | PRT-19SW | 110g |

## PROTRACTOR No.19

HOW TO MOVIE

Satin finish with graduated blade

USE
- Angle measurement

MATERIAL
- Stainless steel

FEATURES
- Satin finish

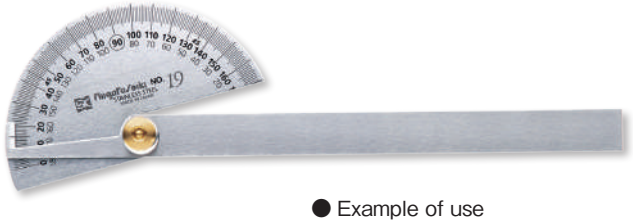
SPECIFICATIONS
- Graduation: 1°
- Maximum angle:180°
- Accuracy: ±20′
- Size: φ90mm × (T)1.2mm
- Blade size: (L)204mm × (T)1.2mm

| Order No. | Model No. | Weight |
|---|---|---|
| 008003 | PRT-19S | 81g |

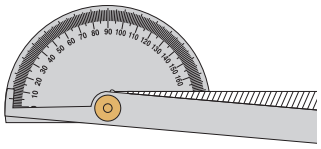
## PROTRACTOR No.19A

HOW TO MOVIE

Cut out protractor suitable for acute angle measurement



● Example of use



Measurement of acute angle

USE
- ●Angle measurement

MATERIAL
- ●Stainless steel

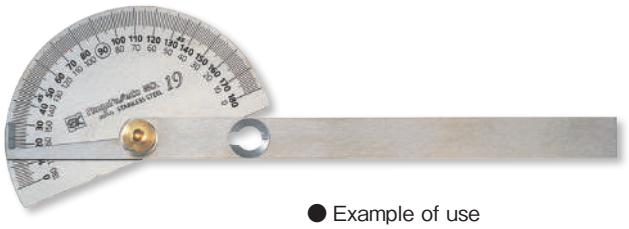
FEATURES
- ●Polished finish
- ●Cutout for measuring small angle

SPECIFICATIONS
- ●Graduation: 1°
- ●Maximum angle: 180°
- ●Accuracy±20′
- ●Protractor size: ϕ90mm × (T)1.2mm
- ●Blade: (L)204mm × (T)1.2mm

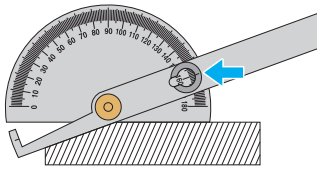
| Order No. | Model No. | Weight |
|---|---|---|
| 008004 | PRT-19A | 90g |

## PROTRACTOR No.19B

HOW TO MOVIE



● Example of use



Window with the baseline for easier scale reading

USE
- ●Angle measurement

MATERIAL
- ●Stainless steel

FEATURES
- ●Polished finish
- ●Protractor blade contains stop for setting a baseline angle and measuring against that set point

SPECIFICATIONS
- ●Graduation: 1°
- ●Maximum angle: 180°
- ●Accuracy: ±20′
- ●Protractor size: ϕ90mm × (T)1.2mm
- ●Blade: (L)204mm × (T)1.2mm

| Order No. | Model No. | Weight |
|---|---|---|
| 008005 | PRT-19B | 90g |

## PROTRACTOR No.182

HOW TO MOVIE

With a needle in the lock nut for marking

USE
- ●Angle measurement

MATERIAL
- ●Stainless steel

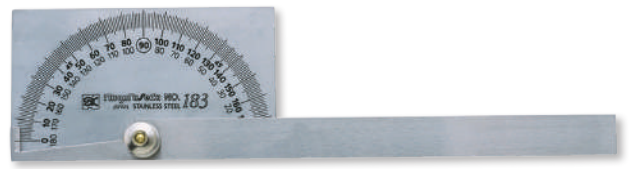
FEATURES
- ●Satin finish
- ●Center lock nut has a built in needle for marking center point

SPECIFICATIONS
- ●Graduation: 1°
- ●Maximum angle: 180°
- ●Accuracy: ±20′
- ●Protractor size: ϕ90mm × (T)1.2mm
- ●Blade: (L)204mm × (T)1.2mm

| Order No. | Model No. | Weight |
|---|---|---|
| 008182 | PRT-182S | 155g |

## PROTRACTOR No.183

HOW TO MOVIE



USE
- ●Angle measurement

MATERIAL
- ●Stainless steel

FEATURES
- ●Satin finish

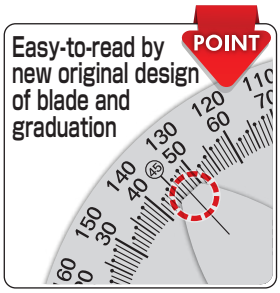
SPECIFICATIONS
- ●Graduation: 1°
- ●Maximum angle: 180°
- ●Accuracy: ±20′
- ●Protractor size: (H)52mm × (W)90mm × (T)1.2mm
- ●Blade: (L)204mm × (T)1.2mm

| Order No. | Model No. | Weight |
|---|---|---|
| 008183 | PRT-183S | 90g |

## PROTRACTOR KAIDAN No.19

T

Easy-to-read by newly and originally designed blade and graduation




USE
- Angle measurement

MATERIAL
- Stainless steel

FEATURES
- Easy-to-read by Kaidan style graduation plus blade designed not to hide graduation

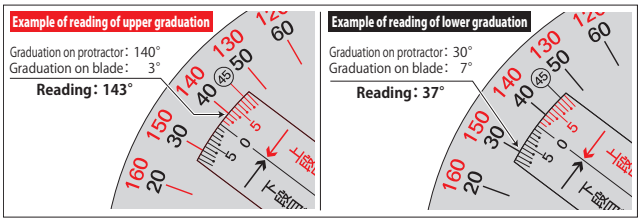
SPECIFICATIONS
- Protractor size φ90mm × (T)1.2mm
- Blade size φ90mm × (T)1.2mm
- Blade 10cm ruler

| Order No. | Model No. | Maximum angle | Graduation | Accuracy | Weight |
|---|---|---|---|---|---|
| 008006 | PRT-19KD | 180° | 1° | ± 20′ | 60g |

## PROTRACTOR KAIDAN No.30

T

New original design of graduation




USE
- Angle measurment

MATERIAL
- Stainless steel

FEATURES
- Reading: Total of degree on protractor (10° unit) and matched degree on blade (1° unit)

SPECIFICATIONS
- Protractor size φ120mm × (T)1.5mm
- Blade size φ240mm × (T)1.5mm
- Blade 10cm ruler

| Order No. | Model No. | Maximum angle | Graduation | Accuracy | Weight |
|---|---|---|---|---|---|
| 008031 | PRT-30KD | 180° | 1° | ± 20′ | 117g |

## PROTRACTOR No.30

T

HOW TO MOVIE

Recommended for plate working.
Cost-effective model with this performance at this price.

USE
- Angle measurement

MATERIAL
- Stainless steel

FEATURES
- Satin finish
- Graduation: 1°
- Maximum angle: 180°
- Accuracy: ±15′
- Protractor size: φ120mm × (T)1.5mm
- Blade size: (L)315mm × (T)1.5mm

| Order No. | Model No. | Weight |
|---|---|---|
| 008030 | PRT-30S | 190g |

## PROTRACTOR No.101

T

HOW TO MOVIE

Recommended for plate working.
Fixable and graduated blade.

USE
- Angle measurement

MATERIAL
- Stainless steel

FEATURES
- Satin finish
- Blade can be fixed. Ideal for work requiring high accuracy.

SPECIFICATIONS
- Graduation: 1°
- Maximum angle: 180°
- Accuracy: ±15′
- Protractor size: φ120mm × (T)1.5mm
- Blade size: (L)304mm × (T)1.5mm (Graduation 1mm 2 steps on one side)

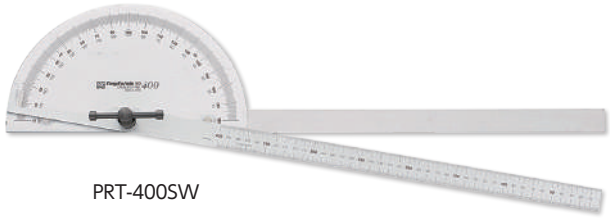
| Order No. | Model No. | Weight |
|---|---|---|
| 008101 | PRT-101S | 158g |

# PROTRACTOR No.300 • No.400 • No.600 • No.1000

HOW TO MOVIE

Large size protractor.
Please choose a suitable model based on your work size.

PRT-400S



PRT-400SW

USE
- Angle measurement

MATERIAL
- Stainless steel

FEATURES
- Satin finish
- With T-handle lock nut (PRT-300SW, PRT-400SW)

SPECIFICATIONS
- Graduation: 0.5°
- Maximum angle: 180°
- Accuracy: ±15′

| Order No. | Model No. | Size | Diameter (mm) | Thickness (mm) | Number of blade | Blade Length (mm) | Blade Thickness (mm) | Graduation on Blade | Weight |
|---|---|---|---|---|---|---|---|---|---|
| 008300 | PRT-300S | 300mm | 210 | 2.0 | 1 | 500 | 2.0 | 300mm (1mm step) | 610g |
| 008400 | PRT-400S | 400mm | 250 | 2.0 | | 634 | 2.0 | 400mm (1mm step) | 700g |
| 008600 | PRT-600S | 600mm | 320 | 2.5 | | 823 | 2.5 | 600mm (1mm step) | 1.6kg |
| 008700 | PRT-1000S | 1000mm | 320 | 2.5 | | 1260 | 2.5 | 1000mm (1mm step) | 2kg |
| 008302 | PRT-300SW | 300mm | 210 | 2.0 | 2 | 500 | 2.0 | 300mm (1mm step) | 670g |
| 008402 | PRT-400SW | 400mm | 250 | 2.0 | | 634 | 2.0 | 400mm (1mm step) | 1.1kg |
| 008602 | PRT-600SW | 600mm | 320 | 3.2 | | 823 | 2.5 | 600mm (1mm step) | 2.45kg |
| 008702 | PRT-1000SW | 1000mm | 320 | 3.2 | | 1260 | 2.5 | 1000mm (1mm step) | 3.15kg |

# PROTRACTOR No.192

To be attached onto machines and jigs

PRT192-120S

USE
- Angle measurement to be attached onto machines and jigs

MATERIAL
- Stainless steel

FEATURES
- Polished finish: PRT192-90S
- Satin finish: PRT192-120S・PRT192-200S・PRT192-250S・PRT192-300S

SPECIFICATIONS
- Maximum angle: 180°

| Order No. | Model No. | Graduation | Diameter (mm) | Thickness (mm) | Center hole diameter (mm) | Accuracy | Weight |
|---|---|---|---|---|---|---|---|
| 008901 | PRT192-90S | 1° | 90 | 1.2 | ϕ 5.0 | ±20′ | 40g |
| 008903 | PRT192-120S | | 120 | 1.5 | ϕ 6.5 | | 80g |
| 008930 | PRT192-200S | 0.5° | 210 | 2.0 | ϕ 8.0 | ±15′ | 310g |
| 008940 | PRT192-250S | | 250 | 2.0 | ϕ 8.0 | | 440g |
| 008960 | PRT192-300S | | 320 | 2.5 | ϕ 9.3 | | 870g |

# PROTRACTOR No.192-S2

To be attached onto machines and jigs

PRT192-200S2

USE
- Angle measurement to be attached onto machines and jigs

MATERIAL
- Stainless steel

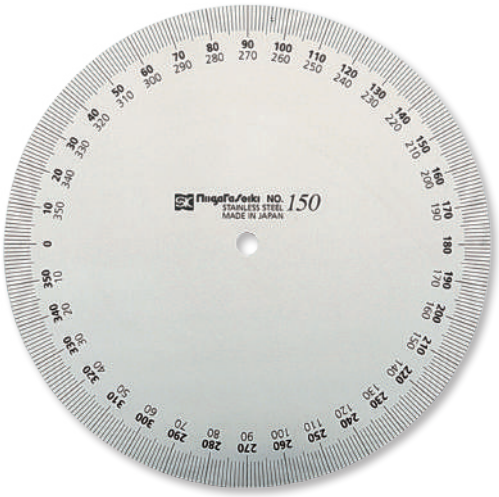
FEATURES
- Satin finish

SPECIFICATIONS
- Maximum angle: 180°

| Order No. | Model No. | Graduation | Diameter (mm) | Thickness (mm) | Center hole diameter (mm) | Accuracy | Weight |
|---|---|---|---|---|---|---|---|
| 008911 | PRT192-90S2 | 1° | 90 | 1.2 | ϕ 5.0 | ±20′ | 40g |
| 008912 | PRT192-120S2 | | 120 | 1.5 | ϕ 6.5 | | 80g |
| 008913 | PRT192-200S2 | 0.5° | 210 | 2.0 | ϕ 8.0 | ±15′ | 310g |
| 008914 | PRT192-250S2 | | 250 | 2.0 | ϕ 8.0 | | 440g |
| 008915 | PRT192-300S2 | | 320 | 2.5 | ϕ 9.3 | | 870g |

## PROTRACTOR No.193

To be attached onto machines and jigs




PRT193-150

USE
- Angle measurement to be attached onto machines and jigs

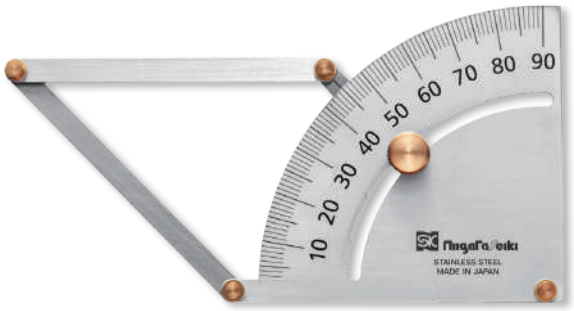
MATERIAL
- Stainless steel

FEATURES
- A circle plate protractor
- Satin finish

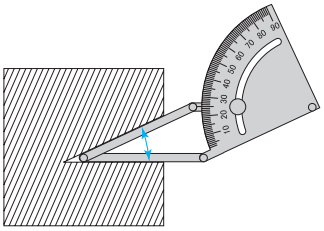
| Order No. | Model No. | Graduation | Maximum angle | Diameter (mm) | Thickness (mm) | Center hole diameter (mm) | Accuracy | Weight |
|---|---|---|---|---|---|---|---|---|
| 009109 | PRT193-90 | 1° | 360° | 90 | 1.2 | ϕ 5.0 | ±20′ | 60g |
| 009112 | PRT193-120 | | | 120 | 1.5 | ϕ 6.5 | | 140g |
| 009115 | PRT193-150 | | | 150 | 1.5 | ϕ 6.5 | | 210g |
| 009120 | PRT193-200 | 0.5° | | 200 | 2.0 | ϕ 8.0 | | 510g |
| 009125 | PRT193-250 | | | 250 | 2.0 | ϕ 8.0 | | 780g |
| 009130 | PRT193-300 | | | 300 | 2.5 | ϕ 10.0 | | 1.38kg |

## INSIDE PROTRACTOR

Measure interior angles in one step. Measurements at a glance.

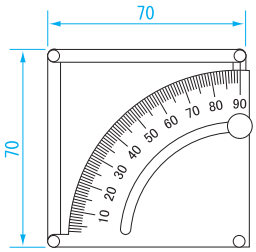



● Example of use



Measurement of interior angles

● DIMENSIONS Units: mm




USE
- Measurement of interior angles

MATERIAL
- Stainless steel

FEATURES
- Measure interior angles at a glance
- Silver matte finish for better legibility
- With plastic case for convenient carrying

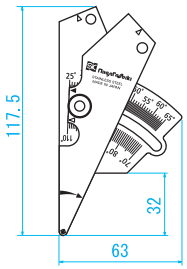
| Order No. | Model No. | Graduation | Angle measurement range | Accuracy | Weight |
|---|---|---|---|---|---|
| 007517 | IP-90 | 1° | 10°～90° | ± 0.5° | 43g |

# ANGLE GAUGE

T

Specialized for angle measurement of grooves with minimum reading 0.5°

● DIMENSIONS Units: mm




USE
- ●Butt angle measurement and gap angle measurement

MATERIAL
- ●Stainless steel

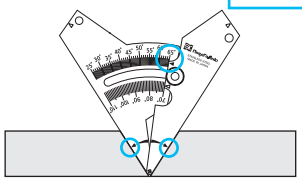
FEATURES
- ●Measurement of butt joint gap angle
- ●Sharpened tip enables measurement for root gap of 0mm, or when sheet thickness is less than 15mm
- ●Minimum reading 0.5°, large graduation for easy reading
- ●T-joint gap angle can be measured avoiding weld buildup
- ●Non-reflective satin finish for better legibility
- ●Solid and convenient carrying (provided with plastic carrying case)

SPECIFICATIONS
- ●Bevel angle: 25~65° (minimum graduation: 0.5°)
- ●Angle of cross weld part: 70~110°

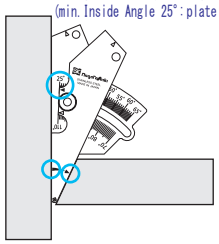
● Example use

Example 1) Butt joint gap angle measurement (max. inside angle 65°: plate thickness :30mm)

・How to read the value
Examples 1) & 2)
Angle between ◀ ▶ marks indicated at ◀



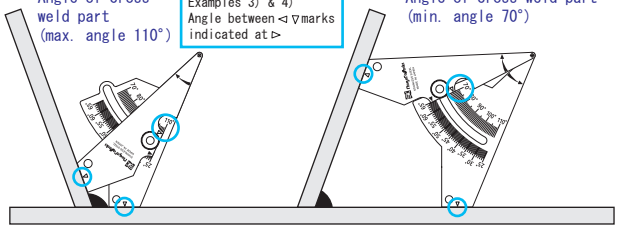
Example 2) T-joint gap angle measurement (min. Inside Angle 25°: plate thickness: 30mm)



Example 3) Angle of cross weld part (max. angle 110°)

How to read the value
Examples 3) & 4)
Angle between ◁ ▽ marks indicated at ▷

Example 4) Angle of cross weld part (min. angle 70°)



SPECIFICATIONS

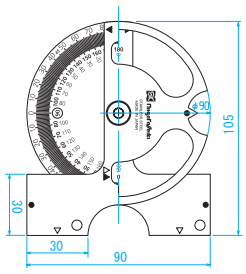
| Order No. | Model No. | Accuracy | Weight |
|---|---|---|---|
| 007518 | WGA-65 | ± 0.5° | 73.5g |

# ANGLE PROTRACTOR

T

Specialized for angle measurement.
Three measurement points enable multiple angle measurements.

● DIMENSIONS Units: mm




USE
- ●Measuring angles for sheet metal bending, welding flanges and butt joints, openings and bevels, scissors plates, etc.

MATERIAL
- ●Stainless steel

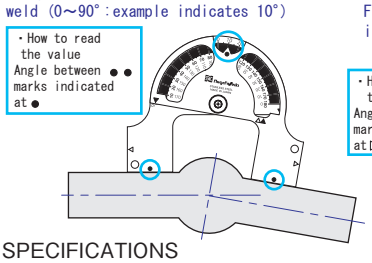
FEATURES
- ●Enables a wide range of angle measurements before and after welding process
- ●Direct measurement can be done without interference from swelling or weld bead
- ●Can measure sheet metal bends and outside angle measurements
- ●Non-reflective satin finish for better legibility
- ●Solid and convenient carrying (provided with plastic case)

SPECIFICATIONS
- ●Bevel angle: Scissors angle 30~130° (minimum graduation: 1°)
- ●Bending angle and angle of butt weld joint: 0~90°
- ●Stud and beam angle after welding: 0~180°

● Example use

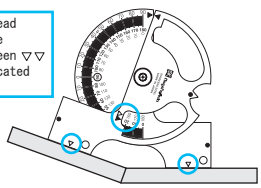
Example 1) Angle measurement of bent butt weld (0~90°: example indicates 10°)

・How to read the value
Angle between ● ● marks indicated at ●



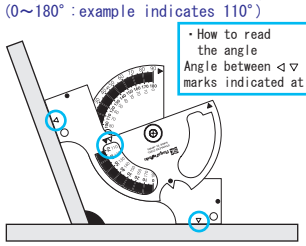
Example 2) Angle measurement of bent Flange and metal plate (0~180°: example indicates 20°)

・How to read the value
Angle between ▽ ▽ marks indicated at ▷



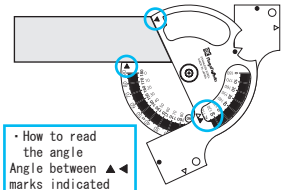
Example 3) Angle of cross weld part (0~180°: example indicates 110°)

・How to read the angle
Angle between ◁ ▽ marks indicated at ▷



Example 4) Plate bevel angle (30~130°: example indicates 65°)

・How to read the angle
Angle between ▲ ◀ marks indicated at ▶



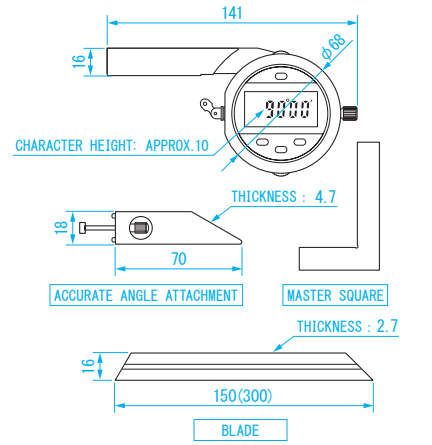
SPECIFICATIONS

| Order No. | Model No. | Accuracy of angle | Weight |
|---|---|---|---|
| 007519 | AP-130 | ± 0.5° | 100g |

# DIGITAL UNIVERSAL PROTRACTOR

Easy-to-read digital display.
Once setting the reference point (90°), angle measurement can be performed easily.

● DIMENSIONS Units: mm




USE
- ●Precise angle measuring instrument used as angle measurement of machine, tooling and fixtures, or for assembly, or as a reference standard

MATERIAL
- ●Blade: Stainless steel

FEATURES
- ●Display unit can be switched between「°」or「′」
- ●+−switchable
- ●Zero setting at desired angle
- ●Display orientation can be flipped 180°

SPECIFICATIONS
- ●Measuring range: 360°
- ●Resolution: 1′・0.01°

POWER
- ●One CR2032 (lithium) battery included for testing

ACCESSORIES
- ●Blade 150mm, 300mm ●Accurate angle attachment ●Master square

※1：Quantization Error (± 1 digit) not included ※2：Battery and blade not included

| Order No. | Model No. | Accuracy※1 | Weight※2 |
|---|---|---|---|
| 151155 | DUP-360AN | ± 5′ (0.08°) | 350g |

164p

164p

164p

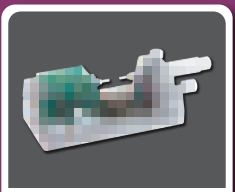
164p

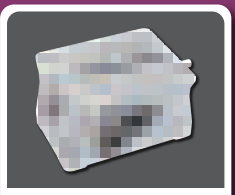
164p

165p

165p

165p


166p


166p

166p

# MEASUREMENT SENSOR

# DIGITAL PRECISION INDICATOR NEW!

Achieve wide-range, high-precision measurements with a measuring range of 10mm and a resolution of 0.1μm when combined with a display unit!
A digital precision indicator that can also function as a positioning sensor.

DPI-1001SC

DPI-1001LC
(Low measuring force type)

<Connection Example>
Digital precision indicator DPI-1001SC, Bench table for outside BTO-25C, LCD display for DPI DPI-DRC, Connection Cable for DPI (L) DPI-CL2C, Mounting Jig BTO-SPC

USE
- For wide-range, high-precision measurements when mounted on measuring stands or automated machines.

MATERIAL
- Body: Zinc
- Retention Section: Stainless Steel
- Spindle: Tool Steel
- Probe: Ceramic
- Rubber Bellows: NBR

FEATURES
- A digital precision indicator that can be connected to a separately sold display unit for precision dimensional measurement and use as a positioning sensor.
- Instantly reads absolute positions upon power-on, eliminating the need for frequent master adjustment and reducing setup time.
- The slim and durable W-bearing structure features metal bearings both above and below the measuring section, installed in a robust die-cast body for exceptional durability.
- The DPI-1001LC is a low measuring force type.

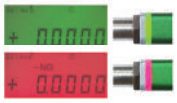
SPECIFICATIONS
- Position detection method: Optical absolute linear encoder
- Operating temperature range: -10 to 55°C (no condensation or freezing)
- Vibration resistance: 10 to 500Hz, double amplitude 3mm (MAX 20G), 2 hours in XYZ directions
- Probe: Ceramic Ball ϕ3.175mm (M2.5 mounting thread)
- Compatible cables: DPI-CS2C (Straight 2m) / DPI-CL2C (L-shaped 2m)
- Compatible display Unit: DPI-DRC

| Order No. | Model No. | Measuring Range (mm) | Minimum Reading Value (μm) | Indication Accuracy (μm) | Measuring Force (N) | Mechanical Response Speed | Protection Class | Weight |
|---|---|---|---|---|---|---|---|---|
| NEW! 152411 | DPI-1001SC | 10 | 0.1 | 1 or less | 1.65 or less | 5Hz | Equivalent to IP67 | 80g |
| NEW! 152412 | DPI-1001LC | | | | 0.35 or less (when rubber bellows are not installed) | 2Hz | Equivalent to IP67 (when rubber bellows are installed) | 80g |

## LCD DISPLAY FOR DPI NEW!

Displays measurement values when connected to an optional digital precision indicator.Compatible with the integrated measuring device communication software SK-LOG.

DPI-DRC



<Equipped with tolerance setting function>
When configured on the display unit, the indicator body also synchronizes to illuminate the color lamp.

USE
- Connects to the digital precision indicators DPI-1001SC/LC for displaying measurement values.

MATERIAL
- Body: ABS

FEATURES
- A display unit for digital precision indicators
- Compact controller with a one-channel specification
- The backlight changes to green (OK) or red (NG) based on the set values, enabling easy tolerance judgment even from a distance
- Reset can be performed at any position
- Equipped with preset, data hold, peak hold, and error functions
- Enabling switching of measurement direction
- Up to seven measurement conditions can be registered

SPECIFICATIONS
- External input/output: RS-232C
- Input signals: reset, hold, peak clear
- Output signals: -NG, OK, +NG, error
- Compatible indicators: DPI-1001SC, DPI-1001LC (Low measuring force type)
- Compatible cables: DPI-CS2C (Straight 2m) / DPI-CL2C (L-shaped 2m)

ACCESSORIES
- AC Adapter(AC100-240V)
- Panel Mounting Frame
- Connector
- Screws×2

| Order No. | Product Name | Model No. | Size | Weight |
|---|---|---|---|---|
| NEW! 152413 | DISPLAY | DPI-DRC | W49×H49×D100mm | 110g |
| NEW! 152439 | AC ADAPTER | DPI-ADC | Cable Length : 1.6m | 80g |

## CONNECTION CABLE FOR DPI NEW!

Connects an optional digital precision indicator to a display unit

DPI-CS2C

DPI-CL2C

USE
- For connecting the digital precision indicators DPI-1001SC/LC to the display unit DPI-DRC.

FEATURES
- A connector cable for connecting a digital precision indicator to a display unit.

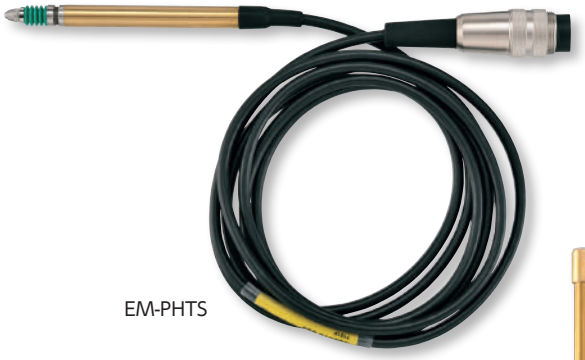
SPECIFICATIONS
- Compatible indicators: DPI-1001SC, DPI-1001LC (Low measuring force type)
- Compatible display unit: DPI-DRC

| Order No. | Model No. | Connector Type | Cable Length (m) | Weight |
|---|---|---|---|---|
| NEW! 152415 | DPI-CS2C | Straight | 2 | 50g |
| NEW! 152416 | DPI-CL2C | L-shaped | | 50g |

# ELECTRIC MICROMETER PROBE

For high precision measuring of 0.01 μm resolution by using SNAP GAUGE and ELECTRIC MICROMETER DISPLAY

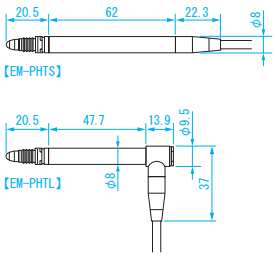
Display of Measurement Values ▶ Electric Micrometer Display P165
Measuring Jig ▶ S-Line Snap Gauge P282
For Precision Measurement of Hole Diameters ▶ S-Line Cylinder Gauge P264
For Measuring Eccentricity ▶ Eccentricity Measurement System P272 ~275
For Holding Probes ▶ Comparator Stand P280 ~281



EM-PHTS

EM-PHTL

● DIMENSIONS Units: mm




USE
- For high precision measurement

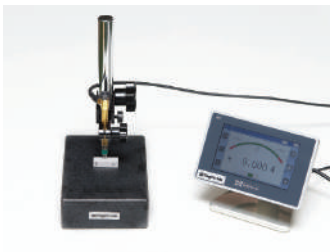
MATERIAL
- Steel

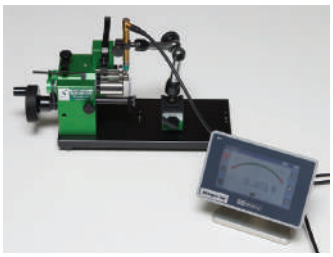
FEATURES
- Applicable to 0.01μm resolution by using ball bearing
- To be combined with ELECTRIC MICROMETER DISPLAY M3 and SNAP GAUGE (sold separately)

SPECIFICATIONS
- Linearity: 0.25%/ ±1mm
- Measuring force: ①0.63N ②0.16~4.0N (by spring conversion)
- Outer mount diameter: φ8mm - Fit tolerance h6
- Carrier frequency: 13kHz ● Input voltage: 3.0V
- Durability: Approx. 10,000,000 times ● Cable length: 2m

POWER
- Supplied from ELECTRIC MICROMETER DISPLAY M3

ACCESSORIES
- Replacement wrench





To be used with ELECTRIC MICROMETER DISPLAY M3 and SNAP GAUGE (sold separately).
(This unit cannot be functioned without them.)

| Order No. | Model No. | Type | Measuring Range (mm) | Movable Range (mm) | Resolution (μm) | Repeat Error (μm) | Weight |
|---|---|---|---|---|---|---|---|
| 152092 | EM-PHTS | Straight | ± 1 | 4.6 | 0.01 | 0.01 | 120g |
| 152093 | EM-PHTL | L shape | | | | | 120g |

# ELECTRIC MICROMETER DISPLAY

High reliability 0.01 μm resolution.For displaying measurement value by combination use of ELECTRIC MICROMETER PROBE (sold separately).

For Data Output Operation by Foot ▶ Mini Plug Foot Pedal P238

USE
- For displaying measurement value by combination use of ELECTRIC MICROMETER PROBE EM-PHTS / EM-PHTL

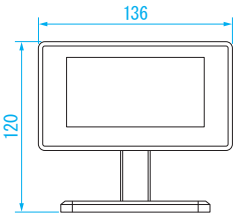
MATERIAL
- Body: Aluminum

FEATURES
- Simultaneous display of up to two channels. Tolerance of each channel can be set independently. ● Measurement data can be output to PC
- Touch-screen display ● Color display. OK/NG judgement and control point are shown in three colors (green, red, yellow).
- Display mode can be chosen from dial display or bar-graph display

SPECIFICATIONS
- Two channels simultaneous display
- Math function (Max. value, Min. value, Max. (minus) Min. value, average value and median value) ● Independent tolerance setting

POWER
- DC5V (AC adaptor <AC100-240V> included)

● DIMENSIONS Units: mm

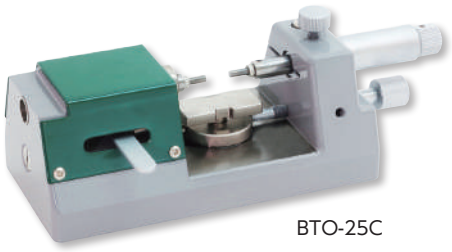



| Order No. | Model No. | Resolution (μm) | Output Signal | Applicable Models | Weight |
|---|---|---|---|---|---|
| 152091 | M3 | 0.01 | RS-232C、USB | EM-PHTS EM-PHTL | 600g |

# BENCH TABLE FOR OUTSIDE/INSIDE NEW!

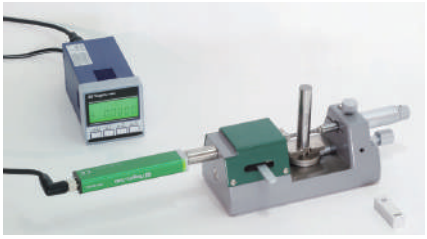
High-Precision Measurement of Mass-Produced Products is Possible by Attaching Digital Precision Indicators or Electric Micrometers.

Made-to-Order Product
(BTI-260C)



BTO-25C

BTI-67C



<Connection Example>
Digital Precision Indicator DPI-1001SC,Outer Diameter Measuring Device BTO-25C, Display Unit DPI-DRC,Connection Cable (L) DPI-CL2C, Mounting Jig BTO-SPC
BTO-SPC

P277 Detailed Specifications

USE
- Enables high-precision measurement of mass-produced items by attaching digitalprecision indicators or electric micrometers.

MATERIAL
- Body: Cast Iron
- Probe Tip: Carbide

FEATURES
- An outer diameter and inner diameter measuring device that supports high-precision comparative measurements by attaching optional dial gauges or indicators.
- Equipped with a lever for moving the probe back and forth, ensuring consistent and stable measurement force. (BTO-25C)

*This product is a comparative measuring device. Please prepare a master gauge tailored to the dimensions of your workpiece.

| Order No. | Model No. | Type | Measuring Range (mm) | Probe Stroke (mm) | Measuring Force (N) | Table Size (mm) | Weight |
|---|---|---|---|---|---|---|---|
| NEW! 152417 | BTO-25C | Outer diameter measurement | 0 ~ 25 | 25 | Compatible indicators | – | 1.6kg |
| NEW! 152419 | BTI-23C | Inner diameter measurement | φ 2 ~φ 20 (Maximum φ 23 with Optional Probe Replacement) | 1 | 1.47 | φ 50 (Center plate) | 1.3kg |
| NEW! 152418 | BTI-67C | | φ 4 ~φ 59 (Maximum φ 23 with Optional Probe Replacement) | 3 | 0.98 ~ 2.94 | 170 × 140 | 6kg |
| NEW! 152420 | BTI-260C | | φ 10 ~φ 260 | 5 | 0.98 ~ 2.94 | 303 × 220 | 30kg |

■ Optional Accessory: Mounting Jig 【Required mounting jig for using the precision indicator in combination with Bench table for outside BTO-25C.】

| Order No. | Model No. |
|---|---|
| NEW! 152421 | BTO-SPC |



# MEASURING BENCH SET

Ideal for measuring outer diameter of small precision parts.
Use with electric micrometer or digital indicator.

Various Replacement Probes ▶
Probes for Bench Set
P278

USE
- Enables measurement of small and precision parts by attaching digital precison indicators (stem diameter:φ8mm) or electric micrometers.

FEATURES
- Compact and light weight for carrying and saving space
- Equipped with two retraction levers
- XYZ stage with fine adjustment
- Adjustable measuring force (0.3~1.0N)
- Bench table can also be installed vertically

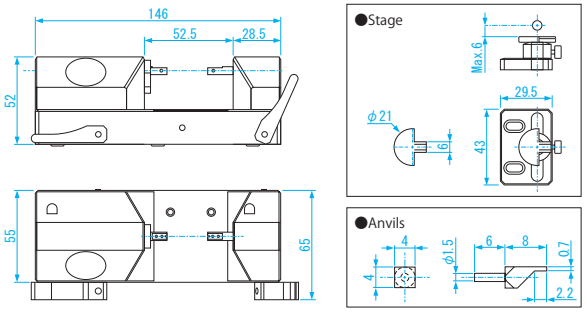
SPECIFICATIONS
- Standard probe: blade probe (0.7mm thickness)
- Repeatability: within 1μm

※This product is a Measuring Comparison Tool and therefore it will require a gauge that has the same presicion measurement for comparison standard

※The probe attachement of this product is in parallel condition when produced in factory.

Paralle adjusment by using wrapping device (Model LD-SET) is required when the probe angle or the attachement.
Also the direction of anvil is able to be adjusted to requested specification when ordered.

● DIMENSIONS Units: mm




| Order No. | Model No. | Measuring Range (mm) | Weight |
|---|---|---|---|
| 151771 | BT-10-SET | 0-10 | 1.9kg |

168p

168p

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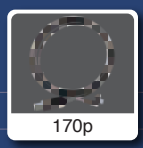
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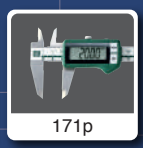
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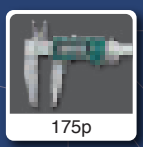
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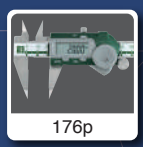
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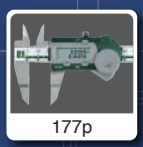
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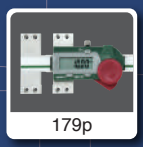
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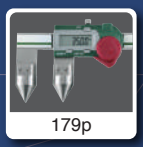
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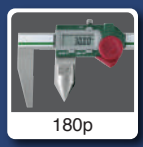
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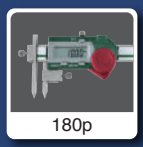
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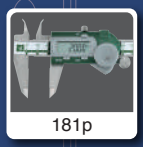
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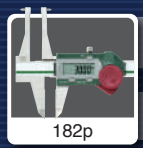
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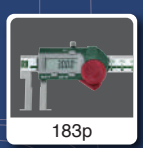
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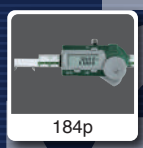
# VERNIER CALIPER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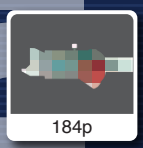
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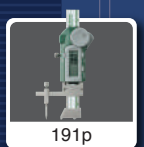
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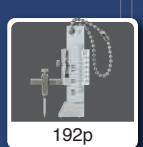
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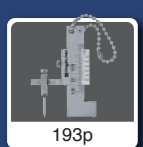
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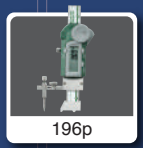
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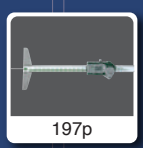
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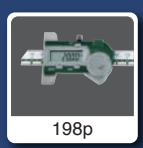
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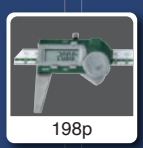
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# BLUETOOTH BOX FOR DIGITAL VERNIER CALIPER

Integrated software for measuring instruments ▶
SK-LOG
P24 ～27

For wireless transmitting of measurement data by attaching Bluetooth BOX to compatible digital vernier caliper.
Can be used in any countries by using each country's Bluetooth dongle.

USE
- Transmitting measurement data wireless to PC by attaching to compatible digital vernier caliper

MATERIAL
- Body: Aluminum
- Switch panel: ABS

FEATURES
- Wireless data transmitting by connecting to PC or tablet with Bluetooth function

※To use this product on PC or tablet without Bluetooth function, please purchase USB dongle in your residence country.
- Can be used in any countries by switching Bluetooth dongle
- Data output to Excel, and GO/ NOGO judgement is possible with the provided software

SPECIFICATIONS
- Bluetooth USB adaptor: Bluetooth 4.0 or above, confirmed to HOGP profile
- Signal: USB HID class(DG01)
  GATT profile(DG02)
- Run time: Approx. 17 hrs.(when sending 250 data per hour)
- Charging: Approx. 100 min.

ACCESSORIES
- Data cable
- USB charging cable
- Mounting plate
- Bluetooth USB dongle adaptor Class 2 (Japan only)
- Dedicated software(SK-LOG Lite version)
- Instruction manual

POWER
- Lithium-polymer battery

<Applicable Products>

| Product Category | Product Name | Model No. | Page Referred |
|---|---|---|---|
| VERNIER CALIPER | DEGITAL VERNIER CALIPER SERIES | GDC*-*** | 172～173<br>176～184 |
| VERNIER CALIPER | DEGITAL SCRIBING CALIPER SERIES | GDCS-***S* | 189～190 |
| VERNIER CALIPER | DEGITAL GAP CALIPER | GDG-**-** | 191～196 |
| VERNIER CALIPER | DEGITAL DEPTH GAUGE SERIES | GDCS-***D*<br>GDCS-25STG | 197～200 |
| GAUGE | DEGITAL WELDING GAUGES | GDCS-20WG | 99 |
| GAUGE | DEGITAL VERNIER CALIPER FOR CHAMFER MEASURING | GDCP-**C8 | 111 |

Dedicated software included

| Order No. | Model No. | OS | Run Time | Outer Dimensions (mm) | Weight |
|---|---|---|---|---|---|
| 152035 | DTW-DG01 | Windows7,8 | Approx. 17 hrs. | L57 × W35 × H24 | 45g |
| 152037 | DTW-DG02 | Windows10,11 | | | |

# WIRELESS RECEIVER

(Receiver)

Integrated software for measuring instruments ▶
SK-LOG
P24 ～27

For importing measurement data to PC.
Pass/ Fail judgement based on pre-set tolerance, and data recording, become possible with combination use of dedicated software.

USE
- For receiving measurement data wireless from compatible measuring devices

FEATURES
- Enables wireless data import from compatible devices for easier data management
- Up to 8 devices can be connected per unit

※By increasing number of WI-1M, up to 32 devices can be connected (SK-LOG Product version is required for the multiple connection).

SPECIFICATIONS
- Radio system: ANT + (communication distance within 6m)
- OS: Windows 7, 8, 10, 11

※Our ANT+ system is qualified in Japan, U.S.A (FCC), EU (CE) and South Korea (KCC). For use in other countries, please contact us.

PRODUCT INCLUDES
- Wireless receiver
- Dedicated software (SK-LOG Lite version)

<Applicable Products>

| Order No. | Product Name | Model No. | Page Referred |
|---|---|---|---|
| 152271 ～ 152273 | S-LINE DIGITAL VERNIER CALIPER | D-***IP67MW | 171 |
| 152235 ～ 152238 | S-LINE DIGITAL MICROMETER | MCD-***IP65MW | 209 |
| 152292 ～ 152294<br>152296 ～ 152297 | S-LINE DIGITAL INDICATOR<br>※ Cannot be used with DATA TRANSFER CABLE at the same time. | DEI-***MW | 233～234 |

Dedicated software included

| Order No. | Model No. | Connecter | Wireless Range | Frequency Band | Weight |
|---|---|---|---|---|---|
| 152278 | WI-1M | USB Type-A | Max. 6m | 2.4GHz | 2g |

## GDC VERNIER CALIPERS KEYBOARD DATA TRANSFER CABLE NEW!

Communication cable for connecting compatible measuring devices and PCs, enabling measurement data output.
Measurement values can be directly output to any software that supports keyboard input.

USE
- For connecting compatible measuring devices and PCs to output measurement data.

MATERIAL
- Plastic

FEATURES
- Measurement values can be output to any software that supports keyboard input, such as Excel, Word, or Notepad.
- Equipped with an input direction switching function that allows selection between Tab and Enter directions.

SPECIFICATIONS
- Compatible OS: Windows XP, 7, 8, 10, 11
- Compatible Software: Programs that support keyboard input (e.g., Excel, Word, Notepad)

POWER
- USB bus power
  *Not compatible with SK-LOG.
  (For output from GDC series to SK-LOG, use a Bluetooth BOX.)

Example Combination with GDC-KEY-FP

<Applicable Models>

| Product Category | Product Name | Model No. | Page Referred |
|---|---|---|---|
| VERNIER CALIPER | DEGITAL VERNIER CALIPER SERIES | GDC*-*** | 172 ~ 173<br>176 ~ 184 |
| VERNIER CALIPER | DEGITAL SCRIBING CALIPER SERIES | GDCS-***S* | 189 ~ 190 |
| VERNIER CALIPER | DEGITAL GAP CALIPER | GDG-**-** | 191 ~ 196 |
| VERNIER CALIPER | DEGITAL DEPTH GAUGE SERIES | GDCS-***D*<br>GDCS-25STG | 197 ~ 200 |
| GAUGE | DEGITAL WELDING GAUGES | GDCS-20WG | 99 |
| GAUGE | DEGITAL VERNIER CALIPER FOR CHAMFER MEASURING | GDCP-**C8 | 111 |

| Order No. | Model No. | PC-Side Connector Type | Cable Length (m) | Body Size (mm) | Weight |
|---|---|---|---|---|---|
| NEW! 152072 | GDC-KEY | USB Type-A | PC Side: Approx. 1.9<br>Measuring Device Side: Approx. 0.95 | Approx. 33 × 67 × 12 | 95g |

## GDC-KEY FOOT PEDAL NEW!

Connect to the "GDC Caliper Keyboard Communication Cable" and output data with the foot pedal!
Keeps both hands free, allowing for continuous measurement and data output, improving work efficiency.

USE
- For data output by stepping on the foot pedal.
  *"GDC Caliper Keyboard Communication Cable GDC-KEY". (sold separately)

MATERIAL
- ABS

FEATURES
- Allows operation of the "Data Transfer Button" on the keyboard communication cable with the foot, enabling measurement and recording work with both hands free.

SPECIFICATIONS
- Compatible Model: GDC Caliper Keyboard Communication Cable GDC-KEY
- Operating Force: Approx. 15N (1.5kgf)
- Type: Momentary Type (operates only when pressed)
- Recording Frequency: 1 record per press

| Order No. | Model No. | Connector Shape | Cable Length (m) | Body Size (mm) | Weight |
|---|---|---|---|---|---|
| NEW! 152074 | GDC-KEY-FP | φ2.5 3pole mini plug | Approx. 1.9 | Approx. 62 × 100 × 33 | 95g |

## USB FOOT PEDAL NEW!

Input shortcut keys with your foot!
When combined with SK-LOG, it allows measurement and recording work with both hands free.

Setup Software

USE
- For key input by stepping on the pedal. Download the dedicated software from the Niigata Seiki website and configure any key for use.

MATERIAL
- ABS

FEATURES
- Allows registration of combinations of multiple key inputs.
- Multiple units can be connected simultaneously, each performing different key inputs.
- Compatible with SK-LOG.

SPECIFICATIONS
- Operating Force: Approx. 35N (3.5kgf)
- Switch Lifespan: Over 300,000 presses
- Compatible OS: Windows 7, 8, 10, 11
- Type: Momentary Type (operates only when pressed)
- Recording Frequency: Configurable in software (single input or continuous input)

POWER
- USB bus power

| Order No. | Model No. | Connector Shape | Cable Length (m) | Body Size (mm) | Weight |
|---|---|---|---|---|---|
| NEW! 152073 | USB-FP1 | USB Type-A | Approx. 3.0 | Approx. 71 × 100 × 34 | 140g |

S line series

# S-LINE DATA TRANSFER CABLE

(Cable)

Integrated software for measuring instruments▶
SK-LOG
P24 ~27

For importing measurement data to PC.
Pass/ Fail judgement based on pre-set tolerance, and data recording, become possible with combination use of dedicated software.

USE
- For importing measurement data from compatible measuring devices

FEATURES
- USB cable for transferring measurement data, compatible with S-line series products
- There is also a data transmission button on the device connection terminal of the cable

PRODUCT INCLUDES
- Cable ● Dedicated software (SK-LOG Lite version)

Dedicated software included

Downloading Android App [SLOG]
GET IT ON Google Play

<Applicable Products>

| Order No. | Product Name | Model No. | Page Referred |
|---|---|---|---|
| 152274 ~ 152276 | S-LINE DIGITAL VERNIER CALIPER | D-***IP67M | 171 |
| 152282 ~ 152283 | S-LINE DIGITAL HEIGHT GAUGE | DHG-**M | 201 |
| 152291・152295 | S-LINE DIGITAL INDICATOR | DEI-***MH | 233 ~ 234 |
| 152292 ~ 152294<br>152296 ~ 152297 | S-LINE DIGITAL INDICATOR<br>※Cannot be used with WIRELESS RECEIVER at the same time. | DEI-***MW | 233 ~ 234 |

| Order No. | Model No. | Connector | Length | OS |
|---|---|---|---|---|
| 152279 | DTC-M1 | USB Type-A | 2m | Windows 7・8・10・11 |



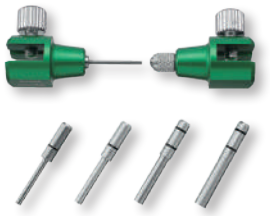
S line series

# CALIPER ATTACHMENT NEW!

(Optional Parts for N-5AS)

Rust prevention▶
Zerust Film for Steel
P370

Simply attach to your existing caliper! Enables point measurements in narrow areas.
(Compatible Jaw Thickness: Up to 3.9mm)



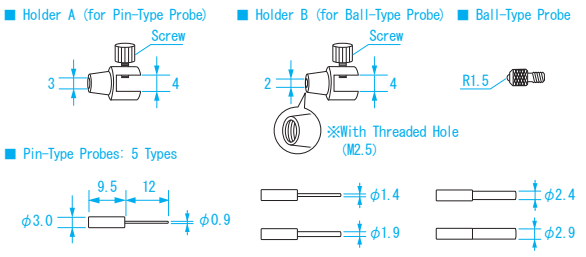
USE
- Attach to the external jaws of a caliper for measuring recesses.

MATERIAL
- Pin-Type Probe: Stainless Steel
- Ball-Type Probe Tip: Carbide ● Holder: Aluminum

FEATURES
- Converts your caliper into a point-type caliper by attaching to the external jaws.
- One side features a ball-type probe, and the other side a pin-type probe, making it ideal for measuring the thickness of pipes with grooves on the outer surface.
- Parts are also available for individual purchase.

SPECIFICATIONS
- Compatible Jaw Thickness: Up to 3.9mm

● DIMENSIONS Unit: mm




| Order No. | Model No. | Weight |
|---|---|---|
| 152032 | N-5AS | 10g |

## ■ Optional Parts for N-5AS

| Order No. | Product Name | Model No. |
|---|---|---|
| NEW! 152061 | Probe ϕ 3.0mm | N-AD30 |
| NEW! 152062 | Probe ϕ 2.5mm | N-AD25 |
| NEW! 152063 | Probe ϕ 2.0mm | N-AD20 |
| NEW! 152064 | Probe ϕ 1.5mm | N-AD15 |
| NEW! 152065 | Probe ϕ 1.0mm | N-AD10 |

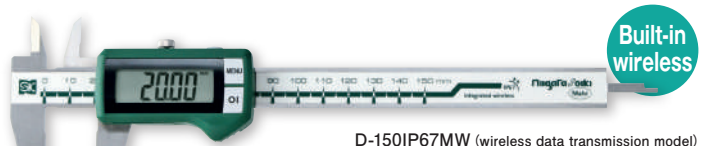
| Order No. | Product Name | Model No. |
|---|---|---|
| NEW! 152066 | Ball-Type Probe | N-AR15 |
| NEW! 152067 | Holder A | N-AA |
| NEW! 152068 | Holder B | N-AB |
| NEW! 152069 | O-Ring | N-AO |

# S-LINE DIGITAL VERNIER CALIPER (IP67)

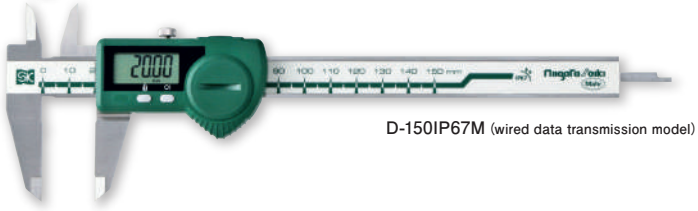
S line series

Niigata Seiki x Mahr collaborated high performance vernier caliper. Protection class IP67. Large LCD with wireless data transmission model (MW series) & wired data transmission model (M series).


Integrated software for measuring instruments▶ SK-LOG P24 ~27
Wireless transmission of measurements to PC▶ Wireless Receiver P168
Captures measured data to PC▶ Data Transfer Cable P170
Reference standard for calibration▶ Block Gauge P32 ~40
For measurement of concave area▶ Caliper Attachment P170
Rust prevention▶ Zerust Film for Steel P370


D-150IP67MW (wireless data transmission model)



D-150IP67M (wired data transmission model)

## Large display (MW series)

A high contrast display with 11mm height of character enables accurate reading of measurement results.

## Integrated data transmission unit (MW Series)

The neatly designed back of LCD that allows comfortable measurement environment.

MW series

## Lap finished sliding surface

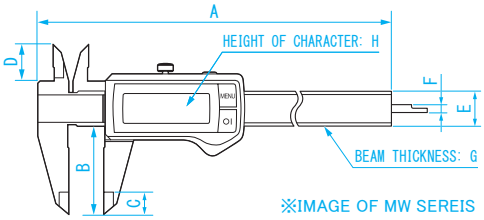
Lap finished sliding surface allows smooth and equal slide.
Long product life compared to grind finished sliding surface.

## Protection class IP67

IP is an protection class indication of electrical equipment and cabinets against solid objects and water, as specified in IEC60529.

| Class | IP | Degree of protection | Test method |
|---|---|---|---|
| 1st digit | 6 | Complete dust proof structure | Completely protected against dust ingress |
| 2nd digit | 7 | Protected against temporary immersion with specified pressure and time | 15cm~1m depth underwater for 30 min. |

● DIMENSIONS




※IMAGE OF MW SEREIS

USE
- For measuring outside and inside dimentions, step and depth

MATERIAL
- Stainless steel

FEATURES
- Immersion and dust proof digital vernier caliper with protection class **IP67**
- Built-in wireless type which is capable of transmitting data wireless in combination use with a separately sold dedicated receiver (MW series)
- Capable of transmitting data in combination use with a separately sold dedicated data transfer cable (M series)
- With Reference function※1 for quick start of measurement shortly after turning on the power
  ※1: A function that remembers the previously saved zero point.
- With a large LCD display for easy reading of measurement values (MW series)
- Lap finished sliding surface for smooth sliding of the scale
- Auto power off function (after approx. 8 min.)

SPECIFICATIONS
- Radio system: ANT+ (communication distance within 6m)※2
  ※2 Our ANT+ system is qualified in Japan, U.S.A (FCC), EU (CE), and South Korea (KCC). For use in other countries, please contact us.

POWER
- One CR2032 (lithium) battery included for testing

Units: mm

| Model No. | A | B | C | D | E | F | G | H |
|---|---|---|---|---|---|---|---|---|
| D-150IP67MW | 235 | 40 | 10 | 16 | 16 | 3.8 | 3 | 11 |
| D-200IP67MW | 285 | 50 | 14 | 19 | | | 3.5 | |
| D-300IP67MW | 388 | 64 | | | | - | 4 | |
| D-150IP67M | 235 | 40 | 10 | 16 | 16 | 3.8 | 3 | 8.5 |
| D-200IP67M | 285 | 50 | 14 | 19 | | | 3.5 | |
| D-300IP67M | 388 | 64 | | | | - | 4 | |

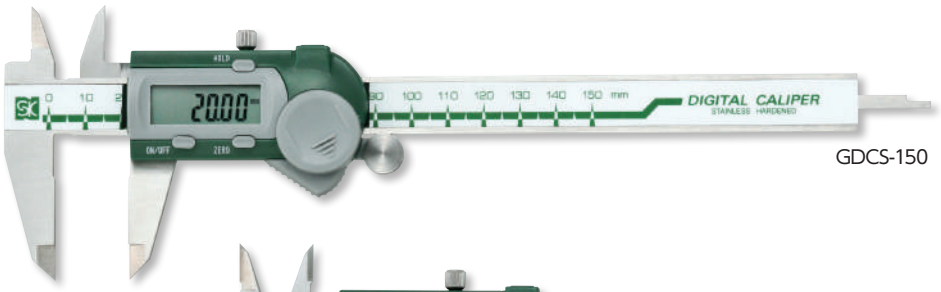
※3: Quantization Error (± 1 digit) not included

| Order No. | Model No. | Measuring Range (mm) | Resolution (mm) | Max. Permissible Error※3 (mm) | Connection Unit for Data Transmission | Depth Bar (Yes/ None) | Weight |
|---|---|---|---|---|---|---|---|
| 152271 | D-150IP67MW | 0-150 | 0.01 | ± 0.03 | WI-1M (Wireless) | Yes | 150g |
| 152272 | D-200IP67MW | 0-200 | | | | | 200g |
| 152273 | D-300IP67MW | 0-300 | | ± 0.04 | | None | 280g |
| 152274 | D-150IP67M | 0-150 | | ± 0.03 | DTC-M1 (Wired) | Yes | 150g |
| 152275 | D-200IP67M | 0-200 | | | | | 200g |
| 152276 | D-300IP67M | 0-300 | | ± 0.04 | | None | 280g |

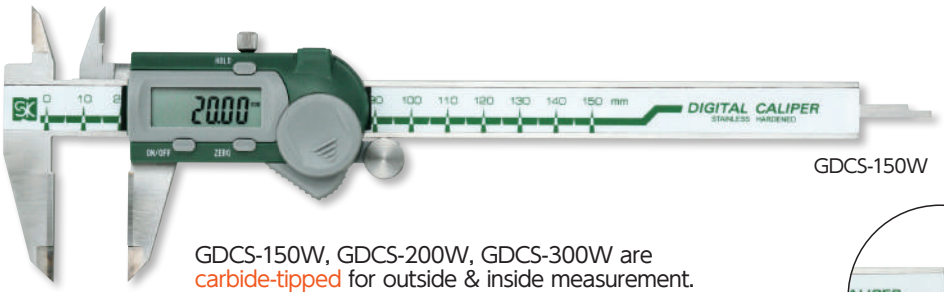
# DIGITAL VERNIER CALIPER / DIGITAL VERNIER CALIPER WITH CARBIDE TIPPED MEASURING FACE

Bluetooth BOX (separately sold) can be attached.
Measured value can be transmitted to PC wireless.
Standard model. Carbide tipped measuring face type is also available for measuring high-hardness, mold materials and rough-processing parts.


Integrated software for measuring instruments▶ SK-LOG P24 ~27
Wireless data output▶ Bluetooth BOX for Calipers P168
Reference standard for calibration▶ Block Gauge P32 ~40
For measurement of concave area▶ Caliper Attachment P170
Rust prevention▶ Zerust Film for Steel P370


GDCS-150



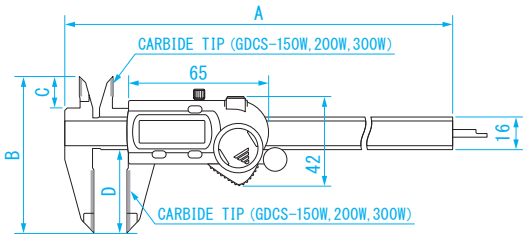

GDCS-150W

GDCS-150W, GDCS-200W, GDCS-300W are carbide-tipped for outside & inside measurement.

Depth bar round bar type suitable for depth measurement of fine holes (GDCS-150CD)

Installation image of Bluetooth BOX (separately sold)

## ● DIMENSIONS




USE
- For outside diameter, inside diameter, step and depth measurement

MATERIAL
- Stainless steel

FEATURES
- Bluetooth BOX (separately sold) can be attached. Measured value can be transmitted to PC wireless.
- Available with carbide tipped measuring face. Suitable for measuring high-hardness, mold materials and rough-processing parts. (GDCS-150W・GDCS-200W・GDCS-300W)
- GDCS-150CD (φ1.9mm round depth bar)
- Display hold function
- Auto power off function (after approx. 20 min.)

POWER
- One CR2032 (lithium) battery included for testing

Units: mm

| Order No. | A | B | C | D |
|---|---|---|---|---|
| GDCS-100 | 186 | 77 | 16.5 | 40 |
| GDCS-150 | 236 | | | |
| GDCS-200 | 286 | 90 | 19.5 | 50 |
| GDCS-300 | 400 | 102 | 21.5 | 60 |
| GDCS-150W | 236 | 77 | 16.5 | 40 |
| GDCS-200W | 286 | 90 | 19.5 | 50 |
| GDCS-300W | 400 | 102 | 21.5 | 60 |
| GDCS-150CD | 236 | 77 | 16.5 | 40 |

※ Quantization Error (± 1digit) not included

| Order No. | Model No | Type | Measuring Range (mm) | Resolution (mm) | Accuracy※ (mm) | Depth Bar (Yes/None) | Weight |
|---|---|---|---|---|---|---|---|
| 151951 | GDCS-100 | Standard | 0-100 | 0.01 | ± 0.03 | Yes | 155g |
| 151952 | GDCS-150 | | 0-150 | | | | 175g |
| 151953 | GDCS-200 | | 0-200 | | | | 200g |
| 151954 | GDCS-300 | | 0-300 | | ± 0.04 | | 260g |
| 151956 | GDCS-150W | Carbide tipped | 0-150 | | ± 0.03 | | 175g |
| 151957 | GDCS-200W | | 0-200 | | | | 200g |
| 151958 | GDCS-300W | | 0-300 | | ± 0.04 | | 260g |
| 151955 | GDCS-150CD | Round depth bar | 0-150 | | ± 0.03 | Yes (φ1.9mm) | 175g |

# DIGITAL VERNIER CALIPER (PRESET TYPE)

Bluetooth BOX (separately sold) can be attached.
With preset function of displaying desired value at desired measuring point.

GDCP-150

Integrated software for measuring instruments▶ SK-LOG P24 ~27
Wireless data output▶ Bluetooth BOX for Calipers P168
Reference standard for calibration▶ Block Gauge P32 ~40
For measurement of concave area▶ Caliper Attachment P170
Rust prevention▶ Zerust Film for Steel P370

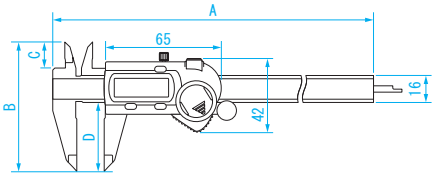
USE
- For outside diameter, inside diameter, step and depth measurement

MATERIAL
- Stainless steel

FEATURES
- Bluetooth BOX (separately sold) can be attached. Measured value can be transmitted to PC wireless.
- Preset function
- Display hold function
- Auto power off function (after approx. 20 min.)

POWER
- One CR2032 (lithium) battery included for testing

● DIMENSIONS




Units: mm

| Model No. | A | B | C | D |
|---|---|---|---|---|
| GDCP-100 | 186 | 77 | 16.5 | 40 |
| GDCP-150 | 236 | | | |
| GDCP-200 | 286 | 90 | 19.5 | 50 |
| GDCP-300 | 400 | 102 | 21.5 | 60 |

※ Quantization Error (± 1digit) not included

| Order No. | Model No. | Type | Measuring Range (mm) | Resolution (mm) | Accuracy※ (mm) | Depth bar (Yes/None) | Weight |
|---|---|---|---|---|---|---|---|
| 151959 | GDCP-100 | Preset function | 0-100 | 0.01 | ± 0.03 | Yes | 155g |
| 151960 | GDCP-150 | | 0-150 | | | | 175g |
| 151961 | GDCP-200 | | 0-200 | | | | 200g |
| 151962 | GDCP-300 | | 0-300 | | ± 0.04 | | 260g |

# DIGITAL VERNIER CALIPER (TOLERANCE TYPE)

Bluetooth BOX (separately sold) can be attached.
For checking measured value whether it is within the tolerance specified.

GDCT-150

Integrated software for measuring instruments▶ SK-LOG P24 ~27
Wireless data output▶ Bluetooth BOX for Calipers P168
Reference standard for calibration▶ Block Gauge P32 ~40
For measurement of concave area▶ Caliper Attachment P170
Rust prevention▶ Zerust Film for Steel P370

USE
- For outside diameter, inside diameter, step and depth measurement

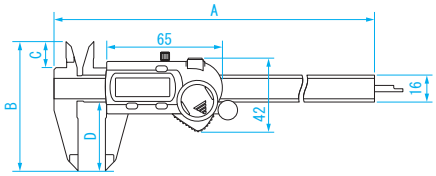
MATERIAL
- Stainless steel

FEATURES
- Bluetooth BOX (separately sold) can be attached. Measured value can be transmitted to PC wireless.
- Preset function and tolerance-set function
- Auto power off function (after approx. 20 min.)

POWER
- One CR2032 (lithium) battery included for testing

Quick reading GO/NOGO by display of 「GO」「◀」「▶」

● DIMENSIONS




Units: mm

| Model No. | A | B | C | D |
|---|---|---|---|---|
| GDCT-100 | 186 | 77 | 16.5 | 40 |
| GDCT-150 | 236 | | | |
| GDCT-200 | 286 | 90 | 19.5 | 50 |
| GDCT-300 | 400 | 102 | 21.5 | 60 |

※ Quantization Error (± 1digit) not included

| Order No. | Model No. | Type | Measuring Range (mm) | Resolution (mm) | Accuracy※ (mm) | Depth bar (Yes/None) | Weight |
|---|---|---|---|---|---|---|---|
| 151963 | GDCT-100 | Tolerance-set function | 0-100 | 0.01 | ± 0.03 | Yes | 155g |
| 151964 | GDCT-150 | | 0-150 | | | | 175g |
| 151965 | GDCT-200 | | 0-200 | | | | 200g |
| 151966 | GDCT-300 | | 0-300 | | ± 0.04 | | 260g |

# INSPECTION SET FOR VERNIER CALIPER

PDI

Combined block gauge set to inspect the accuracy of vernier caliper

CC-S-150

CC-S-300

USE
- To inspect the accuracy of vernier caliper

MATERIAL
- Block Gauge: High carbon high chromium steel

FEATURES
- Provided with a dedicated case
- Block Gauge: Grade 2 equivalent
- Provided with an inspection report

SPECIFICATIONS
- Section size: 35(0~-0.3)×9(-0.05~-0.2)mm
- Coefficient of thermal expansion: $11.5\times10^{-6}$/K

※Calibration and custom size production are NOT available

●BLOCK GAUGE SPECIFICATION

| Size (mm) | Tolerance (μm) | Dimensional Deviation (μm) |
|---|---|---|
| 50 | ± 0.80 | 0.30 |
| 75 | ± 1.00 | 0.35 |
| 100 | ± 1.20 | 0.35 |
| 150 | ± 1.60 | 0.40 |
| 200 | ± 2.00 | 0.40 |
| 300 | ± 2.80 | 0.50 |

| Order No. | Model No. | Block Gauge Size | Weight |
|---|---|---|---|
| 151396 | CC-S-100 | Grade 2 equivalent block gauge 50mm、100mm 1pc each | 1.0kg |
| 151397 | CC-S-150 | Grade 2 equivalent block gauge 75mm、150mm 1pc each | 1.2kg |
| 151398 | CC-S-200 | Grade 2 equivalent block gauge 100mm、200mm 1pc each | 1.6kg |
| 151399 | CC-S-300 | Grade 2 equivalent block gauge 150mm、300mm 1pc each | 2.0kg |

# STORAGE CASE FOR VERNIER CALIPER

Convenient storage case for vernier caliper is now available.
Storage and control of vernier caliper in good condition become easier.

【Storage Example】

Standalone and stackable design for smart storage

USE
- For storing vernier caliper

MATERIAL
- Case: ABS ●Inner: PET

FEATURES
- Instruction manual, Inspection report and battery can also be stored
- Stackable
- Can be placed both horizontally and vertically

SPECIFICATIONS
- Size:L273×W124×H32mm

※Vernier caliper is not included.

<Applicable Products>

| Order No. | Product Name | Model No. | Page Referrend |
|---|---|---|---|
| 151951 ~ 151952<br>151956<br>151955 | DIGITAL VERNIER CALIPER<br>DIGITAL VERNIER CALIPER WITH CARBIDE TIPPED MEASURING FACE<br>DIGITAL VERNIER CALIPER (ROUND DEPTH BAR TYPE) | GDCS-100、150<br>GDCS-150W<br>GDCS-150CD | 172 |
| 151959 ~ 151960 | DIGITAL VERNIER CALIPER (PRESET TYPE) | GDCP-100、150 | 173 |
| 151963 ~ 151964 | DIGITAL VERNIER CALIPER (TOLERANCE TYPE) | GDCT-100、150 | 173 |
| 151967 | DIGITAL VERNIER CALIPER POINT TYPE | GDCS-150P | 176 |
| 151969 | DIGITAL VERNIER CALIPER BLADE TYPE | GDCS-150B | 177 |
| 151991 | DIGITAL VERNIER CALIPER WITH THIN INSIDE JAW | GDCS-150IR | 181 |
| 151983<br>151998 | DIGITAL SCRIBING VERNIER CALIPER | GDCS-150S<br>GDCS-150SS | 189 |

※ Storing non-applicable product may cause damage or inaccuracy to vernier caliper

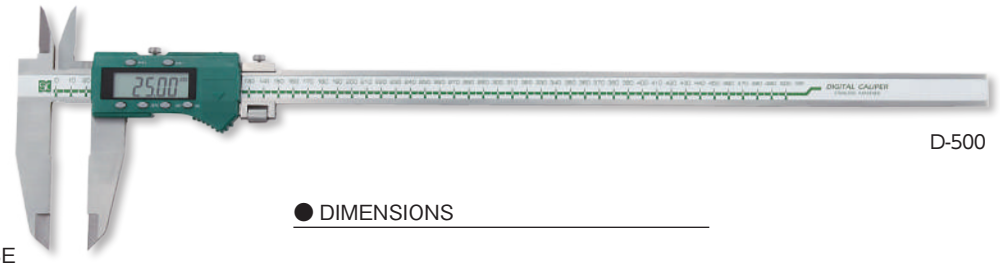
| Order No. | Model No. | Weight |
|---|---|---|
| 152071 | SC-C-1 | 300g |

# DIGITAL VERNIER CALIPER

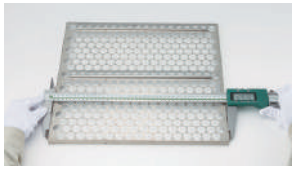
T PDI 0

Reference standard for calibration▶
Block Gauge
P32 ~40

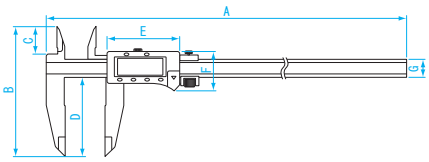
## High measurement performance model



D-500



● DIMENSIONS




USE
- Outside diameter, inside diameter and step measurement

MATERIAL
- Stainless steel

FEATURE
- Digital vernier caliper with nib style and standard jaws
- Zero-setting at any position
- Provided with fine-adjustment carriage

POWER
- One CR2032 (lithium) battery included for testing

Units: mm

| Model No. | A | B | C | D | E | F | G |
|---|---|---|---|---|---|---|---|
| D-500 | 676 | 169 | 38 | 100 | 100 | 55 | 24 |
| D-600 | 776 | | | | | | |
| D-1000 | 1230 | 216 | 51 | 125 | 129 | 75 | 31 |
| D-1500 | 1780 | 262 | 61 | 150 | 165 | 93 | 42 |
| D-2000 | 2290 | | | | | | |

* Accuracy specified for inner most portion of measuring jaw.
Instrument error may be slightly higher when using the tip of jaw for performing measurement.

※ Quantization Error (± 1digit) not included

| Order No. | Model No. | Measuring Range (mm) | Resolution (mm) | Accuracy * (mm) | Depth Bar (Yes/None) | Weight |
|---|---|---|---|---|---|---|
| 151053 | D-500 | 0-500 | 0.01 | ± 0.05 | None | 1.0kg |
| 151054 | D-600 | 0-600 | | ± 0.08 | | 1.1kg |
| 151055 | D-1000 | 0-1000 | | ± 0.10 | | 2.4kg |
| 151156 | D-1500 | 0-1500 | | ± 0.14 | | 5.0kg |
| 151157 | D-2000 | 0-2000 | | ± 0.20 | | 6.5kg |

# DIGITAL LONG JAW VERNIER CALIPER

T PDI 0

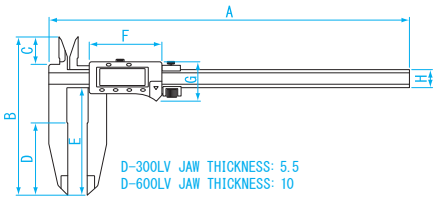
Reference standard for calibration▶
Block Gauge
P32 ~40

## Recommended for sheet metal and plate workings

D-300LV



● DIMENSIONS




USE
- Outside diameter, inside diameter and step measurement

MATERIAL
- Stainless steel

FEATURES
- Digital vernier caliper with nib style and standard jaws
- Long jaws for measuring hard-to-reach features
- Suitable for measuring large diameter works

POWER
- One CR2032 (lithium) battery included for testing

Units: mm

| Model No. | A | B | C | D | E | F | G | H |
|---|---|---|---|---|---|---|---|---|
| D-300LV | 476 | 219 | 38 | 100 | 150 | 100 | 55 | 24 |
| D-600LV | 870 | 412 | 61 | 200 | 300 | 165 | 93 | 42 |

* Accuracy specified for inner most portion of measuring jaw.
Instrument error may be slightly higher when using the tip of jaw for performing measurement.

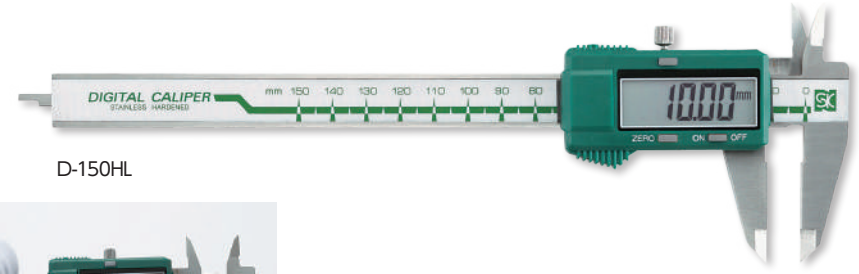
※ Quantization Error (± 1digit) not included

| Order No. | Model No. | Measuring Range (mm) | Resolution (mm) | Accuracy * (mm) | Depth Bar (Yes/None) | Weight |
|---|---|---|---|---|---|---|
| 151296 | D-300LV | 0-300 | 0.01 | ± 0.05 | None | 920g |
| 151297 | D-600LV | 0-600 | | ± 0.08 | | 4.3kg |

# LEFT-HAND DIGITAL VERNIER CALIPER

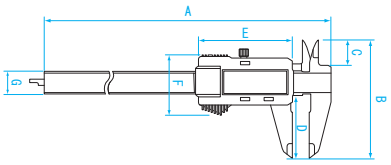
Digital type for left-handed use

Reference standard for calibration▶ Block Gauge P32 ~40
For measurement of concave area▶ Caliper Attachment P170
Rust prevention▶ Zerust Film for Steel P370




D-150HL

● DIMENSIONS




USE
- For measuring outside and inside dimension, step and depth

MATERIAL
- Stainless steel

FEATURES
- Digital vernier caliper for left-handed user
- Auto power off function (after approx. 20min)

POWER
- One SR44 (silver oxide) battery included for testing

Units: mm

| Model No. | A | B | C | D | E | F | G |
|---|---|---|---|---|---|---|---|
| D-150HL | 236 | 76 | 16 | 40 | 61.5 | 37 | 16 |
| D-200HL | 286 | 90 | 19.5 | 50 | | | |
| D-300HL | 400 | 102 | 21.5 | 60 | | | |

※Quantization Error (± 1 digit) not included

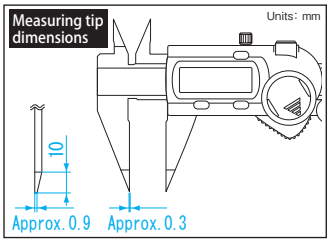
| Order No. | Model No. | Measuring Range (mm) | Resolution (mm) | Max. Permissible Error※ (mm) | Depth Bar (Yes/None) | Weight |
|---|---|---|---|---|---|---|
| 152021 | D-150HL | 0-150 | 0.01 | ± 0.03 | Yes | 150g |
| 152022 | D-200HL | 0-200 | | | | 190g |
| 152023 | D-300HL | 0-300 | | ± 0.04 | | 250g |

# DIGITAL VERNIER CALIPER POINT TYPE

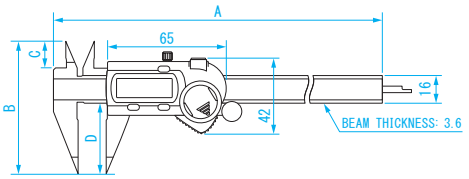
Bluetooth BOX (separately sold) can be attached.
Suitable for concaved area measurement by pointed jaw.

Integrated software for measuring instruments▶ SK-LOG P24 ~27
Wireless data output▶ Bluetooth BOX for Calipers P168
Reference standard for calibration▶ Block Gauge P32 ~40
For measurement of concave area▶ Caliper Attachment P170
Rust prevention▶ Zerust Film for Steel P370

GDCS-150P




● DIMENSIONS




USE
- For outside diameter, inside diameter, step and depth measurement

MATERIAL
- Stainless steel

FEATURES
- Pointed-tip jaws fit into small grooves and can measure narrow dimemsions
- Bluetooth BOX (separately sold) can be attached
- Display hold function
- Auto power off function (after approx. 20 min.)

POWER
- One CR2032 (lithium) battery included for testing

Units: mm

| Model No. | A | B | C | D |
|---|---|---|---|---|
| GDCS-150P | 236 | 77 | 16.5 | 40 |
| GDCS-200P | 286 | 90 | 20 | 50 |

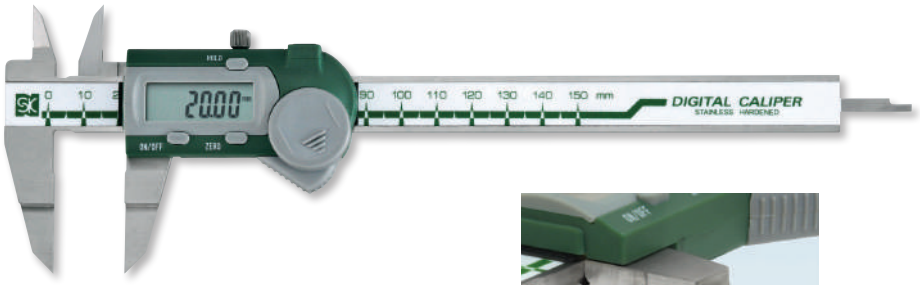
※ Quantization Error (± 1digit) not included

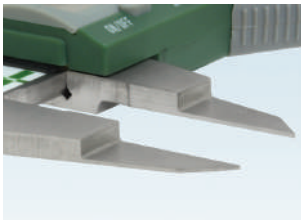
| Order No. | Model No. | Measuring Range (mm) | Resolution (mm) | Accuracy※ (mm) | Depth Bar (Yes/None) | Weight |
|---|---|---|---|---|---|---|
| 151967 | GDCS-150P | 0-150 | 0.01 | ± 0.03 | Yes | 170g |
| 151968 | GDCS-200P | 0-200 | | | | 200g |

# DIGITAL VERNIER CALIPER BLADE TYPE

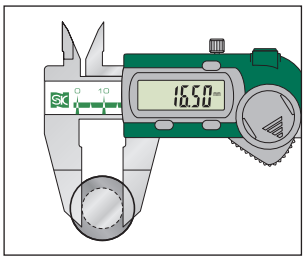
Bluetooth BOX (separately sold) can be attached.
Suitable for concaved area measurement by thin blade jaw.

Integrated software for measuring instruments▶ SK-LOG P24 ~27
Wireless data output▶ Bluetooth BOX for Calipers P168
Reference standard for calibration▶ Block Gauge P32 ~40
Rust prevention▶ Zerust Film for Steel P370



0.75mm thin blade



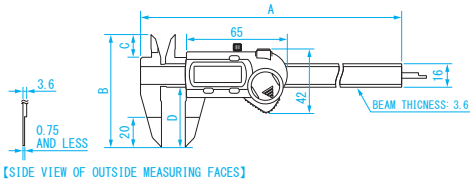

USE
- For outside diameter, inside diameter, step and deapth measurement

MATERIAL
- Stainless steel

FEATURES
- Can obtain diameter of narrow groove
- Bluetooth BOX (separately sold) can be attached
- Display hold function
- Auto power off function (after approx. 20 min.)

POWER
- One CR2032 (lithium) battery included for testing

● DIMENSIONS




Units: mm

| Model No. | A | B | C | D |
|---|---|---|---|---|
| GDCS-150B | 236 | 77 | 16.5 | 40 |

※ Quantization Error (± 1digit) not included

| Order No. | Model No. | Measuring Range (mm) | Resolution (mm) | Accuracy※ (mm) | Depth Bar (Yes/None) | Weight |
|---|---|---|---|---|---|---|
| 151969 | GDCS-150B | 0-150 | 0.01 | ± 0.03 | Yes | 165g |

# DIGITAL OUTSIDE VERNIER CALIPER POINT JAW TYPE

Bluetooth BOX (separately sold) can be attached.
For measuring thickness of concaved area and groove.

Integrated software for measuring instruments▶ SK-LOG P24 ~27
Wireless data output▶ Bluetooth BOX for Calipers P168
Reference standard for calibration▶ Block Gauge P32 ~40
Rust prevention▶ Zerust Film for Steel P370

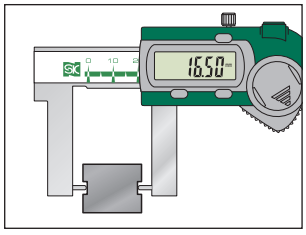
GDCS-150NP

USE
- Outside groove measurement

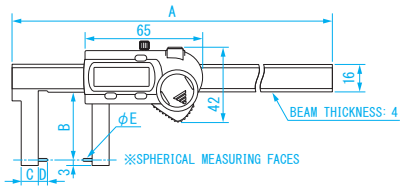
MATERIAL
- Stainless steel

FEATURES
- Spherical measuring faces
- Bluetooth BOX (separately sold) can be attached
- Display hold function
- Auto power off function (after approx. 20 min.)

POWER
- One CR2032 (lithium) battery included for testing




● DIMENSIONS




Units: mm

| Model No. | A | B | C | D | E |
|---|---|---|---|---|---|
| GDCS-150NP | 250 | 40 | 10 | 5 | 2 |
| GDCS-200NP | 310 | 50 | 12 | 8 | 2.5 |

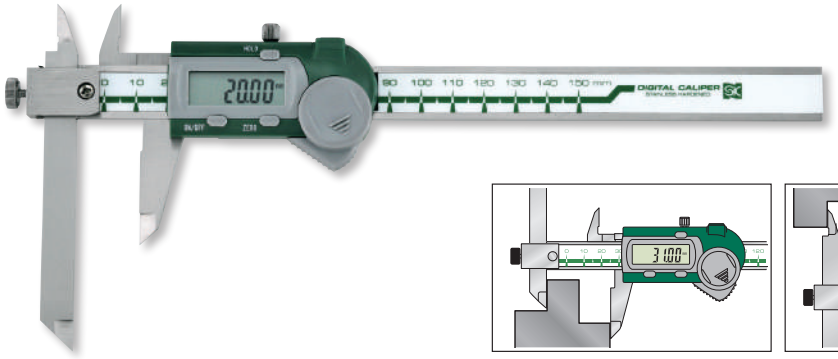
※ Quantization Error (± 1digit) not included

| Order No. | Model No. | Measuring (mm) | Resolution (mm) | Accuracy※ (mm) | Depth Bar (Yes/None) | Weight |
|---|---|---|---|---|---|---|
| 151971 | GDCS-150NP | 0-150 | 0.01 | ± 0.03 | None | 200g |
| 151972 | GDCS-200NP | 0-200 | | ± 0.04 | | 230g |

## DIGITAL OFFSET VERNIER CALIPER

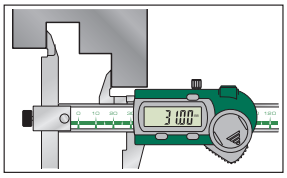
Bluetooth BOX (separately sold) can be attached.
Adjustable jaw length to fit contour of stepped measuring face.

Integrated software for measuring instruments▶ SK-LOG P24 ~27
Wireless data output▶ Bluetooth BOX for Calipers P168
Reference standard for calibration▶ Block Gauge P32 ~40
Rust prevention▶ Zerust Film for Steel P370









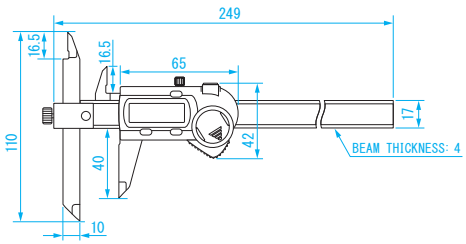

USE
- Measurement of stepped sections

MATERIAL
- Stainless steel

FEATURES
- Slide-and-fix jaw for adjustment
- Bluetooth BOX (separately sold) can be attached
- Display hold function
- Auto power off function (after approx. 20 min.)

POWER
- One CR2032 (lithium) battery included for testing

● DIMENSIONS Units: mm



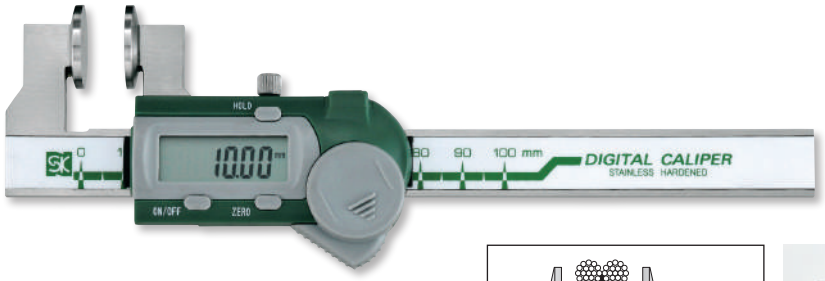

※ Quantization Error (± 1digit) not included

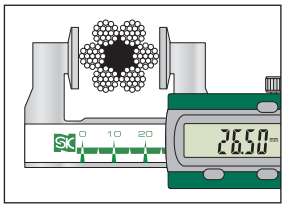
| Order No. | Model No. | Measuring (mm) | Resolution (mm) | Accuracy※ (mm) | Depth Bar (Yes/None) | Weight |
|---|---|---|---|---|---|---|
| 151973 | GDCS-150F | 0-150 | 0.01 | ± 0.04 | None | 230g |

## DIGITAL WIRE ROPE VERNIER CALIPER

Bluetooth BOX (separately sold) can be attached.
Recommended for wire rope users. Suitable for measuring diameter of wire rope.

Integrated software for measuring instruments▶ SK-LOG P24 ~27
Wireless data output▶ Bluetooth BOX for Calipers P168
Reference standard for calibration▶ Block Gauge P32 ~40
Rust prevention▶ Zerust Film for Steel P370



High-demanded for elevator maintenance

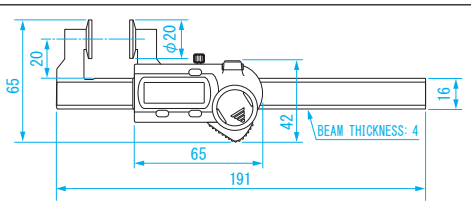
USE
- For measuring diameter of wire rope

MATERIAL
- Stainless steel

FEATURES
- φ20mm measuring face for reliable measurement of wire rope
- Bluetooth BOX (separately sold) can be attached
- Display hold function
- Auto power off function (after approx. 20 min.)

POWER
- One CR2032 (lithium) battery included for testing

● DIMENSIONS Units: mm




※1: Maximum of measurable diameter
※2: Quantization Error (± 1digit) not included

| Order No. | Model No. | Measuring Range※1 (mm) | Resolution (mm) | Accuracy※2 (mm) | Depth Bar (Yes/None) | Weight |
|---|---|---|---|---|---|---|
| 151974 | GDCS-100WR | 0-100 | 0.01 | ± 0.05 | None | 170g |

VERNIER CALIPER
SCRIBING CALIPER
DEPTH GAUGE
HEIGHT GAUGE

# DIGITAL MULTI UNIT CALIPERS NEW! (152015)

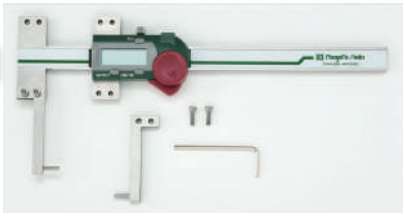
T PDI 0

Compatible with the optional Bluetooth BOX!
Attach custom-made probes to create your own original caliper!

Integrated software for measuring instruments▶ SK-LOG P24 ~27
Wireless data output▶ Bluetooth BOX for Calipers P168
Reference standard for calibration▶ Block Gauge P32 ~40
Rust prevention▶ Zerust Film for Steel P370

GDCP-150MU

GDCP-300MU



Attachment Image
*Probes, screws, and wrenches are not included.

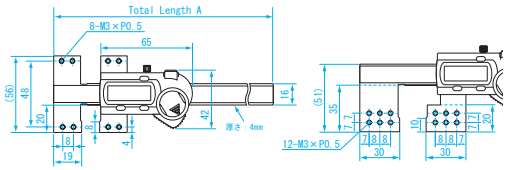
USE
- A base caliper for attaching custom-made probes for original measurements.

MATERIAL
- Stainless steel

FEATURES
- Equipped with M3×P0.5 threaded holes, allowing customers to attach their custom-made probes for flexible measurement.
- Bluetooth BOX (separately sold) can be attached
- Preset function
- Display hold function
- Auto power off function (after approx. 20 min.)

POWER
- One CR2032 (lithium) battery included for testing

● DIMENSIONS Unit: mm




GDCP-150MU GDCP-300MU

(Excludes quantization error of ± 1 count.)

| Order No. | Model No. | Measuring Range (mm) | Minimum Reading Value (mm) | Maximum Permissible Error (mm)* | Total Length A (mm) | Total Number of Threaded Holes | Upper jaw (Yes/None) | Deapth bar (Yes/None) | Weight |
|---|---|---|---|---|---|---|---|---|---|
| 151988 | GDCP-150MU | 0-150 | 0.01 | ± 0.04 | 245 | 8 | Yes | None | 205g |
| NEW! 152015 | GDCP-300MU | 0-300 | | | 420 | 12 | None | | 280g |

# DIGITAL CENTERLINE VERNIER CALIPER WITH CONICAL POINTS

T PDI 0

Bluetooth BOX (separately sold) can be attached.
For measuring center distance between two holes.
Master plate for origin setting included.

Integrated software for measuring instruments▶ SK-LOG P24 ~27
Wireless data output▶ Bluetooth BOX for Calipers P168
Rust prevention▶ Zerust Film for Steel P370

Master plate for origin setting
[Provided with inspection report]

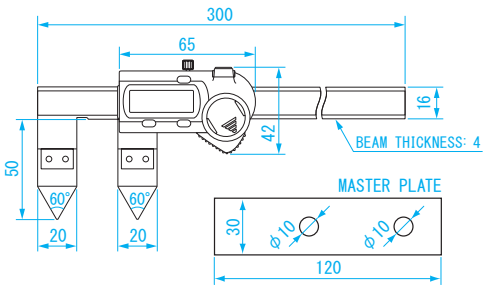
USE
- For measuring center distance between two holes

MATERIAL
- Stainless steel

FEATURES
- Measurement between holes of ϕ1.5~19.5mm is possible
- Cylindrical gauge head (tapered) provides stable measurement
- With master plate for origin setting
- Bluetooth BOX (separately sold) can be attached
- Preset function ● Display hold function
- Auto power off function (after approx. 20 min.)

POWER
- One CR2032 (lithium) battery included for testing

● DIMENSIONS Units: mm



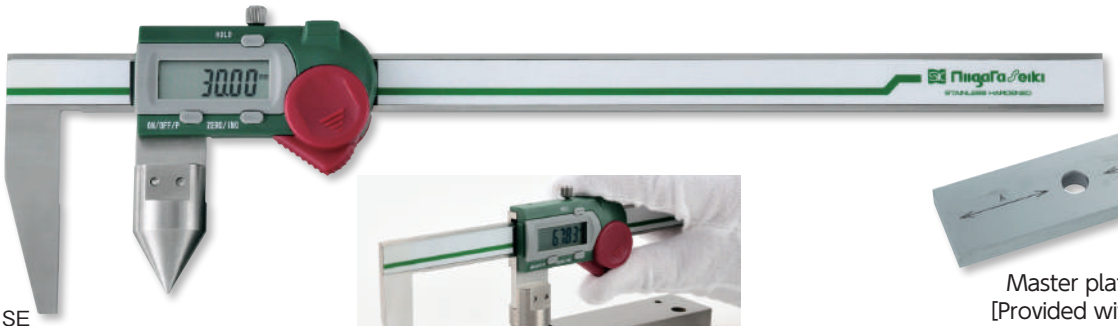

※ Quantization Error (± 1digit) not included

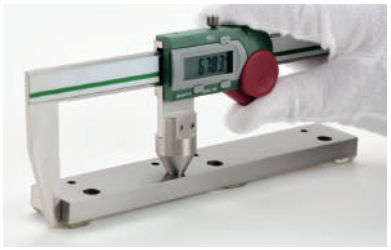
| Order No. | Model No. | Measuring Range (mm) | Applicable hole diameter (mm) | Resolution (mm) | Accuracy※ (mm) | Depth bar (Yes/None) | Weight |
|---|---|---|---|---|---|---|---|
| 151989 | GDCP-200AA | 20-200 | ϕ 1.5 ~ 19.5 | 0.01 | ± 0.05 | None | 300g |

# DIGITAL CENTERLINE VERNIER CALIPER WITH CONICAL POINTS

Bluetooth BOX (separately sold) can be attached.
For measuring distance from the edge of workpiece to center hole.
Master plate for origin setting included.

Integrated software for measuring instruments▶ SK-LOG P24 ~27
Wireless data output▶ Bluetooth BOX for Calipers P168
Rust prevention▶ Zerust Film for Steel P370





Master plate for origin setting
[Provided with inspection report]

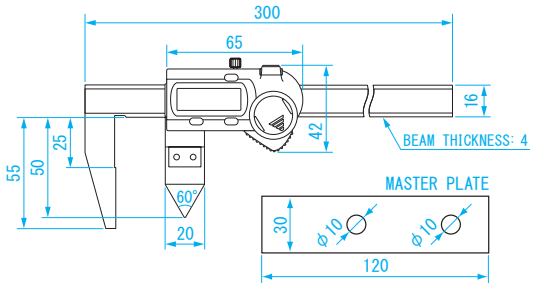
USE
- For measuring distance from the edge of workpiece to center hole

MATERIAL
- Stainless steel

FEATURES
- Measurement between holes of $\phi$1.5~19.5mm is possible
- Cylindrical gauge head (tapered) provides stable measurement
- Master plate for origin setting included
- Bluetooth BOX (separately sold) can be attached
- Preset function ●Display hold function
- Auto power off function (after approx. 20 min.)

POWER
- One CR2032 (lithium) battery included for testing

● DIMENSIONS Units: mm




※ Quantization Error (± 1digit) not included

| Order No. | Model No. | Measuring Range (mm) | Applicable hole diameter (mm) | Resolution (mm) | Accuracy※ (mm) | Depth bar (Yes/None) | Weight |
|---|---|---|---|---|---|---|---|
| 151990 | GDCP-200TA | 10-200 | $\phi$ 1.5 ~ 19.5 | 0.01 | ± 0.05 | None | 260g |

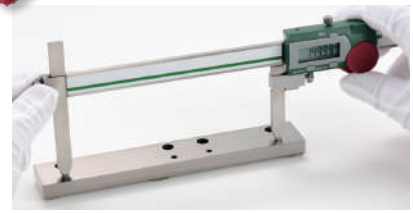
# DIGITAL CENTERLINE VERNIER CALIPER WITH CONICAL POINTS

Bluetooth BOX (separately sold) can be attached.
For measuring center distance between two holes.

Integrated software for measuring instruments▶ SK-LOG P24 ~27
Wireless data output▶ Bluetooth BOX for Calipers P168
Rust prevention▶ Zerust Film for Steel P370

GDCP-150A

Master plate for origin setting
[Provided with inspection report]



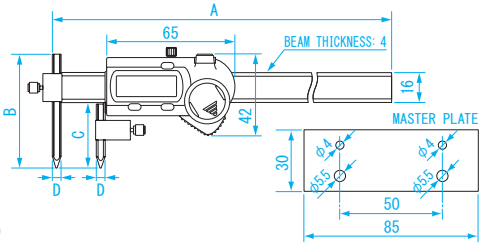
USE
- For measuring center distance between two holes

MATERIAL
- Stainless steel

FEATURES
- Measureable pitch hole: $\phi$1~4.5mm (GDCP-150A), $\phi$1~9.5mm (GDCP-150A2)
- Master plate for origin setting included
- Bluetooth BOX (separately sold) can be attached
- Preset function ●Display hold function
- Auto power off function (after approx. 20 min.)

POWER
- One CR2032 (lithium) battery included for testing

● DIMENSIONS




Units: mm

| Model No. | A | B | C | D |
|---|---|---|---|---|
| GDCP-150A | 241 | 60 | 35 | $\phi$ 5 |
| GDCP-150A2 | 246 | 100 | 62 | $\phi$ 10 |

※ Quantization Error (± 1digit) not included

| Order No. | Model No. | Measuring Range (mm) | Applicable hole diameter (mm) | Resolution (mm) | Accuracy※ (mm) | Depth bar (Yes/None) | Weight |
|---|---|---|---|---|---|---|---|
| 151975 | GDCP-150A | 5-150 | $\phi$ 1 ~ 4.5 | 0.01 | ± 0.05 | None | 200g |
| 151976 | GDCP-150A2 | 10-150 | $\phi$ 1 ~ 9.5 | | | | 220g |

# DIGITAL VERNIER CALIPER TUBE THICKNESS TYPE

T PDI 0

Bluetooth BOX (separately sold) can be attached.
Suitable for measuring wall thickness of tube, bearing, ring etc.


Integrated software for measuring instruments▶ SK-LOG P24 ~27
Wireless data output▶ Bluetooth BOX for Calipers P168
Reference standard for calibration▶ Block Gauge P32 ~40
Rust prevention▶ Zerust Film for Steel P370

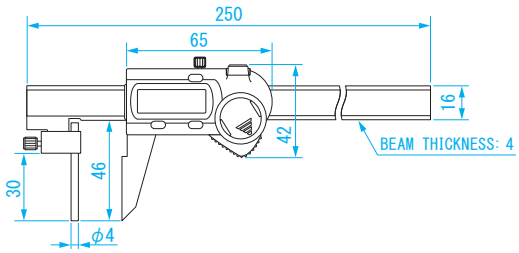
USE
- For measurement of tube wall thickness

MATERIAL
- Stainless steel

FEATURES
- Equipped with round bar jaw (one side) for accurate wall thickness measurement
- Bluetooth BOX (separately sold) can be attached
- Display hold function
- Auto power off function (after approx. 20 min.)

POWER
- One CR2032 (lithium) battery included for testing

● DIMENSIONS Units: mm




※ Quantization Error (± 1digit) not included

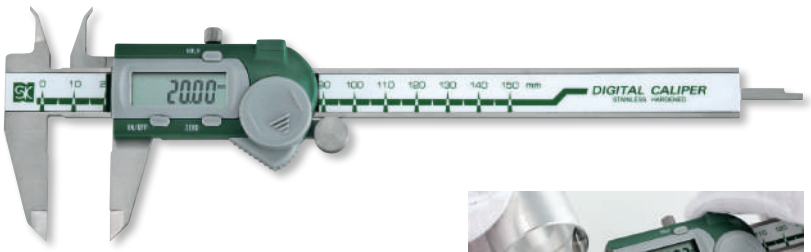
| Order No. | Model No. | Measuring Range (mm) | Measuring Range (mm) | Measurable inner groove (mm) | Accuracy※ (mm) | Depth bar (Yes/None) | Weight |
|---|---|---|---|---|---|---|---|
| 151977 | GDCS-150T | 0-150 | 0.01 | ϕ 4 and above | ± 0.05 | None | 200g |

# DIGITAL VERNIER CALIPER WITH THIN INSIDE JAW

T PDI 0

Bluetooth BOX (separately sold) can be attached.
Can measure inner narrow groove.


Integrated software for measuring instruments▶ SK-LOG P24 ~27
Wireless data output▶ Bluetooth BOX for Calipers P168
Reference standard for calibration▶ Block Gauge P32 ~40
Reference standard for calibration of inside jaw▶ Ring Gauge P62 ~65
For measurement of concave area▶ Caliper Attachment P170
Rust prevention▶ Zerust Film for Steel P370

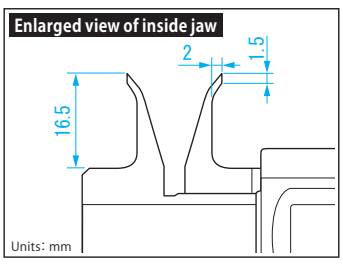



USE
- Outside diameter, inside diameter, step and depth measurement

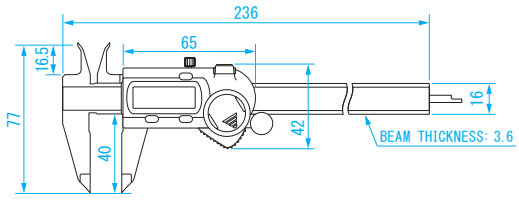
MATERIAL
- Stainless steel

FEATURES
- Ideal for narrow inner groove measurement
- Bluetooth BOX (separately sold) can be attached
- Display hold function
- Auto power off function (after approx. 20 min.)

POWER
- One CR2032 (lithium) battery included for testing




● DIMENSIONS Units: mm

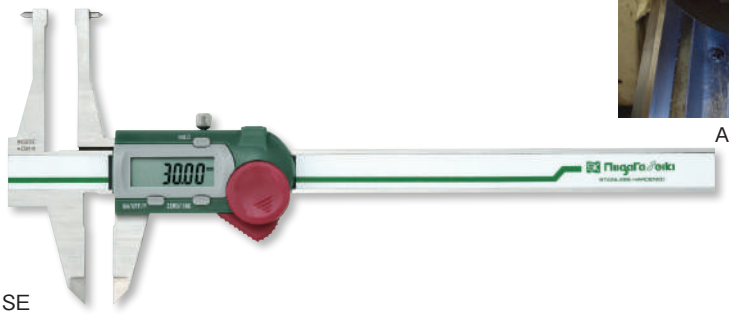



※ Quantization Error (± 1digit) not included

| Order No. | Model No. | Measuring Range (mm) | Resolution (mm) | Accuracy※ (mm) | Depth bar (Yes/None) | Weight |
|---|---|---|---|---|---|---|
| 151991 | GDCS-150IR | 0-150 | 0.01 | ± 0.03 | Yes | 165g |

# DIGITAL INSIDE T-VERNIER CALIPER

BluetoothBOX (separately sold) can be attached.
Long inner jaws allow I/D measurement at deeper area.



Allows easy measurement of I/D during turning operation


Integrated software for measuring instruments▶ SK-LOG P24 ~27
Wireless data output▶ Bluetooth BOX for Calipers P168
Reference standard for calibration▶ Block Gauge P32 ~40
Reference standard for calibration of inside jaw▶ Ring Gauge P62 ~65
For measurement of concave area▶ Caliper Attachment P170
Rust prevention▶ Zerust Film for Steel P370


USE
- Outer/ Inner diameter measurement

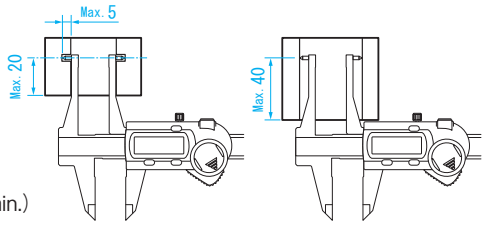
MATERIAL
- Stainless steel

FEATURES
- Long inner jaws allow I/D measurement at deeper area
- Bluetooth BOX (separately sold) can be attached
- Preset function
- Display hold function
- Auto power off function (after approx. 20 min.)

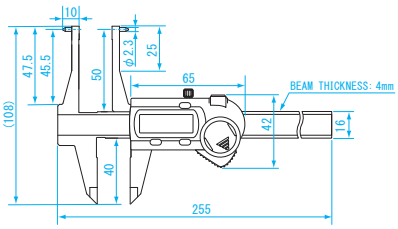
POWER
- One CR2032 (lithium) battery included for testing

※Master ring gauge is not included in the product

● Measureable cylindrical work Units: mm




● DIMENSIONS Units: mm

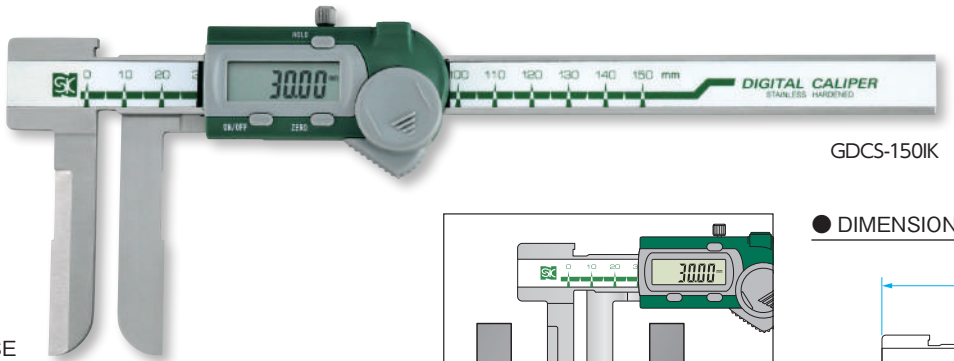



※ Quantization Error (± 1digit) not included

| Order No. | Model No. | Measuring Range (mm) | Resolution (mm) | Accuracy* (mm) | Depth bar (Yes/None) | Weight |
|---|---|---|---|---|---|---|
| 151992 | GDCP-150IT | Outside: 0-150<br>Inside: 20-170 | 0.01 | Outside: ± 0.04<br>Inside: ± 0.06 | None | 205g |

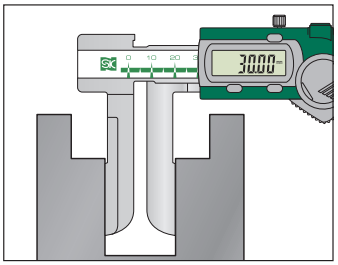
# DIGITAL INSIDE VERNIER CALIPER KNIFE-EDGE TYPE

Bluetooth BOX (separately sold) can be attached.
Suitable for measuring inner diameter of grooved position.

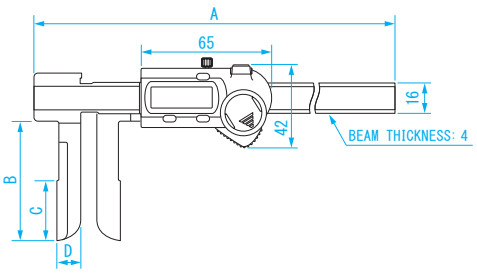


GDCS-150IK


Integrated software for measuring instruments▶ SK-LOG P24 ~27
Wireless data output▶ Bluetooth BOX for Calipers P168
Reference standard for calibration of inside jaw▶ Ring Gauge P62 ~65
Rust prevention▶ Zerust Film for Steel P370

● DIMENSIONS




USE
- For inside measurement

MATERIAL
- Stainless steel

FEATURES
- Equipped with long knife-edge jaws
- Bluetooth BOX (separately sold) can be attached
- Display hold function
- Auto power off function (after approx. 20 min.)

POWER
- One CR2032 (lithium) battery included for testing

Units: mm

| Model No. | A | B | C | D |
|---|---|---|---|---|
| GDCS-150IK | 250 | 60 | 30 | 12 |
| GDCS-200IK | 305 | 75 | 35 | 14 |

* Accuracy specified for inner most portion of measuring jaw.
Instrument error may be slightly higher when using the tip of jaw for performing measurement.

※ Quantization Error (± 1digit) not included

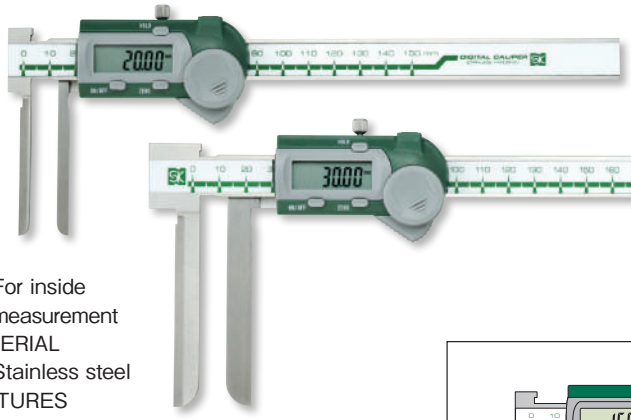
| Order No. | Model No. | Measuring Range (mm) | Resolution (mm) | Accuracy* (mm) | Length of Jaws (mm) | Depth Bar (Yes/None) | Weight |
|---|---|---|---|---|---|---|---|
| 151978 | GDCS-150IK | 15-150 | 0.01 | ± 0.04 | 60 | None | 220g |
| 151979 | GDCS-200IK | 18-200 | | | 75 | | 260g |

# INSIDE DIGITAL VERNIER CALIPER KNIFE-EDGE ,NARROW JAW TYPE

T PDI O

Bluetooth BOX (separately sold) can be attached.
Narrow jaw for wide measuring range.

Integrated software for measuring instruments▶ SK-LOG P24 ~27
Wireless data output▶ Bluetooth BOX for Calipers P168
Reference standard for calibration of inside jaw▶ Ring Gauge P62 ~65
Rust prevention▶ Zerust Film for Steel P370




GDCS-150IK2

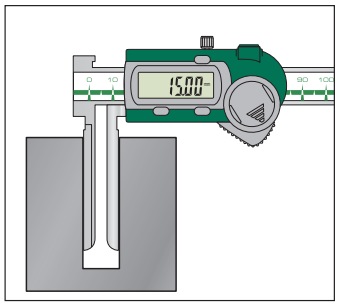
GDCS-200IK2

USE
- For inside measurement

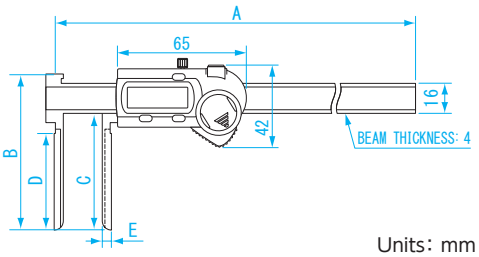
MATERIAL
- Stainless steel

FEATURES
- Thin jaws enable measurements in narrow spaces
- Bluetooth BOX (separately sold) can be attached
- Display hold function
- Auto power off function (after approx. 20 min.)

POWER
- One CR2032 (lithium) battery included for testing




● DIMENSIONS




Units: mm

| Model No. | A | B | C | D | E |
|---|---|---|---|---|---|
| GDCS-150IK2 | 235 | 80.5 | 60 | 50 | 4.5 |
| GDCS-200IK2 | 295 | 100.5 | 80 | 70 | 9.5 |

* Accuracy specified for inner most portion of measuring jaw.
Instrument error may be slightly higher when using the tip of jaw for performing measurement.

※ Quantization Error (± 1digit) not included

| Order No. | Model No. | Measuring Range (mm) | Resolution (mm) | Accuracy* (mm) | Length of jaws (mm) | Depth Bar (Yes/None) | Weight |
|---|---|---|---|---|---|---|---|
| 151993 | GDCS-150IK2 | 5-150 | 0.01 | ± 0.05 | 60 | None | 185g |
| 151994 | GDCS-200IK2 | 10-200 | | | 80 | | 240g |

# DIGITAL INSIDE VERNIER CALIPER POINT JAW TYPE

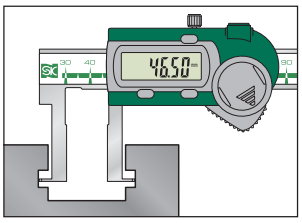
T PDI O

Bluetooth BOX (separately sold) can be attached.
Ideal for inside measurement of special shapes.

Integrated software for measuring instruments▶ SK-LOG P24 ~27
Wireless data output▶ Bluetooth BOX for Calipers P168
Reference standard for calibration of inside jaw▶ Ring Gauge P62 ~65
Rust prevention▶ Zerust Film for Steel P370

GDCP-150I

(Enlarged view of jaw)



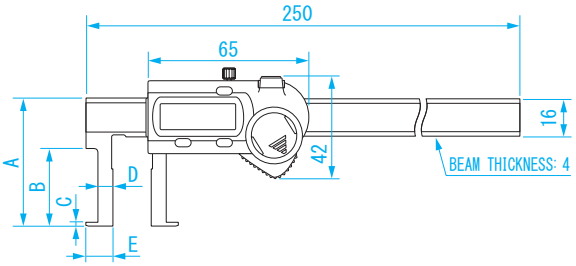

USE
- For inside measurement

MATERIAL
- Stainless steel

FEATURES
- Designed specially for inside measurement
- Bluetooth BOX (separately sold) can be attached
- Preset function
- Display hold function
- Auto power off function (after approx. 20 min.)

POWER
- One CR2032 (lithium) battery included for testing

● DIMENSIONS




Units: mm

| Model No. | A | B | C | D | E |
|---|---|---|---|---|---|
| GDCP-150I | 52 | 30 | 1 | 6 | 11 |
| GDCP-150I2 | 82 | 60 | 1.5 | 11.5 | 17.5 |

※ Quantization Error (± 1digit) not included

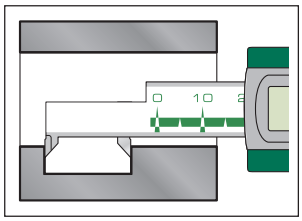
| Order No. | Model No. | Measuring Range (mm) | Resolution (mm) | Accuracy* (mm) | Length of Jaws (mm) | Depth bar (Yes/None) | Weight |
|---|---|---|---|---|---|---|---|
| 151981 | GDCP-150I | 22-150 | 0.01 | ± 0.04 | 30 | None | 180g |
| 151982 | GDCP-150I2 | 35-150 | | ± 0.05 | 60 | | 210g |

# DIGITAL VERNIER CALIPER HOOK TYPE

Bluetooth BOX (separately sold) can be attached.
Suitable for inside measurement in narrow space.

Integrated software for measuring instruments▶ SK-LOG P24 ~27
Wireless data output▶ Bluetooth BOX for Calipers P168
Reference standard for calibration of inside jaw▶ Ring Gauge P62 ~65
Rust prevention▶ Zerust Film for Steel P370

(Enlarged view of probe)



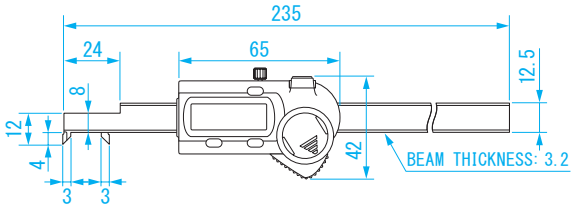
USE
- Inside width and position of groove measurement

MATERIAL
- Stainless steel

FEATURES
- Small jaws can fit into narrow space and measure
- Bluetooth BOX (separately sold) can be attached
- Display hold function
- Auto power off function (after approx. 20 min.)

POWER
- One CR2032 (lithium) battery included for testing

● DIMENSIONS Units: mm



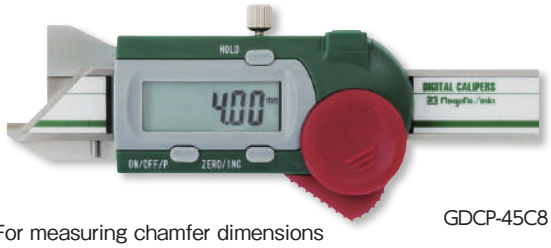

※ Quantization Error (± 1digit) not included

| Order No. | Model No. | Measuring Range (mm) | Resolution (mm) | Accuracy※ (mm) | Depth bar (Yes/None) | Weight |
|---|---|---|---|---|---|---|
| 151980 | GDCS-125H | 4-125 | 0.01 | ± 0.03 | None | 125g |

# DIGITAL VERNIER CALIPER FOR CHAMFER MEASURING NEW!

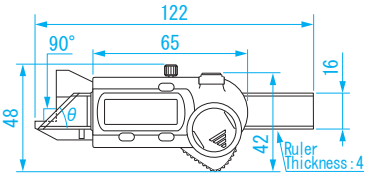
Compatible with the optional Bluetooth BOX!
Accurately measures difficult-to-measure chamfer dimensions digitally.

Integrated software for measuring instruments▶ SK-LOG P24 ~27
Wireless data output▶ Bluetooth BOX for Calipers P168
Rust prevention▶ Zerust Film for Steel P370




GDCP-45C8

● DIMENSIONS Unit: mm




USE
- For measuring chamfer dimensions

MATERIAL
- Stainless steel

FEATURES
- Suitable for measuring chamfer dimensions at 45° or 30°
- Using a 30° caliper to measure the 30° side allows for conversion to the 60° side (GDCP-30C8)
- The ruler's contact thickness is 0.3mm, making it extremely thin, enabling measurement of chamfers inside cylindrical surfaces (cylindrical inner diameter ϕ9mm or larger)
- A master for calibration is available to assist with reference adjustment when the main body wears out (Sold separately, Part No.: MCM-4)
- Bluetooth BOX (separately sold) can be attached ●Display hold function ●Auto power off function (after approx. 20 min.)

POWER
- One CR2032 (lithium) battery included for testing

Separate Master: MCM-4

※ Quantization Error (± 1digit) not included

| Order No. | Model No. | Ruler Tip Angle θ | Measuring Range Chamfer Width (mm) | Minimum Reading Value (mm) | Maximum Permissible Error (mm)* | Weight |
|---|---|---|---|---|---|---|
| NEW! 151313 | GDCP-45C8 | 45° | 0-8 | 0.01 | ± 0.05 | 110g |
| NEW! 151314 | GDCP-30C8 | 30° | | | | 110g |

## ■ Master for Digital Chamfer Measuring Caliper

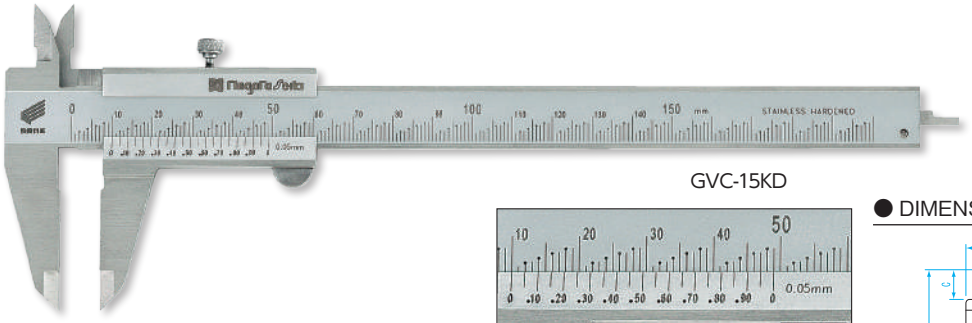
| Order No. | Model No. | Reference Dimension (mm) | Compatible Main Body Model | MATERIAL | Size (mm) | Weight |
|---|---|---|---|---|---|---|
| NEW! 151317 | MCM-4 | 4.00 | GDCP-45C8、GDCP-30C8 | Stainless steel | W25 × L25 × D5 | 25g |

VERNIER CALIPER
SCRIBING CALIPER
DEPTH GAUGE
HEIGHT GAUGE

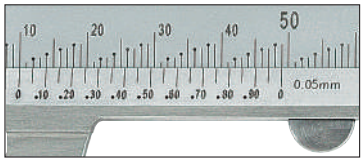
## VERNIER CALIPER KAIDAN

New stepped millimeter graduations prevents misreading.
Renewed graduation design on VERNIER for direct reading.

Reference standard for calibration▶ Block Gauge P32 ~40
For measurement of concave area▶ Caliper Attachment P170
Rust prevention▶ Zerust Film for Steel P370



GVC-15KD

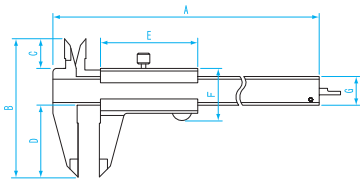


USE
- Outside diameter, inside diameter, step and depth measurement

MATERIAL
- Stainless steel

FEATURES
- Stepped length of linear graduations by 1mm for easy-to-read
- Sequentioal graduations numbers and dot marking every 2mm for prevention of misreading
- Decimal point on vernier makes the number easy-to-read
- Satin finish

● DIMENSIONS



Units: mm

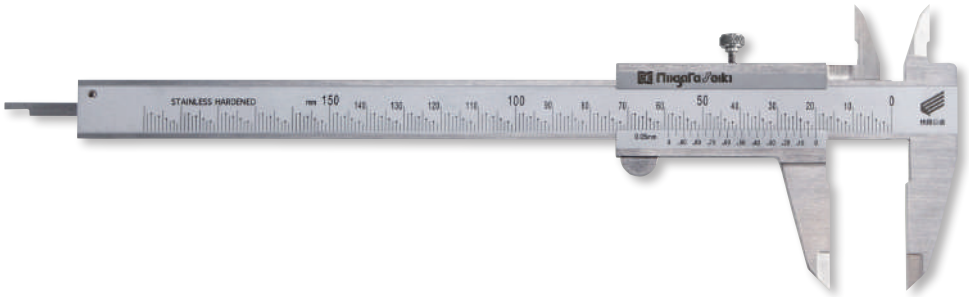
| Model No. | A | B | C | D | E | F | G |
|---|---|---|---|---|---|---|---|
| GVC-15KD | 228 | 77 | 16.5 | 40 | 53 | 30 | 16 |
| GVC-20KD | 290 | 90.5 | 19 | 50 | 60 | 31 | 17 |
| GVC-30KD | 403 | 111 | 22 | 64 | 67.5 | 35 | 20 |

| Order No. | Model No. | Measuring Range (mm) | Resolution (mm) | Accuracy (mm) | Depth Bar (Yes/None) | Weight |
|---|---|---|---|---|---|---|
| 151378 | GVC-15KD | 150 | 0.05 | ± 0.05 | Yes | 140g |
| 151379 | GVC-20KD | 200 | | | | 200g |
| 151380 | GVC-30KD | 300 | | ± 0.08 | | 380g |

## LEFT-HAND VERNIER CALIPER KAIDAN GVC-150KDL

For left-handed use.
Stepped millimeter graduations prevents misreading.

Reference standard for calibration▶ Block Gauge P32 ~40
For measurement of concave area▶ Caliper Attachment P170
Rust prevention▶ Zerust Film for Steel P370

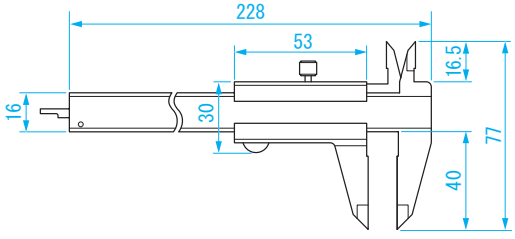


USE
- For measuring outside and inside dimension, step and depth

MATERIAL
- Stainless steel

FEATURES
- For left-handed
- Stepped length of linear graduations by 1mm for easy-to-read
- Sequential graduations numbers and dot marking every 2mm for prevention of misreading
- Decimal point on the vernier makes the number easy-to-read
- Satin finish

● DIMENSIONS Units: mm



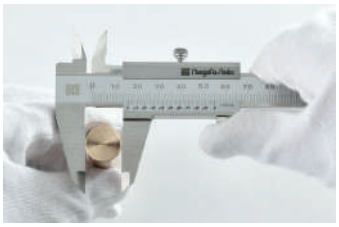

| Order No. | Model No. | Measuring Range (mm) | Resolution (mm) | Max. Permissible Error (mm) | Depth Bar (Yes/None) | Weight |
|---|---|---|---|---|---|---|
| 151322 | GVC-150KDL | 150 | 0.05 | ± 0.05 | Yes | 150g |

# VERNIER CALIPER

## Basic plain design

Reference standard for calibration▶ Block Gauge P32 ~40
For measurement of concave area▶ Caliper Attachment P170
Rust prevention▶ Zerust Film for Steel P370

GVC-15

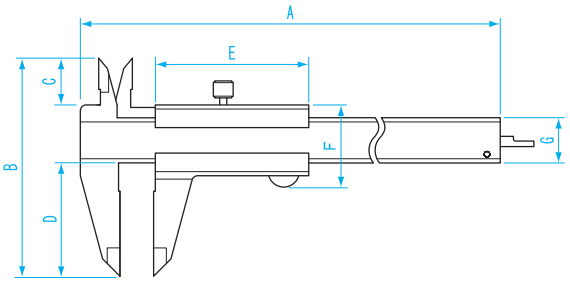


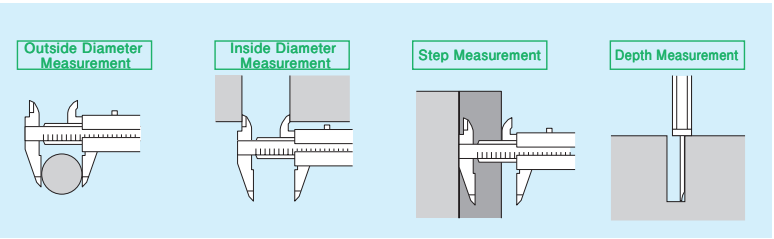
USE
- For outside diameter, inside diameter, step and depth measurement

MATERIAL
- Stainless steel

FEATURES
- Mono block vernier caliper
- Integrated vernier type for easy reading
- Satin finish

● DIMENSIONS




Units: mm

| Model No. | A | B | C | D | E | F | G |
|---|---|---|---|---|---|---|---|
| GVC-15 | 228 | 77 | 16.5 | 40 | 53 | 30 | 16 |
| GVC-20 | 290 | 90.5 | 19 | 50 | 60 | 31 | 17 |
| GVC-30 | 403 | 111 | 22 | 64 | 67.5 | 35 | 20 |
| TVC-60 | 770 | 168 | 38 | 100 | 92 | 45 | 24 |
| TVC-100 | 1230 | 238 | 50 | 150 | 125 | 53 | 31 |

| Order No. | Model No. | Measuring Range (mm) | Resolution (mm) | Accuracy (mm) | Depth Bar (Yes/None) | Weight |
|---|---|---|---|---|---|---|
| 151384 | GVC-15 | 150 | 0.05 | ± 0.05 | Yes | 140g |
| 151385 | GVC-20 | 200 | | | | 210g |
| 151386 | GVC-30 | 300 | | ± 0.08 | | 380g |
| 151095 | TVC-60 | 600 | | ± 0.10 | None | 1.2kg |
| 151096 | TVC-100 | 1000 | | ± 0.15 | | 2.5kg |

# VERNIER CALIPER SMALL TYPE

## Only 70mm small vernier caliper

Reference standard for calibration▶ Block Gauge P32 ~40
Rust prevention▶ Zerust Film for Steel P370

USE
- For measuring outside and inside dimensions, step and depth

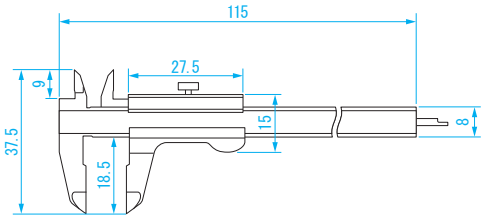
MATERIAL
- Stainless steel

FEATURES
- Pocket size mono-block vernier caliper
- Integrated vernier type for easy reading
- Satin finish

Palm-size and compact

● DIMENSIONS

Units: mm

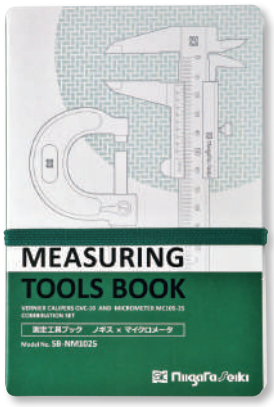



| Order No. | Model No. | Measuring Range (mm) | Resolution (mm) | Max. Permissible Error (mm) | Depth Bar (Yes/None) | Weight |
|---|---|---|---|---|---|---|
| 151374 | VC-07 | 70 | 0.05 | ± 0.05 | Yes | 25g |

## VERNIER CALIPER GVC-10 AND MICROMETER MC105-25/ COMBINATION SET

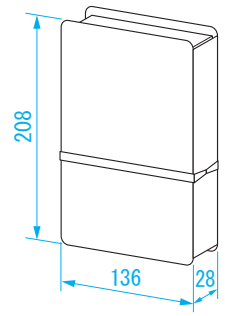
T PDI O

Book shaped combination set of vernier caliper and micrometer.
Can be displayed and stored on desk or shelf.



User friendly.
Instruction manuals are included for beginner.

● DIMENSIONS Units: mm




USE
- Vernier caliper: For measuring outside and inside dimension, step and depth
- Micrometer: For measuring outer dimension

MATERIAL
- Outer case: Paper ● Inner case: Polyethylene

FEATURES
- Combination set of vernier caliper and micrometer
- Instruction manual included
- Book shaped case for storing upright on desk or shelf

※ For more details of each product, please refer to individual pages of the existing catalog or contact us.

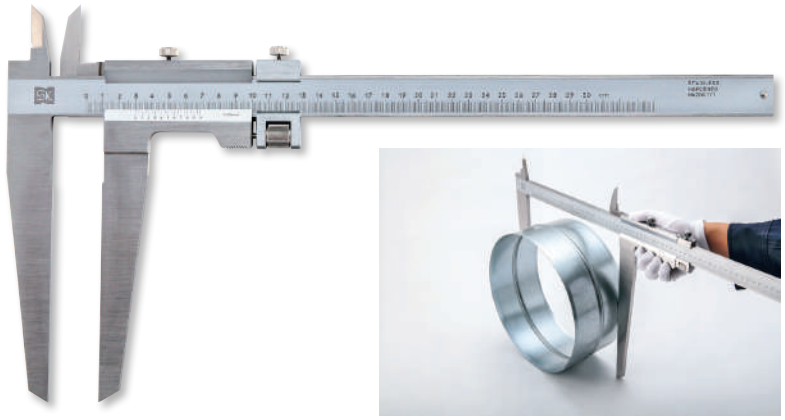
| Order No. | Model No. | Package Content | Page Referred※ | Measuring Range (mm) | Resolution (mm) | Accuracy | Weight |
|---|---|---|---|---|---|---|---|
| 151395 | SB-NM1025 | VERNIER CALIPER 100mm | – | 0 ~ 100 | 0.05 | ± 0.05mm | 365g |
| | | MICROMETER MC105-25 | 212 | 0 ~ 25 | 0.01 | 4μm | |

## LONG JAW VERNIER CALIPER

T PDI O

Recommended for can manufacturers!
Suitable for large diameter measurement

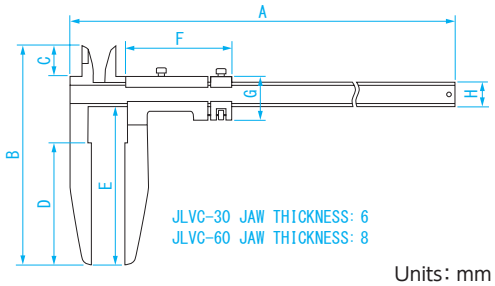
Reference standard for calibration▶
Block Gauge P32 ~40





JLVC-30

● DIMENSIONS




Units: mm

| Model No. | A | B | C | D | E | F | G | H |
|---|---|---|---|---|---|---|---|---|
| JLVC-30 | 458 | 239 | 35 | 130 | 170 | 115 | 53.5 | 25 |
| JLVC-60 | 820 | 405 | 45 | 180 | 320 | 163 | 56.4 | 32 |

USE
- For measuring outside and inside dimension, and step

MATERIAL
- Stainless steel

FEATURES
- Long jaws for measurement in deep space
- Suitable for measuring large diameter
- Hight control support for stable measurement

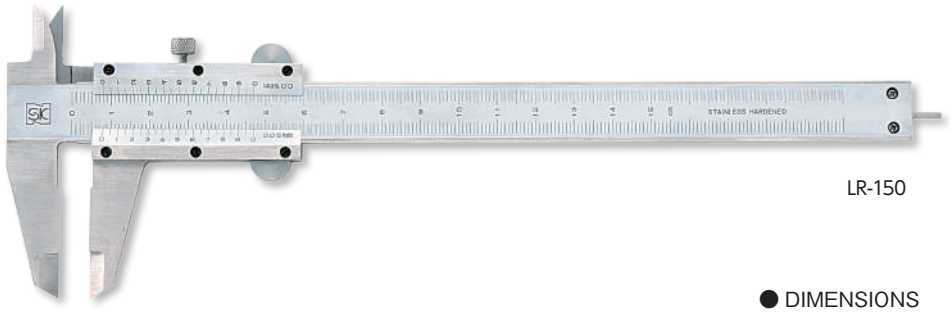
※ Accuracy of outside measurement is guaranteed only when measured by upper side (close to the main scale) of jaws.
Accuracy may be larger depending on how to measure if measured by tips (or near) of jaws.

| Order No. | Model No. | Measuring Range (mm) | Resolution (mm) | Max. Permissible Error※ (mm) | Depth Bar (Yes/None) | Weight |
|---|---|---|---|---|---|---|
| 151815 | JLVC-30 | 300 | 0.05 | ± 0.08 | None | 1.16kg |
| 151816 | JLVC-60 | 600 | | ± 0.10 | | 3.29kg |

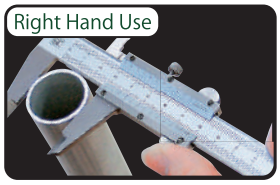
# LR TYPE VERNIER CALIPER

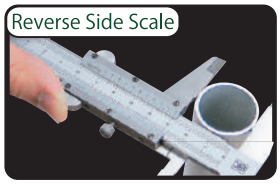
With unique feature that can be used by both right and left hand

Reference standard for calibration▶ Block Gauge P32 ~40
For measurement of concave area▶ Caliper Attachment P170
Rust prevention▶ Zerust Film for Steel P370



LR-150



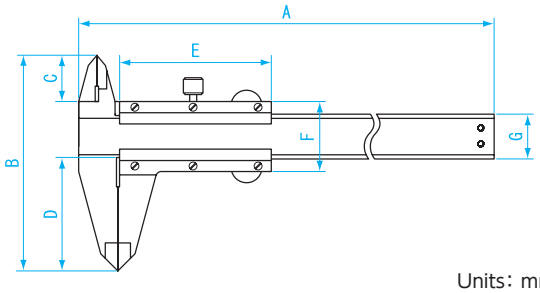




USE
- For outside diameter, inside diameter, step and depth measurement

MATERIAL
- Stainless steel

FEATURES
- Graduations on both upper and lower side
- Dual vernier scales
- Dual thumb grip for use with right or left hand
- Satin finish

● DIMENSIONS



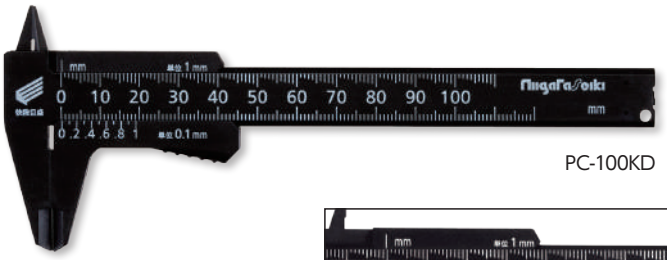

Units: mm

| Model No. | A | B | C | D | E | F | G |
|---|---|---|---|---|---|---|---|
| LR-100 | 160 | 60 | 14 | 30 | 42 | 20 | 12 |
| LR-150 | 235 | 77 | 16 | 40 | 54 | 25 | 16 |
| LR-200 | 300 | 90 | 20 | 50 | | | |

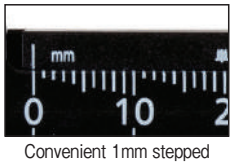
| Order No. | Model No. | Measuring Range (mm) | Resolution (mm) | Accuracy (mm) | Depth Bar (Yes/None) | Weight |
|---|---|---|---|---|---|---|
| 151331 | LR-100 | 100 | 0.05 | ± 0.05 | Yes | 70g |
| 151332 | LR-150 | 150 | | | | 150g |
| 151333 | LR-200 | 200 | | | | 180g |

# PLASTIC VERNIER CALIPER KAIDAN

Scratch resistant and easy handling.
New stepped millimeter graduations prevents misreading.

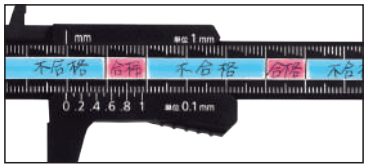



PC-100KD




Convenient 1mm stepped graduation when fine numerical value is not required

With magnet



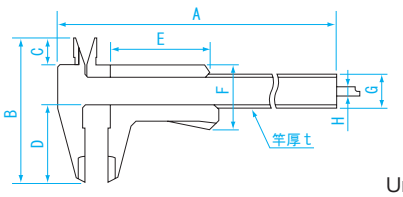

Example of customize

USE
- For outside diameter, inside diameter, step and depth measurement

MATERIAL
- Polycarbonate

FEATURES
- Stepped length of linear graduations by 1mm for easy-to-read
- Convenient 1mm graduation when higher precision is not required
- With white sticker for customizing the scale depending on purpose
- With magnet and strap hole

● DIMENSIONS




Units: mm

| Model No. | A | B | C | D | E | F | G | H | t |
|---|---|---|---|---|---|---|---|---|---|
| PC-70KD | 114 | 43 | 8 | 22 | 27 | 20 | 11 | 2.7 | 3.3 |
| PC-100KD | 166 | 63 | 12 | 34 | 42 | 28 | 15 | 4 | 4 |

| Order No. | Model No. | Measuring Range (mm) | Resolution (mm) | Accuracy (mm) | Depth Bar (Yes/None) | Weight |
|---|---|---|---|---|---|---|
| 151375 | PC-70KD | 70 | 0.1・1 | ± 0.2 | Yes | 8g |
| 151376 | PC-100KD | 100 | | | | 19g |

VERNIER CALIPER
SCRIBING CALIPER
DEPTH GAUGE
HEIGHT GAUGE

## DIGITAL SCRIBING VERNIER CALIPER

Enables stable and high accuracy scribing work

Integrated software for measuring instruments▶ SK-LOG P24 ~27
Reference standard for calibration▶ Block Gauge P32 ~40
Wireless data output▶ Bluetooth BOX for Calipers P168
Rust prevention▶ Zerust Film for Steel P370

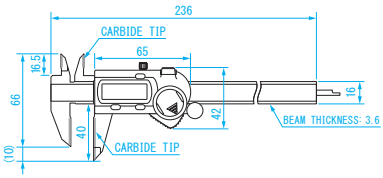
USE
- Outside diameter, inside diameter, step and depth measurement, and also scribing

MATERIAL
- Stainless steel

FEATURES
- One for both measuring and scribing
- Bluetooth BOX (separately sold) can be attached
- Carbide-tipped measuring faces
- Display hold function
- Auto power off function (after approx. 20 min)

POWER
- One CR2032 (lithium) battery included for testing

● DIMENSIONS Units: mm



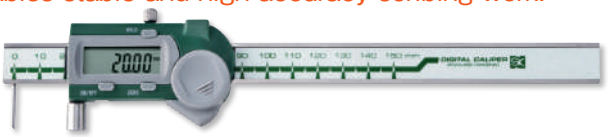

※ Quantization Error (± 1digit) not included

| Order No. | Model No. | Measuring Range (mm) | Resolution (mm) | Accuracy※ (mm) | Depth bar (Yes/None) | Weight |
|---|---|---|---|---|---|---|
| 151983 | GDCS-150S | 0-150 | 0.01 | ± 0.03 | Yes | 170g |

## DIGITAL SCRIBING CALIPER GDCS-150SS

One specialized for scribing work.
Enables stable and high accuracy scribing work.

Integrated software for measuring instruments▶ SK-LOG P24 ~27
Reference standard for calibration▶ Block Gauge P32 ~40
Wireless data output▶ Bluetooth BOX for Calipers P168
Rust prevention▶ Zerust Film for Steel P370

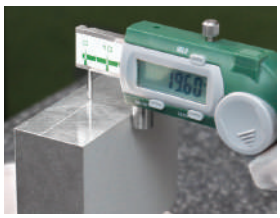


USE
- For scribing work, and for measuring outside dimension

MATERIAL
- Body: Stainless steel
- Scriber: Carbon steel (hardened)

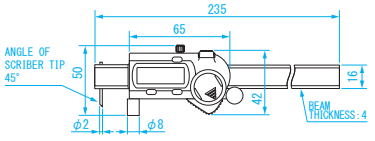
FEATURES
- Measuring and scribing can be done with this one product
- Replacement scriber is separately sold in case it is worn out
- Bluetooth BOX (separately sold) can be attached
- Display hold function
- Auto power off function (after approx. 20 min)

POWER
- One CR2032 (lithium) battery included for testing



Smooth scribing work is possible by the rotating roller

● DIMENSIONS Units: mm




※ Quantization Error (± 1 digit) not included

| Order No. | Model No. | Measuring Range (mm) | Resolution (mm) | Max. Permissible Error※ (mm) | Weight |
|---|---|---|---|---|---|
| 151998 | GDCS-150SS | 0-150 | 0.01 | ± 0.04 | 165g |

### ■ SCRIBING PROBE FOR DIGITAL SCRIBING VERNIER CALIPER

USE
- Scriber for DIGITAL SCRIBING VERNIER CALIPER GDCS-150SS

| Order No. | Model No. | Applicable Model | Material | Weight |
|---|---|---|---|---|
| 151999 | 150SS-SP | GDCS-150SS | Carbon steel (hardened) | 1g |

## SCRIBING VERNIER CALIPER

Recommended for sash and can manufacturers!
Enables stable and high accuracy scribing work.

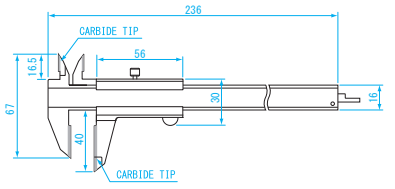
Reference standard for calibration▶ Block Gauge P32 ~40
Rust prevention▶ Zerust Film for Steel P370

USE
- Outside diameter, inside diameter, step and depth measurement, and also scribing

MATERIAL
- Stainless steel

FEATURES
- One for both measuring and scribing
- Carbide-tipped measuring faces
- Stain finish

● DIMENSIONS Units: mm

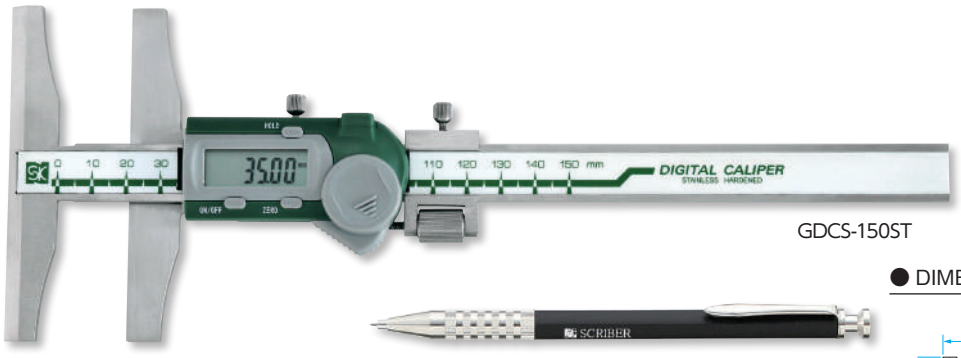



| Order No. | Model No. | Measuring Range (mm) | Resolution (mm) | Accuracy (mm) | Depth Bar (Yes/None) | Weight |
|---|---|---|---|---|---|---|
| 151279 | TVC-15S | 150 | 0.05 | ± 0.05 | Yes | 150g |

# DIGITAL SCRIBING VERNIER CALIPER

Bluetooth BOX (separately sold) can be attached.
Enables stable and high accuracy scribing work.
Stable scribing work can be performed on the base end face.

Integrated software for measuring instruments▶ SK-LOG P24 ~27
Wireless data output▶ Bluetooth BOX for Calipers P168
For marking work▶ Scribes P324 ~325
Rust prevention▶ Zerust Film for Steel P370




GDCS-150ST

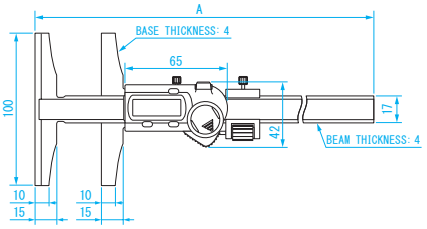
USE
- Measures distance from caliper base to scribe edge

MATERIAL
- Stainless steel

FEATURES
- Digital Display for easy reading and precise scribing work
- Bluetooth BOX (separately sold) can be attached
- Display hold function
- Auto power off function (after approx. 20 min.)
- Carbide tip scriber SC-P included

POWER
- One CR2032 (lithium) battery included for testing

● DIMENSIONS




Units: mm

| Model No. | A |
|---|---|
| GDCS-150ST | 275 |
| GDCS-300ST | 430 |

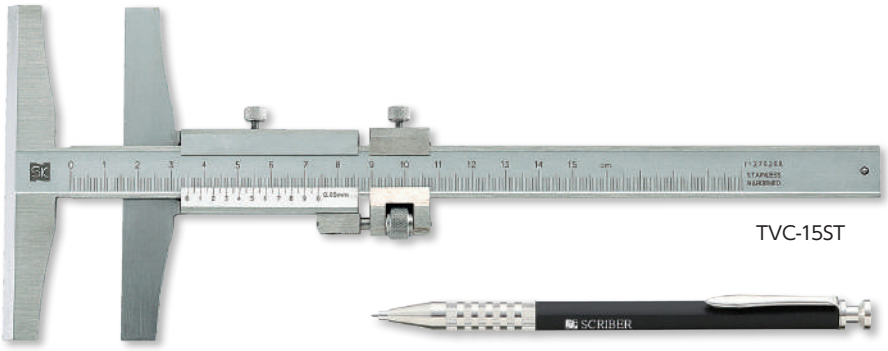
※ Quantization Error (± 1digit) not included

| Order No. | Model No. | Measuring Range (mm) | Resolution (mm) | Accuracy※ (mm) | Base Parallelism (mm) | Weight |
|---|---|---|---|---|---|---|
| 151995 | GDCS-150ST | 0-150 | 0.01 | ± 0.07 | 0.07 | 295g |
| 151996 | GDCS-300ST | 0-300 | | ± 0.08 | 0.08 | 360g |

# SCRIBING VERNIER CALIPER

Enables stable and high-accuracy scribing work.
Stable scribing work can be performed on the base end face.

For marking work▶ Scribes P324 ~325
Rust prevention▶ Zerust Film for Steel P370



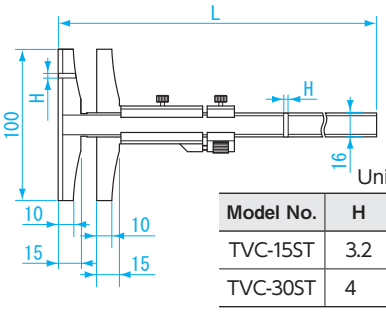

TVC-15ST

USE
- Measures distance from caliper base to scribe edge

MATERIAL
- Stainless steel

FEATURES
- For precise scribing work
- Carbide tip scriber SC-P included
- Stain finish

● DIMENSIONS




Units : mm

| Model No. | H | L |
|---|---|---|
| TVC-15ST | 3.2 | 260 |
| TVC-30ST | 4 | 410 |

| Order No. | Model No. | Measuring Range (mm) | Resolution (mm) | Accuracy (mm) | Weight |
|---|---|---|---|---|---|
| 151803 | TVC-15ST | 150 | 0.05 | ± 0.1 | 240g |
| 151804 | TVC-30ST | 300 | | | 370g |

## DIGITAL GAP CALIPER (FOUR POINTS BASE)

T PDI 0

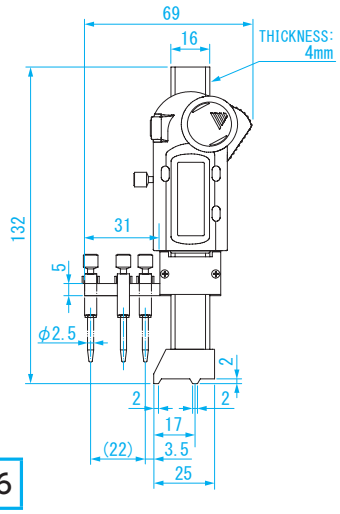
Quick tool for easy gap/step measurement.
Adjustable gauge point can avoid bumps for accurate measurement.
Bluetooth BOX (separately sold) can be attached.

Integrated software for measuring instruments▶ SK-LOG P24 ～27
Wireless data output▶ Bluetooth BOX for Calipers P168
Rust prevention▶ Zerust Film for Steel P370

The gauge point is adjustable

Four points base

● DIMENSIONS Units: mm




USE
- Step depth measurement

MATERIAL
- Stainless steel

FEATURES
- Bluetooth BOX (separately sold) can be attached. Measured value can be transmitted to PC wireless.
- Bottom base in cavity structure
- Display hold function ● Auto power off function (after approx. 20 min.)

POWER
- One CR2032 (lithium) battery included for testing

Parts for Gap Caliper⇒P196

※ Quantization Error (± 1digit) not included

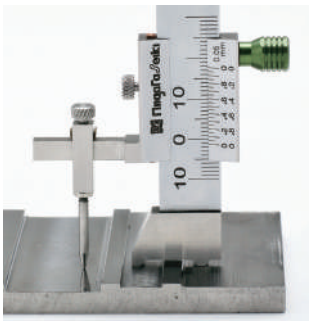
| Order No. | Model No. | Measuring Range (mm) | Resolution (mm) | Accuracy※ (mm) | Probe Operation Range (mm) | Base Shape | Probe | Arm | Weight |
|---|---|---|---|---|---|---|---|---|---|
| 152301 | GDG-4F-S1 | -13-+16 | 0.01 | ± 0.03 | 22 | Four points (Flat) | Stainless steel Tip SR0.5mm | Straight | 150g |

## GAP CALIPER (FOUR POINTS BASE)

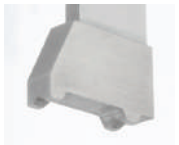
T PDI 0

Quick tool for easy gap / step measurement.
Adjustable gauge point can avoid bumps for accurate measurement.

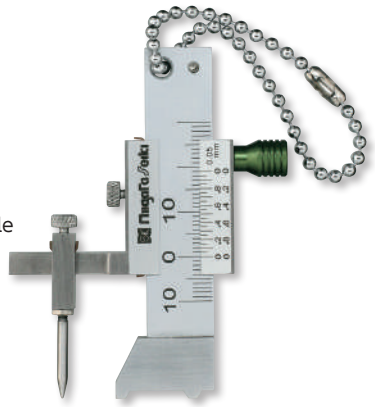
Rust prevention▶ Zerust Film for Steel P370



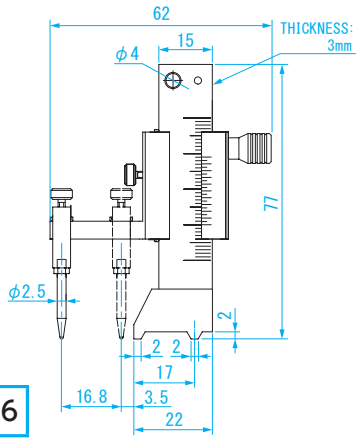
The gauge point is adjustable



Four points base



● DIMENSIONS Units: mm




USE
- Step depth measurement

MATERIAL
- Stainless steel

FEATURES
- Bottom base in cavity structure
- Ball chain attached
- Grip attached

Parts for Gap Caliper⇒P196

| Order No. | Model No. | Measuring Range (mm) | Resolution (mm) | Accuracy (mm) | Probe Operation Range (mm) | Base Shape | Probe | Arm | Weight |
|---|---|---|---|---|---|---|---|---|---|
| 152331 | GVG-4F-S1-G | ± 10mm | 0.05 | ± 0.05 | 16.8 | Four points (Flat) | Stainless steel Tip SR0.5mm | Straight | 70g |

## DIGITAL GAP CALIPER (THREE BALL POINTS BASE)

T PDI O

Well-requested 3 ball points (spherical points) base added to the collection.
Bluetooth BOX (separately sold) can be attached.

Integrated software for measuring instruments▶ SK-LOG P24 ～27
Wireless data output▶ Bluetooth BOX for Calipers P168
Rust prevention▶ Zerust Film for Steel P370

The gauge point is adjustable

Three ball points (spherical points) base

USE
- Step depth measurement

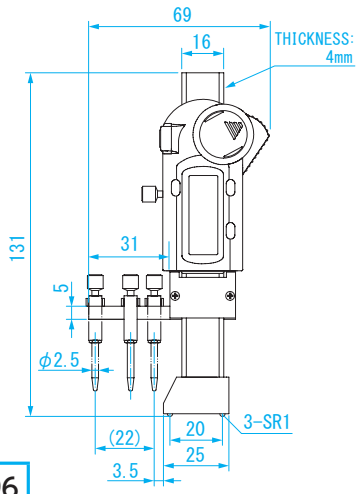
MATERIAL
- Stainless steel

FEATURES
- Bluetooth BOX (separately sold) can be attached. Measured value can be transmitted to PC wireless.
- Bottom base in cavity structure
- Display hold function
- Auto power off function (after approx. 20 min.)

POWER
- One CR2032 (lithium) battery included for testing

Parts for Gap Caliper⇒P196

● DIMENSIONS Units: mm




※ Quantization Error (± 1digit) not included

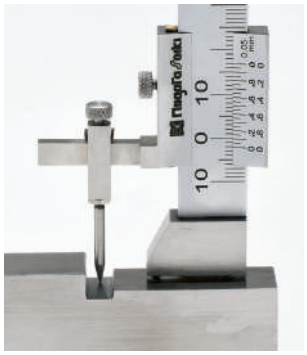
| Order No. | Model No. | Measuring Range (mm) | Resolution (mm) | Accuracy※ (mm) | Probe Operation Range (mm) | Base Shape | Probe | Arm | Weight |
|---|---|---|---|---|---|---|---|---|---|
| 152302 | GDG-3R-S1 | -13-+16 | 0.01 | ± 0.03 | 22 | Three ball points (spherical points) | Stainless steel Tip SR0.5mm | Straight | 155g |

## GAP CALIPER (THREE BALL POINTS BASE)

T PDI O

Quick tool for easy gap/step measurement.
Well-requested 3 ball points (spherical points) base added to the collection.

Rust prevention▶ Zerust Film for Steel P370



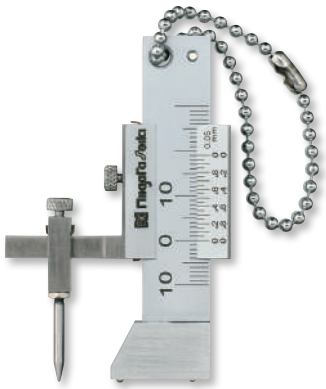
The gauge point is adjustable

Three ball points (spherical points) base

USE
- Step depth measurement

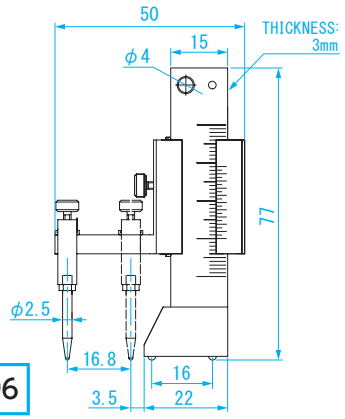
MATERIAL
- Stainless steel

FEATURES
- Bottom base in cavity structure
- Ball chain attached



Parts for Gap Caliper⇒P196

● DIMENSIONS Units: mm




| Order No. | Model No. | Measuring Range (mm) | Resolution (mm) | Accuracy (mm) | Probe Operation Range (mm) | Base Shape | Probe | Arm | Weight |
|---|---|---|---|---|---|---|---|---|---|
| 152332 | GVG-3R-S1 | ± 10mm | 0.05 | ± 0.05 | 16.8 | Three ball points (spherical points) | Stainless steel Tip SR0.5mm | Straight | 75g |

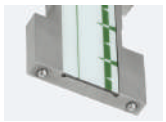
## DIGITAL GAP CALIPER (TWO BALL POINTS BASE)

T PDI O

Quick tool for easy gap/step measurement.
Thin base with two ball points (spherical points) type.
Bluetooth BOX (separately sold) can be attached.

Integrated software for measuring instruments▶ SK-LOG P24 ~27
Wireless data output▶ Bluetooth BOX for Calipers P168
Rust prevention▶ Zerust Film for Steel P370

The gauge point is adjustable



Two ball points (spherical points) base

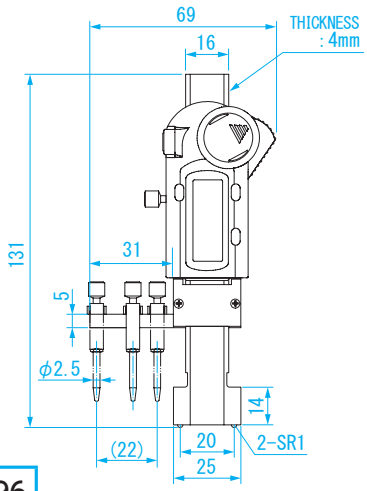
USE
- Step depth measurement

MATERIAL
- Stainless steel

FEATURES
- Bluetooth BOX (separately sold) can be attached. Measured value can be transmitted to PC wireless.
- Bottom base in cavity structure
- Display hold function
- Auto power off function (after approx. 20 min.)

POWER
- One CR2032 (lithium) battery included for testing

● DIMENSIONS Units: mm




Parts for Gap Caliper⇒P196

※ Quantization Error (± 1digit) not included

| Order No. | Model No. | Measuring Range (mm) | Resolution (mm) | Accuracy※ (mm) | Probe Operation Range (mm) | Base Shape | Probe | Arm | Weight |
|---|---|---|---|---|---|---|---|---|---|
| 152306 | GDG-2R-S1 | -13-+16 | 0.01 | ± 0.03 | 22 | Two ball points (spherical points) | Stainless steel Tip SR0.5mm | Straight | 145g |

## GAP CALIPER (TWO BALL POINTS BASE)

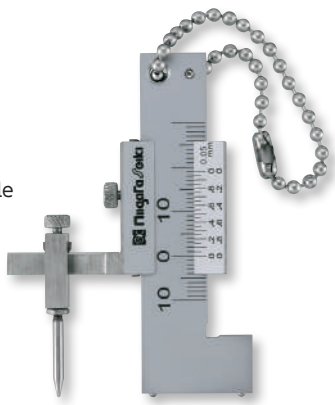
T PDI O

Quick tool for easy gap / step measurement.
Thin base with two ball points (spherical points) type.

Rust prevention▶ Zerust Film for Steel P370

The gauge point is adjustable

Two ball points (spherical points) base

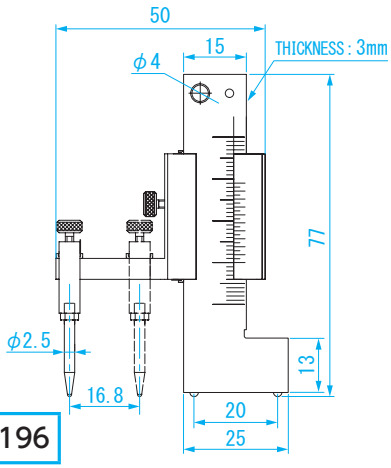


USE
- Step depth measurement

MATERIAL
- Stainless steel

FEATURES
- Bottom base in cavity structure
- Ball chain attached

● DIMENSIONS Units: mm




Parts for Gap Caliper⇒P196

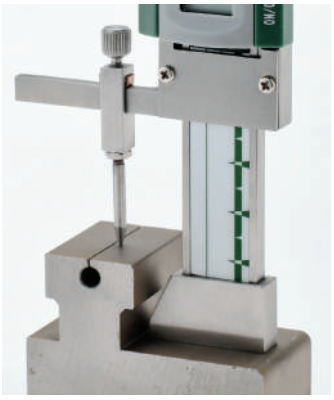
| Order No. | Model No. | Measuring Range (mm) | Resolution (mm) | Accuracy (mm) | Probe Operation Range (mm) | Base Shape | Probe | Arm | Weight |
|---|---|---|---|---|---|---|---|---|---|
| 152339 | GVG-2R-S1 | ± 10mm | 0.05 | ± 0.05 | 16.8 | Two ball points (spherical points) | Stainless steel Tip SR0.5mm | Straight | 65g |

# DEGITAL GAP CALIPER (FLAT BASE)

T PDI 0

Stable measument by flat base.
Bluetooth BOX (separately sold) can be attached.

Integrated software for measuring instruments▶ SK-LOG P24 ~27
Wireless data output▶ Bluetooth BOX for Calipers P168
Rust prevention▶ Zerust Film for Steel P370



The gauge point is adjustable

Flat base

USE
- Step depth measurement

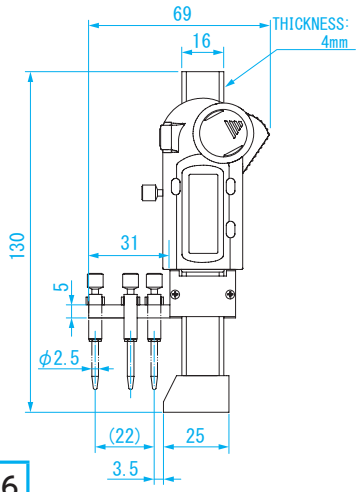
MATERIAL
- Stainless steel

FEATURES
- Bluetooth BOX (separately sold) can be attached. Measured value can be transmitted to PC wireless.
- Display hold function
- Auto power off function (after approx. 20 min.)

POWER
- One CR2032 (lithium) battery included for testing

Parts for Gap Caliper⇒P196

● DIMENSIONS Units: mm




※ Quantization Error (± 1digit) not included

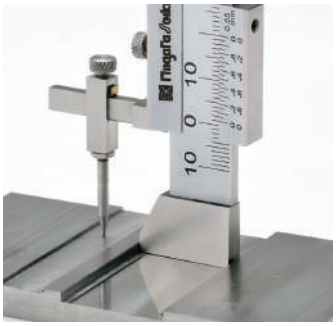
| Order No. | Model No. | Measuring Range (mm) | Resolution (mm) | Accuracy※ (mm) | Probe Operation Range (mm) | Base Shape | Probe | Arm | Weight |
|---|---|---|---|---|---|---|---|---|---|
| 152303 | GDG-F-S1 | -13-+16 | 0.01 | ± 0.03 | 22 | Flat | Stainless steel Tip SR0.5mm | Straight | 150g |

# GAP CALIPER (FLAT BASE)

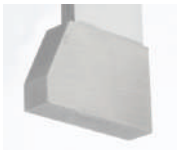
T PDI 0

Stable measurement by flat base

Rust prevention▶ Zerust Film for Steel P370



The gauge point is adjustable

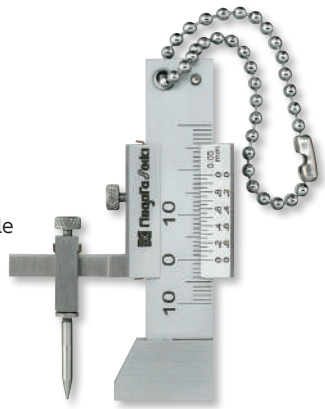


Flat base

USE
- Step depth measurement

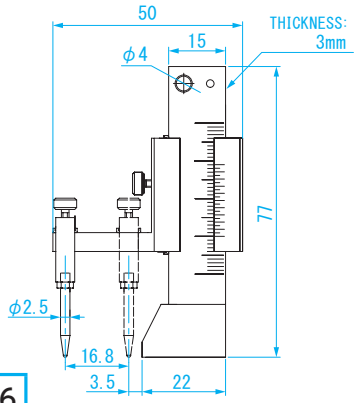
MATERIAL
- Stainless steel

FEATURES
- Ball chain attached



Parts for Gap Caliper⇒P196

● DIMENSIONS Units: mm




| Order No. | Model No. | Measuring Range (mm) | Resolution (mm) | Accuracy (mm) | Probe Operation Range (mm) | Base Shape | Probe | Arm | Weight |
|---|---|---|---|---|---|---|---|---|---|
| 152333 | GVG-F-S1 | ± 10mm | 0.05 | ± 0.05 | 16.8 | Flat | Stainless steel Tip SR0.5mm | Straight | 70g |

## DIGITAL GAP CALIPER (RESIN BASE / NYLON PROBE TYPE)

T PDI 0

Suitable for sensitive object by resin base and nylon probe.
Bluetooth BOX (separately sold) can be attached.

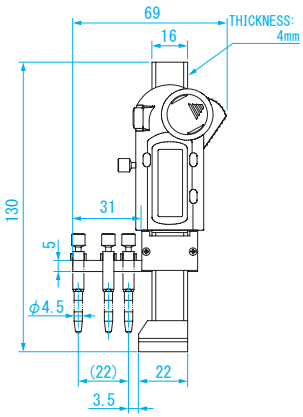
Integrated software for measuring instruments▶ SK-LOG P24 ~27
Wireless data output▶ Bluetooth BOX for Calipers P168
Rust prevention▶ Zerust Film for Steel P370

※ Resin base and nylon probe that are suitable for sensitive objects

Probe (nylon)

Flat base (resin)

● DIMENSIONS Units: mm




USE
- Step depth measurement

MATERAL
- Main Body: Stainless steel
- Base: Resin ● Tip of probe: Nylon

FEATURES
- Suitable for measuring sensitive object by resin base and nylon probe
- Bluetooth BOX (separately sold) can be attached. Measured value can be transmitted to PC wireless.
- Display hold function ● Auto power off function (after approx. 20 min.)

POWER
- One CR2032 (lithium) battery included for testing

Parts for Gap Caliper⇒P196

※ Quantization Error (± 1digit) not included

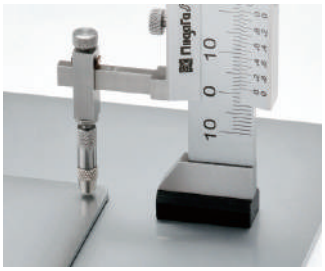
| Order No. | Model No. | Measuring Range (mm) | Resolution (mm) | Accuracy ※ (mm) | Probe Operation Range (mm) | Base Shape | Probe | Arm | Weight |
|---|---|---|---|---|---|---|---|---|---|
| 152304 | GDG-P-S2 | -13-+16 | 0.01 | ± 0.03 | 22 | Flat (resin) | Nylon Tip 1/8 inch ball | Straight | 145g |

## GAP CALIPER (RESIN BASE / NYLON PROBE TYPE)

T PDI 0

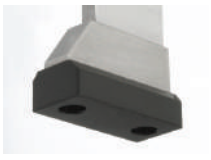
Suitable for measuring sensitive object by resin base and nylon probe

Rust prevention▶ Zerust Film for Steel P370

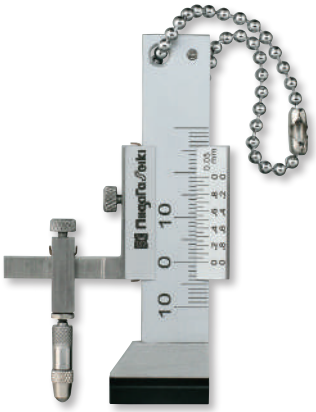


※ Resin base and nylon probe that are suitable for sensitive objects

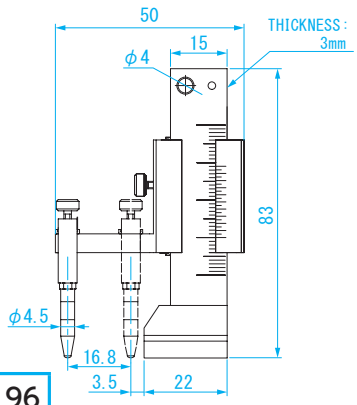
Probe (nylon)



Flat Base (resin)



● DIMENSIONS Units: mm




USE
- Step depth measurement

MATERIAL
- Body: Stainless steel

FEATURES
- Suitable for measuring sensitive object by resin base and nylon probe
- Ball chain attached

Parts for Gap Caliper⇒P196

| Order No. | Model No. | Measuring Range (mm) | Resolution (mm) | Accuracy (mm) | Probe Operation Range (mm) | Base Shape | Probe | Arm | Weight |
|---|---|---|---|---|---|---|---|---|---|
| 152334 | GVG-P-S2 | ± 10mm | 0.05 | ± 0.05 | 16.8 | Flat (resin) | Nylon Tip 1/8inch ball | Straight | 70g |

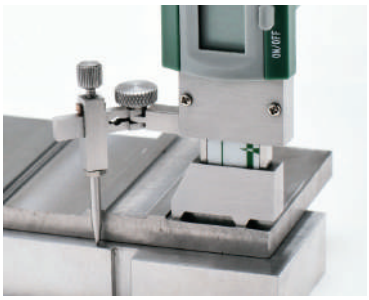
# DIGITAL GAP CALIPER (JOINT ARM TYPE)

Sets probe at aimed point freely by joint arm.
Bluetooth BOX (separately sold) can be attached.

Integrated software for measuring instruments▶
SK-LOG
P24 ~27

Wireless data output▶
Bluetooth BOX for Calipers
P168

Rust prevention▶
Zerust Film for Steel
P370



Joint arm type enables to set probe at any aimed point

Four points base

USE
- Step depth measurement

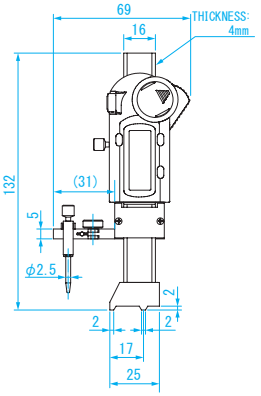
MATERIAL
- Stainless steel

FEATURES
- Joint arm type enables to move the position of probe in wide area
- Bluetooth BOX (separately sold) can be attached. Measured value can be transmitted to PC wireless.
- Bottom base in cavity structure
- Display hold function
- Auto power off function (after approx. 20 min.)

POWER
- One CR2032 (lithium) battery included for testing

Parts for Gap Caliper⇒P196

● DIMENSIONS Units: mm




※ Quantization Error (± 1digit) not included

| Order No. | Model No. | Measuring Range (mm) | Resolution (mm) | Accuracy※ (mm) | Base Shape | Probe | Arm | Weight |
|---|---|---|---|---|---|---|---|---|
| 152305 | GDG-4F-J1 | -13-+16 | 0.01 | ± 0.03 | Four point (flat) | Stainless steel Tip SR0.5mm | Joint | 150g |

# PARTS FOR GAP CALIPER

## ■ Applicable products table

| Parts / Applicable product | | | | Order No. | 152335 | 152336 | 152337 | 152338 |
|---|---|---|---|---|---|---|---|---|
| | | | | Products | PROBE FOR GAP CALIPER | PROBE HOLDER FOR GAP CALIPER | PROBE HOLDER FOR DIGITAL GAP CALIPER | GRIP FOR GAP CALIPER |
| | | | | Model No. | GP-1 | GVP-1H | GDP-1H | GG-12-8 |
| | | | | | | | | Mounting examples |
| Order No. | Products | Model No. | Page referred | | | | | |
| 152301 | DIGITAL GAP CALIPER | GDG-4F-S1 | 191 | | ○ | – | ○ | – |
| 152302 | DIGITAL GAP CALIPER | GDG-3R-S1 | 192 | | ○ | – | ○ | – |
| 152306 | DIGITAL GAP CALIPER | GDG-2R-S1 | 193 | | ○ | – | ○ | – |
| 152303 | DIGITAL GAP CALIPER | GDG-F-S1 | 194 | | ○ | – | ○ | – |
| 152304 | DIGITAL GAP CALIPER | GDG-P-S2 | 195 | | ○※1 | – | ○ | – |
| 152305 | DIGITAL GAP CALIPER | GDG-4F-J1 | 196 | | ○ | – | ○ | – |
| 152331 | GAP CALIPER | GVG-4F-S1-G | 191 | | ○ | ○ | – | ○ |
| 152332 | GAP CALIPER | GVG-3R-S1 | 192 | | ○ | ○ | – | ○ |
| 152339 | GAP CALIPER | GVG-2R-S1 | 193 | | ○ | ○ | – | ○ |
| 152333 | GAP CALIPER | GVG-F-S1 | 194 | | ○ | ○ | – | ○ |
| 152334 | GAP CALIPER | GVG-P-S2 | 195 | | ○※1 | ○ | – | ○ |

※ 1: GP-1 is also attachable to GDG-P-S2 and GVG-P-S2 though nylon probe

# DIGITAL DEPTH GAUGE

Bluetooth BOX (separately sold) can be attached.
Digital type for measuring depth.

Integrated software for measuring instruments▶ SK-LOG P24 ~27
Wireless data output▶ Bluetooth BOX for Calipers P168
Rust prevention▶ Zerust Film for Steel P370

GDCS-150D

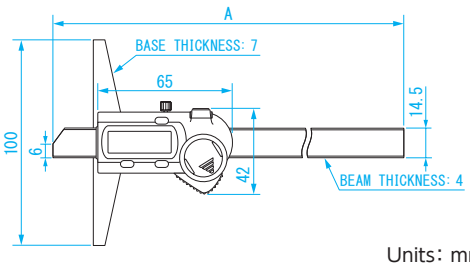
USE
- For measuring depth

MATERIAL
- Stainless steel

FEATURES
- Bluetooth BOX (separately sold) can be attached
- Display hold function
- Auto power off function (after approx. 20 min.)

POWER
- One CR2032 (lithium) battery included for testing

● DIMENSIONS




Units: mm

| Model No. | A |
|---|---|
| GDCS-150D | 235 |
| GDCS-200D | 285 |
| GDCS-300D | 385 |

※ Quantization Error (± 1digit) not included

| Order No. | Model No. | Measuring Range (mm) | Resolution (mm) | Accuracy※ (mm) | Weight |
|---|---|---|---|---|---|
| 151984 | GDCS-150D | 0-150 | 0.01 | ± 0.03 | 195g |
| 151985 | GDCS-200D | 0-200 | | | 220g |
| 151986 | GDCS-300D | 0-300 | | ± 0.04 | 250g |

# DIGITAL DEPTH GAUGE (ROUND DEPTH BAR)

Bluetooth BOX (separately sold) can be attached.
Digital depth gauge with round bar probe.
For measuring depth of narrow grooves and small holes.

Integrated software for measuring instruments▶ SK-LOG P24 ~27
Wireless data output▶ Bluetooth BOX for Calipers P168
Rust prevention▶ Zerust Film for Steel P370

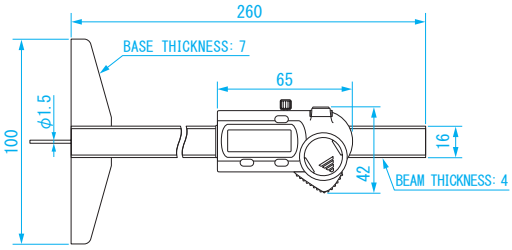
USE
- For measuring depth of narrow grooves and small holes etc.

MATERIAL
- Stainless steel

FEATURES
- Measuring depth of narrow grooves and small holes with round bar probe of ϕ1.5mm
- Bluetooth BOX (separately sold) can be attached
- Display hold function
- Auto power off function (after approx. 20 min.)

POWER
- One CR2032 (lithium) battery included for testing

● DIMENSIONS Units: mm




※ Quantization Error (± 1digit) not included

| Order No. | Model No. | Measuring Range (mm) | Resolution (mm) | Accuracy※ (mm) | Weight |
|---|---|---|---|---|---|
| 151987 | GDCS-150DCD | 0-150 | 0.01 | ± 0.04 | 240g |

# DIGITAL DEPTH GAUGE (SHORT BASE)

Bluetooth BOX (separately sold) can be attached.
Suitable for measuring in narrow groove by short base.

Integrated software for measuring instruments▶ SK-LOG P24 ~27
Wireless data output▶ Bluetooth BOX for Calipers P168
Rust prevention▶ Zerust Film for Steel P370

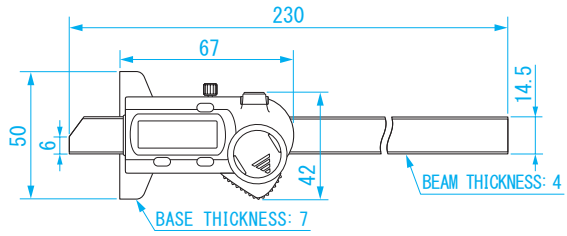
USE
- Depth measurement

MATERIAL
- Stainless steel

FEATURES
- Suitable for measuring depth in narrow groove by short base
- Bluetooth BOX (separately sold) can be attached
- Display hold function
- Auto power off function (after approx. 20 min.)

POWER
- One CR2032 (lithium) battery included for testing

● DIMENSIONS Units: mm




※ Quantization Error (± 1digit) not included

| Order No. | Model No. | Measuring Range (mm) | Resolution (mm) | Accuracy※ (mm) | Weight |
|---|---|---|---|---|---|
| 151158 | GDCS-150DS | 0-150 | 0.01 | ± 0.03 | 175g |

# DIGITAL DEPTH GAUGE (ONE SIDE BASE)

Bluetooth BOX (separately sold) can be attached.
Suitable for measuring in narrow groove by one side base.

Integrated software for measuring instruments▶ SK-LOG P24 ~27
Wireless data output▶ Bluetooth BOX for Calipers P168
Rust prevention▶ Zerust Film for Steel P370

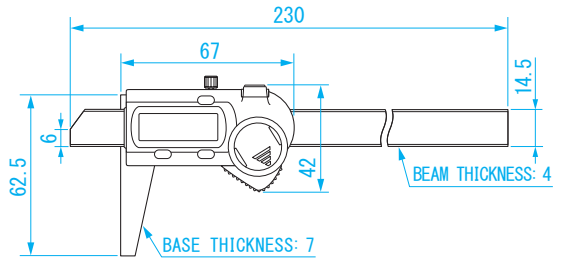
USE
- Depth measurement

MATERIAL
- Stainless steel

FEATURES
- Suitable for measuring in narrow groove by one side base
- Bluetooth BOX (separately sold) can be attached
- Display hold function
- Auto power off function (after approx. 20 min.)

POWER
- One CR2032 (lithium) battery included for testing

● DIMENSIONS Units: mm




※ Quantization Error (± 1digit) not included

| Order No. | Model No. | Measuring Range (mm) | Resolution (mm) | Accuracy※ (mm) | Weight |
|---|---|---|---|---|---|
| 151159 | GDCS-150DR | 0-150 | 0.01 | ± 0.03 | 175g |

# DIGITAL DEPTH GAUGE (HOOK END)

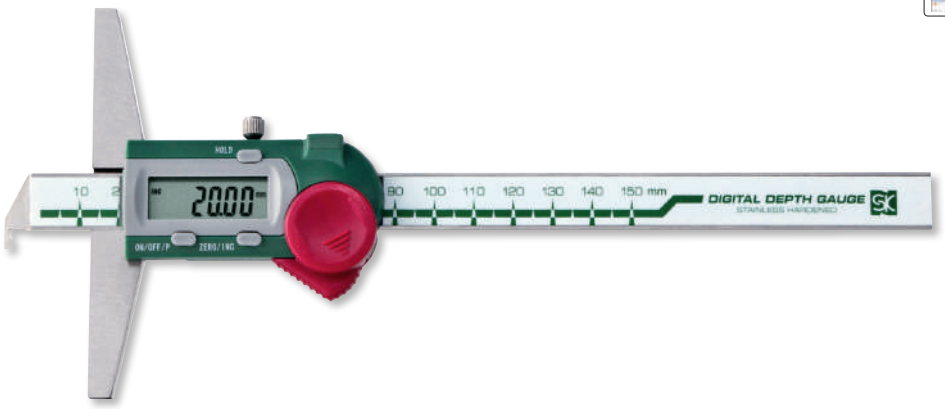
T PDI 0

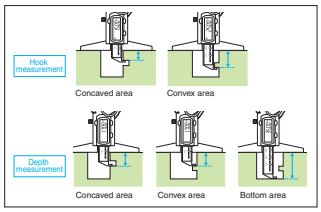
Bluetooth BOX (separately sold) can be attached.
Hook shaped stylus, suitable for measuring depth of uneven parts inside holes.

Integrated software for measuring instruments▶
SK-LOG
P24 ~27

Wireless data output▶
Bluetooth BOX for Calipers
P168

Rust prevention▶
Zerust Film for Steel
P370



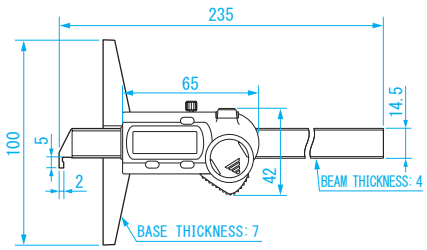

USE
- For depth measurement and pinch (hook) measurement by the hook shaped stylus

MATERIAL
- Stainless steel

FEATURES
- Hook shaped stylus, suitable for measuring depth of uneven parts inside holes
- Bluetooth BOX (separately sold) can be attached
- Preset function
- Display hold function
- Auto power off function (after approx. 20 min.)

POWER
- One CR2032 (lithium) battery included for testing

● DIMENSIONS Units: mm




※ Quantization Error (± 1 digit) not included

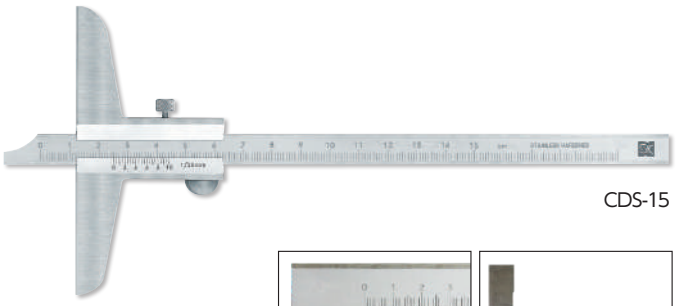
| Order No. | Model No. | Measuring Range (mm) | Resolution (mm) | Max. Permissible Error※ (mm) | Weight |
|---|---|---|---|---|---|
| 151187 | GDCP-150DF | Depth measurement: 2.1-150<br>Hook measurement: 0-150 | 0.01 | ± 0.03 | 190g |

# VERNIER DEPTH GAUGE

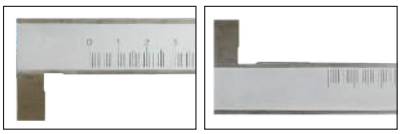
T PDI 0 (Exclude CDS-100)

Analog depth gauge

Rust prevention▶
Zerust Film for Steel
P370



CDS-15



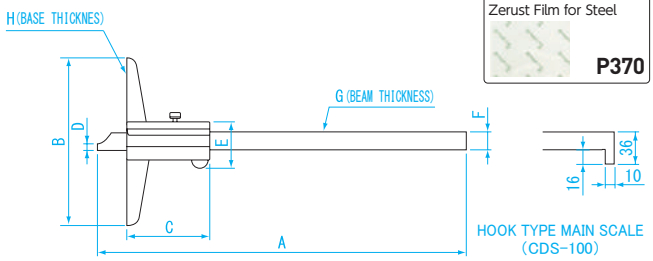
※CDS-100 can become B type (hook type) by replacing the main scale

USE
- For measuring depth

MATERIAL
- Stainless steel

FEATURES
- Fully hardened measuring faces
- Satin finish

● DIMENSIONS




Units: mm

| Model No. | A | B | C | D | E | F | G | H |
|---|---|---|---|---|---|---|---|---|
| CDS-15 | 231 | 100 | 51 | 4 | 27 | 10.5 | 2.8 | 6.1 |
| CDS-20 | 280 | | | | | | | |
| CDS-30 | 380 | 150 | 47.5 | 5 | 29 | 13 | | |
| CDS-50 | 590 | 250 | 80 | 10 | 36 | 20 | 5 | 13.5 |
| CDS-60 | 692 | | | | | | | |
| CDS-100 | 1098 | | | | | | | |

| Order No. | Model No. | Measuring Range (mm) | Resolution (mm) | Accuracy (mm) | Weight |
|---|---|---|---|---|---|
| 007711 | CDS-15 | 150 | 0.05 | ± 0.08 | 125g |
| 007712 | CDS-20 | 200 | | | 140g |
| 007713 | CDS-30 | 300 | | ± 0.10 | 220g |
| 007714 | CDS-50 | 500 | | | 1.0kg |
| 007715 | CDS-60 | 600 | | ± 0.12 | 1.1kg |
| 007716 | CDS-100 | 1000 | | ± 0.15 | 1.4kg |

# DIGITAL MINI DEPTH GAUGE

Bluetooth BOX (separately sold) can be attached.
High resolution 0.01mm digital mini depth gauge.

Integrated software for measuring instruments▶ SK-LOG P24 ~27
Wireless data output▶ Bluetooth BOX for Calipers P168
Rust prevention▶ Zerust Film for Steel P370

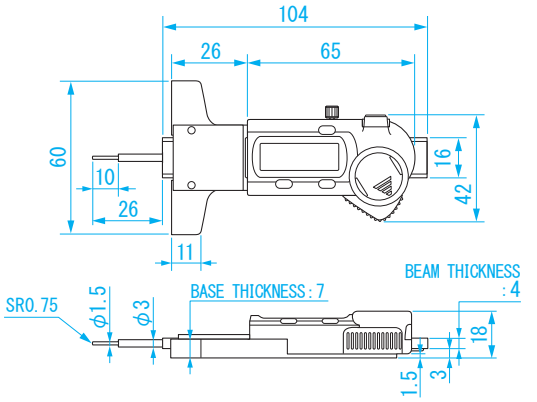
USE
- Depth measurement

MATERIAL
- Stainless steel

FEATURES
- φ1.5mm probe for narrow hole measurement
- Bluetooth BOX (separately sold) can be attached
- Display hold function
- Auto display off function (after approx. 20 min.)

POWER
- CR2032 (lithium) battery included for testing

● DIMENSIONS Units: mm




※ Quantization Error (± 1digit) not included

| Order No. | Model No. | Measuring Range (mm) | Resolution (mm) | Accuracy* (mm) | Weight |
|---|---|---|---|---|---|
| 151997 | GDCS-25STG | 0-25 | 0.01 | ± 0.02 | 165g |

# DIGITAL MINI DEPTH GAUGE

Suitable for measuring tire depth

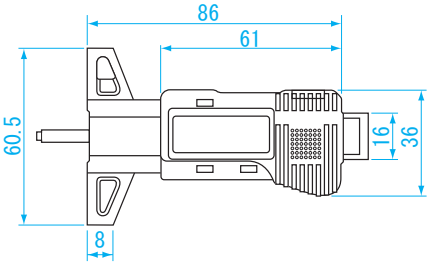
USE
- For measuring depth

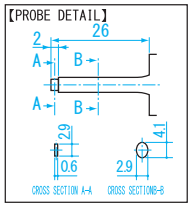
MATERIAL
- Plastic (ABS resin, carbon composite plastic)

FEATURES
- For simple and quick depth measurement
- Display hold function
- Auto display off function (after approx. 5 min.)

POWER
- CR2032 (lithium) battery included for testing

● DIMENSIONS Units: mm




※ Quantization Error (± 1digit) not included

| Order No. | Model No. | Measuring Range (mm) | Resolution (mm) | Accuracy* (mm) | Weight |
|---|---|---|---|---|---|
| 151195 | DMD-25G | 0-25 | 0.1 | ± 0.2 | 40g |

VERNIER CALIPER
SCRIBING CALIPER
DEPTH GAUGE
HEIGHT GAUGE

# S-LINE DIGITAL HEIGHT GAUGE

S line series

T PDI O

HOW TO MOVIE

Niigata Seiki x Mahr collaborated high performance height gauge.
A slide handle is equipped for smooth sliding move.


Integrated software for measuring instruments▶ SK-LOG P24 ~27

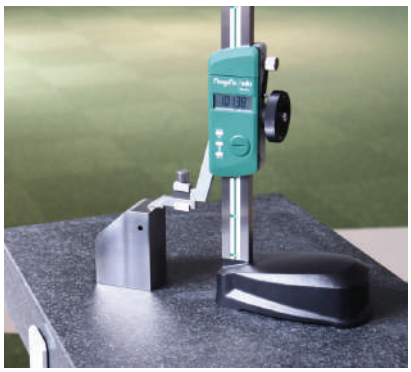
Captures measured data to PC▶ Data Transfer Cable P170

Reference standard for calibration▶ Block Gauge P32 ~40

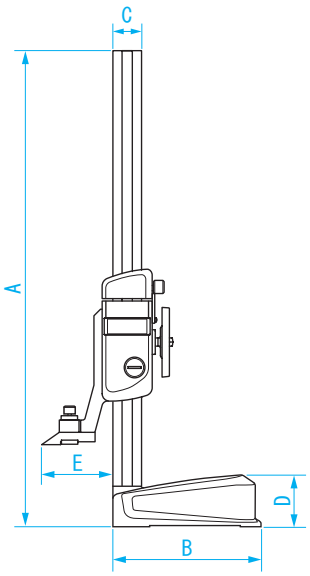
Reference plane of measurement▶ Granite Surface Plate P283

DHG-35M

DHG-60M



● DIMENSIONS




USE
- For measuring height or for scribing work

MATERIAL
- Main scale: Stainless steel ● Base: Cast iron
- Scriber: Carbide tipped

FEATURES
- Capable of transmitting data in combination use with a separately sold dedicated data transfer cable
- With Reference function※1 for quick start of measurement shortly after turning on the power

※1: A function that remembers the previously saved zero point.
- With a slide handle for smooth sliding
- With fine adjustment carriage
- Auto power off function (after approx. 10 min.)

POWER
- One CR2032 (lithium) battery included for testing

ACCESSORIES
- Scriber ● Wrench for the battery cover

Units: mm

| Model No. | A | B | C | D | E |
|---|---|---|---|---|---|
| DHG-35M | 580 | 180 | 35 | 62 | 87 |
| DHG-60M | 835 | | | | |

※2: Quantization Error (± 1 digit) not included

| Order No. | Model No. | Measuring Range (mm) | Resolution (mm) | Max. Permissible Error※2 (mm) | Connection Unit for Data Transmission | Slider fine adjustment feed (mm) | Weight |
|---|---|---|---|---|---|---|---|
| 152282 | DHG-35M | 0-350 | 0.01 | ± 0.04 | DTC-M1 (Wired) | 6 | 7kg |
| 152283 | DHG-60M | 0-600 | | ± 0.05 | | | 8kg |

## CARBIDE TIPPED SCRIBER

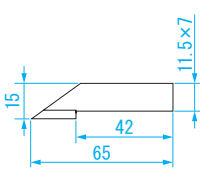
O

USE
- Scriber for Digital S-line Height Gauge DHG-35M, DHG-60M

MATERIAL
- Stainless steel

FEATURES
- Carbide tipped

● DIMENSIONS Units: mm




| Order No. | Model No. | Applicable Model No. | Weight |
|---|---|---|---|
| 152284 | DHG-MS | DHG-35M DHG-60M | 40g |

## INDICATOR HOLDER

O

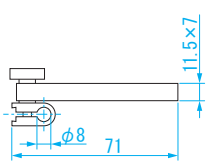

Rust prevention▶ Zerust Film for Steel P370

USE
- Indicator holder for Digital S-line Height Gauge DHG-35M, DHG-60M

MATERIAL
- Carbon steel (Black oxide finish)

SPECIFICATIONS
- Mount size: ϕ8mm, Dovetail mount

● DIMENSIONS Units: mm




| Order No. | Model No. | Applicable Model No. | Weight |
|---|---|---|---|
| 152285 | DHG-MH | DHG-35M DHG-60M | 60g |

# DIGITAL HEIGHT GAUGE

## Steel plated bottom base for wear resistance

HOW TO MOVIE

Reference standard for calibration▶
Block Gauge
P32 ～40

Measuring instruments▶
Indicator
P236～237・P244～246

Reference plane of measurement▶
Granite Surface Plate
P283

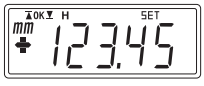
VH-30D　　VH-60D

**TOL button (setting tolerance)**

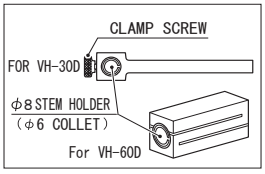
Using the [TOL] button enables you to check if measured value is within a specified range or not easily.

1. Press the [TOL] button until "SET" blinks on display, and the 「▲」 symbol is displayed. In this state the maximum tolerance can be specified.
2. Holding down the [TOL] button will change the blinking position. Release [TOL] button when number to change is blinking, press again to change number +/−. Repeat until desired value is displayed. When the value is set, select [SET] and press the [TOL] button to save setting.
3. When 「▼」 is displayed, use the same procedure to set the minimum tolerance level.
4. Press "TOL" button to return to blinking "SET" on display. Tolerance is now set.
5. When taking a measurement:
   - If the value is within the measurement tolerance, LCD will display 「OK」
   - If the value is above the measurement tolerance, LCD will display 「▲」
   - If the value is below the measurement tolerance, LCD will display 「▼」

【LCD DISPLAY】




Indicator holder arm




### USE

- For measuring of toolings and fixtures or for scribing work
- A dial indicator can be mounted with combination use of Indicator holder arm and Scriber clamp

### MATERIAL

- Vernier:Stainless steel
- Base: Cast iron
- Scriber:Carbide tipped

### FEATURES

- Digital display for easy reading
- Zero-setting at any position
- Display hold function
- Tolerance setting function

### POWER

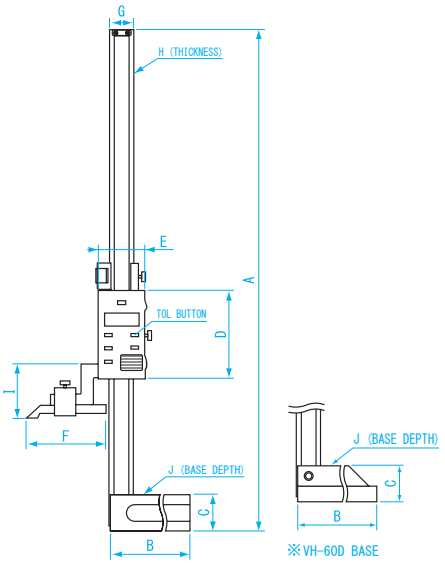
- One SR44 (Silver oxide)

### ACCESSORIES

- Indicator holder arm
- Scriber clamp
- Scriber
- φ6 collet

※In case of using with a dial indicator, comparison measurement is recommended. Please refer to the master which is about the same height as works to be measured.

### ● DIMENSIONS




Units: mm

| Model No. | A | B | C | D | E | F | G | H | I | J |
|---|---|---|---|---|---|---|---|---|---|---|
| VH-30D | 455 | 110 | 32 | 80 | 45 | 75 | 23 | 6 | 54 | 65 |
| VH-60D | 810 | 161 | 52 | 95 | 50 | 102 | 31 | 10.5 | 76 | 120 |

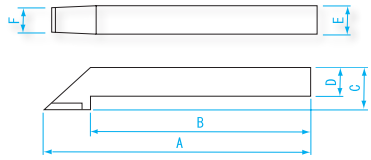
※ Quantization Error (± 1digit) not included

| Order No. | Model No. | Measuring Range (mm) | Resolution (mm) | Accuracy※ (mm) | Scale Adjustment (mm) | Weight |
|---|---|---|---|---|---|---|
| 151210 | VH-30D | 300 | 0.01 | ± 0.04 | 8 | 2.6kg |
| 151211 | VH-60D | 600 | | ± 0.06 | | 5kg |

## CARBIDE TIPPED SCRIBER

SDH-30

● DIMENSIONS




Units: mm

| Model No. | A | B | C | D | E | F |
|---|---|---|---|---|---|---|
| SDH-30 | 76 | 63 | 12 | 8 | 6 | 5.3 |
| SDH-60 | 105 | 70 | 25 | 12 | 10 | 9 |

USE
- Scriber for digital height gauge VH-30D, VH-60D

MATERIAL
- Stainless steel

FEATURES
- Carbide tipped

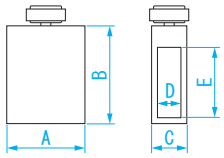
| Order No. | Model No. | Applicable Height Gauge | Weight |
|---|---|---|---|
| 151215 | SDH-30 | VH-30D | 30g |
| 151216 | SDH-60 | VH-60D | 100g |

## SCRIBER CLAMP

VH-30D-C

VH-60D-C

● DIMENSIONS




Units: mm

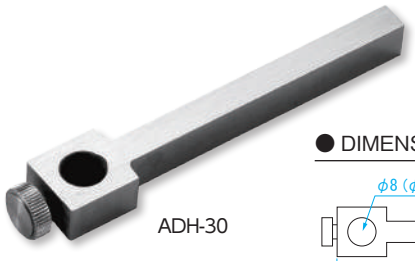
| Model No. | A | B | C | D | E |
|---|---|---|---|---|---|
| VH-30D-C | 20 | 25 | 11 | 6 | 18 |
| VH-60D-C | 22 | 35 | 15 | 10 | 24 |

USE
- Scriber clamp for digital height gauge VHS-30D, VHS-60D

MATERIAL
- Stainless steel

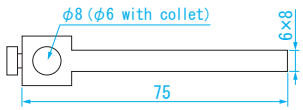
| Order No. | Model No. | Applicable Model No. | Weight |
|---|---|---|---|
| 151222 | VH-30D-C | VH-30D | 25g |
| 151223 | VH-60D-C | VH-60D | 50g |

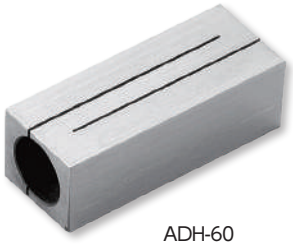
## INDICATOR HOLDER ARM



ADH-30

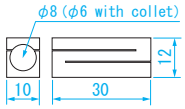
● DIMENSIONS Units: mm



ADH-60

● DIMENSIONS Units: mm




USE
- Dedicated indicator holder arm for VH-30D, VH-60D

MATERIAL
- Stainless steel

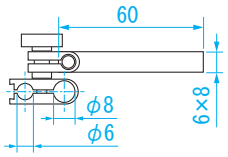
SPECIFICATIONS
- Mount size: ϕ8mm (ϕ6mm collet included)
- Arm length: ADH-30…Approx. 75mm
  ADH-60…Approx. 30mm

| Order No. | Model No. | Applicable Height Gauge | Weight |
|---|---|---|---|
| 151217 | ADH-30 | VH-30D | 35g |
| 151218 | ADH-60 | VH-60D | 20g |

## INDICATOR HOLDER

Rust prevention▶
Zerust Film for Steel
P370

● DIMENSIONS Units: mm




USE
- Dedicated indicator holder for VH-30D
  ※Indicator holder for VH-60D is VHS-T ⇒ refer to P202

MATERIAL
- Steel

SPECIFICATIONS
- Mount size:ϕ 6mm, ϕ 8mm, Dovetail mount
- Arm length: Approx. 60mm

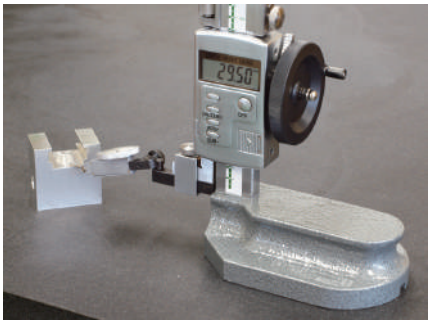
| Order No. | Model No. | Applicable Height Gauge | Weight |
|---|---|---|---|
| 151214 | ADH-30D | VH-30D | 45g |

# DIGITAL HEIGHT GAUGE

T PDI O

HOW TO MOVIE

Handle for smooth sliding operation



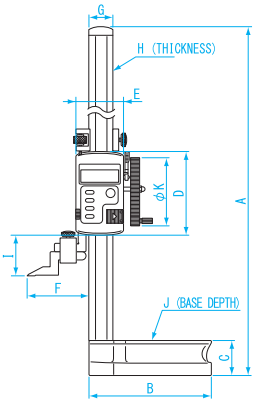
Reference standard for calibration▶
Block Gauge
P32 ～40

Measuring instruments▶
Indicator
P236～237・P244～246

Reference plane of measurement▶
Granite Surface Plate
P283

VHS-30D　VHS-60D

● DIMENSIONS




USE
- ●Enables stable measurement using a dial indicator
- ●Suitable for scribing work

MATERIAL
- ●Vernier: Stainless steel
- ●Base: Cast iron
- ●Scriber: Carbide tipped

FEATURES
- ●Large digital display for easy reading
- ●Preset function

POWER
- ●One SR44 (Silver oxide)

ACCESSORIES
- ●Dial indicator holder
- ●Scriber
- ●Scriber clamp

※For use with dial indicator, dial indicator holder arm and dial indicator required. Maximum error may larger.

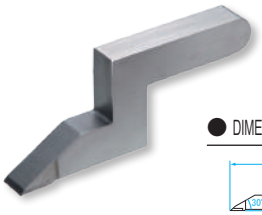
Units: mm

| Model No. | A | B | C | D | E | F | G | H | I | J | K |
|---|---|---|---|---|---|---|---|---|---|---|---|
| VHS-30D | 535 | 172 | 51.5 | 114 | 66.5 | 82 | 35 | 15 | 59 | 116 | 85 |
| VHS-60D | 837 | 178 | 53.5 | | | | | | | 140 | |

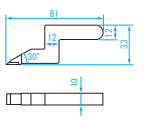
※ Quantization Error (± 1digit) not included

| Order No. | Model No. | Measuring Range (mm) | Resolution (mm) | Accuracy※ (mm) | Scale Adjustment (mm) | Weight |
|---|---|---|---|---|---|---|
| 151212 | VHS-30D | 300 | 0.01 | ± 0.04 | 10 | 6.4kg |
| 151213 | VHS-60D | 600 | | ± 0.05 | | 7.5kg |

## CARBIDE TIPPED SCRIBER O



● DIMENSIONS Units: mm



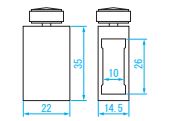

USE
- ●Scriber for VHS-30D, VHS-60D

MATERIAL
- ●Stainless steel
- ●Carbide tipped

| Order No. | Model No. | Applicable Model No. | Weight |
|---|---|---|---|
| 151208 | VHS-S | VHS-30D VHS-60D | 85g |

## SCRIBER CLAMP O

● DIMENSIONS Units: mm




USE
- ●Scriber clamp for digital height gauge VHS-30D, VHS-60D

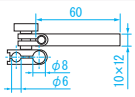
MATERIAL
- ●Stainless steel

| Order No. | Model No. | Applicable Model No. | Weight |
|---|---|---|---|
| 151224 | VHS-C | VHS-30D VHS-60D | 45g |

## INDICATOR HOLDER O

Rust prevention▶
Zerust Film for Steel
P370

● DIMENSIONS Units: mm




USE
- ●Indicator holder for VHS-30D, VHS-60D (P204), VH-60D (P202)

MATERIAL
- ●Steel

SPECIFICATIONS
- ●φ6mm, φ8mm, dovetail mount
- ●Arm length: Approx. 60mm

| Order No. | Model No. | Applicable Model No. | Weight |
|---|---|---|---|
| 151209 | VHS-T | VHS-30D VHS-60D VH-60D | 80g |

# VERNIER HEIGHT GAUGE KAIDAN

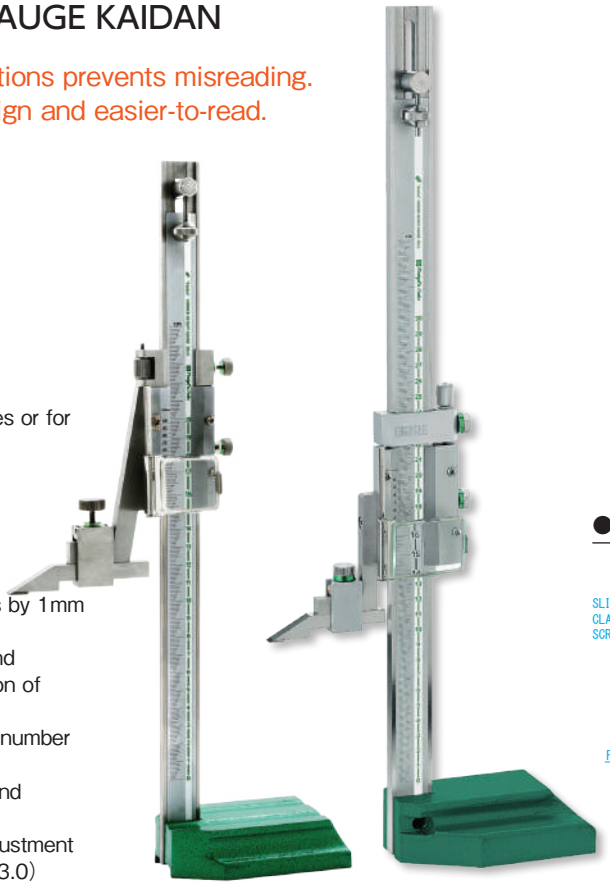
New stepped millimeter graduations prevents misreading.
Colored numbers for better design and easier-to-read.

HOW TO MOVIE

Reference standard for calibration▶
Block Gauge
P32 ~40

Measuring instruments▶
Indicator
P236~237・P244~246

Reference plane of measurement▶
Granite Surface Plate
P283



VHK-20KDS　　VHK-30KDS

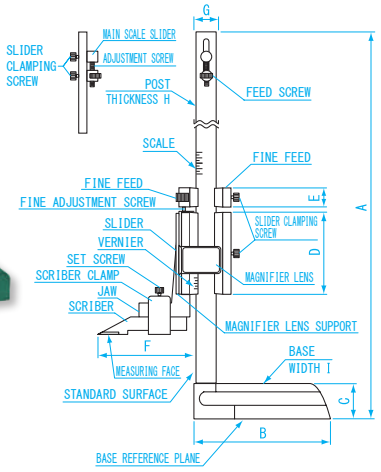
USE
- For measuring of toolings and fixtures or for scribing work

MATERIAL
- Main & vernier scale:Stainless steel
- Base:Cast iron
- Scribe:Carbide tipped

FEATURES
- Stepped length of linear graduations by 1mm for easy-to-read
- Sequentioal graduations numbers and dot marking every 2mm for prevention of misreading.
- Decimal point on vernier makes the number easy-to-read
- Colored numbers for better design and easier-to-read
- Main scale slider enables easier adjustment
- Easy reading with magnifier lens (×3.0)
- Fine adjustment carriage to feed the slider finely
- With carbide tipped scriber
- Please use dail indicator holder when use
- Made of stainless steel for easy anti-rust treatment

ACCESSORIES
- Dial indicator holder
- Scriber
- Scriber clamp
- Magnifier lens for main scale

● DIMENSIONS & NAME OF PARTS (VHK-20KDS)

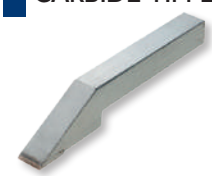



Units: mm

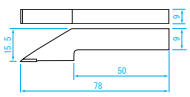
| Model No. | A | B | C | D | E | F | G | H | I |
|---|---|---|---|---|---|---|---|---|---|
| VHK-20KDS | 391 | 103 | 28 | 67 | 20 | 77 | 22 | 6 | 60 |
| VHK-30KDS | 540 | 125 | 40 | 75 | | | 28 | 9 | 86 |

| Order No. | Model No. | Measuring Range (mm) | Resolution (mm) | Accuracy (mm) | Slider Fine Feed (mm) | Weight |
|---|---|---|---|---|---|---|
| 151269 | VHK-20KDS | 200 | 0.05 | ± 0.05 | 8 | 1.7kg |
| 151270 | VHK-30KDS | 300 | 0.02 | ± 0.04 | | 3.1kg |

## CARBIDE TIPPED SCRIBER



● DIMENSIONS Units: mm




USE
- Scriber for height gauges

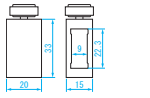
MATERIAL
- Stainless steel

FEATURES
- Carbide tipped

| Order No. | Model No. | Applicable Height Gauge | Weight |
|---|---|---|---|
| 151043 | SVH-1520 | VHK-20KDS<br>VHK-30KDS<br>VHK-15<br>VHK-20<br>VHK-30<br>VHK-60 | 45g |

## SCRIBER CLAMP

● DIMENSIONS Units: mm




USE
- Scriber clamp for height gauges

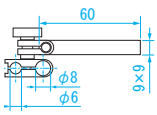
MATERIAL
- Stainless steel

| Order No. | Model No. | Applicable Height Gauge | Weight |
|---|---|---|---|
| 151268 | VHK-C | VHK-20KDS<br>VHK-30KDS<br>VHK-15<br>VHK-20<br>VHK-30<br>VHK-60 | 50g |

## INDICATOR HOLDER

Rust prevention▶
Zerust Film for Steel
P370

● DIMENSIONS Units: mm




USE
- Indicator holder for height gauges

MATERIAL
- Steel

SPECIFICATIONS
- ϕ6mm, ϕ8mm, dovetail mount
- Arm length: Approx. 60mm

| Order No. | Model No. | Applicable Height Gauge | Weight |
|---|---|---|---|
| 151275 | TVH-1520 | VHK-20KDS<br>VHK-30KDS<br>VHK-15<br>VHK-20<br>VHK-30<br>VHK-60 | 75g |

# VERNIER HEIGHT GAUGE

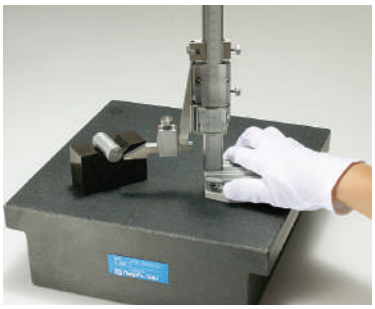
Easy zero point adjustment function makes for easy long-term use

HOW TO MOVIE

Reference standard for calibration▶
Block Gauge P32 ~40

Measuring instruments▶
Indicator P236~237・P244~246

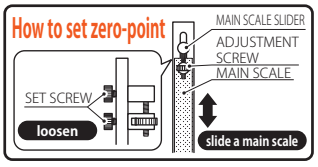
Reference plane of measurement▶
Granite Surface Plate P283



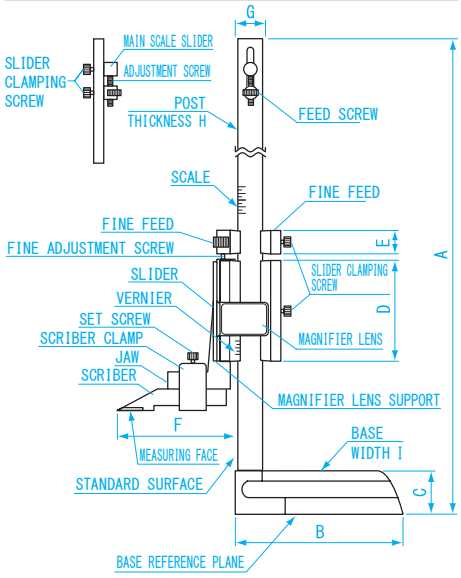
VHK-20

VHK-30

Magnifier lens for main scale (VHK-15)




● DIMENSIONS & NAME OF PARTS (VHK-20)




USE
- For measuring of toolings and fixtures or for scribing work

MATERIAL
- Main Scale & Vernier: Stainless steel
- Base: Cast iron
- Scriber: Carbide tipped

FEATURES
- Main scale slider enables easier adjustment
- Easy reading with magnifier lens (×3.0)
- Fine adjustment carriage to feed the slider finely
- With carbide tipped scriber
- Please use dail indicator holder when use
- Made of stainless steel for easy anti-rust treatment

ACCESSORIES
- Dial indicator holder
- Scriber
- Scriber clamp
- Magnifier lens for main scale

Units: mm

| Model No. | A | B | C | D | E | F | G | H | I |
|---|---|---|---|---|---|---|---|---|---|
| VHK-15 | 341 | 103 | 28 | 67 | 20 | 77 | 22 | 6 | 60 |
| VHK-20 | 391 | | | | | | | | |
| VHK-30 | 540 | 125 | 40 | 75 | | | 28 | 9 | 86 |
| VHK-60 | 871 | 180 | 55 | 85 | 24 | 80 | 35 | 11 | 120 |

| Order No. | Model No. | Measuring Range (mm) | Resolution (mm) | Accuracy (mm) | Slider Fine Feed (mm) | Weight |
|---|---|---|---|---|---|---|
| 151271 | VHK-15 | 150 | 0.05 | ± 0.05 | 8 | 1.6kg |
| 151272 | VHK-20 | 200 | | | | 1.7kg |
| 151273 | VHK-30 | 300 | 0.02 | ± 0.04 | | 3.1kg |
| 151274 | VHK-60 | 600 | | ± 0.08 | | 6.9kg |

Scriber for VHK series Height Gauge: SVH-1520
For more information, refer to P205

Scriber Clamp for VHK series Height Gauge: VHK-C
For more information, refer to P205

Indicator Holder for VHK series Height Gauge: TVH-1520
For more information, refer to P205

# MICROMETER

208p

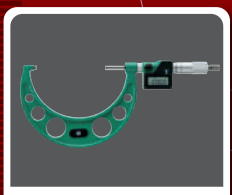
208p

209p

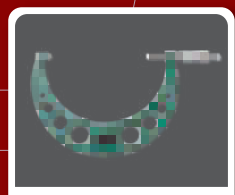
210p

210p

211p

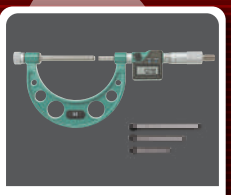

211p

212p


212p

212p

213p


213p

214p

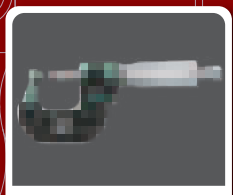
214p

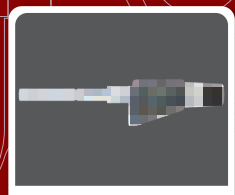
215p

215p

216p

216p


216p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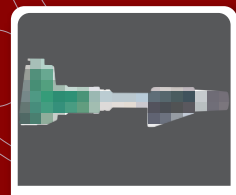
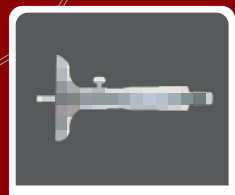
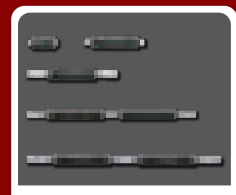

217p

218p

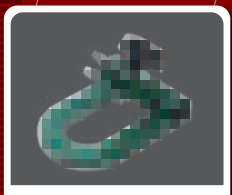
218p

219p


219p


220p

220p


220p

## WIRELESS RECEIVER

(Receiver)

For importing measurement data to PC.
Pass/ Fail judgement based on pre-set tolerance, and data recording, become possible with combination use of dedicated software.

Integrated software for measuring instruments ▶
SK-LOG
P24 ~27

USE
- For receiving measurement data wireless from compatible measuring devices

FEATURES
- Enables wireless data import from compatible devices for easier data management
- Up to 8 devices can be connected per unit
  ※By increasing number of WI-1M, up to 32 devices can be connected (SK-LOG Product version is required for the multiple connection).

SPECIFICATIONS
- Radio system: ANT + (communication distance within 6m)
- OS: Windows 7, 8, 10, 11
  ※Our ANT+ system is qualified in Japan, U.S.A (FCC), EU (CE) and South Korea (KCC). For use in other countries, please contact us.

PRODUCT INCLUDES
- Wireless receiver
- Dedicated software (SK-LOG Lite version)

Dedicated software included

<Applicable Products>

| Order No. | Product Name | Model No. | Page Referred |
|---|---|---|---|
| 152271 ~ 152273 | S-LINE DIGITAL VERNIER CALIPER | D-***IP67MW | 171 |
| 152235 ~ 152238 | S-LINE DIGITAL MICROMETER | MCD-***IP65MW | 209 |
| 152292 ~ 152294<br>152296 ~ 152297 | S-LINE DIGITAL INDICATOR<br>*Cannot be used with DATA TRANSFER CABLE at the same time. | DEI-***MW | 233 ~ 234 |

| Order No. | Model No. | Connecter | Wireless Range | Frequency Band | Weight |
|---|---|---|---|---|---|
| 152278 | WI-1M | USB Type-A | Max. 6m | 2.4GHz | 2g |

## S-LINE DATA TRANSFER CABLE

S line series

(Cable)

For importing measurement data to PC.
Pass/ Fail judgement based on pre-set tolerance, and data recording, become possible with combination use of dedicated software.

Integrated software for measuring instruments ▶
SK-LOG
P24 ~27

USE
- For importing measurement data from compatible measuring devices

FEATURES
- USB cable for transferring measurement data, compatible with S-line series products
- There is also a data transmission button on the device connection terminal of the cable (DTC-M1)

PRODUCT INCLUDES
- Cable
- Dedicated software (SK-LOG Lite version)

<Applicable Products>
- Connectable to DTC-1

DTC-1

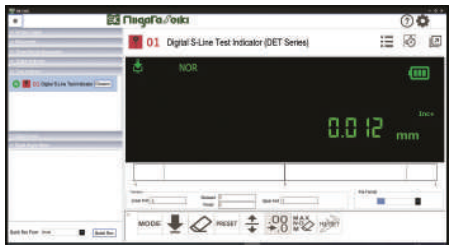
| Order No. | Product Name | Model No. | Page Referred |
|---|---|---|---|
| 151227 ~ 151229<br>151234 | S-LINE DIGITAL MICROMETER<br>S-LINE DIGITAL BLADE MICROMETER | MCD-**IP67S2<br>MCD-25IP67BS2 | 210 |

- Connectable to DTC-2

| Order No. | Product Name | Model No. | Page Referred |
|---|---|---|---|
| 151746 ~ 151747 | S-LINE DIGITAL TEST INDICATOR | DET-****SW | 237 |

- Connectable to DTC-M1

| Order No. | Product Name | Model No. | Page Referred |
|---|---|---|---|
| 152274 ~ 152276 | S-LINE DIGITAL VERNIER CALIPER | D-***IP67M | 171 |
| 152282 ~ 152283 | S LINE DIGITAL HEIGHT GAUGE | DHG-**M | 201 |
| 152291 ・ 152295 | S LINE DIGITAL INDICATOR | DEI-***MH | 233 ~ 234 |
| 152292 ~ 152294<br>152296 ~ 152297 | S LINE DIGITAL INDICATOR<br>*Cannot be used with DATA TRANSFER CABLE at the same time. | DEI-***MW | 233 ~ 234 |




Dedicated software included

Downloading Android App [SLOG]
GET IT ON Google Play

| Order No. | Model No. | Connector | Length | OS |
|---|---|---|---|---|
| 152033 | DTC-1 | USB Type-A | 3m※1 | Windows 7・8・10・11<br>Android※2 |
| 152034 | DTC-2 | | | |
| 152060 | DTC-2-DS | D-SUB9 | 3m※1 | Windows 7・8・10・11 |
| 152279 | DTC-M1 | USB Type-A | 2m | Windows 7・8・10・11 |

※ 1: D-SUB9 pin type and length change of the cable are possible (USB type: Max. 7m, D-SUB9 pin type: Max. 10m). Please contact us.
※ 2: Models equipped with a USB host function (Please prepare a USB host cable separately when using an Android device). The Android version software is SLOG.

# S-LINE DIGITAL MICROMETER (IP65)

S line series

Niigata Seiki x Mahr collaborated high performance micrometer.
Protection class IP65.
Large LCD with wireless data transmission model.

MCD-25IP65MW

Integrated software for measuring instruments ▶
SK-LOG
P24 ~27

Wireless transmission of measurement data to PC ▶
Wireless Receiver
P208

Reference standard for calibration ▶
Block Gauge
P32 ~40

For holding micrometers ▶
Micrometer Stand
P220

Rust prevention ▶
Zerust Film for Steel
P370

## Large display

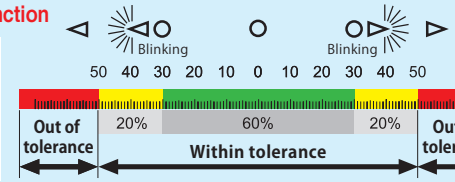
A high contrast display with 10mm height of character enables accurate reading of measurement results.

## Integrated data transmission unit

The neatly designed back of LCD that allows comfortable measurement environment.

## Tolerance setting with warning function

- Within tolerance
- Upper Limit Alert (Arrow blinks)
- Lower Limit Alert (Arrow blinks)
- Out of tolerance (Arrow lights)



## Protection class IP65

IP is a protection class indication of electrical equipment and cabinets against solid objects and water, as specified in IEC60529.

| Class | IP | Degree of protection | Test method |
|---|---|---|---|
| 1st digit | 6 | Complete dust proof structure | Completely protected against dust ingress |
| 2nd digit | 5 | No harmful affection by a direct jet of water from any direction | 12.5ℓ/ min x 30kpa jet water from a distance of 3m in all directions, 3 minutes |

USE
- For measuring outer dimension

MATERIAL
- Frame: Steel
- Spindle: Stainless steel

FEATURES
- Immersion and dust proof digital micrometer with protection class **IP65**
- Built-in wireless type which is capable of transmitting data wireless in combination use with a separately sold dedicated receiver
- With Reference function※1 for quick start of measurement shortly after turning on the power

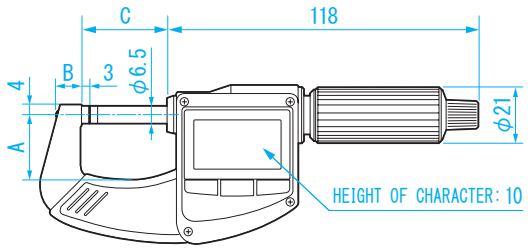
※1: A function that remembers the previously saved zero point.
- With a large LCD display for easy reading of measurement values
- Auto power off function (selectable with after approx. 8 min., 120min. or none)
- Display hold function
- Tolerance mode
- Carbide tipped measuring face
- One setting standard included (except for MCD-25IP65MW)

SPECIFICATIONS
- Radio system: ANT+ (Communication distance within 6m)※2

※2: Our ANT+ system is qualified in Japan, U.S.A (FCC), EU (CE) and South Korea (KCC). For use in other countries, please contact us.

POWER
- One CR2032 (lithium) battery included for testing

● DIMENSIONS




Units: mm

| Model No. | A | B | C | Width | Height | Thickness |
|---|---|---|---|---|---|---|
| MCD-25IP65MW | 24 | 9.5 | 32 | 166 | 58 | 27 |
| MCD-50IP65MW | 36 | 11 | 57 | 192 | 80 | |
| MCD-75IP65MW | 45 | 13 | 82 | 220 | 93 | |
| MCD-100IP65MW | 57 | | 107 | 248 | 110 | |

※3: Quantization Error (±1 digit) not included

| Order No. | Model No. | Measuring Range (mm) | Resolution (mm) | Max. Permissible Error※3 (μm) | Connection Unit for Data Transmission | Weight |
|---|---|---|---|---|---|---|
| 152235 | MCD-25IP65MW | 0 - 25 | 0.001 | ±2 | WI-1M (Wireless) | 320g |
| 152236 | MCD-50IP65MW | 25 - 50 | | | | 420g |
| 152237 | MCD-75IP65MW | 50 - 75 | | ±3 | | 600g |
| 152238 | MCD-100IP65MW | 75 - 100 | | | | 760g |

# S-LINE DIGITAL MICROMETER (IP67)

S line series

S-line series micrometer, high end model for high performance. IP67 that is suitable in wet environment.

MCD-30IP67S2

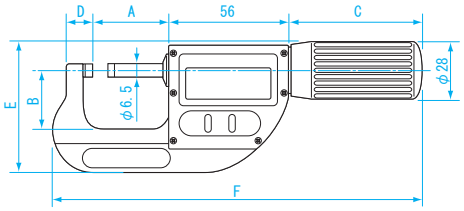
**Protection class IP67**

IP is a protection class indication of electrical equipment and cabinets against solid objects and water, as specified in IEC60529.

| Class | IP | Degrees of protection | Test method |
|---|---|---|---|
| 1st digit | 6 | Complete dust prrof structure | Completely protected against dust ingress |
| 2nd digit | 7 | No harmful affection by water immersion at specific pressure and duration | Submerged 15 cm to 1 m underwater for 30 minutes |

Integrated software for measuring instruments ▶ SK-LOG P24 ~27
Import measurement data to PC ▶ Data Transfer Cable P208
Reference standard for calibration ▶ Block Gauge P32 ~40
For holding micrometers ▶ Micrometer Stand P220
Rust prevention ▶ Zerust Film for Steel P370

● DIMENSIONS




Units: mm

| Model No. | A | B | C | D | E | F |
|---|---|---|---|---|---|---|
| MCD-30IP67S2 | 37.3 | 27.5 | 68 | 12.5 | 63 | 181 |
| MCD-66IP67S2 | 73.3 | 43 | 74 | 13.5 | 86 | 230 |
| MCD-102IP67S2 | 109.3 | 60 | 74 | 14.5 | 106 | 269 |

USE
- For measuring outer dimension

MATERIAL
- Frame: Steel
- Spindle: Stainless steel

FEATURES
- Immersion and dust proof digital micrometer with protection class **IP67**
- Suitable for work environment where it is exposed to coolant, cutting fluid and lubricant
- With 10mm/ rev fast displacement of measuring spindle for efficiency in measuring different size of workpiece
- Each model has wide measuring range and 0-102mm can be covered with a set of the three models
- Non-rotating spindle
- MCD-30IP67S2 has switchable measuring force (5N/10N)
- Carbide tipped measuring face
- Stand-by mode function (after approx. 20 min.)
- Display hold function
- One setting standard included (except for MCD-30IP67S2)

POWER
- POWER CR2032 (lithium) battery included for testing

※ Quantization error (± 1 digit) not included

| Order No. | Model No. | Measuring Range (mm) | Resolution (mm) | Maximum Error※ (μm) | Weight |
|---|---|---|---|---|---|
| 151227 | MCD-30IP67S2 | 0 - 30 | 0.001 | 3 | 300g |
| 151228 | MCD-66IP67S2 | 30 - 66 | | 4 | 440g |
| 151229 | MCD-102IP67S2 | 66 - 102 | | 5 | 560g |

# S-LINE DIGITAL BLADE MICROMETER (IP67)

S line series

Blade design suitable for thin grooves. S-line series, high-end model for high performance.

Integrated software for measuring instruments ▶ SK-LOG P24 ~27
Import measurement data to PC ▶ Data Transfer Cable P208
Reference standard for calibration ▶ Block Gauge P32 ~40
For holding micrometers ▶ Micrometer Stand P220
Rust prevention ▶ Zerust Film for Steel P370

USE
- For measuring narrow groove of round objects

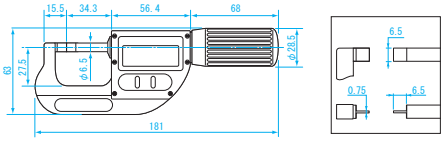
MATERIAL
- Frame: Steel
- Spindle: Stainless steel

FEATURES
- Immersion and dust proof digital micrometer with protection class **IP67**
- Switchable measuring force (5N/10N)
- With 10mm/ rev fast displacement of measuring spindle
- Non-rotating spindle
- Carbide tipped measuring face
- Stand-by mode function (after approx. 20 min.)
- Display hold function

POWER
- CR2032 (lithium) battery included for testing

● DIMENSIONS

Units: mm




※ Quantization error (± 1 digit) not included

| Order No. | Model No. | Measuring Range (mm) | Resolution (mm) | Maximum Error※ (μm) | Weight |
|---|---|---|---|---|---|
| 151234 | MCD-25IP67BS2 | 0 - 25 | 0.001 | 3 | 280g |

# DIGITAL OUTSIDE MICROMETER

Great value for the performance


Reference standard for calibration▶ Block Gauge P32 ～40

Zero point setting▶ Setting Standards P220

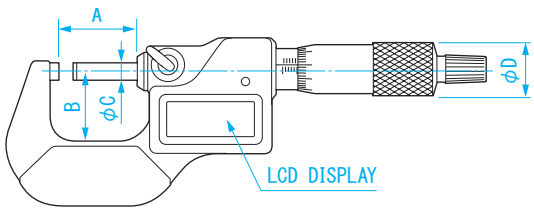
For holding micrometers▶ Micrometer Stand P220

Rust prevention▶ Zerust Film for Steel P370

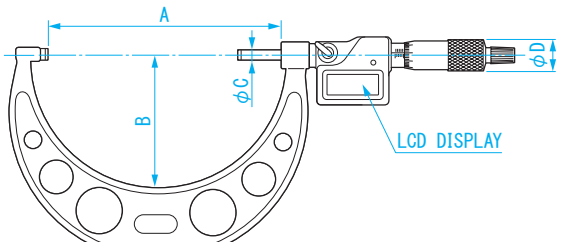
QEM133-25

QEM133-125

## ● DIMENSIONS




QEM133-25～QEM133-100




QEM133-125, QEM133-150

USE
- For measuring outer dimension

MATERIAL
- Frame: Spheroidal graphite cast iron
- Spindle: High carbon chrome steel

FEATURES
- Quick digital display of the measured value
- Carbide measuring faces
- With ratchet stop
- Auto display off function (after approx. 20 min.)
- With thermal protection (except for QEM133-125, QEM133-150)
- Painted frame
- Sphere spindle attachment (SR2.5)
- One setting standard included (except for QEM133-25)

POWER
- CR2032 (lithium) battery included for testing

Units : mm

| Model No. | A | B | C | D |
|---|---|---|---|---|
| QEM133-25 | 28 | 25.5 | 6.5 | 18 |
| QEM133-50 | 53 | 32.5 | | |
| QEM133-75 | 78 | 45 | | |
| QEM133-100 | 103 | 57.5 | | |
| QEM133-125 | 129 | 73 | | |
| QEM133-150 | 155 | 84 | | |

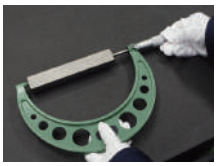
※ Quantization Error (± 1 digit) not included

| Order No. | Model No. | Measuring Range (mm) | Resolution (mm) | Maximum Error※ (μm) | Weight |
|---|---|---|---|---|---|
| 152343 | QEM133-25 | 0 - 25 | 0.001 | 4 | 265g |
| 152344 | QEM133-50 | 25 - 50 | | | 380g |
| 152345 | QEM133-75 | 50 - 75 | | 6 | 460g |
| 152346 | QEM133-100 | 75 - 100 | | | 600g |
| 152347 | QEM133-125 | 100 - 125 | | | 515g |
| 152348 | QEM133-150 | 125 - 150 | | | 560g |

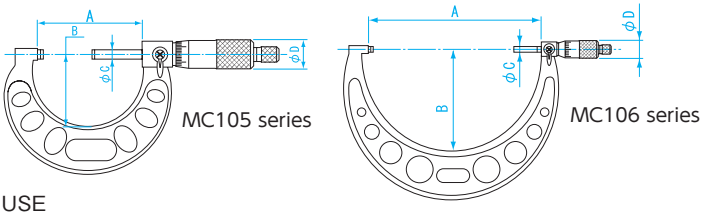
# OUTSIDE MICROMETER MC105 / MC106 SERIES

Great value for the performance.
For more stable measurement compared to vernier calipers.

Reference standard for calibration▶ Block Gauge P32 ~40
Zero point setting▶ Setting Standards P220
For holding micrometers▶ Micrometer Stand P220
Rust prevention▶ Zerust Film for Steel P370



## ● DIMENSIONS




Units: mm

| Model No. | A | B | C | D |
|---|---|---|---|---|
| MC105-25 | 31 | 29 | 6.5 | 18 |
| MC105-50 | 56 | 37 | | |
| MC105-75 | 81 | 50 | | |
| MC105-100 | 106 | 63 | | |
| MC105-125 | 131 | 75 | | |
| MC105-150 | 156 | 88 | | |
| MC106-175 | 183 | 104 | | |
| MC106-200 | 209 | 117 | | |
| MC106-225 | 234 | 130 | | |
| MC106-250 | 260 | 142 | | |
| MC106-275 | 285 | 155 | | |
| MC106-300 | 310 | 168 | | |

USE
- For measuring outer dimension

MATERIAL
- Frame: Spheroidal graphite cast iron
- Spindle: High carbon chrome steel

FEATURES
- Carbide measuring face
- With ratchet stop
- Painted frame
- One setting standard included (except for MC105-25)

| Order No. | Model No. | Measuring Range (mm) | Resolution (mm) | Maximum Error (μm) | Weight |
|---|---|---|---|---|---|
| 151070 | MC105-25 | 0 ~ 25 | 0.01 | 4 | 150g |
| 151071 | MC105-50 | 25 ~ 50 | | | 200g |
| 151072 | MC105-75 | 50 ~ 75 | | 5 | 230g |
| 151073 | MC105-100 | 75 ~ 100 | | | 260g |
| 151074 | MC105-125 | 100 ~ 125 | | 6 | 330g |
| 151075 | MC105-150 | 125 ~ 150 | | | 400g |
| 151401 | MC106-175 | 150 ~ 175 | | 7 | 670g |
| 151402 | MC106-200 | 175 ~ 200 | | | 740g |
| 151403 | MC106-225 | 200 ~ 225 | | 8 | 870g |
| 151404 | MC106-250 | 225 ~ 250 | | | 900g |
| 151405 | MC106-275 | 250 ~ 275 | | 9 | 970g |
| 151406 | MC106-300 | 275 ~ 300 | | | 1070g |

# OUTSIDE MICROMETER SET

A set of six different sizes of outside micrometers in a PC box

● Refer to MC105 series for specifications

Reference standard for calibration▶ Block Gauge P32 ~40
Zero point setting▶ Setting Standards P220
For holding micrometers▶ Micrometer Stand P220
Rust prevention▶ Zerust Film for Steel P370

## ● Included in set

| | |
|---|---|
| Outside Micrometers | 0~25, 25~50, 50~75, 75~100, 100~125, 125~150 (6 pcs) |
| Setting Standards | 25 ,50, 75, 100, 125 (5 pcs) |

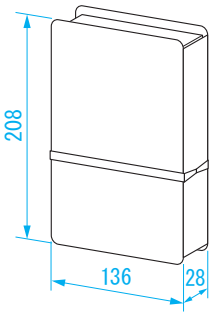
| Order No. | Model No. | Measuring Range (mm) | Resolution (mm) | Weight |
|---|---|---|---|---|
| 151240 | MC105-150ST | 0 ~ 150 | 0.01 | 3.8kg |

## VERNIER CALIPER GVC-10 AND MICROMETER MC105-25/ COMBINATION SET

Book shaped combination set of vernier caliper and micrometer.
Can be displayed and stored on desk or shelf.

User friendly.
Instruction manuals are included for beginner.

● DIMENSIONS Units: mm




USE
- Vernier caliper: For measuring outside and inside dimension, step and depth
- Micrometer: For measuring outer dimension

MATERIAL
- Outer case: Paper
- Inner case: Polyethylene

FEATURES
- Combination set of vernier caliper and micrometer
- Instruction manual included
- Book shaped case for storing upright on desk or shelf

※ For more details of each product, please refer to individual pages of the existing catalog or contact us.

| Order No. | Model No. | Package Content | Page Referred※ | Measuring Range (mm) | Resolution (mm) | Accuracy | Weight |
|---|---|---|---|---|---|---|---|
| 151395 | SB-NM1025 | VERNIER CALIPER 100mm | – | 0 ~ 100 | 0.05 | ± 0.05mm | 365g |
| | | MICROMETER MC105-25 | 212 | 0 ~ 25 | 0.01 | 4μm | |

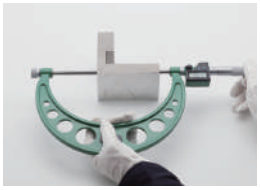
## DIGITAL MICROMETER WITH INTERCHANGEABLE ANVIL

Wide measuring range with interchangeable anvils

Reference standard for calibration▶ Block Gauge P32 ~40
For holding micrometers▶ Micrometer Stand P220
Rust prevention▶ Zerust Film for Steel P370

QEM146-100K

Interchangeable anvils



USE
- For measuring outer dimension

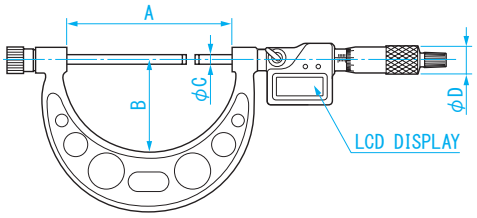
MATERIAL
- Frame: Spheroidal graphite cast iron
- Spindle: High carbon chrome steel

FEATURES
- Quick digital display of the measured value
- Enables to measure wide range with one product by exchanging the provided anvils
- Carbide measuring faces
- With ratchet stop
- Auto display off function (after approx. 20 min.)
- Painted frame

SPECIFICATIONS
- Interchangeable anvils: 4 pcs
- Setting standard: QEM146-100K: 3 pcs (25·50·75mm)
  : QEM146-200K: 4 pcs (100·125·150·175mm)
- Head stroke: 25mm

POWER
- CR2032 (lithium) battery included for testing

● DIMENSIONS




Units : mm

| Model No. | A | B | C | D |
|---|---|---|---|---|
| QEM146-100K | 108 | 57 | 8 | 18 |
| QEM146-200K | 208 | 114 | | |

※ Quantization Error (± 1 digit) not included

| Order No. | Model No. | Measuring Range (mm) | Resolution (mm) | Maximum Error※ (μm) | Weight |
|---|---|---|---|---|---|
| 152362 | QEM146-100K | 0 - 100 | 0.001 | 6 | 480g |
| 152363 | QEM146-200K | 100 - 200 | | 8 | 940g |

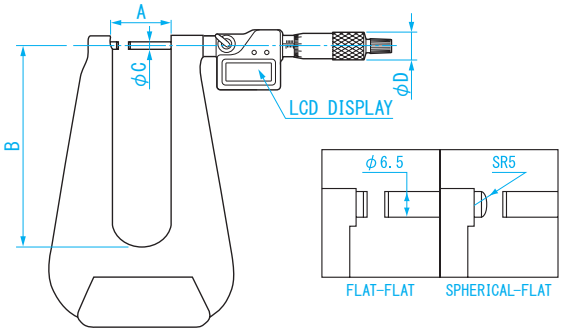
# DIGITAL DEEP THROAT MICROMETER

Deep throat frame for measuring thickness of sheet metal and so on

Reference standard for calibration▶ Block Gauge P32 ~40

QEM293-100U

● DIMENSIONS




USE
- For measuring thickness of sheet metal

MATERIAL
- Frame: Spheroidal graphite cast iron
- Spindle: High carbon chrome steel

FEATURES
- Quick digital display of the measured value
- Carbide measuring faces
- With ratchet stop
- With thermal protection cover
- Auto display off function (after approx. 20 min.)
- Painted frame

POWER
- CR2032 (lithium) battery included for testing

Units : mm

| Model No. | A | B | C | D |
|---|---|---|---|---|
| QEM293-100U | 32 | 100 | 6.5 | 18 |
| QEM293-150U | | 150 | | |
| QEM293-300U | | 300 | | |

※ Quantization Error (± 1 digit) not included

| Order No. | Model No. | Measuring Range (mm) | Resolution (mm) | Maximum Error※ (μm) | Shape of Measuring Face | Weight |
|---|---|---|---|---|---|---|
| 152364 | QEM293-100U | 0 - 25 | 0.001 | 6 | Flat-Flat | 620g |
| 152365 | QEM293-150U | | | | | 830g |
| 152366 | QEM293-300U | | | 8 | Spherical-Flat | 2000g |



# DIGITAL SMALL MEASURING FACE MICROMETER

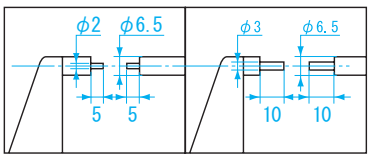
Small measuring faces suitable for measuring groove of spline shaft, etc.

Reference standard for calibration▶ Block Gauge P32 ~40
For holding micrometers▶ Micrometer Stand P220
Rust prevention▶ Zerust Film for Steel P370

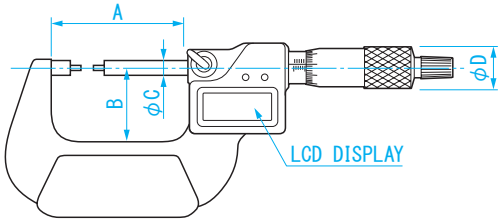
QEM290-25SB



● DIMENSIONS




QEM290-25SA QEM290-25SB




USE
- Small measuring faces for measuring groove diameter of spline shaft

MATERIAL
- Frame: Spheroidal graphite cast iron
- Spindle: High carbon chrome steel

FEATURES
- Quick digital display of the measured value
- Carbide measuring faces
- With ratchet stop
- With thermal protection cover
- Auto display off function (after approx. 20 min.)
- Painted frame

POWER
- CR2032 (lithium) battery included for testing

Units : mm

| 品番 | A | B | C | D |
|---|---|---|---|---|
| QEM290-25SA | 57 | 32 | 6.5 | 18 |
| QEM290-25SB | | | | |

※ Quantization Error (± 1 digit) not included

| Order No. | Model No. | Measuring Range (mm) | Resolution (mm) | Maximum Error※ (μm) | Mesuring Face (mm) | Weight |
|---|---|---|---|---|---|---|
| 152367 | QEM290-25SA | 0 - 25 | 0.001 | 4 | φ 2 × 5 | 370g |
| 152368 | QEM290-25SB | | | | φ 3 × 10 | 380g |

# DIGITAL BLADE MICROMETER

T PDI 0

Thin blade measuring faces suitable for measuring narrow groove

QEM295-25BA

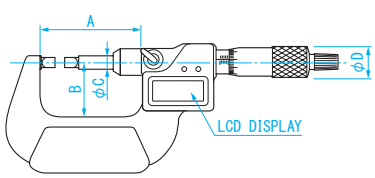
Reference standard for calibration▶ Block Gauge P32 ~40

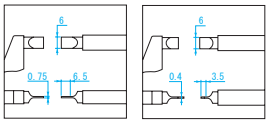
Zero point setting▶ Setting Standards P220

For holding micrometers▶ Micrometer Stand P220

Rust prevention▶ Zerust Film for Steel P370

● DIMENSIONS




BA type BAU type

※Above dimension is for BA type

Units : mm

| Model No. | A | B | C | D |
|---|---|---|---|---|
| QEM295-25BA | 57 | 32 | 8 | 18 |
| QEM295-50BA | 82 | 44.5 | | |
| QEM295-25BAU | 57 | 32 | | |
| QEM295-50BAU | 82 | 44.5 | | |

USE

- Blade type measuring faces for measuring narrow-groove diameter of cylindrical workpieces

MATERIAL

- Frame: Spheroidal graphite cast iron
- Spindle: High carbon chrome steel

FEATURES

- Quick digital display of the measured value
- With ratchet stop
- With thermal protection cover
- Auto display off function (after approx. 20 min.)
- Painted frame
- One setting standard included (QEM295-50BA, QEM295-50BAU)

POWER

- CR2032 (lithium) battery included for testing

※ Quantization Error (± 1 digit) not included

| Order No. | Model No. | Measuring Range (mm) | Resolution (mm) | Maximum Error※ (μm) | Weight |
|---|---|---|---|---|---|
| 152369 | QEM295-25BA | 0 - 25 | 0.001 | 4 | 400g |
| 152370 | QEM295-50BA | 25 - 50 | | | 480g |
| 152371 | QEM295-25BAU | 0 - 25 | | | 400g |
| 152372 | QEM295-50BAU | 25 - 50 | | | 480g |

# DIGITAL GEAR TOOTH MICROMETER NEW!

T PDI 0

Suitable for measuring base tangent length of gear

QEM290-25D

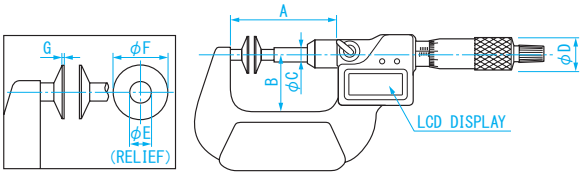
Reference standard for calibration▶ Block Gauge P32 ~40

Zero point setting▶ Setting Standards P220

For holding micrometers▶ Micrometer Stand P220

Rust prevention▶ Zerust Film for Steel P370

● DIMENSIONS




Units : mm

| Model No. | A | B | C | D | E | F | G |
|---|---|---|---|---|---|---|---|
| QEM290-25D | 57 | 32 | 8 | 18 | 8 | 20 | 0.7 |
| QEM290-50D | 82 | 44.5 | | | | | |

USE

- Disc type measuring faces for measuring base tangent length of gear

MATERIAL

- Frame: Spheroidal graphite cast iron
- Spindle: High carbon chrome steel

FEATURES

- Quick digital display of the measured value
- With ratchet stop
- With thermal protection cover
- Auto display off function (after approx. 20 min.)
- Painted frame
- One setting standard included (QEM290-50D)

POWER

- CR2032 (lithium) battery included for testing

※ Quantization Error (± 1 digit) not included

| Order No. | Model No. | Measuring Range (mm) | Resolution (mm) | Max. Permmissible Error※ (μm) | Gear Module | Weight |
|---|---|---|---|---|---|---|
| NEW! 152373 | QEM290-25D | 0 - 25 | 0.001 | 4 | 0.5 ~ 6 | 410g |
| NEW! 152374 | QEM290-50D | 25 - 50 | | | | 500g |

## DIGITAL TUBE MICROMETER

T PDI O

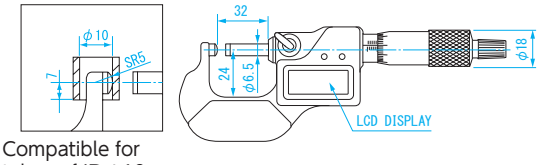
### Spherical anvil suitable for thickness measurement of bearings

Reference standard for calibration▶ Block Gauge P32 ～40

For holding micrometers▶ Micrometer Stand P220

Rust prevention▶ Zerust Film for Steel P370

● DIMENSIONS Units: mm




Compatible for tubes of ID φ10mm and larger

USE
- For measuring tube thickness

MATERIAL
- Frame: Spheroidal graphite cast iron
- Spindle: High carbon chrome steel

FEATURES
- Quick digital display of the measured value
- Carbide measuring faces
- With ratchet stop
- With thermal protection cover
- Auto display off function (after approx. 20 min.)
- Painted frame

POWER
- CR2032 (lithium) battery included for testing

※ Quantization Error (± 1 digit) not included

| Order No. | Model No. | Measuring Range (mm) | Resolution (mm) | Maximum Error※ (μm) | Weight |
|---|---|---|---|---|---|
| 152375 | QEM296-25T | 0 - 25 | 0.001 | 4 | 270g |

## DIGITAL POINT MICROMETER

T PDI O

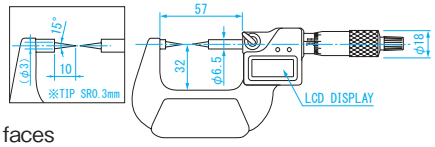
### Pointed measuring faces suitable for point measurement

Reference standard for calibration▶ Block Gauge P32 ～40

For holding micrometers▶ Micrometer Stand P220

Rust prevention▶ Zerust Film for Steel P370

● DIMENSIONS Units : mm




USE
- For measuring rood diameter such as web diameter of drills

MATERIAL
- Frame: Spheroidal graphite cast iron
- Spindle: High carbon chrome steel

FEATURES
- Quick digital display of the measured value
- With ratchet stop
- Carbide measuring faces
- With thermal protection cover
- Auto display off function (after approx. 20 min.)
- Painted frame

SPECIFICATIONS
- Tapered angle of the tip: Approx. 15°

POWER
- CR2032 (lithium) battery included for testing

※ Quantization Error (± 1 digit) not included

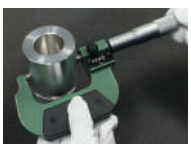
| Order No. | Model No. | Measuring Range (mm) | Resolution (mm) | Maximum Error※ (μm) | Weight |
|---|---|---|---|---|---|
| 152376 | QEM292-25P | 0 - 25 | 0.001 | 4 | 380g |

## OUTSIDE COUNT MICROMETER

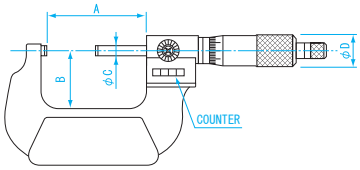
T PDI O

### Mechanical digit counter for misreading prevention

MC122-25C



● DIMENSIONS




Reference standard for calibration▶ Block Gauge P32 ～40

Zero point setting▶ Setting Standards P220

For holding micrometers▶ Micrometer Stand P220

Rust prevention▶ Zerust Film for Steel P370

USE
- Measuring outer dimension

MATERIAL
- Frame: Spheroidal graphite cast iron
- Spindle: High carbon chrome steel

FEATURES
- Mechanical digit counter for quick and error-free reading
- Carbide measuring faces
- With ratchet stop
- Painted frame
- One setting standard included (MC122-50C)

Units : mm

| Model No. | A | B | C | D |
|---|---|---|---|---|
| MC122-25C | 28 | 25 | 6.5 | 18 |
| MC122-50C | 53 | 32 | | |

| Order No. | Model No. | Measuring Range (mm) | Resolution (mm) | Maximum Error※ (μm) | Weight |
|---|---|---|---|---|---|
| 151391 | MC122-25C | 0～25 | 0.01 | 4 | 220g |
| 151392 | MC122-50C | 25～50 | | | 300g |

# DIGITAL THREE-POINT INTERNAL MICROMETER NEW!

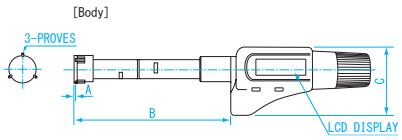
For high precision measurement of internal diameter.
Supplied with extension rod for deeper hole measurement.

Reference standard for calibration▶ Ring Gauge P62 ~65
Rust prevention▶ Zerust Film for Steel P370

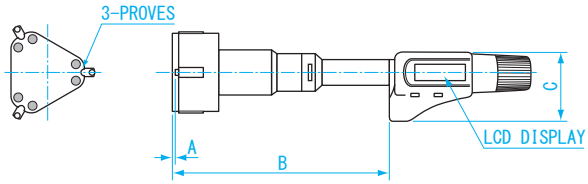
QEM3385-1216TP

QEM3385-87100TP

● DIMENSIONS

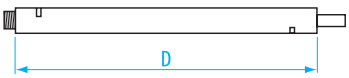



QEM3385-0608TP~QEM3385-4050TP




QEM3385-5063TP~QEM3385-87100TP

[ATTACHMENT/ EXTENSION ROD FOR DEEPER HOLE]



USE
- For precision measurement of internal diameter

MATERIAL
- Probe Carbide tipped

FEATURES
- Didital display for easy reading
- With ratchet stop
- Three-point proves for higher accuracy inner diameter measurement
- Supplied with "EXTENSION ROD FOR DEEPER HOLE" for measurement of deeper location
- Auto display off function (after approx. 20 min.)

POWER
- CR2032 (lithium) battery included for testing

Units : mm

| Model No. | A | B | C | D |
|---|---|---|---|---|
| QEM3385-0608TP | less than 2 | 85 | 43 | 100 |
| QEM3385-0810TP | | | | |
| QEM3385-1012TP | | | | |
| QEM3385-1216TP | less than 1 | 100 | | 150 |
| QEM3385-1620TP | | | | |
| QEM3385-2025TP | | 105 | | |
| QEM3385-2530TP | | | | |
| QEM3385-3040TP | | 110 | | |
| QEM3385-4050TP | | | | |
| QEM3385-5063TP | | 127 | | |
| QEM3385-6275TP | | | | |
| QEM3385-7588TP | | | | |
| QEM3385-87100TP | | | | |

※ Quantization Error (± 1 digit) not included

| Order No. | Model No. | Measuring Range (mm) | Resolution (mm) | Max. Permissible Error* (μm) | Weight |
|---|---|---|---|---|---|
| NEW! 152349 | QEM3385-0608TP | 6 - 8 | 0.001 | 4 | 180g |
| NEW! 152350 | QEM3385-0810TP | 8 - 10 | | | 180g |
| NEW! 152351 | QEM3385-1012TP | 10 - 12 | | | 180g |
| NEW! 152352 | QEM3385-1216TP | 12 - 16 | | | 230g |
| NEW! 152353 | QEM3385-1620TP | 16 - 20 | | | 230g |
| NEW! 152354 | QEM3385-2025TP | 20 - 25 | | | 300g |
| NEW! 152355 | QEM3385-2530TP | 25 - 30 | | | 320g |
| NEW! 152356 | QEM3385-3040TP | 30 - 40 | | | 430g |
| NEW! 152357 | QEM3385-4050TP | 40 - 50 | | 5 | 500g |
| NEW! 152358 | QEM3385-5063TP | 50 - 63 | | | 540g |
| NEW! 152359 | QEM3385-6275TP | 62 - 75 | | | 550g |
| NEW! 152360 | QEM3385-7588TP | 75 - 88 | | | 680g |
| NEW! 152361 | QEM3385-87100TP | 87 -100 | | | 690g |

* Three-point micrometer is precision instrument. For the best performance, temperature should be around 20℃ with sufficient time to acclimate. Extreme tempratures may affect accuracy and performance of measurement instruments.

# DIGITAL INSIDE MICROMETER

Provided with a reference ring gauge for zero-point setting.
Ready to use immediately.

Reference standard for calibration▶ Ring Gauge P62 ～65
For holding micrometers▶ Micrometer Stand P220
Rust prevention▶ Zerust Film for Steel P370

QEM394-50I

QEM394-75I

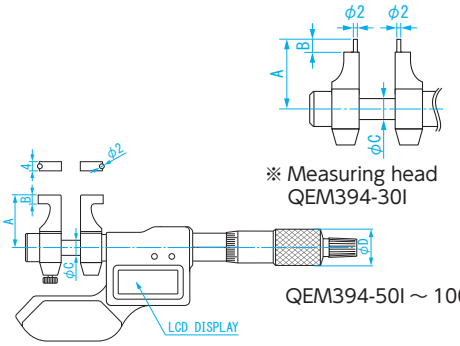
USE
- For measuring inside dimension

MATERIAL
- Frame: Spheroidal graphite cast iron
- Spindle: High carbon chrome steel

FEATURES
- Quick digital display of the measured value
- Provided with a reference ring gauge
- With ratchet stop
- Auto display off function (after approx. 20 min.)
- Carbide measuring faces

POWER
- CR2032 (lithium) battery included for testing

● DIMENSIONS




Units : mm

| Model No. | A | B | C | D |
|---|---|---|---|---|
| QEM394-30I | 28 | 5 | 8 | 18 |
| QEM394-50I | | | | |
| QEM394-75I | | | | |
| QEM394-100I | | | | |

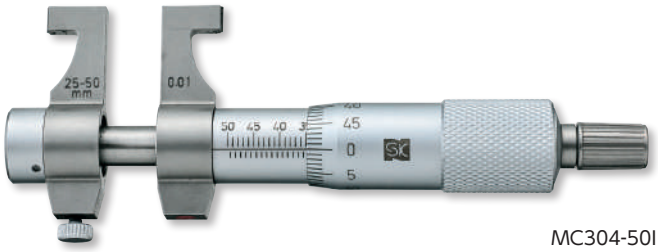
※ Quantization Error (± 1 digit) not included

| Order No. | Model No. | Measuring Range (mm) | Resolution (mm) | Maximum Error※ (μm) | Reference Ring Gauge (mm) | Weight |
|---|---|---|---|---|---|---|
| 152379 | QEM394-30I | 5 - 30 | 0.001 | 6 | φ 5 | 300g |
| 152380 | QEM394-50I | 25 - 50 | | | φ 25 | 300g |
| 152381 | QEM394-75I | 50 - 75 | | 8 | φ 50 | 290g |
| 152382 | QEM394-100I | 75 - 100 | | | φ 75 | 300g |

# CALIPER TYPE INSIDE MICROMETER

Provided with a reference ring gauge for zero-point setting.
Ready to use immediately.

Reference standard for calibration▶ Ring Gauge P62 ～65
For holding micrometers▶ Micrometer Stand P220
Rust prevention▶ Zerust Film for Steel P370



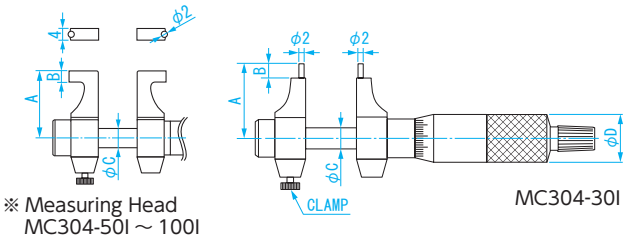

MC304-50I

USE
- For measuring inside dimension

MATERIAL
- Spindle: High carbon chrome steel

FEATURES
- Provided with a reference ring gauge
- With ratchet stop
- Carbide measuring faces

● DIMENSIONS




Units : mm

| Model No. | A | B | C | D |
|---|---|---|---|---|
| MC304-30I | 28 | 5 | 8 | 18 |
| MC304-50I | | | | |
| MC304-75I | | | | |
| MC304-100I | | | | |

| Order No. | Model No. | Measuring Range (mm) | Resolution (mm) | Maximum Error (μm) | Reference Ring Gauge (mm) | Weight |
|---|---|---|---|---|---|---|
| 151230 | MC304-30I | 5～ 30 | 0.01 | 5 | φ 5 | 140g |
| 151231 | MC304-50I | 25～ 50 | | 6 | φ 25 | 150g |
| 151232 | MC304-75I | 50～ 75 | | 7 | φ 50 | 160g |
| 151233 | MC304-100I | 75～100 | | 8 | φ 75 | 190g |

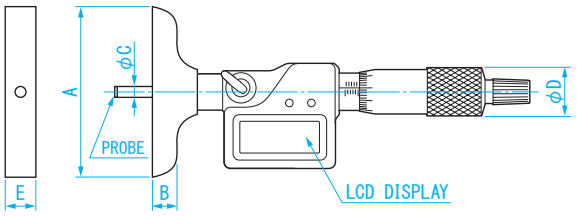
# DIGITAL DEPTH MICROMETER

For high precision measurement of depth

Reference standard for calibration▶ Block Gauge P32 ～40
Rust prevention▶ Zerust Film for Steel P370

QEM293-25FA

● DIMENSIONS




USE
- ●For depth measurement

MATERIAL
- ●Base: Stainless steel ●Probe: High carbon chrome steel

FEATURES
- ●Quick digital display of the measured value ●With ratchet stop
- ●Auto display off function (after approx. 20 min.)

POWER
- ●CR2032 (lithium) battery included for testing

Units : mm

| Model No. | A | B | C | D | E |
|---|---|---|---|---|---|
| QEM293-25FA | 63 | 9 | 4.5 | 18 | 17 |
| QEM293-25FB | 101.5 | | | | |

※ Quantization Error (± 1 digit) not included

| Order No. | Model No. | Measuring Range (mm) | Resolution (mm) | Maximum Error ※ (μm) | Weight |
|---|---|---|---|---|---|
| 152377 | QEM293-25FA | 0 - 25 | 0.001 | 6 | 310g |
| 152378 | QEM293-25FB | | | | 380g |

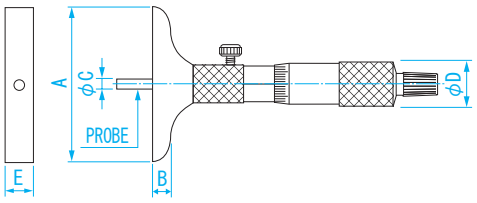
# DEPTH MICROMETER

For high precision measurement of depth

Reference standard for calibration▶ Block Gauge P32 ～40
Rust prevention▶ Zerust Film for Steel P370

MC202-25F

● DIMENSIONS




USE
- ●For depth measurement

MATERIAL
- ●Base: Stainless
- ●Probe: High carbon chrome steel

FEATURES
- ●With ratchet stop

Units: mm

| Model No. | A | B | C | D | E |
|---|---|---|---|---|---|
| MC202-25F | 63 | 9 | 4.5 | 18 | 17 |
| MC202-25FS | 101.5 | | | | |

| Order No. | Model No. | Measuring Range (mm) | Resolution (mm) | Maximum Error (μm) | Weight |
|---|---|---|---|---|---|
| 151220 | MC202-25F | 0～25 | 0.01 | 4 | 210g |
| 151221 | MC202-25FS | | | | 265g |

# SETTING STANDARD

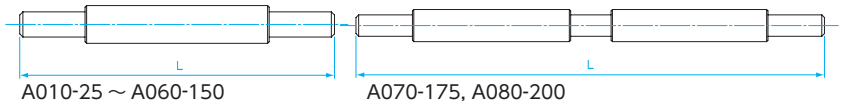
## For origin setting of outside micrometers

Rust prevention▶
Zerust Film for Steel
P370

Units: mm

| Model No. | L |
|---|---|
| A010-25 | 25 |
| A020-50 | 50 |
| A030-75 | 75 |
| A040-100 | 100 |
| A050-125 | 125 |
| A060-150 | 150 |
| A070-175 | 175 |
| A080-200 | 200 |

● DIMENSIONS




A010-25 ~ A060-150　　A070-175, A080-200

USE
●For origin setting of outside micrometers with measuring range over 25~50mm
MATERIAL
●Body: Stainless steel ●Grip: ABS

| Order No. | Model No. | Micrometer size | Accuracy (μm) | Dia. dimension (mm) | Weight |
|---|---|---|---|---|---|
| 151491 | A010-25 | 25 ~ 50 | ± 2 | ϕ 7 | 10g |
| 151492 | A020-50 | 50 ~ 75 | | | 15g |
| 151493 | A030-75 | 75 ~ 100 | ± 2.5 | | 25g |
| 151494 | A040-100 | 100 ~ 125 | ± 3 | ϕ 8 | 45g |
| 151495 | A050-125 | 125 ~ 150 | ± 3.5 | | 50g |
| 151496 | A060-150 | 150 ~ 175 | ± 4 | | 65g |
| 151497 | A070-175 | 175 ~ 200 | ± 4.5 | | 75g |
| 151498 | A080-200 | 200 ~ 225 | ± 5 | | 85g |

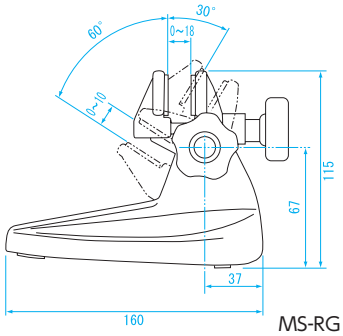
# MICROMETER STAND

## Convenient stand for mounting micrometer

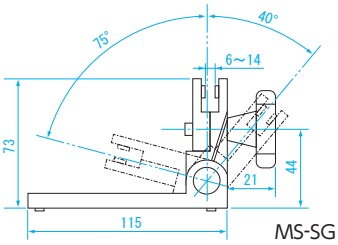
MS-RG

MS-SG

● DIMENSIONS　Units: mm



MS-RG

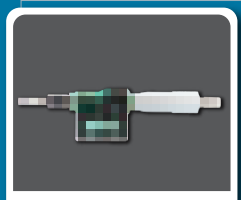


MS-SG

USE
●Stand for outside micrometers
MATERIAL
●Body: Cast iron
FEATURES
●Stable stand with moderate weight and low center of gravity
●With anti-slip rubber feet
●Adjustable cramp angle for secure holding
SPECIFICATIONS
●Clamp range: Outside micrometers up to 100mm

| Order No. | Model No. | Weight |
|---|---|---|
| 011766 | MS-RG | 1.2kg |
| 011767 | MS-SG | 795g |

# MICROMETER HEAD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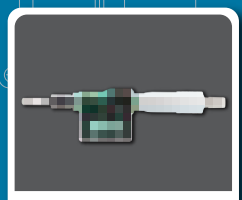
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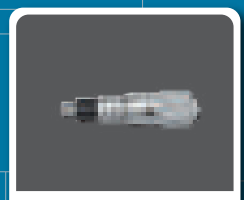
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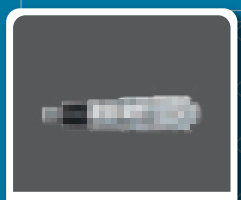
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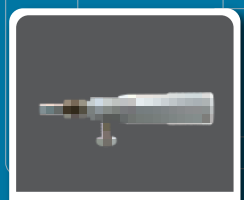
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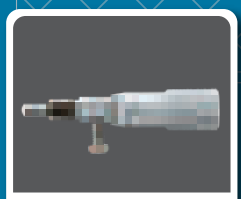
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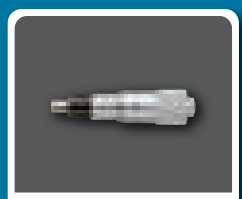
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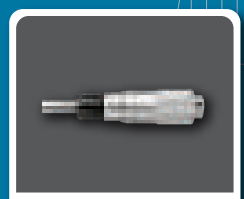
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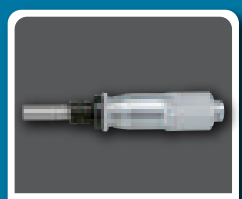
226p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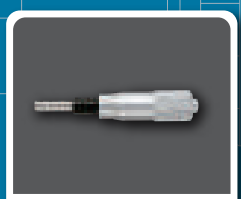
227p


228p

228p

228p

# Micrometer head Size Lineup

※Background grid: approx. 10mm

## ■ Measuring Range 0～5.0mm

0000-050 P225

0010-050 P225

## ■ Measuring Range 0～6.5mm

MH-65KD P224

1001-050 P225

1011-050 P225

1001-350 P225

1011-350M P225

## ■ Measuring Range 0～13mm

MH-130KD P224

1002-050 P226

1012-050 P226

1002-350 P226

1012-350 P226

1702-050 P226

1712-050 P226

1702-350 P226

1712-350 P226

## ■ Measuring Range 0～15mm

1002-250 P227

1012-250 P227

1009-350 P227

1019-350 P227

1709-050 P227

1719-050 P227

1709-350 P227

1719-350 P227

## ■ Measuring Range 0～25mm

MH-250KD P224

1603-000 P228

T1003-000D P228

1003-310 P228

1003-010 P228

1703-010 P228

1803-300 P228

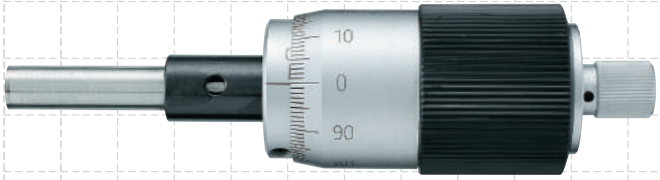
1703-310 P228

1813-300 P228

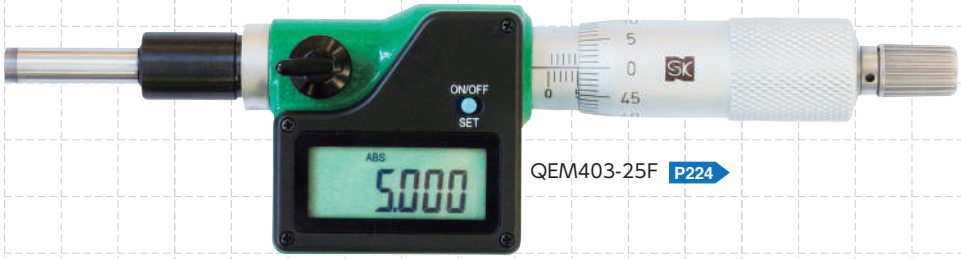
Spindle 1mm pitch 1004-000 P228

1813-310 P228

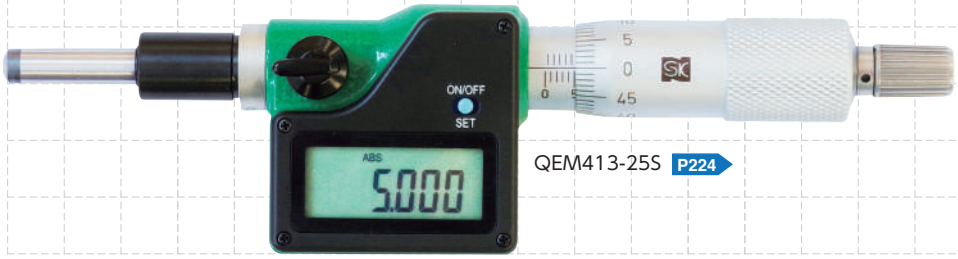
1003-000 P228



Spindle 1mm pitch 1004-030 P228




QEM403-25F P224




QEM413-25S P224

# DIGITAL MICROMETER HEAD

PDI

Digital type. To be mounted on measuring instruments or use as feeding device or stopper, not for single use.

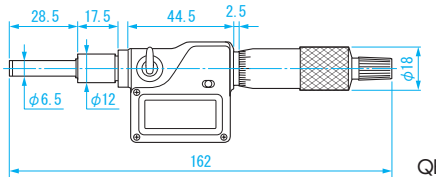
Rust prevention▶ Zerust Film for Steel P370

## ● Measuring range: 0 ~ 25mm

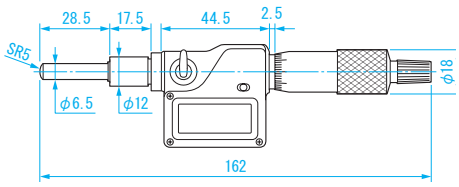
QEM403-25F

QEM413-25S

● DIMENSIONS Units: mm




QEM403-25F




QEM413-25S

USE
- ●Mount on precision equipment or machinery to measure, position and feed

MATERIAL
- ●Thimble: Carbon steel for machine structual use ●Spindle: High carbon chromium steel

FEATURES
- ●Quick digital display of the measured value ●Standard and general purpose with measuring range 0~25mm ●Carbide tipped measuring face for wear resistanc
- ●Auto display off function (after approx. 20 min.) ●With ratchet stop

POWER
- ●One CR2032 (lithium) battery included for testing

※ Quantization Error (± 1digit) not included

| Order No. | Model No. | Stem | Spindle Dimension (mm) | Stem Dimension (mm) | Spindle Face | Resolution (mm) | Maximum Permissible Error※ (μm) | Length (mm) | Thimble Diameter (mm) | Weight |
|---|---|---|---|---|---|---|---|---|---|---|
| NEW! 152341 | QEM403-25F | Straight | Φ6.5×28.5 | Φ12×17.5 | Flat | 0.001 | 3 | 162 | 18 | 220g |
| NEW! 152342 | QEM413-25S | | | | Spherical (SR5) | | | | | |

# MICROMETER HEAD KAIDAN

快段目盛

New stepped millimeter graduations prevents misreading. To be mounted on measuring instruments or use as feeding device or stopper, not for single use.

Rust prevention▶ Zerust Film for Steel P370

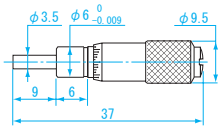
## ● Measuring Range: 0 ~ 6.5㎜ ● Measuring Range: 0 ~ 13㎜ ● Measuring Range: 0 ~ 25㎜

MH-65KD

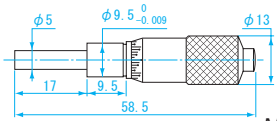
MH-130KD

MH-250KD

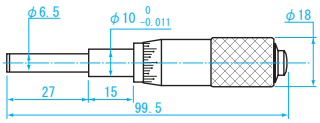
● DIMENSIONS Units: mm




MH-65KD




MH-130KD




MH-250KD

USE
- ●Mount on precision equipment or machinery to measure position and feed

MATERIAL
- ●Thimble: Alloy tool steel
- ●Spindle: High carbon chromium steel

FEATURES
- ●Easy reading Kaidan series
- ●Carbide tipped measuring face (MH-250KD)

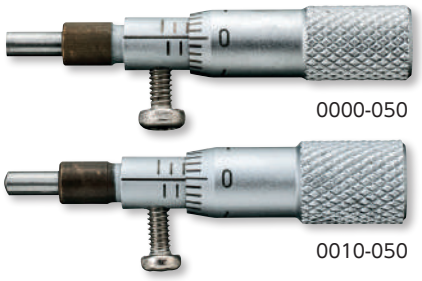
| Order No. | Model No. | Stem | Spindle Dimension (mm) | Stem Dimension (mm) | Spindle Face | Resolution (mm) | Maximum Permissible Error (μm) | Length (mm) | Thimble Diameter (mm) | Weight |
|---|---|---|---|---|---|---|---|---|---|---|
| 151147 | MH-65KD | Straight | φ3.5×9 | φ6×6 | Flat | 0.01 | 5 | 37 | 9.5 | 10g |
| 151148 | MH-130KD | | φ5×17 | φ9.5×9.5 | | | 4 | 58.5 | 13 | 35g |
| 151149 | MH-250KD | | φ6.5×27 | φ10×15 | | | 3 | 99.5 | 18 | 90g |

# MICROMETER HEAD

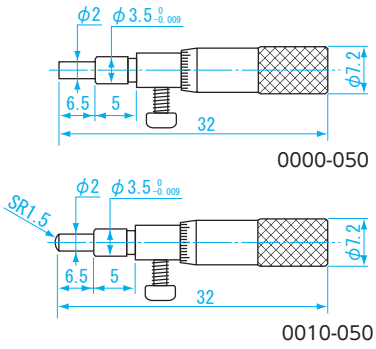
To be mounted on measuring instruments or use as feeding device or stopper, not for single use

Rust prevention▶
Zerust Film for Steel
P370

## ● Measuring Range: 0～5.0mm




● DIMENSIONS Units: mm




USE
- ●Mount on precision equipment or machinery to measure position and feed

MATERIAL
- ●Thimble: Alloy tool steel
- ●Spindle: High carbon chromium steel

FEATURES
- ●Measuring range: 0～5mm, small and lightweight ●With spindle fixing screw

| Order No. | Model No. | Stem | Spindle Dimension (mm) | Stem Dimension (mm) | Spindle Face | Resolution (mm) | Maximum Permissible Error (μm) | Length (mm) | Thimble Diameter (mm) | Weight |
|---|---|---|---|---|---|---|---|---|---|---|
| 151145 | 0000-050 | Straight | ϕ2×6.5 | ϕ3.5×5 | Flat | 0.02 | 5 | 32 | 6 | 4g |
| 151146 | 0010-050 | | | | Spherical (SR1.5) | | | | | |

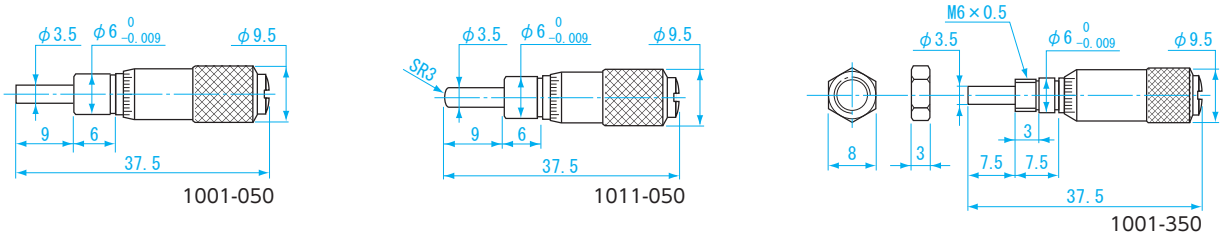
# MICROMETER HEAD

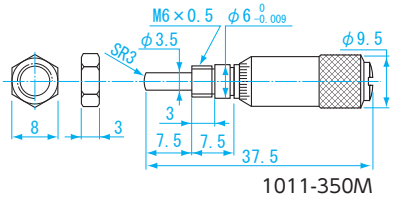
To be mounted on measuring instruments or use as feeding device or stopper, not for single use

Rust prevention▶
Zerust Film for Steel
P370

## ● Measuring Range: 0～6.5mm

● DIMENSIONS Units: mm




USE
- ●Mount on precision equipment or machinery to measure position and feed

MATERIAL
- ●Thimble: Alloy tool steel
- ●Spindle: High carbon chromium steel

FEATURES
- ●Measuring range: 0～6.5mm, small and lightweight

| Order No. | Model No. | Stem | Spindle Dimension (mm) | Stem Dimension (mm) | Nut (mm) | Spindle Face | Resolution (mm) | Maximum Permissible Error (μm) | Length (mm) | Thimble Diameter (mm) | Weight |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 151134 | 1001-050 | Straight | ϕ3.5×9 | ϕ6×6 | – | Flat | 0.01 | 5 | 37.5 | 9.5 | 10g |
| 151135 | 1011-050 | | | | | Spherical (SR3) | | | | | |
| 151136 | 1001-350 | Threaded | ϕ3.5×7.5 | ϕ6×7.5 | ϕ8×3 | Flat | | | | | |
| 151150 | 1011-350M | | | | | Spherical (SR3) | | | | | |

# MICROMETER HEAD

To be mounted on measuring instruments or use as feeding device or stopper, not for single use

Rust prevention▶ Zerust Film for Steel P370

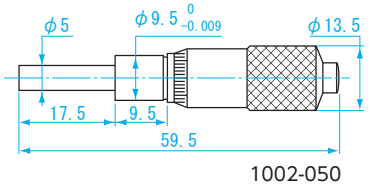
## ● Measuring Range: 0～13㎜

1002-050

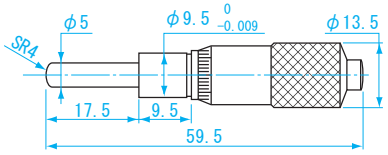
1702-350

● DIMENSIONS

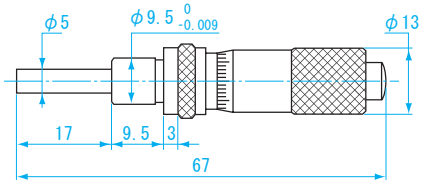
Units: mm



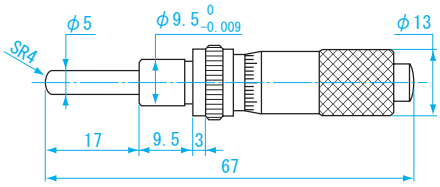

1002-050



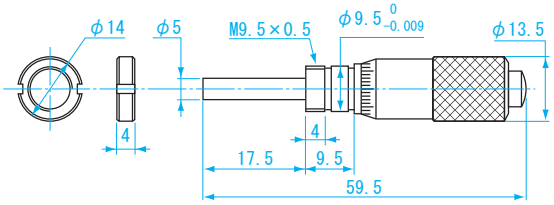

1012-050



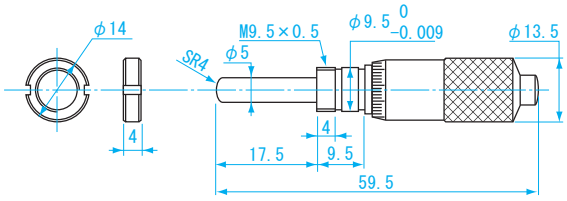

1702-050



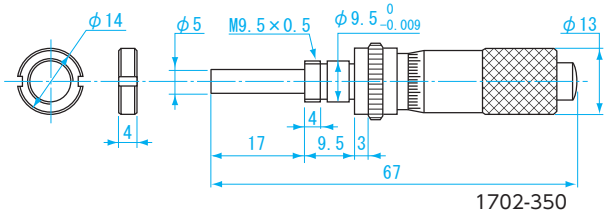

1712-050



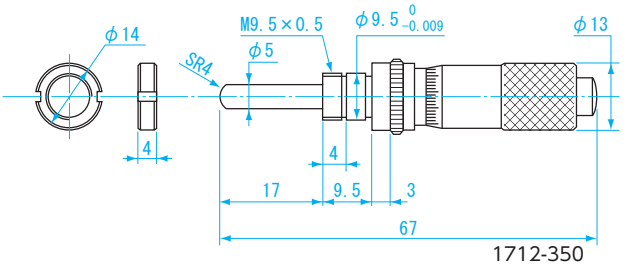

1002-350




1012-350




1702-350




1712-350

USE

●Mount on precision equipment or machinery to measure position and feed

MATERIAL

●Thimble: Alloy tool steel

●Spindle: High Carbon chromium steel

FEATURES

●Measuring range: 0～13mm, small, general-purpose series

| Order No. | Model No. | Stem/ Spindle Clamp | Spindle Dimension (mm) | Stem Dimension (mm) | Nut (mm) | Spindle Face | Resolution (mm) | Maximum Permissible Error (μm) | Length (mm) | Thimble Diameter (mm) | Weight |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 151110 | 1002-050 | Straight | ϕ5×17.5 | ϕ9.5×9.5 | – | Flat | 0.01 | 4 | 59.5 | 13.5 | 35g |
| 151111 | 1012-050 | | | | | Spherical (SR4) | | | | | |
| 151112 | 1002-350 | Threaded | | | ϕ14×4 | Flat | | | | | |
| 151113 | 1012-350 | | | | | Spherical (SR4) | | | | | |
| 151114 | 1702-050 | Straight / with Clamp | ϕ5×17 | | – | Flat | | | 67 | 13 | 45g |
| 151115 | 1712-050 | | | | | Spherical (SR4) | | | | | |
| 151116 | 1702-350 | Threaded / with Clamp | | | ϕ14×4 | Flat | | | | | |
| 151117 | 1712-350 | | | | | Spherical (SR4) | | | | | |

# MICROMETER HEAD

To be mounted on measuring instruments or use as feeding device or stopper, not for single use

Rust prevention▶
Zerust Film for Steel
P370

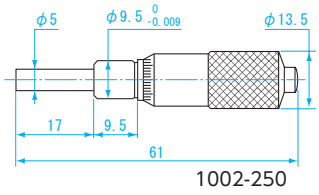
## ● Measuring range: 0 ~ 15mm

1709-050

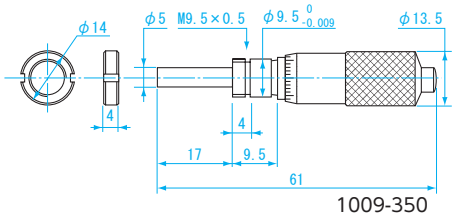
1719-350

● DIMENSIONS

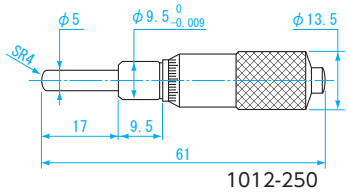
Units: mm



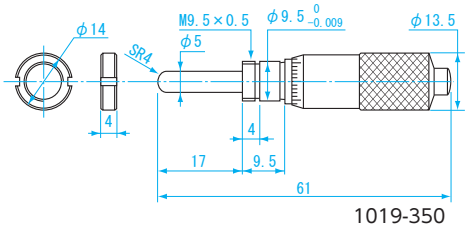

1002-250




1009-350




1012-250

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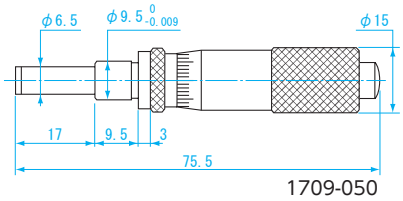
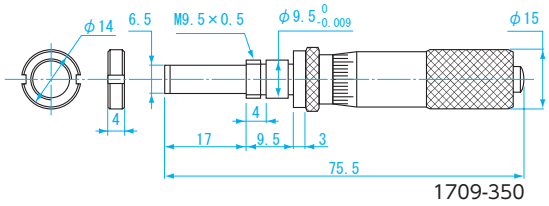
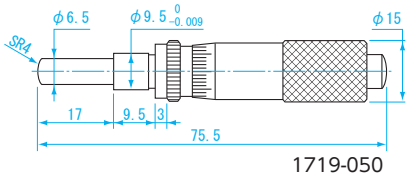


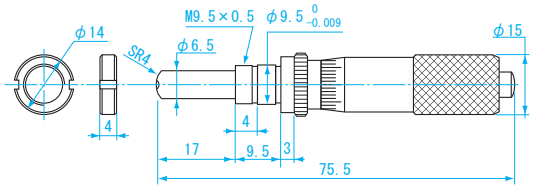

1709-050




1709-350




1719-050




1719-350

USE

●Mount on precision equipment or machinery to measure position and feed

MATERIAL

●Thimble: Alloy tool steel

●Spindle: High carbon chromium steel

FEATURES

●Measuring range: 0~15mm small, general-purpose series

●Carbide tipped measuring faces (1709-050, 1719-050, 1709-350, 1719-350)

| Order No. | Model No. | Stem/ Spindle Clamp | Spindle Dimension (mm) | Stem Dimension (mm) | Nut (mm) | Spindle Face | Resolution (mm) | Maximum Permissible Error (μm) | Length (mm) | Thimble Diameter (mm) | Weight |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 151118 | 1002-250 | Straight | ϕ5×17 | ϕ9.5×9.5 | – | Flat | 0.01 | 4 | 61 | 13.5 | 40g |
| 151119 | 1012-250 | | | | | Spherical (SR4) | | | | | |
| 151120 | 1009-350 | Threaded | | | ϕ14×4 | Flat | | | | | |
| 151121 | 1019-350 | | | | | Spherical (SR4) | | | | | |
| 151122 | 1709-050 | Straight / with Clamp | ϕ6.5×17 | | – | Flat | | | 75.5 | 15 | 65g |
| 151123 | 1719-050 | | | | | Spherical (SR4) | | | | | |
| 151124 | 1709-350 | Threaded / wtih Clamp | | | ϕ14×4 | Flat | | | | | |
| 151125 | 1719-350 | | | | | Spherical (SR4) | | | | | |

# MICROMETER HEAD

To be mounted on measuring instruments or use as feeding device or stopper, not for single use

Rust prevention▶ Zerust Film for Steel P370

## ● Measuring Range: 0 ~ 25㎜

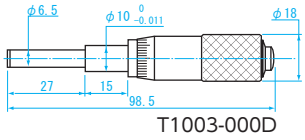
T1003-000D

1813-310

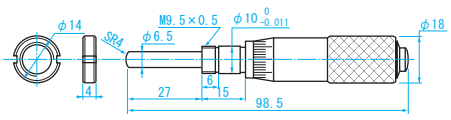
1004-000

● DIMENSIONS

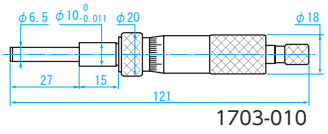
Units: mm



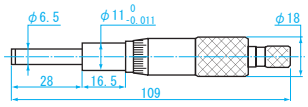

T1003-000D



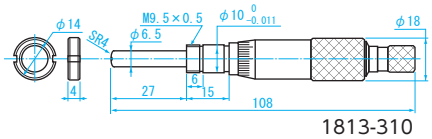

1813-300



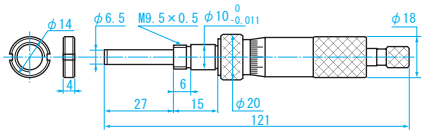

1703-010



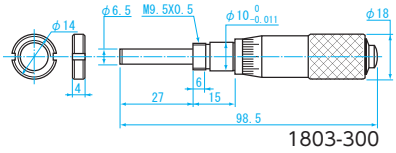

1003-010



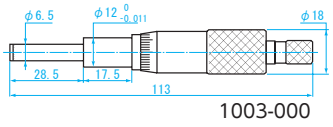

1813-310



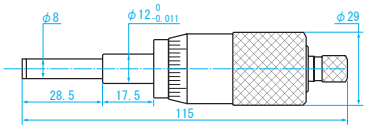

1703-310




1803-300

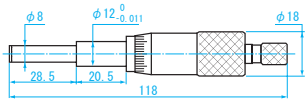



1003-000

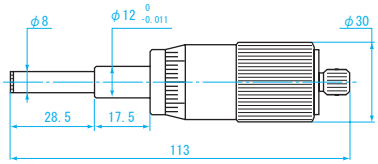



Spindle 1mm pitch

1004-000

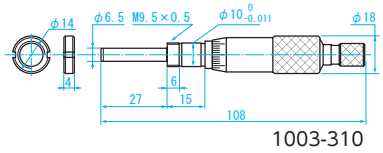



1603-000




Spindle 1mm pitch

1004-030




1003-310

USE

- ●Mount on precision equipment or machinery to measure position and feed

MATERIAL

- ●Thimble: Alloy tool steel
- ●Spindle: High carbon chromium steel

FEATURES

- ●Measuring range: 0~25mm small, general-purpose series
- ●Carbide tipped measuring faces (exclude 1813-300)
- ●Spindle 1mm pitch (1004-000, 1004-030)

| Order No. | Model No. | Rachet | Stem / Spindle Clamp | Spindle Dimension (mm) | Stem Dimension (mm) | Nut (mm) | Spindle Face | Resolution (mm) | Maximum Permissible Error (μm) | Length (mm) | Thimble Diameter (mm) | Weight |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 151138 | T1003-000D | None | Straight | ϕ6.5×27 | ϕ10×15 | – | Flat | 0.01 | 3 | 98.5 | 18 | 90g |
| 151126 | 1003-010 | Yes | | ϕ6.5×28 | ϕ11×16.5 | | | | | 109 | | |
| 151139 | 1803-300 | None | Threaded | ϕ6.5×27 | ϕ10×15 | ϕ14×4 | Spherical (SR4) | | | 98.5 | | |
| 151141 | 1813-300 | | | | | | | | | | | |
| 151140 | 1813-310 | Yes | | | | | | | | 108 | | 95g |
| 151127 | 1003-000 | | Straight | ϕ6.5×28.5 | ϕ12×17.5 | – | Flat | | | 113 | | 100g |
| 151128 | 1603-000 | | | ϕ8×28.5 | ϕ12×20.5 | | | | | 118 | | 110g |
| 151129 | 1003-310 | | Threaded | ϕ6.5×27 | ϕ10×15 | ϕ14×4 | | | | 108 | | 95g |
| 151130 | 1703-010 | | Straight / with Clamp | | | – | | | | 121 | | 115g |
| 151131 | 1703-310 | | Threaded / with Clamp | | | ϕ14×4 | | | | | | 120g |
| 151133 | 1004-000 | | Straight | ϕ8×28.5 | ϕ12×17.5 | – | | | 4 | 115 | 29 | 230g |
| 151132 | 1004-030 | | | | | | | | | 113 | 30 | 200g |

# DIAL GAUGE

232p

232p

233p

234p

235p

236p

237p

238p

238p

239p

239p

240p

240p

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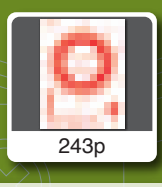
242p

242p

243p

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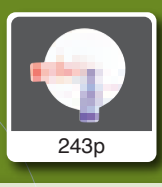
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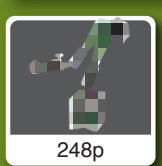
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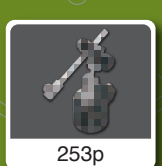
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254～255p

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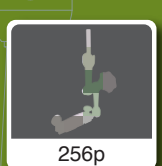
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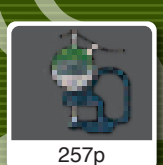
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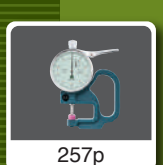
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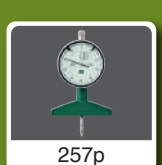
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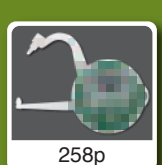
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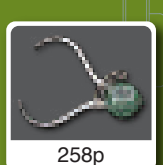
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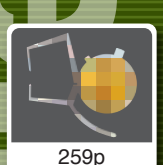
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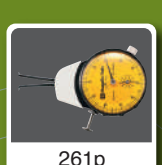
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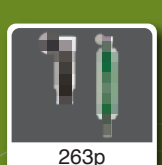
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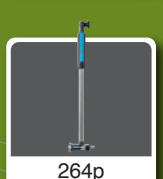
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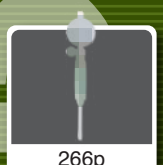
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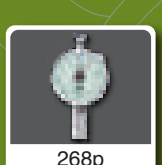

268p

268p

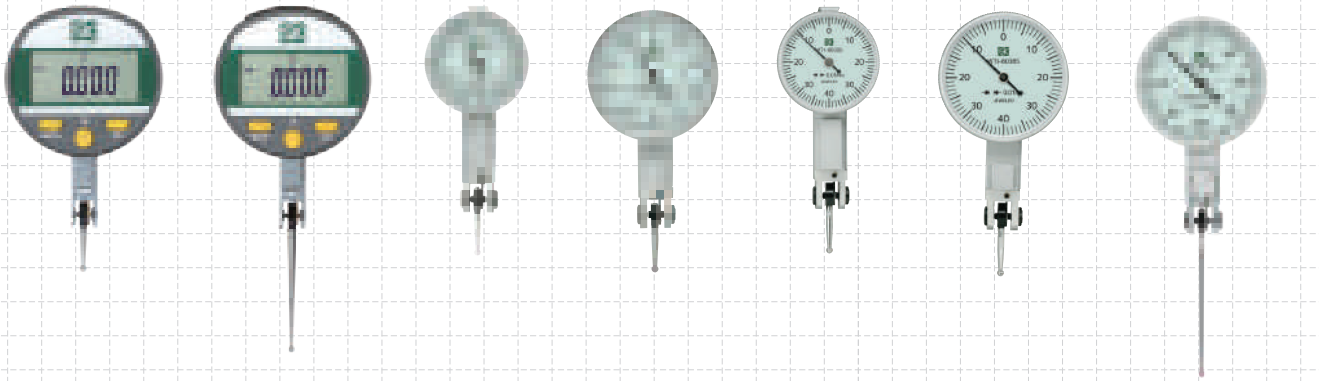
269p

270p

# Dial Gauge Size Lineup

*Background grid: approx. 10mm

DET-0800S P236
DET-2000S P236
WTI-2030R P244 WTI-2038R P244
WTI-2030W P244 WTI-2038W P244
WTI-8030S P245 WTI-8038S P245
WTI-8030R P245 WTI-8038R P245 WTI-8038RL P246
WTI-8030W P245 WTI-8038W P245 WTI-8038WL P246



DET-0800SW P237
DET-2000SW P237
DEI-127 P239
DEI-127M P238
DEI-254M P238

DEI-501MW P233

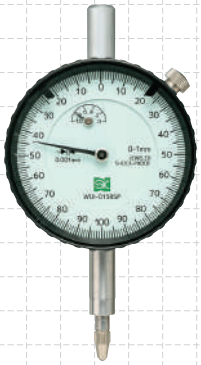
DEI-121MH P233
DEI-121MW P233
DEI-251MW P233
DEI-122MH P234
DEI-122MW P234
DEI-252MW P234

WDI-10KD P240

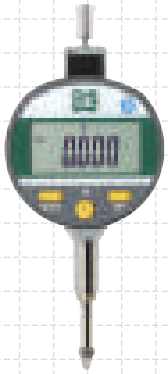
WDI-10 P240

WDI-0558SP P241
WDI-1058SP P241

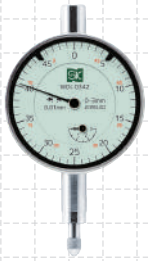
WDI-0158SP P241



DMI-1095SW P235



WDI-0342 P242
WDI-0542 P242

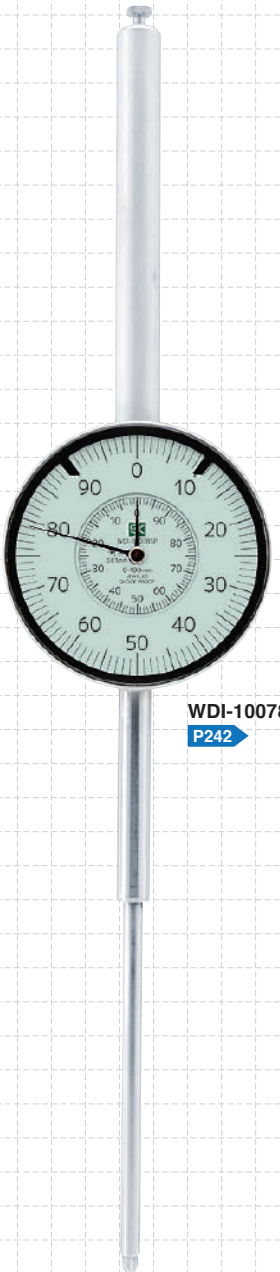


WDI-3058SP P242

WDI-5058SP P242

WDI-8058SP P242

WDI-10078SP P242



## WIRELESS RECEIVER

(Receiver)

For importing measurement data to PC.
Pass/ Fail judgement based on pre-set tolerance, and data recording, become possible with combination use of dedicated software.

Integrated software for measuring instruments▶
SK-LOG
P24 ～27

USE
- For receiving measurement data wireless from compatible measuring devices

FEATURES
- Enables wireless data import from compatible devices for easier data management
- Up to 8 devices can be connected per unit
  ※By increasing number of WI-1M, up to 32 devices can be connected (SK-LOG Product version is required for the multiple connection)

SPECIFICATIONS
- Radio system: ANT + (communication distance within 6m)
- OS: Windows 7, 8, 10, 11

※Our ANT+ system is qualified in Japan, U.S.A (FCC), EU (CE) and South Korea (KCC). For use in other countries, please contact us.

PRODUCT INCLUDES
- Wireless receiver
- Dedicated software (SK-LOG Lite version)

<Applicable Products>

| Order No. | Product and Model No. |
|---|---|
| 152271 ～ 152273 | S-LINE DIGITAL VERNIER CALIPER D-***IP67MW |
| 152235 ～ 152238 | S-LINE DIGITAL MICROMETER MCD-***IP65MW |
| 152292 ～ 152294<br>152296 ～ 152297 | S-LINE DIGITAL INDICATOR DEI-***MW<br>※ Cannot be used with DATA TRANSFER CABLE at the same time. |

Dedicated software included

| Order No. | Model No. | Connecter | Wireless Range | Frequency Band | Weight |
|---|---|---|---|---|---|
| 152278 | WI-1M | USB | Max. 6m | 2.4GHz | 2g |

## S-LINE DATA TRANSFER CABLE

S line series

(Cable)

For importing measurement data to PC.
Pass/ Fail judgement based on pre-set tolerance, and data recording, become possible with combination use of dedicated software.

Integrated software for measuring instruments▶
SK-LOG
P24 ～27

USE
- For importing measurement data from compatible measuring devices

FEATURES
- USB cable for transferring measurement data, compatible with S-line series products
- There is also a data transmission button on the device connection terminal of the cable (DTC-M1)

PRODUCT INCLUDES
- Cable
- Dedicated software (SK-LOG Lite version)

<Applicable Products>
- Connectable to DTC-1

| Order No. | Product and Model No. |
|---|---|
| 151227 ～ 151229<br>151234 | S-LINE DIGITAL MICROMETER MCD-**IP67S2<br>S-LINE DIGITAL BLADE MICROMETER MCD-25IP67BS2 |

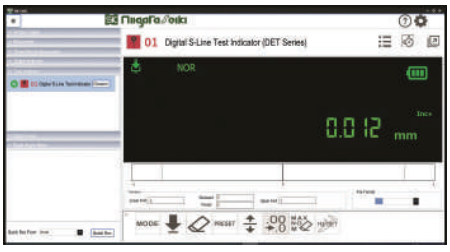
- Connectable to DTC-2, DTC-2-DS

| Order No. | Product and Model No. |
|---|---|
| 151749 | S-LINE DIGITAL MINI INDICATOR DMI-1095SW |
| 151917 ～ 151918<br>151746 ～ 151747 | S-LINE DIGITAL TEST INDICATOR DET-****S<br>S-LINE DIGITAL TEST INDICATOR DET-****SW |

- Connectable to DTC-M1

| Order No. | Product and Model No. |
|---|---|
| 152274 ～ 152276 | S-LINE DIGITAL VERNIER CALIPER D-***IP67M |
| 152282 ～ 152283 | S-LINE DIGITAL HEIGHT GAUGE DHG-**M |
| 152291・152295 | S-LINE DIGITAL INDICATOR DEI-***MH |
| 152292 ～ 152294<br>152296 ～ 152297 | S-LINE DIGITAL INDICATOR DEI-***MW<br>※ Cannot be used with WIRELESS RECEIVER at the same time. |

DTC-1




Dedicated software included

Downloading Android App [SLOG]
GET IT ON Google Play

| Order No. | Model No. | Connector | Length | OS |
|---|---|---|---|---|
| 152033 | DTC-1 | USB | 3m※1 | Windows 7, 8, 10, 11<br>Android※2 |
| 152034 | DTC-2 | | | |
| 152060 | DTC-2-DS | D-SUB9 | 3m※1 | Windows 7, 8, 10, 11 |
| 152279 | DTC-M1 | USB | 2m | Windows 7, 8, 10, 11 |

※1: D-SUB9 pin type and length change of the cable are possible (USB type: Max. 7m, D-SUB9 pin type: Max. 10m). Please contact us.
※2: Models equipped with a USB host function (Please prepare a USB host cable separately when using an Android device). The Android version software is SLOG.

# S-LINE DIGITAL INDICATOR

S line series

HOW TO MOVIE

Niigataseiki x Mahr collaborated high performance digital indicator.
With a large LCD display for easy reading of measurement values.


Integrated software for measuring instruments ▶
SK-LOG
P24 ～27

Wireless transmission of measurement data To PC ▶
Wireless Receiver
P232

Importing measurement data to PC ▶
Data Transfer Cable
P232

Reference standard for comparative measurement ▶
Block Gauge
P32 ～40

Holding measuring instruments ▶
Magnetic Base
P247 ～255

Precision measuring instrument holder ▶
Comparator Stand
P280 ～281

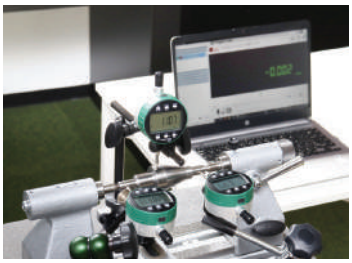
Rust prevention ▶
Zerust Film for Steel
P370

DEI-121MH
(Minimum reading : 0.0001mm)

DEI-121MW
(Built-in wireless type)

DEI-251MW
(Built-in wireless type)

DEI-501MW
(Built-in wireless type)



USE
- For measuring displacement such as unevenness of flat surface, OK/ NG for mounting of workpiece, runout of shaft, and squareness

MATERIAL
- Stem & spindle: Stainless steel
- Probe: Steel

FEATURES
- Reference function※1 eliminates the need to set 0 every time

※1: Retaining zero position setting when the power turned off

- Combination use with a dedicated cable (DTC series) enables wired data transmission
- Combination use with a dedicated receiver (WI-1M) enables wireless data transmission (Except for DEI-121MH)
- With a large LCD display (11mm height of character) for easy reading of measurement values
- Display unit can be rotated through 270°
- Tolerance mode
- Measuring direction (+/-) switching function
- Preset function
- Auto power off function (can be set in 0 to 999 min)

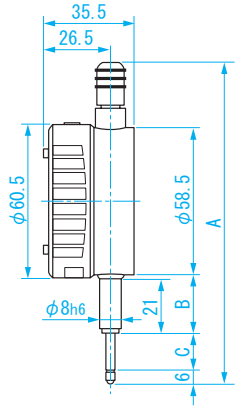
SPECIFICATIONS
- Radio system: ANT+ (Communication distance within 6m)※2 (Except for DEI-121MH)

※2: Our ANT+ system qualification is with TELEC (Japan), FCC (U.S.A), CE (EU) and KCC (South Korea). Please contact us for use in other countries.

POWER
- One CR2450 (lithium) battery included for testing

ACCESSORIES
- Spindle speed adjusting screw (DEI-501MW only)

## ● DIMENSIONS




Units: mm

| Model No. | A | B | C |
|---|---|---|---|
| DEI-121MH | 126.3 | 23 | 13.5 |
| DEI-121MW | | | |
| DEI-251MW | 153.4 | 26.8 | 26.5 |
| DEI-501MW | 267.3 | 40 | 52 |

※ 3: Quantization Error (± 1 digit) not included

| Order No. | Model No. | Measuring Range (mm) | Resolution (mm) | Minimum Reading Display (mm) | Error of indication over a range of Measuring range※3 (μm) | Hysteresis Error (μm) | Repeatability (μm) | Measuring Force (N) | Connection Unit for Data Transmission | Weight (including flat type back) |
|---|---|---|---|---|---|---|---|---|---|---|
| 152291 | DEI-121MH | 12.5 | 0.0001 | 0.01/0.005/0.002/0.001/ 0.0005/0.0001 (switchable) | 1.8 | 0.6 | 0.5 | Less than 1.5 | DTC-M1 (wired) | 130g |
| 152292 | DEI-121MW | 12.5 | 0.0005 | 0.01/0.005/ 0.002/0.001/ 0.0005 (switchable) | 4 | 2 | 1 | Less than 1.5 | WI-1M (wireless), DTC-M1 (wired) | 130g |
| 152293 | DEI-251MW | 25 | | | | | | | | 140g |
| 152294 | DEI-501MW | 50 | | | 7 | 3 | | Less than 3.0 | | 190g |


DAIAL GAUGE
DIAL INDICATOR
MAGNETIC BASE
THICKNESS GAUGE
CALIPER GAUGE
BORE GAUGE
OTHER DIAL GAUGES
HARDNESS
FILM THICKNESS

# S-LINE DIGITAL INDICATOR

S line series

HOW TO MOVIE

Niigataseiki x Mahr collaborated high performance digital indicator.
Digital/ analog dual-indication display for intuitive reading.


Integrated software for measuring instruments ▶ SK-LOG P24 ~27
Wireless transmission of measurement data To PC ▶ Wireless Receiver P232
Importing measurement data to PC ▶ Data Transfer Cable P232
Reference standard for comparative measurement ▶ Block Gauge P32 ~40
Holding measuring instruments ▶ Magnetic Base P247 ~255
Precision measuring instrument holder ▶ Comparator Stand P280 ~281
Rust prevention ▶ Zerust Film for Steel P370

DEI-122MH

DEI-122MW
(Built-in wireless type)

DEI-252MW
(Built-in wireless type)

USE
- For measuring displacement such as unevenness of flat surface, OK/ NG for mounting of workpiece, runout of shaft, and squareness

MATERIAL
- Stem & spindle: Stainless steel
- Probe: Steel

FEATURES
- Reference function※1 eliminates the need to set 0 every time

※1: Retaining zero position setting when the power turned off

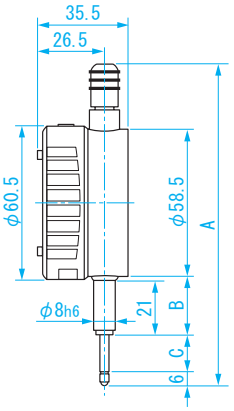
- Combination use with a dedicated cable (DTC series) enables wired data transmission
- Combination use with a dedicated receiver (WI-1M) enables wireless data transmission (Except for DEI-122MH)
- LCD with analog indication
- Display unit can be rotated through 270°
- Tolerance mode
- MAX/MIN measurement function
- Measuring direction (+/-) switching function
- Preset function
- Auto power off function (can be set in 0 to 999 min)

SPECIFICATIONS
- Radio system: ANT+ (Communication distance within 6m)※2 (Except for DEI-122MH)

※2: Our ANT+ system qualification is with TELEC (Japan), FCC (U.S.A), CE (EU) and KCC (South Korea). Please contact us for use in other countries.

POWER
- One CR2450 (lithium) battery included for testing

● DIMENSIONS




Units: mm

| Model No. | A | B | C |
|---|---|---|---|
| DEI-122MH | 126.3 | 23 | 13.5 |
| DEI-122MW | | | |
| DEI-252MW | 153.4 | 26.8 | 26.5 |

※ 3: Quantization Error (± 1 digit) not included

| Order No. | Model No. | Measuring Range (mm) | Resolution (mm) | Minimum Reading Display (mm) | Error of indication over a range of Measuring range※3 (μm) | Hysteresis Error (μm) | Repeatability (μm) | Measuring Force (N) | Connection Unit for Data Transmission | Weight (including flat type back) |
|---|---|---|---|---|---|---|---|---|---|---|
| 152295 | DEI-122MH | 12.5 | 0.0001 | 0.01/0.005/0.002/0.001/ 0.0005/0.0001 (switchable) | 1.8 | 0.6 | 0.5 | Less than 1.5 | DTC-M1 (wired) | 130g |
| 152296 | DEI-122MW | 12.5 | 0.0005 | 0.01/0.005/ 0.002/0.001/ 0.0005 (switchable) | 4 | 2 | 1 | | WI-1M (wireless), DTC-M1 (wired) | 130g |
| 152297 | DEI-252MW | 25 | | | | | | | | 140g |


DAIAL GAUGE
DIAL INDICATOR
MAGNETIC BASE
THICKNESS GAUGE
CALIPER GAUGE
BORE GAUGE
OTHER DIAL GAUGES
HARDNESS
FILM THICKNESS

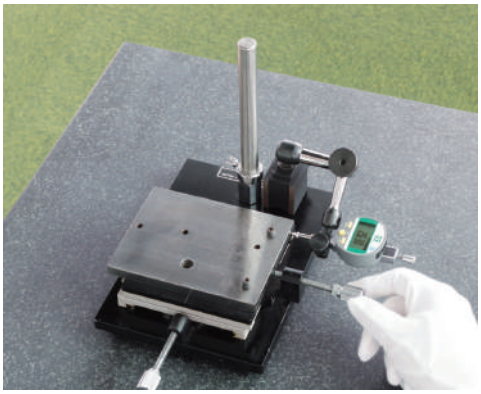
S line series

# DIGITAL S-LINE MINI INDICATOR (Built-in Bluetooth/ IP54) NEW!

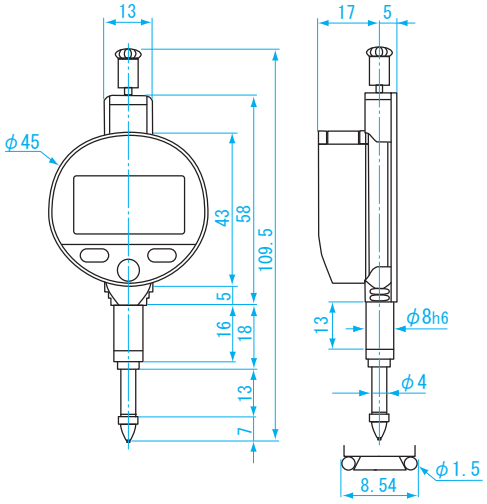
HOW TO MOVIE

Built-in Bluetooth function.
Compact type with an overall length of 110 mm and a thickness of 22 mm.


Integrated software for measuring instruments ▶ SK-LOG P24 ~27
Importing measurement data to PC ▶ Data Transfer Cable P232
Reference standard for comparative measurement ▶ Block Gauge P32 ~40
Holding measuring instruments ▶ Magnetic Base P247 ~255
Precision measuring instrument holder ▶ Comparator Stand P280 ~281
Rust prevention ▶ Zerust Film for Steel P370



## DIMENSIONS




## Protection category IP54

IP is an protection class indication of electrical equipment and cabinets against solid objects and water, as specified in IEC60529.

| Class | IP | Definition | Testing for |
|---|---|---|---|
| 1st digit | 5 | Protected against dust limited ingress | Protected against quantity of dust that could interfere with the normal operation of the product or compromise safety |
| 2nd digit | 4 | No harmful effects from water splashing from any direction | Spray rotating equipment with 10L/min flow for 10 min. from height of 300~500m |

USE
- Measuring surface flatness, checking tool setup, axial runout, checking squareness

MATERIAL
- Stem & spindle: Stainless steel
- Probe: Carbide

FEATURES
- Built-in Bluetooth digital test indicator
- The small type is suitable for use in confined spaces
- The display has both digital and analog display for easy reading
- MIN, MAX, DEL TA (Max. displacement) measurment function
- Measuring direction (+/-) switching function
- Preset function
- Auto display off function (After approx. 10 min)
- Selectable minimum reading display: 0.01mm/0.001mm

SPECIFICATIONS
- Radio system: Bluetooth 5.0 (Communication distance within 15m)

※Our Bluetooth system qualification is with TELEC (Japan), FCC (U.S.A)、CE (EU), KCC (South Korea) (Excerpts from major regions only)
For use in other countires, please contact us

POWER
- CR2032 (litium battery) include for testing

※ Quantization Error (± 1 digit) not included

| Order No. | Model No. | Measuring Range (mm) | Minimum Reading Display (mm) | Resolution (mm) | Maximum Error※ (μm) | Backlash Error (μm) | Repeatablity (μm) | Measuring Force (N) | Weight |
|---|---|---|---|---|---|---|---|---|---|
| NEW! 151749 | DMI-1095SW | 12.5 | 0.001 | 0.01/0.001 (switchable) | 4 | 2 | 2 | Less than 1.5 | 75g |

# DIGITAL S-LINE TEST INDICATOR (IP54) NEW!

S line series

HOW TO MOVIE

IP54 compliant digital test indicator.
Data transfer is possible with a dedicated cable (sold separately).


Integrated software for measuring instruments ▶ SK-LOG P24 ~27
Importing measurement data to PC ▶ Data Transfer Cable P232
Reference standard for comparative measurement ▶ Block Gauge P32 ~40
Holding measuring instruments ▶ Height Gauge P202 ~206
Holding measuring instruments ▶ Magnetic Base P247 ~255
Precision measuring instrument holder ▶ Comparator Stand P280 ~281
Rust prevention ▶ Zerust Film for Steel P370

DET-0800S

DET-2000S

## Protection category IP54

IP is an protection class indication of electrical equipment and cabinets against solid objects and water, as specified in IEC60529.

| Class | IP | Definition | Testing for |
|---|---|---|---|
| 1st digit | 5 | Protected against dust limited ingress | Protected against quantity of dust that could interfere with the normal operation of the product or compromise safety |
| 2nd digit | 4 | No harmful effects from water splashing from any direction | Spray rotating equipment with 10L/min flow for 10 min. from height of 300~500m |

LSD display rotates 270°
Measurement can be taken in suitable posture

USE
- Lever type digital test indicator
- Measuring surface flatness, checking tool setup, axial runout, checking squareness

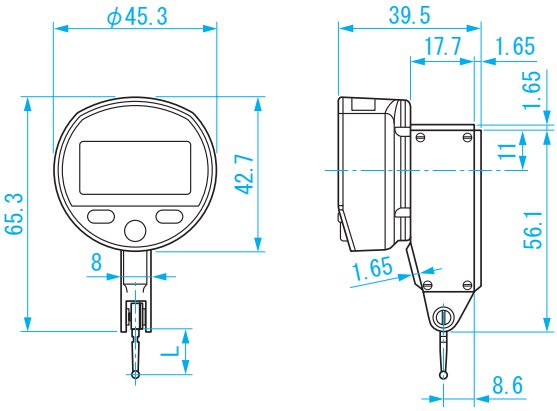
MATERIAL
- Probe: Carbide

FEATURES
- Built-in Bluetooth digital test indicator
- Display rotates 270°
- The display has both digital and analog display for easy reading
- MIN, MAX, DEL TA (Max. displacement) measurment function
- Measuring direction (+/-) switching function
- Preset function
- Auto display off function (After approx. 10 min)
- Selectable minimum reading display: 0.01mm/0.001mm

POWER
- CR2032 (litium battery) include for testing

ACCESSORIES
- φ8 dovetail stem

● DIMENSIONS




※ We also offer replacement measuring elements.

■ Probe for S-line test indicator (For replacement)

●Mounting screw size: M1.4 x P0.3, screw length 2mm

| Order No. | Model No. | Probe Length L (mm) | Probe diameter (mm) | Applicable Model No. |
|---|---|---|---|---|
| 151717 | DET-P125S1 | 12.5 | φ 1 | DET-0800S DET-0800SW |
| 151718 | DET-234S1-S | | φ 2 | |
| 151719 | DET-234S2-S | 36.5 | | DET-2000S DET-2000SW |

※ Requires calibration with standard when replacing probe

Units: mm

| Model No. | L |
|---|---|
| DET-0800S | 12.5 |
| DET-2000S | 36.5 |

※ Quantization Error (± 1 digit) not included

| Order No. | Model No. | Measuring Range (mm) | Minimum Reading Display (mm) | Resolution (mm) | Maximum Error* (μm) | Backlash Error (μm) | Repeatablity (μm) | Measuring Force (N) | Weight |
|---|---|---|---|---|---|---|---|---|---|
| NEW! 151917 | DET-0800S | 0.8 | 0.001 | 0.01/0.001 (switchable) | 3 | 2 | 1 | Less than 0.2 | 70g |
| NEW! 151918 | DET-2000S | 2.0 | | | 8 | 3 | | Less than 0.1 | 70g |


DAIAL GAUGE
DIAL INDICATOR
MAGNETIC BASE
THICKNESS GAUGE
CALIPER GAUGE
BORE GAUGE
OTHER DIAL GAUGES
HARDNESS
FILM THICKNESS

# DIGITAL S-LINE TEST INDICATOR (Built-in Bluetooth/IP54)

S line series

T PDI O

HOW TO MOVIE

Digital test indicator with Bluetooth function.
Capable of wireless measurement data transfer.


Integrated software for measuring instruments ▶ SK-LOG P24 ~27
Importing measurement data to PC ▶ Data Transfer Cable P232
Reference standard for comparative measurement ▶ Block Gauge P32 ~40
Holding measuring instruments ▶ Height Gauge P202 ~206
Holding measuring instruments ▶ Magnetic Base P247 ~255
Precision measuring instrument holder ▶ Comparator Stand P280 ~281
Rust prevention ▶ Zerust Film for Steel P370

DET-0800SW

DET-2000SW

## Protection category IP54

IP is an protection class indication of electrical equipment and cabinets against solid objects and water, as specified in IEC60529.

| Class | IP | Definition | Testing for |
|---|---|---|---|
| 1st digit | 5 | Protected against dust limited ingress | Protected against quantity of dust that could interfere with the normal operation of the product or compromise safety |
| 2nd digit | 4 | No harmful effects from water splashing from any direction | Spray rotating equipment with 10L/min flow for 10 min. from height of 300~500m |

LCD display rotates 270°
Measurement can be taken in suitable posture

USE
- Lever type digital test indicator
- Measuring surface flatness, checking tool setup, axial runout, checking squareness

MATERIAL
- Probe: Carbide

FEATURES
- Built-in Bluetooth digital test indicator
- Display rotates 270°
- The display has both digital and analog display for easy reading
- MIN, MAX, DELTA (Max. displacement) measurment function
- Measuring direction (+/-) switching function ●Preset function
- Auto display off function (After approx.10 min)
- Selectable minimum reading display: 0.01mm/0.001mm

SPCIFICATIONS
- Radio system: Bluetooth5.0 (Communication distance within 15m)

※ Our Bluetooth system qualification is with TELEC (Japan), FCC (U.S.A), CE (EU), KCC (South Korea), NCC (Taiwan) and CCC (China). For use in other countries, please contact us.

POWER
- CR2032 (litium battery) included for testing

ACCESSORIES
- φ8 dovetail stem

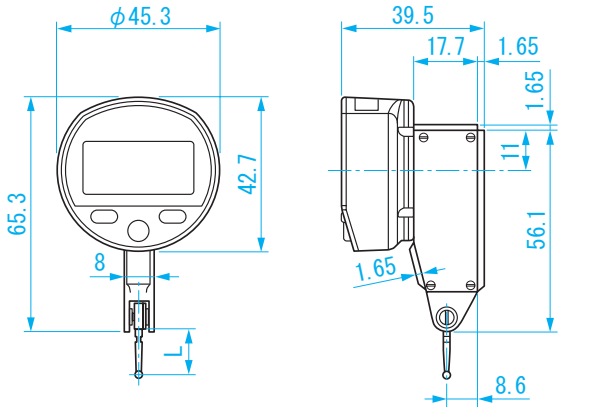
※ We also offer replacement measuring elements.

■ Probe for S-line test indicator (For replacement)
- Mounting screw size: M1.4 x P0.3, screw length 2mm

| Order No. | Model No. | Probe Length L (mm) | Probe diameter (mm) | Applicable Model No. |
|---|---|---|---|---|
| 151717 | DET-P125S1 | 12.5 | φ 1 | DET-0800S DET-0800SW |
| 151718 | DET-234S1-S | | φ 2 | |
| 151719 | DET-234S2-S | 36.5 | | DET-2000S DET-2000SW |

※ Requires calibration with standard when replacing probe

● DIMENSIONS




Units: mm

| Model No. | L |
|---|---|
| DET-0800SW | 12.5 |
| DET-2000SW | 36.5 |

※ Quantization Error (± 1 digit) not included

| Order No. | Model No. | Measuring Range (mm) | Resolution (mm) | Minimum Reading Display (mm) | Maximum Error (μm) | Backlash Error (μm) | Repeatability (μm) | Measuring Force (N) | Weight |
|---|---|---|---|---|---|---|---|---|---|
| 151746 | DET-0800SW | 0.8 | 0.001 | 0.01/0.001 (switchable) | 3 | 2 | 1 | Less than 0.2 | 70g |
| 151747 | DET-2000SW | 2.0 | | | 8 | 3 | | Less than 0.1 | 70g |

# DIGITAL INDICATOR (IP65)

HOW TO MOVIE

IP65 rating digital indicator, can be used in cutting fluid environment.
With tolerance setting function suitable for inspection, and digital/ analog dual-indication for intuitive reading.

Reference standard for comparative measurement▶ Block Gauge P32 ~40
Holding measuring instruments▶ Magnetic Base P247 ~255
Precision measuring instrument holder▶ Comparator Stand P280 ~281
Rust prevention▶ Zerust Film for Steel P370

**Protection category IP65**

IP is an protection class indication of electrical equipment and cabinets against solid objects and water, as specified in IEC60529.

| Class | IP | Definition | Testing for |
|---|---|---|---|
| 1st digit | 6 | No ingress of dust allowed | Complete protection against contact |
| 2nd digit | 5 | No harmful effects from direct jet of water from any direction | Spray rotating equipment with 12.5L/min flow for at least 3 min. at distance of 2.5~3m |

DEI-127M

USE
- For measuring displacement such as unevenness of flat surface, OK/ NG for mounting of workpiece, runout of shaft, and squareness

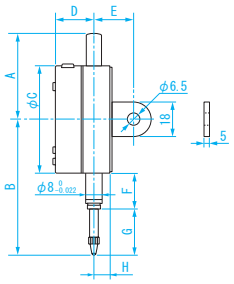
MATERIAL
- Stem: Stainless steel
- Probe tip: Carbide

FEATURES
- **IP65** rating digital indicator, protected against dust and water
- Tolerance mode
- Measuring direction (+/-) switching function
- Preset function
- ABS/INC switching function
- Display hold function
- With analog display (range ±0.025mm in unit of 0.001mm)
- Auto power off function (after 5 min.: sleep mode, after 8 hrs.: power-off)
- Flat type back and center-lug back included

POWER
- One CR2032 (lithium) battery included for testing

ACCESSORIES
- Flathead screwdriver (for battery replacement)
- Finger rest (DEI-254M only)

● DIMENSIONS




Units: mm

| Model No. | A | B | C | D | E | F | G | H |
|---|---|---|---|---|---|---|---|---|
| DEI-127M | 45 | 70 | 56 | 20 | 19 | 19 | 23 | 8 |
| DEI-254M | 54 | 111 | 56 | 24 | 24 | 47 | 36 | 12 |

※ Quantization Error (± 1 digit) not included

| Order No. | Model No. | Measuring Range (mm) | Resolution (mm) | Error of indication over a range of Measuring range※ (μm) | Hysteresis Error (μm) | Repeatability (μm) | Measuring Force (N) | Weight (including flat type back) |
|---|---|---|---|---|---|---|---|---|
| 151915 | DEI-127M | 12.7 | 0.001 | 7 | 4 | 2 | Less than 1.5 | 110g |
| 151916 | DEI-254M | 25.4 | | 8 | | | Less than 2.2 | 160g |

# KEYBOARD DATA TRANSFER CABLE NEW!

This communication cable that connects supported measurement equipment to a PC for output of measurement data.
No special software is required, the data can be recorded into Excel etc.

USE
- Connects supported measurement equipment to a PC for output of measurement data

MATERIAL
- ABS

FEATURES
- Measured values can be output to any software that allows keyboard input, such as Excel, Word, Notepad, etc
- When a Mini Plug Foot Pedal (sold separately) is connected, measurement data can be output without using hands

SPECIFICATIONS
- Applicable Gauges: Digital Indicator DEI-127M / DEI-254M
- OS: Windows 7,8,10,11
- Software: Programs which accept keyboard input (Excel, Word, Notepad, etc.)

POWER
- USB bus

DEI-C-KEY

EPJ35-FP

| Order No. | Model No. | PC Connector | Cable Length (m) | Body Dimensions (mm) | Weight |
|---|---|---|---|---|---|
| NEW! 151919 | DEI-C-KEY | USB Type-A | PC Side: Approx. 1.0<br>Measuring Device Side: Approx. 1.0 | Approx. 45×73×23 | 90g |

●(sold separately) mini plug foot pedal【Supported models: Keyboard Date Transfer Cable, DEI-C-KEY・Electric Micrometer Display, M3】

| Order No. | Model No. | PC Connector | Cable Length (m) | Body Dimensions (mm) | Weight |
|---|---|---|---|---|---|
| NEW! 151920 | EPJ35-FP | ϕ3.5 Mini Plug / 2-Pole | Approx. 2.0 | Approx. 80×82×33 | 95g |

DAIAL GAUGE
DIAL INDICATOR
MAGNETIC BASE
THICKNESS GAUGE
CALIPER GAUGE
BORE GAUGE
OTHER DIAL GAUGES
HARDNESS
FILM THICKNESS

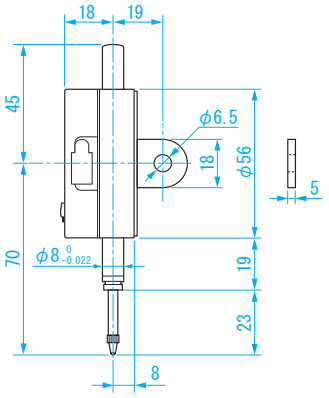
## DIGITAL INDICATOR

Digital dispray. Good performance and reasonable price.

HOW TO MOVIE

Reference standard for comparative measurement ▶ Block Gauge P32 ~40
Holding measuring instruments ▶ Magnetic Base P247 ~255
Precision measuring instrument holder ▶ Comparator Stand P280 ~281
Rust prevention ▶ Zerust Film for Steel P370

● DIMENSIONS Units: mm




USE
- ●Measuring surface flatness, checking tool set up, axial runout, checking squareness

MATERIAL
- ●Body&probe: Steel

FEATURES
- ●Easy to read digital display
- ●Display hold function
- ●Auto power off function (after approx. 5 min)
- ●Resolution 0.01mm, Measuring Range 12.7mm
- ●Flat type back and center-lug back included

POWER
- ●One CR2032 (Lithium) battery included for testing

※ Quantization Error (± 1 digit) not included

| Order No. | Model No. | Measuring Range (mm) | Resolution (mm) | Maximum Error※ (μm) | Backlash Error (μm) | Repeatablity (μm) | Measuring Force (N) | Weight |
|---|---|---|---|---|---|---|---|---|
| 151715 | DEI-127 | 12.7 | 0.01 | 20 | 10 | 10 | Less than 1.5 | 140g |

## S-LINE DIAL COMPARATOR GAUGE

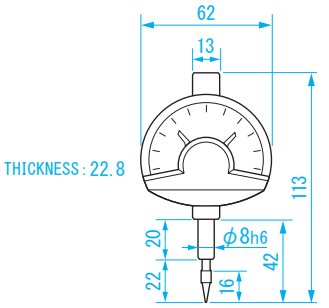
S line series

PDI

S-line series, high-end model for high-performance.
Resolution 0.001mm and to be paired with S-LINE BORE GAUGE.

Reference standard for comparative measurement ▶ Block Gauge P32 ~40
GO/NOGO judgment ▶ Limit Mark Sticker P243
High-precision inner dia measurement ▶ S-Line Cylinder Gauge P264
Holding measuring instruments ▶ Magnetic Base P247 ~255
Precision measuring instrument holder ▶ Comparator Stand P280 ~281
Rust prevention ▶ Zerust Film for Steel P370

● DIMENSIONS Units: mm




USE
- ●Comparison measurement

MATERIAL
- ●Body: Steel

FEATURES
- ●High precision micro indicator
- ●To be used together with S-LINE BORE GAUGE (separately sold)
- ●Shock proof spindle mechanism protects the gear from abrupt motion

| Order No. | Model No. | Graduation (mm) | Measuring Range (mm) | Dial Reading | Error of indication over a range of Measuring range (μm) | Indication error over the Entire Measuring range (μm) | Local span of error (μm) | Hysteresis Error (μm) | Repeatability (μm) | Measuring Force (N) | Weight |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 152085 | KMC-1001 | 0.001 | 0.1 | 50-0-50 | 1 | 1.2 | 0.7 | 0.5 | 0.5 | Less than 1.5 | 180g |

# DIAL GAUGE KAIDAN

HOW TO MOVIE

## Originally designed graduation prevents misreading

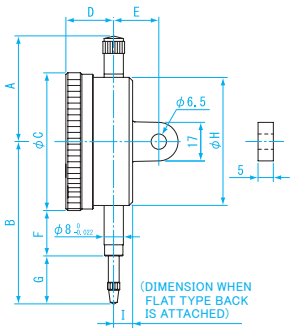

Reference standard for comparative measurement ▶ Block Gauge P32 ~40
GO/NOGO judgment ▶ Limit Mark Sticker P243
Holding measuring instruments ▶ Magnetic Base P247 ~255
Precision measuring instrument holder ▶ Comparator Stand P280 ~281
Rust prevention ▶ Zerust Film for Steel P370

USE
- For measuring displacement such as unevenness of flat surface, OK/ NG for mounting of workpiece, runout of shaft, and squareness

MATERIAL
- Body & probe: Steel

FEATURES
- Stepped length of linear graduations for easy-to-read
- Graduation 0.01mm, measuring range 0~10mm
- Limit indicator clips included
- Jeweled bearings
- Green scale plate
- Flat type back and center-lug back included

● DIMENSIONS




Units: mm

| Model No. | A | B | C | D | E | F | G | H | I |
|---|---|---|---|---|---|---|---|---|---|
| WDI-10KD | 43.5 | 68.5 | 58 | 16.5 | 19 | 18.5 | 21 | 53.5 | 8 |

| Order No. | Model No. | Graduation (mm) | Measuring Range (mm) | Dial Reading | 1 Revolution (mm) | Indication Error 1/10 rev (μm) | Indication error over the Entire Measuring range (μm) | Hysteresis Error (μm) | Repeatability (μm) | Measuring Force (N) | Weight (including flat type back) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 151677 | WDI-10KD | 0.01 | 10 | ±0-100 | 1 | 8 | 20 | 5 | 5 | Less than 1.5 | 180g |

# DIAL GAUGE STANDARD TYPE

HOW TO MOVIE

## Standard size.
## Good performance and reasonable price.

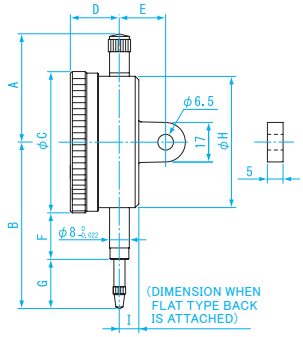

Reference standard for comparative measurement ▶ Block Gauge P32 ~40
GO/NOGO judgment ▶ Limit Mark Sticker P243
Holding measuring instruments ▶ Magnetic Base P247 ~255
Precision measuring instrument holder ▶ Comparator Stand P280 ~281
Rust prevention ▶ Zerust Film for Steel P370

USE
- Measuring surface flatness, checking tool set up, axial runout, checking squareness

MATERIAL
- Body&probe: Steel

FEATURES
- Graduation 0.01mm
- Limit indicator clips included
- Jeweled bearings
- Green scale plate
- Flat type back and center-lug back included

● DIMENSIONS




Units: mm

| Model No. | A | B | C | D | E | F | G | H | I |
|---|---|---|---|---|---|---|---|---|---|
| WDI-10 | 43.5 | 68.5 | 58 | 16.5 | 19 | 18.5 | 21 | 53.5 | 8 |

| Order No. | Model No. | Graduation (mm) | Measuring Range (mm) | Dial Reading (mm) | 1 Revolution (mm) | Indication Error 1/10 rev (μm) | Error over entire range (μm) | Backlash Error (μm) | Repeatablity (μm) | Measuring Force (N) | Weight (including flat type back) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 151520 | WDI-10 | 0.01 | 10 | ±0-100 | 1 | 8 | 20 | 5 | 5 | Less than 1.5 | 180g |

# DIAL GAUGE STANDARD TYPE

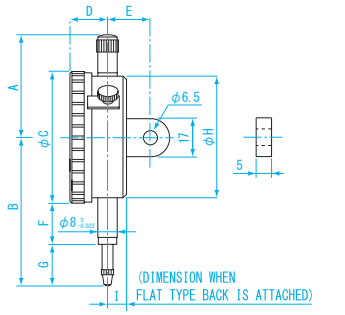
## Standard dial gauge with carbide probe

HOW TO MOVIE

Reference standard for comparative measurement ▶ Block Gauge P32 ~40
GO/NOGO judgment ▶ Limit Mark Sticker P243
Holding measuring instruments ▶ Magnetic Base P247 ~255
Precision measuring instrument holder ▶ Comparator Stand P280 ~281
Rust prevention ▶ Zerust Film for Steel P370

WDI-0558SP

● DIMENSIONS




USE
- ●Measuring surface flatness, checking tool set up, axial runout, checking squareness

MATERIAL
- ●Body: Aluminum, steel
- ●Probe: Carbide

FEATURES
- ●Graduation 0.01mm
- ●Limit indicator clips included
- ●Jeweled bearings
- ●Green scale plate
- ●Flat type back and center-lug back included
- ●Shock proof spindle mechanism protects the gear from abrupt motion

Units: mm

| Model No. | A | B | C | D | E | F | G | H | I |
|---|---|---|---|---|---|---|---|---|---|
| WDI-0558SP | 43.5 | 68.5 | 58 | 17 | 19 | 18.5 | 21 | 54 | 8 |
| WDI-1058SP | | | | | | | | | |

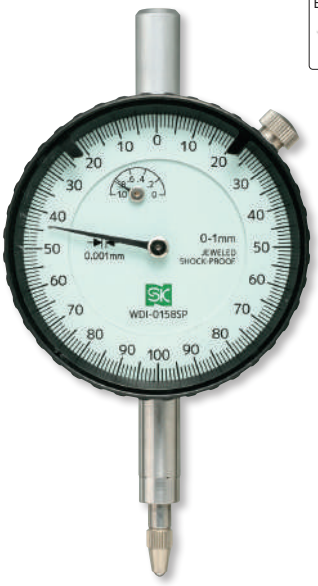
| Order No. | Model No. | Graduation (mm) | Measuring Range (mm) | Dial Reading | 1 Revolution (mm) | Indication Error 1/10 rev (μm) | Error over entire range (μm) | Backlash Error (μm) | Repeatablity (μm) | Measuring Force (N) | Weight (including flat type back) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 151912 | WDI-0558SP | 0.01 | 5 | ±0-100 | 1 | 8 | 16 | 3 | 3 | Less than 1.5 | 190g |
| 151913 | WDI-1058SP | | 10 | | | 10 | 20 | | | | |

# DIAL GAUGE STANDARD TYPE

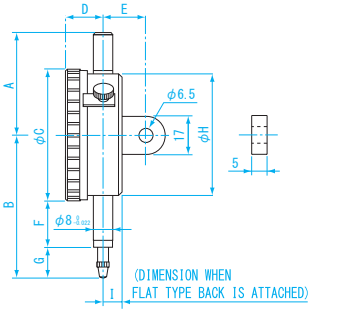
## Standard dial gauge graduation 0.001mm with carbide probe

HOW TO MOVIE

Reference standard for comparative measurement ▶ Block Gauge P32 ~40
GO/NOGO judgment ▶ Limit Mark Sticker P243
Holding measuring instruments ▶ Magnetic Base P247 ~255
Precision measuring instrument holder ▶ Comparator Stand P280 ~281
Rust prevention ▶ Zerust Film for Steel P370




● DIMENSIONS




USE
- ●Measuring surface flatness, checking tool set up, axial runout, checking squareness

MATERIAL
- ●Body: Aluminum, steel
- ●Probe: Carbide

FEATURES
- ●Graduation 0.001mm
- ●Limit indicator clips included
- ●Jeweled bearings
- ●Green scale plate
- ●Flat type back and center-lug back included
- ●Shock proof spindle mechanism protects the gear from abrupt motion

Units: mm

| Model No. | A | B | C | D | E | F | G | H | I |
|---|---|---|---|---|---|---|---|---|---|
| WDI-0158SP | 45 | 61.5 | 56 | 17 | 19 | 20 | 13.5 | 54 | 8 |

| Order No. | Model No. | Graduation (mm) | Measuring Range (mm) | Dial Reading | 1 Revolution (mm) | Indication Error 1/10 rev (μm) | Error over entire range (μm) | Backlash Error (μm) | Repeatablity (μm) | Measuring Force (N) | Weight (including flat type back) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 151911 | WDI-0158SP | 0.001 | 1 | 0-100-0 | 0.2 | 3 | 5 | 2 | 0.3 | Less than 2.0 | 190g |

# DIAL GAUGE LONG STROKE TYPE

PDI

HOW TO MOVIE

Suitable for adjusting ignition timing
and top dead center of car engine and others


Reference standard for comparative measurement ▶ Block Gauge P32 ~40

GO/NOGO judgment ▶ Limit Mark Sticker P243

Holding measuring instruments ▶ Magnetic Base P247 ~255

Precision measuring instrument holder ▶ Comparator Stand P280 ~281

Rust prevention ▶ Zerust Film for Steel P370

WDI-3058SP

WDI-5058SP

WDI-8058SP

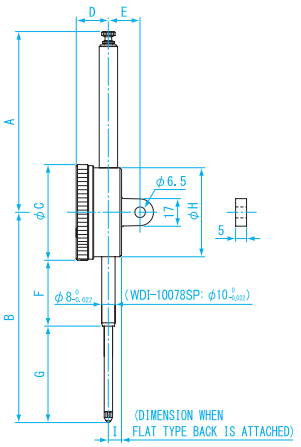
WDI-10078SP

USE
- Long stroke measurement

MATERIAL
- Body&probe: Steel

FEATURES
- Limit indicator clips included
- Jeweled bearings
- White scale plate
- Flat type back and center-lug back included
- Shock proof spindle mechanism protects the gear rom abrupt motion

● DIMENSIONS




Units: mm

| Model No. | A | B | C | D | E | F | G | H | I |
|---|---|---|---|---|---|---|---|---|---|
| WDI-3058SP | 37.5 | 86.5 | 58 | 19 | 19.5 | 19.5 | 38 | 53.5 | 8.5 |
| WDI-5058SP | 108.5 | 126 | 58 | 19 | 19.5 | 39.5 | 57.5 | 53.5 | 8.5 |
| WDI-8058SP | 138.5 | 168.5 | 58 | 19 | 19.5 | 51.5 | 88 | 53.5 | 8.5 |
| WDI-10078SP | 167.5 | 208 | 78 | 20 | 20.5 | 61 | 108 | 69 | 10 |

※ For vertical measurements please keep measurement head above shaft

| Order No. | Model No. | Graduation (mm) | Measuring Range (mm) | Dial Reading (mm) | 1 Revolution (mm) | Indication Error 1/10 rev (μm) | Error over entire range (μm) | Backlash Error (μm) | Repeatability (μm) | Measuring Force (N) | Weight (including flat type back) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 151586 | WDI-3058SP | 0.01 | 30 | 0-100 | 1 | 14 | 35 | 7 | 5 | Less than 3.0 | 210g |
| 151587 | WDI-5058SP | | 50 | | | 15 | 40 | 9 | | Less than 3.5 | 270g |
| 151588 | WDI-8058SP | | 80 | | | – | 50 | 11 | 6 | Less than 4.0 | 290g |
| 151589 | WDI-10078SP | | 100 | | | – | | 15 | | Less than 4.5 | 530g |

# DIAL GAUGE SMALL TYPE

PDI

Good performance and reasonable price

USE
- For multi-measurement or mounting to fixtures

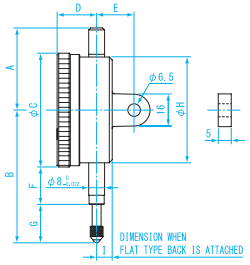
MATERIAL
- Body: Steel
- Probe: Steel

FEATURES
- Graduation 0.01mm, small size dial gauge
- Limit indicator clips included
- Jeweled bearings
- Green scale plate
- Flat type back and center-lug back included

WDI-0342

WDI-0542

● DIMENSIONS





Reference standard for comparative measurement ▶ Block Gauge P32 ~40

Holding measuring instruments ▶ Magnetic Base P247 ~255

Precision measuring instrument holder ▶ Comparator Stand P280 ~281

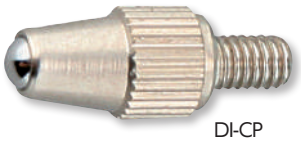
Rust prevention ▶ Zerust Film for Steel P370


Units: mm

| Model No. | A | B | C | D | E | F | G | H | I |
|---|---|---|---|---|---|---|---|---|---|
| WDI-0342 | 31 | 45 | 42 | 14 | 18 | 14 | 10 | 40 | 7 |
| WDI-0542 | 31 | 47 | 42 | 14 | 18 | 14 | 12 | 40 | 7 |

| Order No. | Model No. | Graduation (mm) | Measuring Range (mm) | Dial Reading (mm) | 1 Revolution (mm) | Indication Error 1/10 rev (μm) | Error over entire range (μm) | Backlash Error (μm) | Repeatability (μm) | Measuring Force (N) | Weight (including flat type back) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 151512 | WDI-0342 | 0.01 | 3 | ±0-50 | 0.5 | 8 | 14 | 6 | 5 | Less than 1.5 | 100g |
| 151513 | WDI-0542 | | 5 | | | 9 | 16 | | | | |

## DIAL GAUGE REPLACEABLE TIP



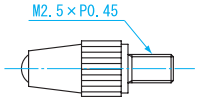
DI-CP

Rust prevention▶
Zerust Film for Steel
P370

USE
- Dial gauge probe tip

MATERIAL
- Measurement tip: Steel ball (DI-CP・DI-CPK)
  Carbide (WDI-W)

● DIMENSIONS Units: mm

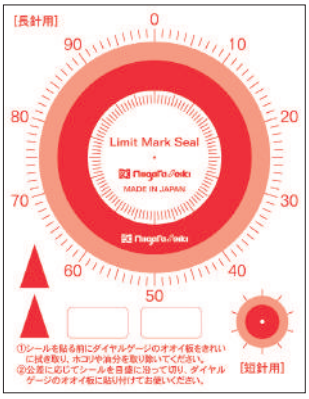



### Compatibility Table

| Model No. | Applicable Dial Indicator |
|---|---|
| DI-CP | WDI-10KD WDI-10<br>WDI-3058SP WDI-5058SP WDI-8058SP<br>WDI-10078SP WDI-0342 WDI-0542<br>DD-205 |
| | ・Ex-model No.<br>DI-3058 DI-5058 DI-8058 DI-10078<br>DI-0342 DI-0542 DI-1058<br>DI-1220A DI-1220AS DI-1102A DI-1810A |
| DI-CPK | ・Ex-model No.<br>DI-10 (Rev. since 2007) DI-10KD<br>DI-1060SC DI-0560SC DI-0160SC |
| WDI-W | WDI-0158SP WDI-0558SP WDI-1058SP |

| Order No. | Model No. |
|---|---|
| 151500 | DI-CP |
| 151675 | DI-CPK |
| 151914 | WDI-W |

## DIAL GAUGE LIMIT MARK STICKER



USE
- GO/NO GO judgment for diameter inspection

MATERIAL
- Pobick #100Rt-H (high strength, transparent, removable)

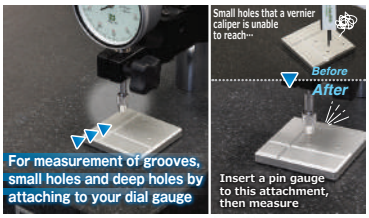
FEATURES
- Acceptable range is clearly visible. Ideal for inspection of mass produced parts.
- Includes arrow pointers for use with notes, indicating alert points, etc.

SPECIFICATIONS
- Applicable dial gauge: DIAL face more than ϕ52mm
- Sticker outside diameter: Long indicator ⋯ϕ51.5mm
  Short indicator ⋯ϕ10mm
- Contains 10 pcs

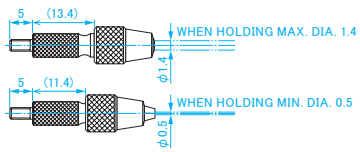
| Order No. | Model No. | Quantity | Weight |
|---|---|---|---|
| 151674 | DI-LMS | 10 | 20g |

## DIAL GAUGE ATTACHMENT

An attachment capable of changing your dial gauge probe that suits your measurement




● DIMENSIONS Units: mm




USE
- For changing dial gauge probe depending on purpose of measurement

MATERIAL
- Brass

FEATURES
- Capable of changing dial gauge probe into various forms by attaching to your dial gauge and fixing a pin gauge, a needle pin, a parallel pin gauge etc

SPECIFICATIONS
- Holdable probe dia.: ϕ0.5~1.4mm ● Screw size: M2.5×P0.45
- Insertion depth of probe hole: Approx. 18mm

※Probe not included

| Order No. | Model No. | Weight |
|---|---|---|
| 151673 | D-0514A | 5g |

## PROTECTION FILM FOR DIAL GAUGE NEW!

For protection of dial gauge crystal
With instruction stickers

USE
- Prevents scratches and cracks on the dial gauge's crystal

MATERIAL
- PET

FEATURES
- Attaching to the dial gauge crystal prevents scratching and cracking

SPECIFICATIONS
- Product dimensions: ϕ42㎜ ● 2 pcs set

| Order No. | Model No. | Quantity | Weight |
|---|---|---|---|
| NEW! 151678 | DI-PF | 2 | 0.5g |

# DIAL INDICATOR (0 ~ 0.2mm/Graduation0.002mm)

T PDI O

HOW TO MOVIE

Suitable for surface flatness,
straightness and axial runout measurement in narrow area


Holding measuring instruments ▶ Height Gauge P202 ~206

Holding measuring instruments ▶ Magnetic Base P247 ~255

Rust prevention ▶ Zerust Film for Steel P370

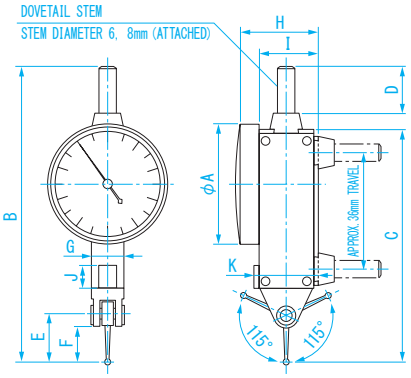
WTI-2030R (Ruby ball)

- High abrasion resistance
- Not electrically conductive
- Non-magnetic

WTI-2030W (Carbide ball)

- High abrasion resistance
- High hardness
- Low coefficient of thermal expansion

● DIMENSIONS




USE
- ●Lever type dial gauge

MATERIAL
- ●Body: Steel

FEATURES
- ●Compact with long reach for measuring in deep and confined spaces
- ●Jeweled bearings
- ●Green scale plate

ACCESSORIES
- ●ϕ6 mm Stem (with Dovetail Groove)
- ●ϕ8 mm Stem (with Dovetail Groove)
- ●Spanner for Replacing Probe

Units: mm

| Model No. | A | B | C | D | E | F | G | H | I | J | K |
|---|---|---|---|---|---|---|---|---|---|---|---|
| WTI-2030R<br>WTI-2030W | 30 | 97 | 73 | 17 | 16 | 12 | 10 | 26 | 18.4 | 15 | 20 |
| WTI-2038R<br>WTI-2038W | 37.5 | | | | | | | | | 7 | |

| Order No. | Model No. | Probe Material | Graduation (mm) | Measuring Range (mm) | Dial Reading | Error over entire range (μm) | Backlash Error (μm) | Repeatability (μm) | Measuring Force less than (N) | Weight |
|---|---|---|---|---|---|---|---|---|---|---|
| 151925 | WTI-2030R | Ruby | 0.002 | 0.2 | 0-100-0 | 6 | 2 | 1 | Less than 0.5 | 70g |
| 151926 | WTI-2038R | | | | | | | | | 80g |
| 151929 | WTI-2030W | Carbide | | | | | | | | 70g |
| 151930 | WTI-2038W | | | | | | | | | 80g |

*The probe can only be replaced with WTI-20R or WTI-20W.

# REPLACEABLE PROBE FOR DIAL INDICATOR

O

Replaceable probe for dial indicator

USE
- ●Replaceable probe for dial indicator

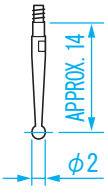
※ Requires calibration with standard after replacing probe

| Order No. | Model No. | Probe Material | Model No. of applicable dial indicator |
|---|---|---|---|
| 151935 | WTI-20R | Ruby | WTI-2030R<br>WTI-2038R |
| 151937 | WTI-20W | Carbide | WTI-2030W<br>WTI-2038W |

WTI-20R

WTI-20W

● DIMENSIONS Units: mm





DAIAL GAUGE
DIAL INDICATOR
MAGNETIC BASE
THICKNESS GAUGE
CALIPER GAUGE
BORE GAUGE
OTHER DIAL GAUGES
HARDNESS
FILM THICKNESS

# DIAL INDICATOR (0 ~ 0.8mm/Graduation 0.01mm)

HOW TO MOVIE

## Suitable for surface flatness, straightness and axial runout measurement in narrow area


Holding measuring instruments ▶ Height Gauge P202 ~206
Holding measuring instruments ▶ Magnetic Base P247 ~255
Rust prevention ▶ Zerust Film for Steel P370

WTI-8030S (Steel ball)

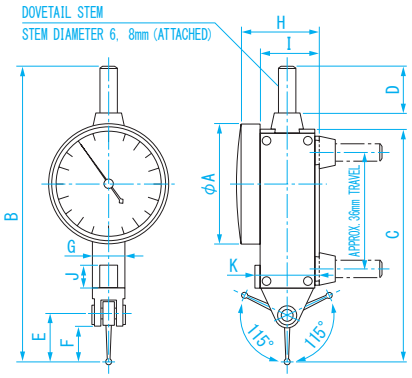
WTI-8030R (Ruby ball)

- High abrasion resistance
- Not electrically conductive
- Non-magnetic

WTI-8030W (Carbide ball)

- High abrasion resistance
- High hardness
- Low coefficient of thermal expansion

● DIMENSIONS




USE
- ●Lever type dial gauge

MATERIAL
- ●Body: Steel

FEATURES
- ●Compact with long reach for measuring in deep and confined spaces
- ●Jeweled bearings
- ●Green scale plate

ACCESSORIES
- ●ϕ6 mm Stem (with Dovetail Groove)
- ●ϕ8 mm Stem (with Dovetail Groove)
- ●Spanner for Replacing Probe

Units: mm

| Model No. | A | B | C | D | E | F | G | H | I | J | K |
|---|---|---|---|---|---|---|---|---|---|---|---|
| WTI-8030S<br>WTI-8030R<br>WTI-8030W | 30 | 97 | 73 | 17 | 16.5 | 12.5 | 10 | 26 | 18.4 | 15 | 20 |
| WTI-8038S<br>WTI-8038R<br>WTI-8038W | 37.5 | | | | | | | | | 7 | |

| Order No. | Model No. | Probe Material | Graduation (mm) | Measuring Range (mm) | Dial Reading | Error over entire range (μm) | Backlash Error (μm) | Repeatability (μm) | Measuring Force less than (N) | Weight |
|---|---|---|---|---|---|---|---|---|---|---|
| 151923 | WTI-8030S | Steel | 0.01 | 0.8 | 0-40-0 | 13 | 3 | 3 | Less than 0.5 | 70g |
| 151924 | WTI-8038S | | | | | | | | | 80g |
| 151927 | WTI-8030R | Ruby | | | | | | | | 70g |
| 151928 | WTI-8038R | | | | | | | | | 80g |
| 151931 | WTI-8030W | Carbide | | | | | | | | 70g |
| 151932 | WTI-8038W | | | | | | | | | 80g |

*The probe can only be replaced with WTI-80S, WTI-80R or WTI-80W.

# REPLACEABLE PROBE FOR DIAL INDICATOR

## Replaceable probe for dial indicator

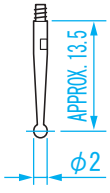
USE
- ●Replaceable probe for dial indicator

※ Requires calibration with standard after replacing probe

| Order No. | Model No. | Probe Material | Model No. of applicable dial indicator |
|---|---|---|---|
| 151934 | WTI-80S | Steel | WTI-8030S<br>WTI-8038S |
| 151936 | WTI-80R | Ruby | WTI-8030R<br>WTI-8038R |
| 151938 | WTI-80W | Carbide | WTI-8030W<br>WTI-8038W |

WTI-80S WTI-80R WTI-80W

● DIMENSIONS Units: mm




DAIAL GAUGE
DIAL INDICATOR
MAGNETIC BASE
THICKNESS GAUGE
CALIPER GAUGE
BORE GAUGE
OTHER DIAL GAUGES
HARDNESS
FILM THICKNESS

# DIAL INDICATOR (0~0.8mm/ Graduation 0.01mm/ LONG PROBE)

T PDI O

For measuring deeper space where normal dial indicator can not reach


Holding measuring instruments▶ Height Gauge P202 ~206

Holding measuring instruments▶ Magnetic Base P247 ~255

Rust prevention▶ Zerust Film for Steel P370

WTI-8038RL (Ruby ball)
- High abrasion resistance
- Not electrically conductive
- Non-magnetic

WTI-8038WL (Carbide ball)
- High abrasion resistance
- High hardness
- Low coefficient of thermal expansion

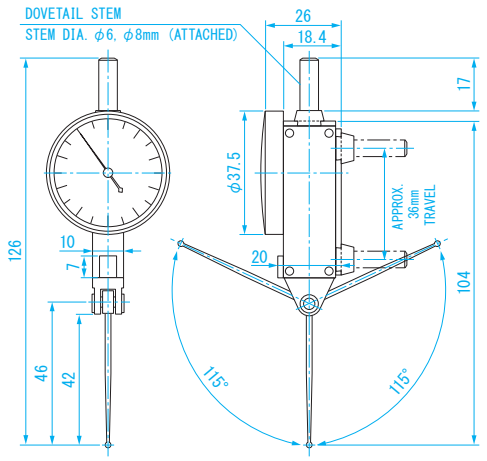
USE
- Lever type dial indicator with long probe

MATERIAL
- Body: Steel

FEATURES
- For measuring deeper space where normal dial indicator can not reach
- Jeweled bearings
- Green scale plate

ACCESSORIES
- φ6mm dovetail stem
- φ8mm dovetail stem
- Spanner for probe change

● DIMENSIONS Units: mm




| Order No. | Model No. | Probe Material | Graduation (mm) | Measuring Range (mm) | Dial Reading | Error of indication over a range of Measuring range (μm) | Hysteresis Error (μm) | Repeatability (μm) | Measuring Force (N) | Weight |
|---|---|---|---|---|---|---|---|---|---|---|
| 151939 | WTI-8038RL | Ruby | 0.01 | 0.8 | 0-40-0 | 13 | 9 | 3 | Less than 0.2 | 80g |
| 151940 | WTI-8038WL | Carbide | | | | | | | | 80g |

※Probe changeable WTI-80RL, WTI-80WL only

# REPLACEMENT PROBE FOR DIAL INDICATOR

O

Replaceable probe for dial indicator

USE
- Replaceable probe for dial indicator (long probe type)

※Requires calibration with standard after replacing probe

| Order No. | Model No. | Probe Material | Applicable Models |
|---|---|---|---|
| 151941 | WTI-80RL | Ruby | WTI-8038RL |
| 151942 | WTI-80WL | Carbide | WTI-8038WL |

WTI-80RL



WTI-80WL

● DIMENSIONS Units: mm

DAIAL GAUGE
DIAL INDICATOR
MAGNETIC BASE
THICKNESS GAUGE
CALIPER GAUGE
BORE GAUGE
OTHER DIAL GAUGES
HARDNESS
FILM THICKNESS

# ■ MAGNETIC BASE LIST

| Product Photo | | | | | |
|---|---|---|---|---|---|
| Order No. | 012896 | 012897 | 012898 | 012870 | 012871 |
| Product Name | Magnet Base Lock Type | Magnet Base Lock Type | Magnet Base Lock Type | Magnetic Base Standard Type | Magnetic Base Fine Adjustment Type |
| Model No. | WMB-50G | WMB-80G | WMB-100G | SB-6C | SB-6B |
| Features | Lock all joints simultaneously with a knob / Compatible with optional cylindrical clamp fixtures | | | Standard | Fine adjustment for easy position setting |
| Holder Size | ϕ 6mm ／ϕ 8mm ／With dovetail grooves | | | ϕ6mm Stem / ϕ8mm Stem / ϕ6.5mm & ϕ8mm Lug back dial gauge | |
| Magnetic Adsorption (approx.) | 500N | 800N | 1000N | 800N | |
| Magnet ON / OFF | ○ | ○ | ○ | ○ | ○ |
| Main post Size (mm) | 67 + 56 | 110 + 85 | 155 + 100 | ϕ 12 × 178 | |
| Arm Size (mm) | – | – | – | ϕ 10 × 165 | |
| Catalog Page | 248 | 248 | 248 | 249 | 249 |

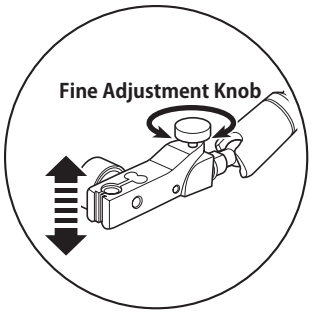
| Product Photo | | | | | | |
|---|---|---|---|---|---|---|
| Order No. | 012873 | 012899 | 012874 | 012875 | 012868 | 012872 |
| Product Name | Magnetic Base Thick Main Post Type | Magnet Base Thick Main Column Type | Magnetic Base Flexible Post Type | Magnetic Base Lock Type | Magnet Base Free Base Type | Magnetic Base Mini Type |
| Model No. | SB-80P | SB-130PL | SB-80F | SB-100G | WMB-45FR | SB-25M |
| Features | Stable holding is possible | Equipped with the tallest main column | It post can be bent frexibly | Easy joint locking | Deformable adhesive surface | Compact size for use in narrow space |
| Holder Size | ϕ6mm Stem / ϕ8mm Stem / ϕ6.5mm & ϕ8mm Lug back dial gauge | ϕ 6mm ／ϕ 8mm／Lug hole ϕ 6.5 mm, Compatible with ϕ 8 mm dial gauges | ϕ6mm / ϕ8mm / Dovetail | ϕ6mm / ϕ8mm / Dovetail | ϕ 6mm ／ϕ 8mm ／With dovetail grooves | ϕ 6mm |
| Magnetic Adsorption (approx.) | 800N | 1300N | 800N | 1000N | 450N | 250N |
| Magnet ON / OFF | ○ | ○ | ○ | ○ | ○ | ○ |
| Main post Size (mm) | ϕ 14 × 178 | ϕ 20 × 350 | ϕ 16 × 340 | 145 + 125 + 50 | 110 + 85 | ϕ 7 × 54 |
| Arm Size (mm) | ϕ 12 × 165 | ϕ 14 × 200 | – | – | – | – |
| Catalog Page | 250 | 250 | 250 | 251 | 251 | 252 |

| Product Photo | | | | | | |
|---|---|---|---|---|---|---|
| Order No. | 012705 | 012704 | 012700 | 012701 | 012702 | 012703 |
| Product Name | Magnetic Base Mini Lock Type | Mini Magnetic Base | Mini Magnetic Base | Mini Magnetic Base Fine Adjustment Type | Mini Magnetic Base Fine Adjustment with Long Post | Mini Magnetic Base |
| Model No. | MB-7 | MB-6 | B-2 | B-3 | B-4 | B-5 |
| Features | Easy joint locking | Fine adjustment for easy position setting, with universal joint | Mini type | Fine adjustment for easy position setting | Fine adjustment for easy position setting, with long main post | With universal joint for easy angle adjustment |
| Holder Size | ϕ6.0mm / ϕ8.0mm / grooved | ϕ8mm / Dovetail | ϕ 6mm | ϕ6mm / Dovetail | | ϕ6.0mm / ϕ8.0mm / Lug back dial gauge |
| Magnetic Adsorption (approx.) | 250N | 200N | 80N | 65N | | 200N |
| Magnet ON / OFF | ○ | × | × | × | × | × |
| Main post Size (mm) | 58 + 64 | 62 + 15 | 31 | 31 | 90 | 28 |
| Arm Size (mm) | – | – | – | 89mm long arm | 89mm long arm | 89mm long arm |
| Catalog Page | 252 | 252 | 253 | 253 | 253 | 253 |

# MAGNETIC BASE LOCK TYPE

One lock knob for locking all joints.
Firmly locks with a light force, and precise position adjustment is also possible.

Measuring instruments▶ Dial Gauge P233～235・P238～242
Measuring instruments▶ Test Indicator P236～237・P244～246
Replacement part▶ Parts for Magnetic Base P254～255
Rust prevention▶ Zerust Film for Steel P370




Enables smooth and easy fine feeding for precise positioning.

WMB-80G

USE
- Measurements that require a dial gauge or dial indicator to be held in fixed position

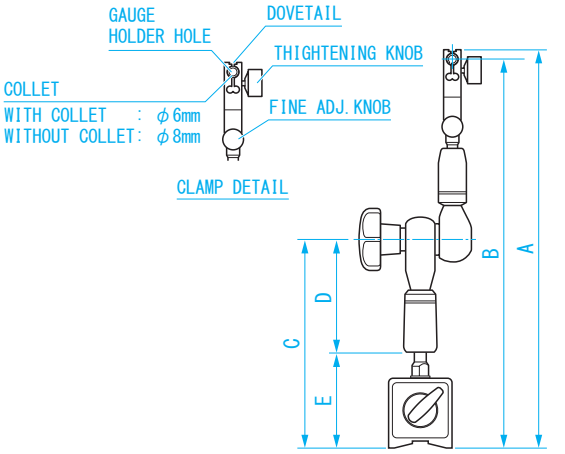
MATERIAL
- Body: Aluminum
- Magnet: Neodymium (WMB-50G)
  Ferrite (WMB-80G,WMB-100G)

FEATURES
- Mechanical lock knob locks all joints with a single operation
- Removable with ON/OFF lever operation
- Capable of holding cylindrical work as well by attaching separately sold CLUMP JIG FOR CYLINDRICAL WORK

SPECIFICASIONS
- Stem holder: $\phi$6mm・$\phi$8mm
- With dovetail mount

Parts for Magnetic Base⇒P255

● DIMENSIONS




Units: mm

| Model No. | A | B | C | D | E |
|---|---|---|---|---|---|
| WMB-50G | 253 | 246 | 122 | 67 | 55 |
| WMB-80G | 340 | 333 | 180 | 110 | 70 |
| WMB-100G | 405 | 398 | 230 | 155 | 75 |

| Order No. | Model No. | Magnetic Adsorption (N) | Base Dimension (mm) | Base - Arm Screw | Arm - Clamp Screw | Weight |
|---|---|---|---|---|---|---|
| 012896 | WMB-50G | Approx. 500 | 40×40×40 | M6×P1.0 | M6×P1.0 | 710g |
| 012897 | WMB-80G | Approx. 800 | 50×60×55 | M8×P1.25 | | 1,380g |
| 012898 | WMB-100G | Approx. 1000 | 50×75×55 | M8×P1.25 | | 1,830g |

# CLUMP JIG FOR CYLINDRICAL WORK

For holding cylindrical work.
Applicable to MAGNETIC BASE LOCK TYPE WMB series.

USE
- As a jig for cylindrical work

MATERIAL
- Body: Aluminum
- Lever: Iron

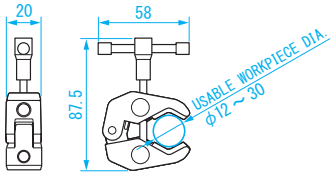
FEARTURES
- To be used by attaching to MAGNETIC BASE LOCK TYPE WMB series

SPECIFICATIONS
- Mounting hole screw: M6×P1.0
- Workpiece weight: Up to 2kg
- Workpiece diameter: $\phi$12～30mm

APPLICABLE MODEL
- MAGNETIC BASE LOCK TYPE WMB-50G・WMB-80G・WMB-100G・WMB-45FR

● DIMENSIONS

Units: mm




| Order No. | Model No. | Weight |
|---|---|---|
| 012901 | CC-WMB | 130g |

## MAGNETIC BASE STANDARD TYPE

Can be used with a lug back dial gauge

Measuring instruments▶ Dial Gauge P233～235・P238～242
Measuring instruments▶ Test Indicator P236～237・P244～246
Replacement part▶ Parts for Magnetic Base P254～255
Rust prevention▶ Zerust Film for Steel P370

USE
- Measurements that require a dial gauge or dial indicator to be held in fixed position

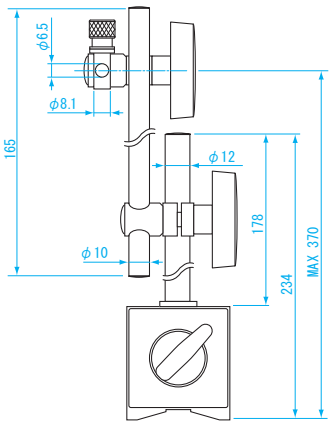
MATERIAL
- Body: Rolled steel for general structure
- Magnet: Ferrite

FEATURES
- Standard type
- Removable with ON/OFF lever operation

SPECIFICATIONS
- Magnetic adsorption: **approx. 800N**
- Stem holder: ϕ6mm･ϕ8mm
- Lug back holder: ϕ6.5mm･ϕ8mm
- Main post screw: M8×P1.25

Parts for Magnetic Base⇒P254

● DIMENSIONS Units: mm




P356 Magnet Types and Characteristics

| Order No. | Model No. | Base Dimension (mm) | Surface magnetic flux density (mT) | Weight |
|---|---|---|---|---|
| 012870 | SB-6C | 50×60×55 | Max. 100 | 1.5kg |

## MAGNETIC BASE FINE ADJUSTMENT TYPE

Can be used with a lug back dial gauge

Measuring instruments▶ Dial Gauge P233～235・P238～242
Measuring instruments▶ Test Indicator P236～237・P244～246
Replacement part▶ Parts for Magnetic Base P254～255
Rust prevention▶ Zerust Film for Steel P370

USE
- Measurements that require a dial gauge or dial indicator to be held in fixed position

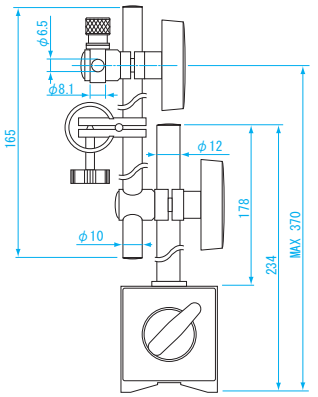
MATERIAL
- Body: Rolled steel for general structure
- Magnet: Ferrite

FEATURES
- Fine adjustment type (2mm adj. range)
- Removable with ON/OFF magnet operation

SPECIFICATIONS
- Magnetice adsorption: **approx. 800N**
- Stem holder: ϕ6mm･ϕ8mm
- Lug back holder: ϕ6.5mm･ϕ8mm
- Main post screw: M8×P1.25

Parts for Magnetic Base⇒P254

● DIMENSIONS Units: mm




P356 Magnet Types and Characteristics

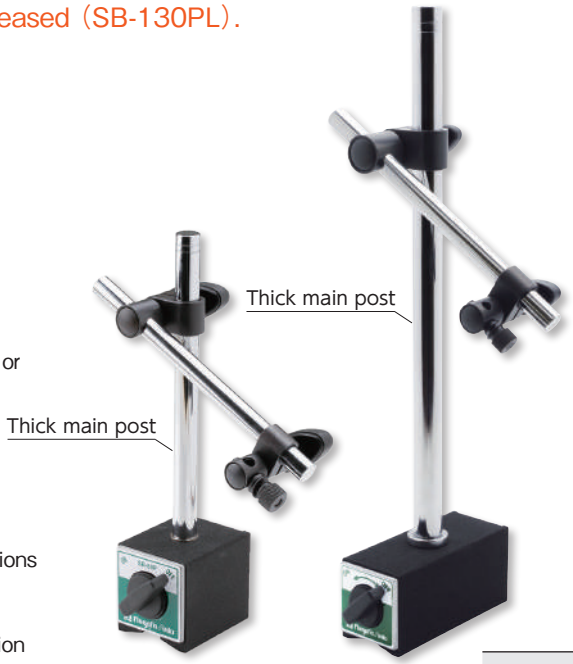
| Order No. | Model No. | Base Dimension (mm) | Surface magnetic flux density (mT) | Weight |
|---|---|---|---|---|
| 012871 | SB-6B | 50×60×55 | Max. 100 | 1.5kg |

## MAGNETIC BASE THICK MAIN POST TYPE NEW! (012899)

Thick main post type for stable holding.
Highest main post and largest base size in series history.
Strong adsorption type is newly released (SB-130PL).

Measuring instruments▶ Dial Gauge P233～235・P238～242
Measuring instruments▶ Test Indicator P236～237・P244～246
Replacement part▶ Parts for Magnetic Base P254～255
Rust prevention▶ Zerust Film for Steel P370

Can be used with a lug back dial gauge




SB-80P SB-130PL

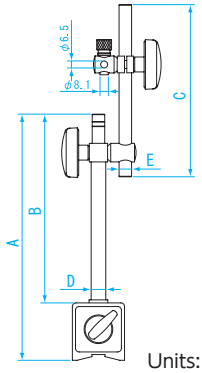
USE
- Measurements that require a dital gauge or dial indicator to be held in fixed position

MATERIAL
- Body: Rolled steel for general structure
- Magnet: Ferrite
- Head: Aluminum

FEATURES
- Main and support post of thick specifications are adopted. Holds measuring instruments stably.
- Removable with ON/OFF magnet operation

SPECIFICATIONS
- Stem holder: ϕ6mm･ϕ8mm
- Lug back holder: ϕ6.5mm･ϕ8mm

● DIMENSIONS




Units: mm

| Model No. | A | B | C | D | E |
|---|---|---|---|---|---|
| SB-80P | 236 | 175 | 165 | ϕ 14 | ϕ 12 |
| SB-130PL | 410 | 355 | 200 | ϕ 20 | ϕ 14 |

Parts for Magnetic Base⇒P254

P356 Magnet Types and Characteristics

| Order No. | Model No. | Magnetice adsorption(N) | Main post Dimension(mm) | Support post Dimension(mm) | Base Dimension (mm) | Surface magnetic flux density(mT) | Main point screw | Weight |
|---|---|---|---|---|---|---|---|---|
| 012873 | SB-80P | Approx. 800 | ϕ14×178 | ϕ12×165 | 50× 60×55 | Max. 100 | M8×P1.25 | 1.5kg |
| NEW! 012899 | SB-130PL | Approx. 1300 | ϕ20×350 | ϕ14×200 | 50×117×55 | | M10×P1.25 | 3.4kg |

## MAGNETIC BASE FLEXIBLE POST TYPE

Measuring instruments▶ Dial Gauge P233～235・P238～242
Measuring instruments▶ Test Indicator P236～237・P244～246
Replacement part▶ Parts for Magnetic Base P254～255
Rust prevention▶ Zerust Film for Steel P370

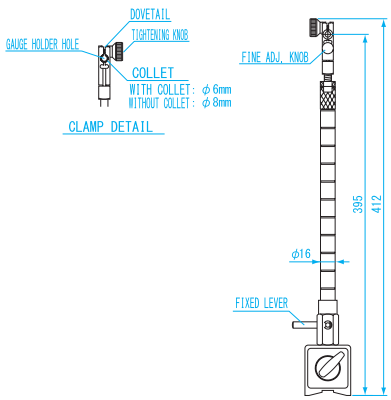
USE
- Measurements that require a dial gauge or dial indicator to be held in fixed position

MATERIAL
- Body: Rolled steel for general structure
- Magnet: Ferrite

FEATURES
- Flexible post for quick and easy positioning. One touch lever to fix position securely.
- Removable with ON/OFF magnet operation

SPECIFICATIONS
- Magnetice adsorption: **approx. 800N**
- Stem holder: ϕ6mm･ϕ8mm
- With dovetail mount
- Main post screw: M8×P1.25

● DIMENSIONS Units: mm




Parts for Magnetic Base⇒P255

P356 Magnet Types and Characteristics

| Order No. | Model No. | Base Dimension (mm) | Surface magnetic flux density (mT) | Weight |
|---|---|---|---|---|
| 012874 | SB-80F | 50×60×55 | Max. 100 | 1.3kg |

# MAGNETIC BASE LOCK TYPE

Measuring instruments▶ Dial Gauge P233～235・P238～242
Measuring instruments▶ Test Indicator P236～237・P244～246
Replacement part▶ Parts for Magnetic Base P254～255
Rust prevention▶ Zerust Film for Steel P370

USE
- Measurements that require a dial gauge or dial indicator to be held in fixed position

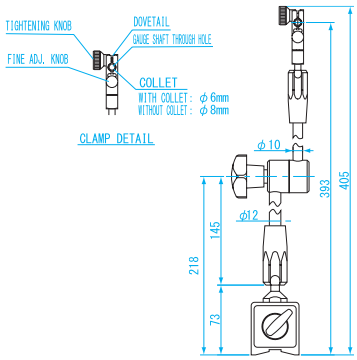
MATERIAL
- Body: Rolled steel for general structure
- Magnet: Ferrite

FEATURES
- Mechanical lock knob tightens all joints with a single operation
- Removable with ON/OFF magnet operation

SPECIFICATIONS
- Magnetice adsorption: **approx.1000N**
- Stem holder: φ6mm･φ8mm
- With dovetail mount
- Main post screw: M8×P1.255

Parts for Magnetic Base⇒P255

● DIMENSIONS Units: mm

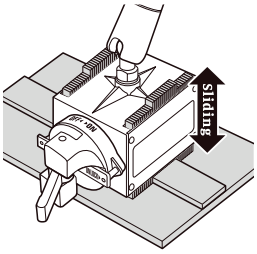



P356 Magnet Types and Characteristics

| Order No. | Model No. | Base Dimension (mm) | Surface magnetic flux density (mT) | Weight |
|---|---|---|---|---|
| 012875 | SB-100G | 50×75×55 | Max. 100 | 1.7kg |

# MAGNETIC BASE TRANSFORMABLE BASE TYPE NEW!

Lock firmly even with light force.
The suction surface is deformable and can adsorb on uneven and R-shaped surfaces.



Measuring instruments▶ Dial Gauge P233～235・P238～242
Measuring instruments▶ Test Indicator P236～237・P244～246
For holding cylindrical work▶ Clump jig for cylindrical work P248
Replacement part▶ Parts for Magnetic Base P254～255
Rust prevention▶ Zerust Film for Steel P370

USE
- Measurements that require a dial gauge or dial indicator to be held in fixed position

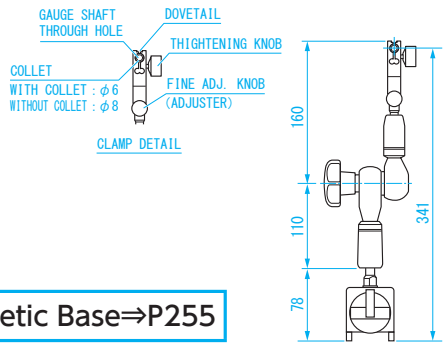
MATERIAL
- Body: Alminum
- Magnet: Ferrite

FEATURES
- By sliding the magnet pin, the suction surface is transformed to fit the object
- Lever operation to switch between fixing and releasing the magnet pin
- Magnet can be turned on/off by dial operation
- Mechanical lock knob tightens all joints with a single operation
- It can also be used as a cylindrical workholding tool by attaching the optional cylindrical clamping jig

SPECIFICATIONS
- Adsorption surface movable range: max. approx. 14mm
- Stem holder: φ6mm･φ8mm
- With dovetail

Parts for Magnetic Base⇒P255

● DIMENSIONS Units: mm




| Order No. | Model No. | Magnetic Adsorption (N) | Base Dimension (mm) | Base Arm Screw | Arm Clamp Screw | Weight |
|---|---|---|---|---|---|---|
| NEW! 012868 | WMB-45FR | 約450 | 54×63×58 | M8×P1.25 | M6×P1.0 | 1,300g |

## MAGNETIC BASE MINI TYPE

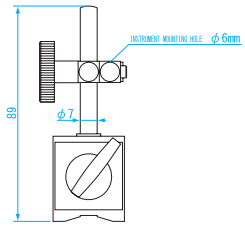
USE
- Measurements that require a dial indicator to be held in fixed position

MATERIAL
- Body: Rolled steel for general structure
- Magnet: Neodymium magnet

FEATURES
- Compact size
- Removable with ON/OFF magnet operation

SPECIFICATIONS
- Magnetice adsorption: **approx. 250N**
- Stem holder: ϕ6mm
- Main post screw: M5×P0.8

● DIMENSIONS Units: mm




Replacement part▶ Parts for Magnetic Base P254～255
Rust prevention▶ Zerust Film for Steel P370
P356 Magnet Types and Characteristics
Parts for Magnetic Base⇒P255

| Order No. | Model No. | Base Dimension (mm) | Surface magnetic flux density (mT) | Weight |
|---|---|---|---|---|
| 012872 | SB-25M | 30×35×35 | Max. 100 | 270g |

## MAGNETIC BASE MINI LOCK TYPE

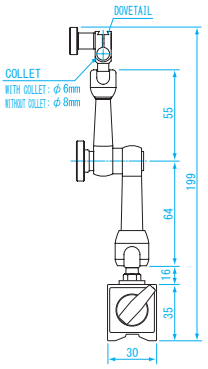
USE
- Measurements that require a dial indicator to be held in fixed position

MATERIAL
- Magnet: Neodymium magnet

FEATURES
- Mechanical lock knob tightens all three joints with a single operation
- Removable with ON/OFF magnet operation

SPECIFICATIONS
- Magnetice adsorption: **approx. 250N**
- Stem holder: ϕ6mm･ϕ8mm
- With dovetail mount ●Main post screw: M5×P0.8

● DIMENSIONS Units: mm




Measuring instruments▶ Dial Gauge P233～235・P238～242
Measuring instruments▶ Test Indicator P236～237・P244～246
Replacement part▶ Parts for Magnetic Base P254～255
Rust prevention▶ Zerust Film for Steel P370
P356 Magnet Types and Characteristics
Parts for Magnetic Base⇒P255

| Order No. | Model No. | Base Dimension (mm) | Surface magnetic flux density (mT) | Weight |
|---|---|---|---|---|
| 012705 | MB-7 | 30×35×35 | Max. 100 | 430g |

## MINI MAGNETIC BASE FINE ADJUSTMENT TYPE

Can be used in narrow space or on machines

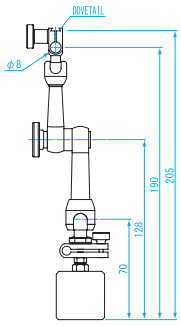
USE
- Measurements that require a dial indicator to be held in fixed position

MATERIAL
- Alnico magnet

FEATURES
- Strong holding force using alnico magnet
- Universal joint can be set to any angle
- Locking knob for easy tightening
- With fine adjustment (0.5mm adj. range)

SPECIFICATIONS
- Magnetice adsorption: **approx. 200N**
- Stem holder: ϕ8mm
- With dovetail mount
- Main post screw: M5×P0.8

● DIMENSIONS Units: mm




Measuring instruments▶ Test Indicator P236～237・P244～246
Rust prevention▶ Zerust Film for Steel P370
P356 Magnet Types and Characteristics

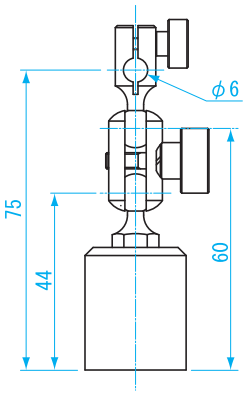
| Order No. | Model No. | Base Dimension (mm) | Surface magnetic flux density (mT) | Weight |
|---|---|---|---|---|
| 012704 | MB-6 | ϕ35×32 | Max. 90 | 510g |

## MINI MAGNETIC BASE

Can be used in narrow space or on machines

Measuring instruments▶ Test Indicator P236～237・P244～246
Rust prevention▶ Zerust Film for Steel P370

● DIMENSIONS Units: mm




USE
- ●Measurements that require a dial indicator to be held in fixed position

MATERIAL
- ●Alnico magnet

FEATURES
- ●Excellent holding force using high power alnico magnet
- ●Fixed type

SPECIFICATIONS
- ●Magnetice adsorption: **approx. 80N**
- ●Stem holder: ϕ6mm
- ●Main post screw: M5×P0.8

P356 Magnet Types and Characteristics

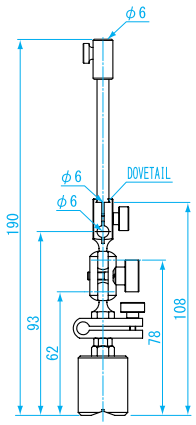
| Order No. | Model No. | Base Dimension (mm) | Surface magnetic flux density (mT) | Weight |
|---|---|---|---|---|
| 012700 | B-2 | ϕ25×30 | Max. 50 | 160g |

## MINI MAGNETIC BASE FINE ADJUSTMENT TYPE

Can be used in narrow space or on machines

Measuring instruments▶ Test Indicator P236～237・P244～246
Rust prevention▶ Zerust Film for Steel P370

● DIMENSIONS Units: mm




USE
- ●Measurements that require a dial indicator to be held in fixed position

MATERIAL
- ●Alnico magnet

FEATURES
- ●Excellent holding force using high power alnico magnet
- ●89mm long arm
- ●With fine adjustment (0.5mm adj. range)

SPECIFICATIONS
- ●Magnetice adsorption: **approx. 65N**
- ●Stem holder: ϕ6mm
- ●With dovetail mount
- ●Main post screw: M5×P0.8

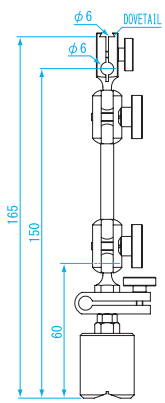
P356 Magnet Types and Characteristics

| Order No. | Model No. | Base Dimension (mm) | Surface magnetic flux density (mT) | Weight |
|---|---|---|---|---|
| 012701 | B-3 | 25×25×30 | Max. 50 | 230g |

## MINI MAGNETIC BASE FINE ADJUSTMENT WITH LONG POST

Measuring instruments▶ Test Indicator P236～237・P244～246
Rust prevention▶ Zerust Film for Steel P370

● DIMENSIONS Units: mm




USE
- ●Measurements that require a dial indicator to be held in fixed position

MATERIAL
- ●Alnico magnet

FEATURES
- ●Excellent holding force using high power alnico magnet
- ●Two joints
- ●89mm long arm
- ●With fine adjustment (0.5mm adj. range)

SPECIFICATIONS
- ●Magnetice adsorption: **approx. 65N**
- ●Stem holder: ϕ6mm
- ●With dovetail mount
- ●Main post screw: M5×P0.8

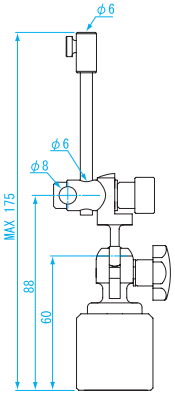
P356 Magnet Types and Characteristics

| Order No. | Model No. | Base Dimension (mm) | Surface magnetic flux density (mT) | Weight |
|---|---|---|---|---|
| 012702 | B-4 | 25×25×30 | Max. 50 | 280g |

## MINI MAGNETIC BASE

Measuring instruments▶ Test Indicator P236～237・P244～246
Rust prevention▶ Zerust Film for Steel P370

● DIMENSIONS Units: mm




USE
- ●Measurements that require a dial indicator to be held in fixed position

MATERIAL
- ●Alnico magnet

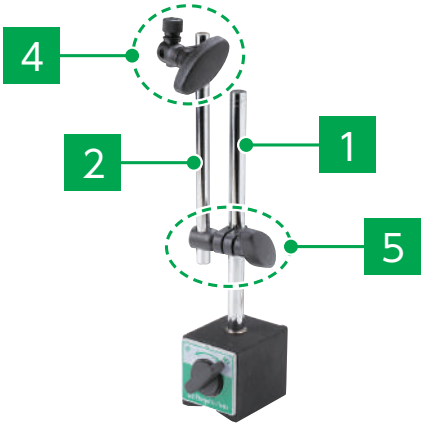
FEATURES
- ●Strong holding force using alnico magnet
- ●Universal joint can be set to any angle
- ●Locking knob for easy tightening

SPECIFICATIONS
- ●Magnetice adsorption: **approx. 200N**
- ●Stem holder: ϕ6mm・ϕ8mm
- ●With clamp for mounting dial gauge
- ●Main post screw: M5×P0.8

P356 Magnet Types and Characteristics

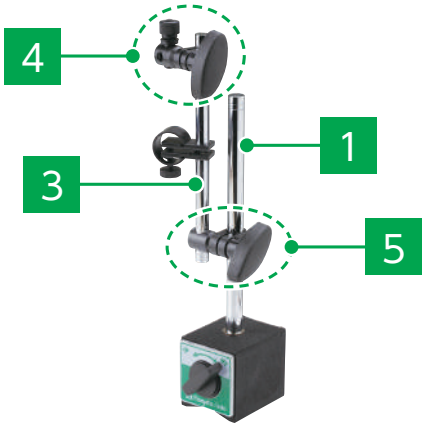
| Order No. | Model No. | Base Dimension (mm) | Surface magnetic flux density (mT) | Weight |
|---|---|---|---|---|
| 012703 | B-5 | ϕ35×32 | Max. 90 | 270g |

# PARTS FOR MAGNETIC BASE



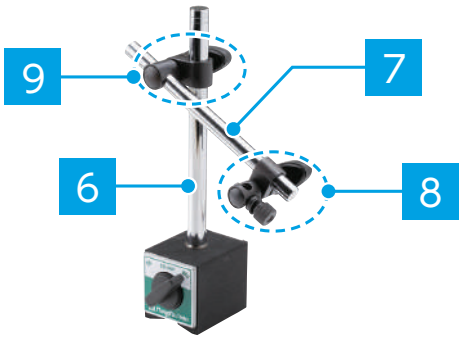

MAGNETIC BASE STANDARD TYPE SB-6C

P249




MAGNETIC BASE WITH FINE ADJUSTMENT TYPE SB-6B

P249




MAGNETIC BASE THICK MAIN POST TYPE SB-80P

P250

## 1 MAIN POST FOR SB-6 (φ12)

| Order No. | 012691 |
|---|---|
| Model No. | SB6-MP |
| Compatible Model No. | SB-6C<br>SB-6B |

## 2 ARM FOR SB-6C (φ10)

| Order No. | 012694 |
|---|---|
| Model No. | SB6C-SP |
| Compatible Model No. | SB-6C |

## 3 ARM FOR SB-6B (φ10)

| Order No. | 012681 |
|---|---|
| Model No. | SB6B-SP |
| Compatible Model No. | SB-6B |

## 4 GAUGE CLAMP KNOB FOR SB-6

| Order No. | 012692 |
|---|---|
| Model No. | SB6-GK |
| Compatible Model No. | SB-6C<br>SB-6B |

## 5 POST CLAMP KNOB FOR SB-6

| Order No. | 012693 |
|---|---|
| Model No. | SB6-CK |
| Compatible Model No. | SB-6C<br>SB-6B |

## 6 MAIN POST FOR SB-80P (φ14)

| Order No. | 012682 |
|---|---|
| Model No. | SB80P-MP |
| Compatible Model No. | SB-80P |

## 7 ARM FOR SB-80P (φ12)

| Order No. | 012683 |
|---|---|
| Model No. | SB80P-SP |
| Compatible Model No. | SB-80P |

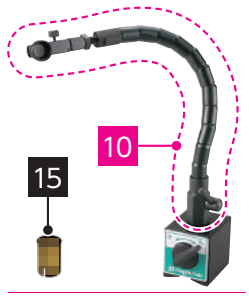
## 8 GAUGE CLAMP KNOB FOR SB-80P

| Order No. | 012684 |
|---|---|
| Model No. | SB80P-GK |
| Compatible Model No. | SB-80P |

## 9 POST CLAMP KNOB FOR SB-80P

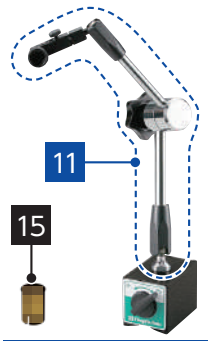
| Order No. | 012685 |
|---|---|
| Model No. | SB80P-CK |
| Compatible Model No. | SB-80P |

# PARTS FOR MAGNETIC BASE




MAGNETIC BASE FLEXIBLE POST TYPE SB-80F

P250

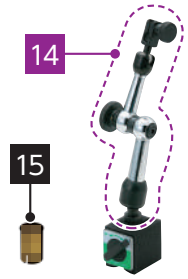



MAGNETIC BASE LOCK TYPE SB-100G

P251

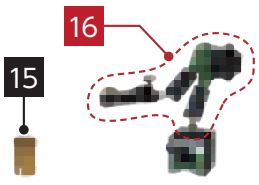
MAGNETIC BASE MINI TYPE SB-25M

P252



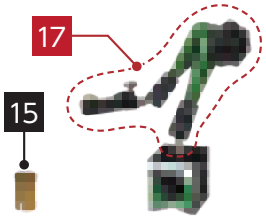

MAGNETIC BASE MINI LOCK TYPE MB-7

P252



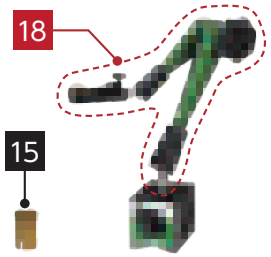

MAGNETIC BASE LOCK TYPE WMB-50G

P248



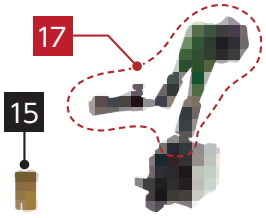

MAGNETIC BASE LOCK TYPE WMB-80G

P248




MAGNETIC BASE LOCK TYPE WMB-100G

P248




MAGNETIC BASE TRANSFORMABLE BASE TYPE WMB-45FR

P251

## 10 FREXIBLE POST FOR SB-80F

| | |
|---|---|
| Order No. | 012686 |
| Model No. | SB80F-MPS |
| Compatible Model No. | SB-80F |

## 11 LOCK ARM FOR SB-100G

| | |
|---|---|
| Order No. | 012687 |
| Model No. | SB100G-LAS |
| Compatible Model No. | SB-100G |

## 12 MAIN POST FOR SB-25M(ϕ7)

| | |
|---|---|
| Order No. | 012688 |
| Model No. | SB25M-MP |
| Compatible Model No. | SB-25M |

## 13 GAUGE CLAMP KNOB FOR SB-25M

| | |
|---|---|
| Order No. | 012689 |
| Model No. | SB25M-GK |
| Compatible Model No. | SB-25M |

## 14 LOCK ARM FOR MB-7

| | |
|---|---|
| Order No. | 012690 |
| Model No. | MB7-LAS |
| Compatible Model No. | MB-7 |

## 15 COLLET FOR DIAL GAUGE MOUNT(ϕ6)

| | |
|---|---|
| Order No. | 012695 |
| Model No. | BC-6 |
| Compatible Model No. | SB-80F、SB-100G、MB-7、WMB-50G、WMB-80G、WMB-100G |

## 16 LOCK ARM FOR WMB-50G

| | |
|---|---|
| Order No. | 012902 |
| Model No. | WMB50G-LAS |
| Compatible Model No. | WMB-50G |

## 17 LOCK ARM FOR WMB-80G

| | |
|---|---|
| Order No. | 012903 |
| Model No. | WMB80G-LAS |
| Compatible Model No. | WMB-80G、WMB-45FR |

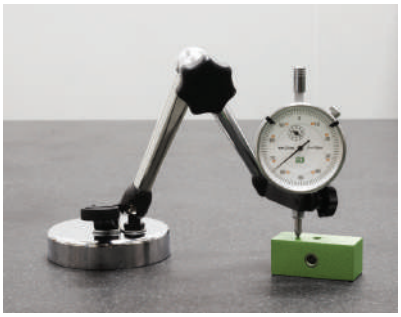
## 18 LOCK ARM FOR WMB-100G

| | |
|---|---|
| Order No. | 012904 |
| Model No. | WMB100G-LAS |
| Compatible Model No. | WMB-100G |

## VACUUM CLAMPING BASE

Enables to use dial indicator on non-magnetic surface such as granite surface plate

Measuring instruments▶ Dial Gauge P233～235・P238～242
Measuring instruments▶ Test Indicator P236～237・P244～246
Precision surface plate▶ Granite Surface Plate P283



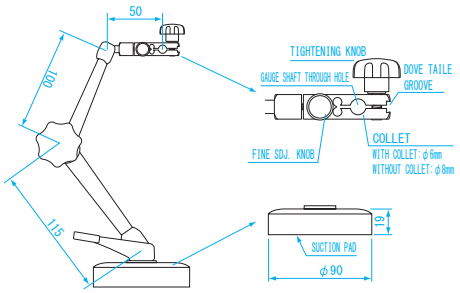
USE
- For mounting dial gauge and dial indicator

MATERIAL
- Main body: Aluminum
- Suction cup: Rubber

FEATURES
- Suction cup for fixing to non-magnetic surface such as granite surface plate

SPECIFICATIONS
- Holding force: **approx.200N**
- Stem holder: $\phi$6・$\phi$8
- With dove tail groove

● DIMENSIONS Units: mm

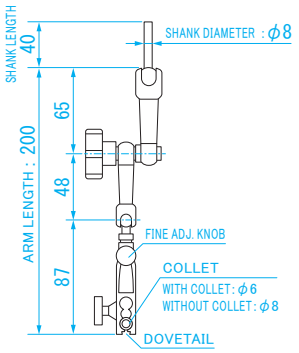



| Order No. | Model No. | Base Dimension (mm) | Weight |
|---|---|---|---|
| 011756 | VB-200 | $\phi$90×19 | 540g |

## CHUCK CENTERING ARM NEW!

Attached to the drill chuck of a drilling machine, milling machine, or other processing machine.
For parallel and vertical surface, and centering of inside and outer diameters.

● DIMENSIONS Units: mm




USE
- Machine tool centering
- Measurements that require a dial gauge or dial indicator to be held in fixed position

MATERIAL
- Body: Alminum

SPECIFICATIONS
- This product attaches drill chuck mounted onto drilling such milling machine or other processing machines and suspended for use
- By attaching a measuring device such as a dial gauge or dial indicator (sold separately), be used for centering workpieces based on inside diameter or outside diameter, as well as for set up based on parallel and vertical surfaces
- The tip has a dovetail and $\phi$6 and $\phi$8 with stem hole
- Equipped with a Fine adj. knob to fine tune the angle of the tip of the clamping section

| Order No. | Model No. | Shank diameter (mm) | Shank length (mm) | Fine Adjust Angle | Weight |
|---|---|---|---|---|---|
| NEW! 012696 | CCA-200 | $\phi$8 | 40 | approx.0～10° | 200g |

## DIGITAL THICKNESS GAUGE

PDI

Rust prevention▶ Zerust Film for Steel P370

Digital type for easy reading

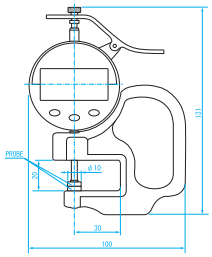
USE
- One touch thickness measurement of sheet material

MATERIAL
- Body: Steel
- Probe: Ceramic

FEATURES
- Digital display for easy reading
- Easy to operate for quick measurements
- Auto power off function (after approx. 5 min.)
- Display hold function

POWER
- One CR2032 (Lithium) battery included for testing

● DIMENSIONS Units: mm



※ Quantization Error (± 1 digit) not included

| Order No. | Model No. | Graduation (mm) | Measuring Range (mm) | Insert Depth (mm) | Accuracy※ (μm) | Measuring Force (N) | Probe Shape | Weight |
|---|---|---|---|---|---|---|---|---|
| 151720 | DES-3010 | 0.01 | 0-10 | 30 | ±20 | Less than 1.5 | ϕ10mm Flat | 180g |

## DIAL THICKNESS GAUGE

PDI

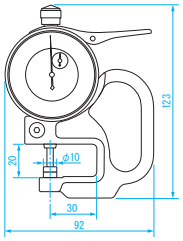
GO/NOGO judgment▶ Limit Mark Sticker P243

Rust prevention▶ Zerust Film for Steel P370

Good performance and reasonable price.
One-touch quick thickness measurement.

WDT-10SPC

● DIMENSIONS Units: mm



USE
- One-touch quick thickness measurement of small parts or sheet material

MATERIAL
- Body: Steel

FEATURES
- Easy operation for quick measurements
- Shock proof mechanism protects the gear from abrupt spindle motion

| Order No. | Model No. | Measuring Face Material | Graduation (mm) | Measuring Range (mm) | Insertion Depth (mm) | Accuracy (μm) | Measuring Force (N) | Probe Shape | Weight |
|---|---|---|---|---|---|---|---|---|---|
| 151682 | WDT-10SPS | Steel | 0.01 | 0~10 | 30 | ±20 | Less than 2.5 | ϕ10mm Flat | 260g |
| 151683 | WDT-10SPC | Ceramic | | | | | | | |

## DIAL DEPTH GAUGE

PDI

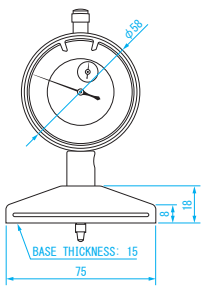
GO/NOGO judgment▶ Limit Mark Sticker P243

Rust prevention▶ Zerust Film for Steel P370

For depth measurement in narrow space

Supports Depths of Up to 205mm

● DIMENSIONS Units: mm




USE
- For comparison measurement of depth

MATERIAL
- Dial gauge & probe tip: Steel
- Base: Steel casting stainless

FEATURES
- Measurement of max. 205mm by replacing the included extension rod (10mm·15mm·20mm·30mm·50mm·80mm)

| Order No. | Model No. | Graduation (mm) | Measuring range (mm) | Accuracy (μm) | Weight |
|---|---|---|---|---|---|
| 151710 | DD-205 | 0.01 | Depth: Max. 205 Dial Gauge: 10 | ±20 | 310g |

# DIGITAL CALIPER GAUGE

T PDI 0

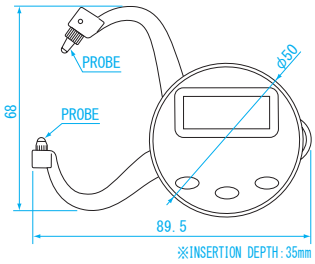
Ideal for quick thickness measurement of small parts and tubes

Reference standard for comparative measurement▶ Block Gauge P32 ~40
Rust prevention▶ Zerust Film for Steel P370

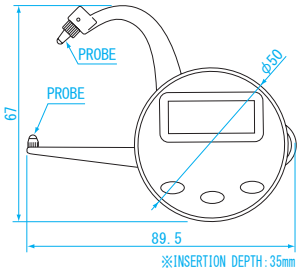
EDC-A125

EDC-A225

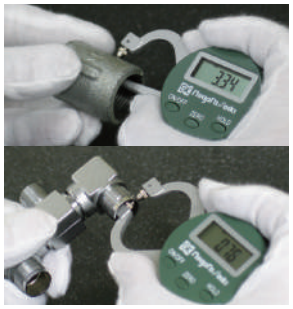
● DIMENSIONS Units: mm




EDC-A125




EDC-A225



USE
- ●For external measurement

MATERIAL
- ●Body: Steel, plastic

FEATURES
- ●Easy to read digital display
- ●Display hold function,
  Auto power off function (after approx. 2~5 min)

POWER
- ●One CR2032 (Lithium) battery included for testing

※ Quantization Error (± 1 digit) not included

| Order No. | Model No. | Resolution (mm) | Measuring Range (mm) | Accuracy (mm) | Measuring Face | Weight |
|---|---|---|---|---|---|---|
| 152051 | EDC-A125 | 0.02 | 0-25 | 0.00~ 5.00mm: ±0.04<br>5.02~25.00mm: ±0.08 | Round (ϕ2.5mm) | 105g |
| 152052 | EDC-A225 | | | | | 90g |

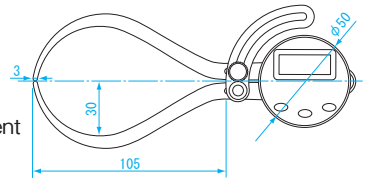
# DIGITAL CALIPER GAUGE

T PDI 0

Wide measuring range of 0~150mm

Reference standard for comparative measurement▶ Block Gauge P32 ~40
Rust prevention▶ Zerust Film for Steel P370

● DIMENSIONS Units: mm




USE
- ●For external measurement

MATERIAL
- ●Body: Steel, plastic

FEATURES
- ●Digital display for easy reading
- ●Wide measuring range of 0~150mm

POWER
- ●One CR2032 (Lithium) battery included for testing

※ Quantization Error (± 1 digit) not included

| Order No. | Model No. | Resolution (mm) | Measuring Range (mm) | Accuracy※ (mm) | Weight |
|---|---|---|---|---|---|
| 152053 | EDC-A1150 | 0.1 | 0-150 | ±0.2 | 140g |

# DIAL CALIPER GAUGE NEW! T PDI 0

Quickly measure the thickness of small parts, tubes, etc. with a single touch

WDC-MA1

WDC-MA2

USE
- ●For external measurement

MATERIAL
- ●Body: Aluminum alloy

FEATURES
- ●Convenient portable size
- ●Round probe tip for measuring irregular shapes

| Order No. | Model No. | Graduation (mm) | Measuring Range (mm) | Accuracy (mm) | Measuring Face | Weight |
|---|---|---|---|---|---|---|
| NEW! 151577 | WDC-MA1 | 0.05 | 0-10 | ±0.1 | Round (ϕ2mm) | 75g |
| NEW! 151578 | WDC-MA2 | | | | | |

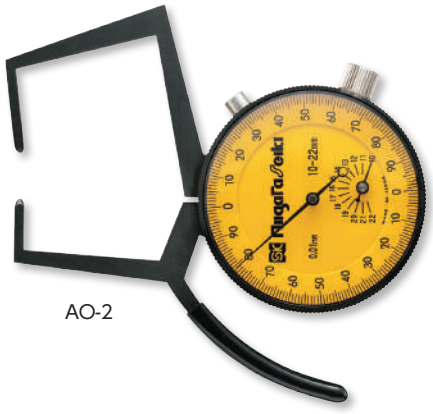
DAIAL GAUGE
DIAL INDICATOR
MAGNETIC BASE
THICKNESS GAUGE
CALIPER GAUGE
BORE GAUGE
OTHER DIAL GAUGES
HARDNESS
FILM THICKNESS

# DIAL CALIPER GAUGE (OUTSIDE)

For high accuracy O.D. measurement

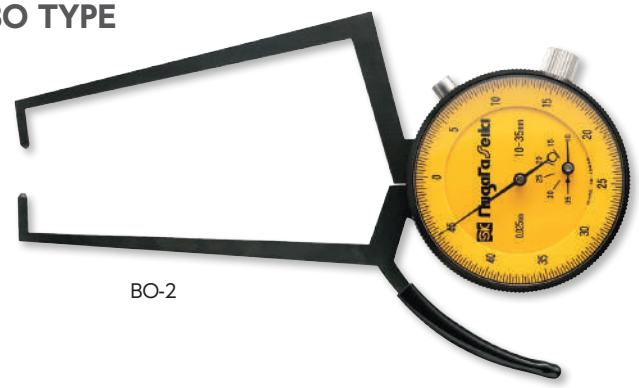
Reference standard for comparative measurement▶ Block Gauge P32 ~40
Rust prevention▶ Zerust Film for Steel P370

## AO TYPE



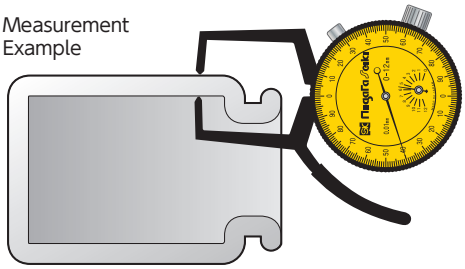
AO-2

## BO TYPE

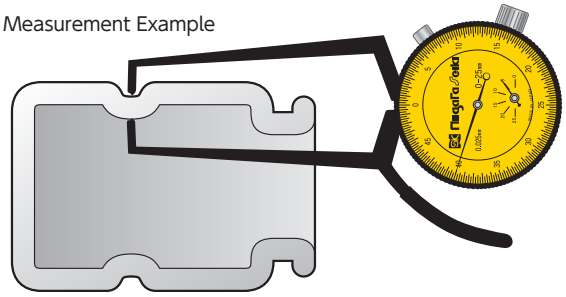


BO-2

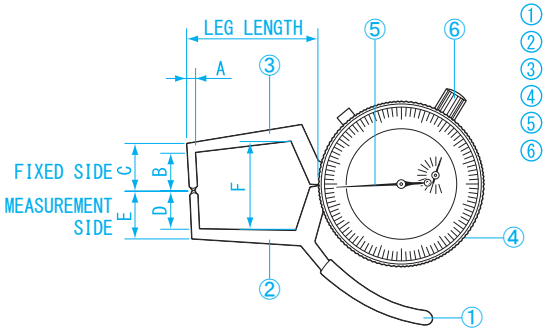
Measurement Example



Measurement Example



● DIMENSIONS




USE
- For external measurement

MATERIAL
- Body: Steel

FEATURES
- Ideal for measuring O.D. and wall thickness

Units: mm

| Model No. | Leg Length | A | B | C | D | E | F |
|---|---|---|---|---|---|---|---|
| AO-1 | 40 | 2.3 | 11.5 | 14.5 | 11.5 | 14.5 | 27 |
| AO-2 | 42 | | 18.5 | 20.5 | | | 45 |
| AO-3 | | | 8.5 | 10.5 | | | 49 |
| BO-1 | 85 | | | | 8.5 | 10.5 | 27.5 |
| BO-2 | 86 | | | | | | 46.5 |
| BO-3 | 89 | | | | | | 55.5 |

※ Gauge head : $\phi$ 1.6mm bal

※ Custom shape product available by special order

| Order No. | Model No. | Graduation (mm) | Measuring Range (mm) | Accuracy (mm) | Repeatablity (mm) | Weight |
|---|---|---|---|---|---|---|
| 151561 | AO-1 | 0.01 | 0~12 | ±0.04 | 0.02 | 80g |
| 151562 | AO-2 | | 10~22 | | | 83g |
| 151563 | AO-3 | | 20~32 | | | 85g |
| 151571 | BO-1 | 0.025 | 0~25 | ±0.075 | 0.05 | 80g |
| 151572 | BO-2 | | 10~35 | | | 83g |
| 151573 | BO-3 | | 20~45 | | | 85g |

# DIAL CALIPER GAUGE (INSIDE)

For high accuracy I.D. measurement

PDI

Reference standard for calibration▶ Ring Gauge P62 ~65

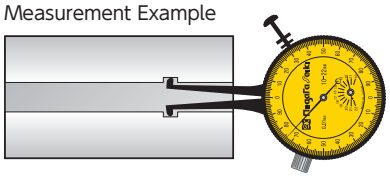
Rust prevention▶ Zerust Film for Steel P370

## AI TYPE

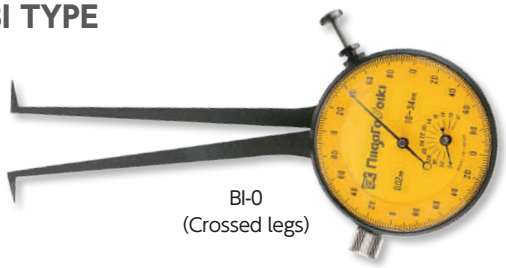
AI-0
(Crossed legs)

AI-3

Measurement Example

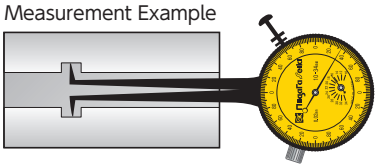


## BI TYPE

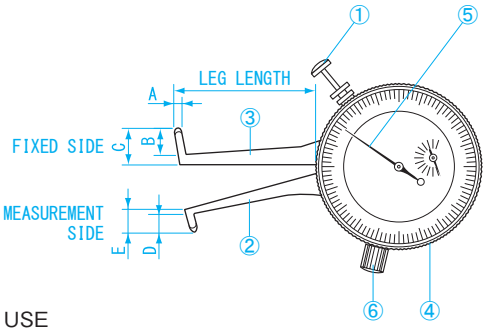


BI-0
(Crossed legs)

Measurement Example



● DIMENSIONS




①PUSH BUTTON
②MOVING ARM
③FIXED ARM
④BEZEL (RING)
⑤LIMIT INDICATOR
⑥CLAMP

USE
- For internal measurement

MATERIAL
- Body: Steel

FEATURES
- Ideal for measuring bore size and I.D. of irregular parts

Units: mm

| Model No. | Leg Length | A | B | C | D | E |
|---|---|---|---|---|---|---|
| AI-0 | 41 | Tip 1 | 1.1 | 2.8 | 1.1 | 2.8 |
| AI-1 | 40 | 2.3 | | | | |
| AI-2 | | | 2.7 | 4.5 | 2.3 | 4.8 |
| AI-3 | 42 | | 8 | 11 | 4.4 | 6.7 |
| AI-4 | 43 | | 18 | 21 | | |
| AI-5 | 44 | | 28 | 31 | | |
| BI-0 | 85 | Tip 1 | 7 | 9 | 7 | 9 |
| BI-1 | | 2.3 | 2.6 | 4.6 | 2.6 | 4.6 |
| BI-2 | | | 5.1 | 7.1 | 4.8 | 6.8 |
| BI-3 | 88 | | 7.5 | 10 | 8.6 | 10.6 |
| BI-4 | 89 | | 17.5 | 20 | | |
| BI-5 | 90 | | 27.5 | 30 | | |

※ Probe Tip : ϕ 1.6 mm Ball (AI-0 and BI-0 Feature Sharp Edges and Are Hardened)

※ Custom shape product available by special order

| Order No. | Model No. | Graduation (mm) | Measuring Range (mm) | Measurable Arm Length (mm) | Measurable Range (mm) | Accuracy (mm) | Repeatability (mm) | Weight |
|---|---|---|---|---|---|---|---|---|
| 151540 | AI-0 | 0.01 | 3~ 9 | 15 | 3~ 5 | ±0.04 | 0.02 | 75g |
| | | | | 30 | 5~ 9 | | | |
| 151541 | AI-1 | | 6~18 | 20 | 6~ 9 | | | 75g |
| | | | | 40 | 9~18 | | | |
| 151542 | AI-2 | | 10~22 | 20 | 10~16 | | | 80g |
| | | | | 40 | 16~22 | | | |
| 151543 | AI-3 | | 20~32 | 40 | 20~32 | | | 73g |
| 151544 | AI-4 | | 30~42 | 40 | 30~42 | | | 85g |
| 151545 | AI-5 | | 40~52 | 40 | 40~52 | | | 88g |
| 151550 | BI-0 | 0.02 | 10~34 | 60 | 10~20 | ±0.06 | 0.04 | 80g |
| | | | | 80 | 20~34 | | | |
| 151551 | BI-1 | 0.025 | 10~35 | 40 | 10~20 | ±0.075 | 0.05 | 83g |
| | | | | 80 | 20~35 | | | |
| 151552 | BI-2 | | 20~45 | 80 | 20~45 | | | 85g |
| 151553 | BI-3 | | 30~55 | 80 | 30~55 | | | 88g |
| 151554 | BI-4 | | 40~65 | 80 | 40~65 | | | 90g |
| 151555 | BI-5 | | 50~75 | 80 | 50~75 | | | 93g |

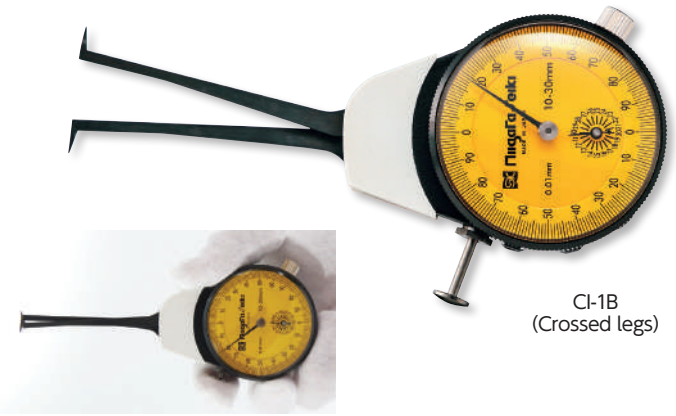
# DIAL CALIPER GAUGE (INSIDE)

Analog type dial caliper. For inner diameter measurement.

Reference standard for calibration▶ Ring Gauge P62～65
Rust prevention▶ Zerust Film for Steel P370

## CI 型

CI-0
(Crossed legs)



CI-1B
(Crossed legs)

CI-1A

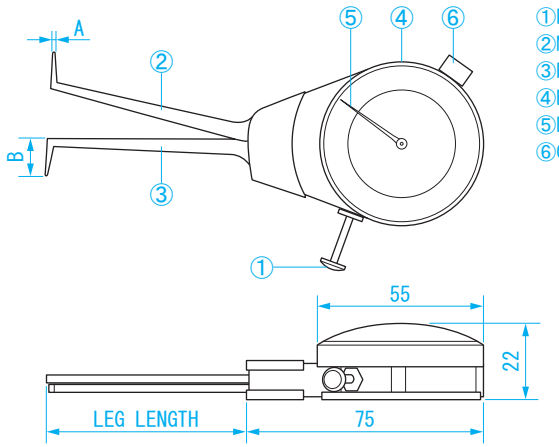
CI-2

● DIMENSIONS

Units: mm

| Model No. | Leg Length | A | B |
|---|---|---|---|
| CI-0 | 30 | Tip 0.6 | 4 |
| CI-1A | | | 7.5 |
| CI-1B | 64 | | 8 |
| CI-2 | 66 | | 12.5 |

※ Probe tip: Knife-edged, hardened




①PUSH BUTTON
②MOVING ARM
③FIXED ARM
④BEZEL (RING)
⑤LIMIT INDICATOR
⑥CLAMP

USE
- For internal measurement

MATERIAL
- Body: Steel

FEATURES
- Ideal for hole diameter measurement and internal measurement of complex shape

| Order No. | Model No. | Graduation (mm) | Measuring Range (mm) | Measurable Arm Length (mm) | Measurable Range (mm) | Accuracy (mm) | Repeatability (μm) | Weight |
|---|---|---|---|---|---|---|---|---|
| 151791 | CI-0 | 0.01 | 5～15 | 10 | 5～8 | ±0.03 | 0.02 | 85g |
| | | | | 30 | 8～15 | | | |
| 151792 | CI-1A | | 10～20 | 30 | 10～20 | | | 85g |
| 151793 | CI-1B | | 10～30 | 50 | 10～20 | ±0.05 | | 95g |
| | | | | 60 | 20～30 | | | |
| 151794 | CI-2 | | 20～40 | 60 | 20～40 | | | 95g |

# S-LINE PRECISION MEASURMENT PLUG GAUGE HEAD

S line series

BTO

Easier, more efficient and more accurate hole diameter measurement in mass production.
Combination use with separately sold holder.

USE
- Precision hole diameter measurement

MATERIAL
- Head body: Tool steel (Titanium nitride coating)
- Probe: Carbide coating polished finish (Diamond probe is available on request)

FEARTURES
- A special head tailored to the workpiece enables more efficient and accurate measurement of hole diameter
- It is effective for mass production lines and other sites with a fixed size and a large number of inspections
- Titanium coated body for superior durability

SPECIFICATIONS
- Manufacturable size: Two point measuring head···6~280mm
  Three point measuring head···15~100mm
- Repeatability: Less than 1μ (When tolerance class is IT8)
- Head hardness: Approx.2200HV

For GO hole Three point measuring head

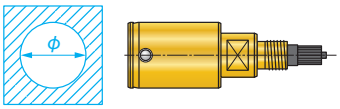
For NOGO hole Two point measuring head

Diamond probe compafible
※Excluding some types

<Combination Example>

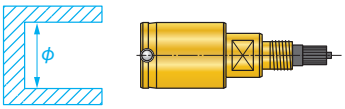
Heads are completely built-to-order. Please contact us for details.

## Standard Type
- Standard Type for Through Holes.

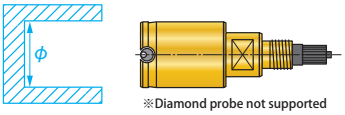



## Short Type
- Standard Type for Blind Holes.

※For measurements closer to the bottom surface, please select the Bottom Type (SL Type).

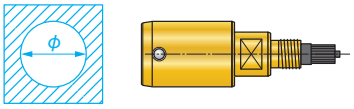



## Bottom Type
- Type designed for the deepest bottom-side measurements of blind holes.

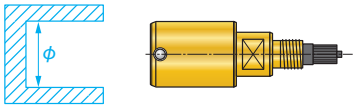


※Diamond probe not supported

## Automated Measurement (Chamfer) · Standard Type
- For Through Holes: Features a larger chamfered shape to allow easier head insertion.




## Automated Measurement (Chamfer) · Short Type
- For Blind Holes: Features a larger chamfered shape to allow easier head insertion.

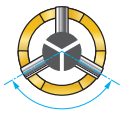



## Selectable Based on Environment and Workpiece × Measurement Types and Head Combinations

### Two-Point Measurement Head

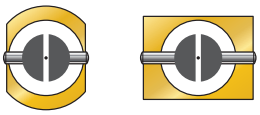
180°

### Three-Point Measurement Head

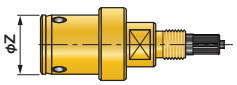

120°

### Square Parallel Measuring Head

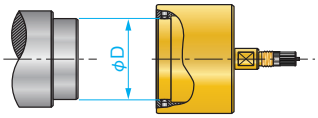
### Parallel Measurement Head


B = 8~40mm B = 40~130mm

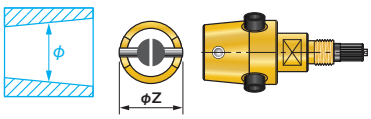
### Depth Stopper Integrated Type




### Outer Diameter Measurement AM

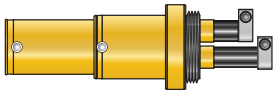



### For Taper Holes KE

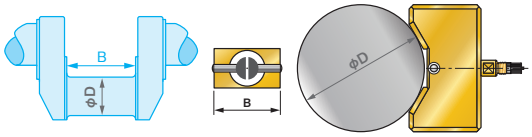



We also offer various special heads. Please feel free to consult with us.

### For Multiple Point Measurements ME



### For Crankshaft Parallel Measurements B=6mm~




**S-Line Precision Measurement Plug Gauge Series Web Site**
**https://niigataseiki.co.jp/lp/s-line_plag_gauge/**

# S-LINE PRECISION MEASUREMENT PLUG GAUGE HOLDER

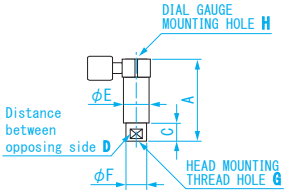
S line series

Easier, more efficient and more accurate hole diameter measurement in mass production.
Combination use with separately sold head, which are made to order for each factory.

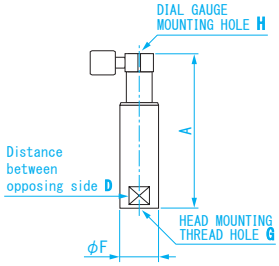
SKP-HM-02-32

SKP-HM-02-100

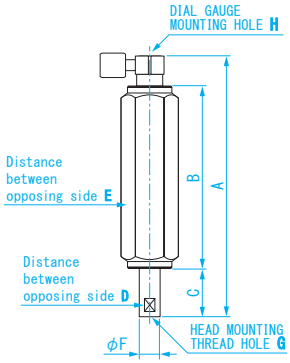
● DIMENSIONS




DIMENSION①




DIMENSION②




DIMENSION③

USE
- ●Precision hole diameter measurement

MATERIAL
- ●Shaft:
  Full length 32～100mm type･･･Steel
  Full length 150mm type･･･Special alloy steel
- ●Handle: Aluminum

FEATURES
- ●Dial gauge holder for precision measurement plug gauge
- ●Dial gauge with φ8 stem diameter can be installed
- ●Shaft is made of special alloy steel less affected by temperature changes (SKP-HM-02-150、SKP-HM-03-150 only)

※Head, dial gauge are sold separately

Units: mm

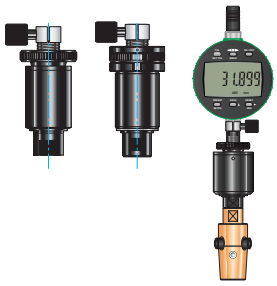
| Model No. | Dimensions | A | B | C | D | E | F | G | H |
|---|---|---|---|---|---|---|---|---|---|
| SKP-HM-02-32 | ① | 32 | – | 7 | 7 | 10 | 8 | M6 × P0.75 | φ8 H7 |
| SKP-HM-GS-02-50 | ① | 50 | – | 9.5 | | | | | |
| SKP-HM-02-50 | ③ | 50 | 33 | – | | 19 | | | |
| SKP-HM-02-100 | ③ | 100 | 70 | 18.5 | | | | | |
| SKP-HM-02-150 | ③ | 150 | 70 | 68.5 | | | | | |
| SKP-HM-GS-03-60 | ② | 60 | – | – | 13 | – | 15 | M10 × P1.0 | |
| SKP-HM-03-60 | ③ | 60 | 38 | – | | 22 | | | |
| SKP-HM-03-150 | ③ | 150 | 100 | 30 | | | | | |

| Order No. | Model No. | Corresponding Head Size (mm) | Head Mounting Thread hole diameter | Full Length(mm) | Weight |
|---|---|---|---|---|---|
| 151881 | SKP-HM-02-32 | φ6～φ20 | M6×P0.75 | 32 | 30g |
| 151888 | SKP-HM-GS-02-50 | | | 50 | 20g |
| 151882 | SKP-HM-02-50 | | | 50 | 40g |
| 151883 | SKP-HM-02-100 | | | 100 | 80g |
| 151884 | SKP-HM-02-150 | | | 150 | 85g |
| 151885 | SKP-HM-GS-03-60 | φ15～φ280 | M10×P1.0 | 60 | 50g |
| 151886 | SKP-HM-03-60 | | | 60 | 75g |
| 151887 | SKP-HM-03-150 | | | 150 | 130g |

## Examples of Optional Accessories Compatible with S-Line Precision Measuring Plug Gauge Heads and Holders

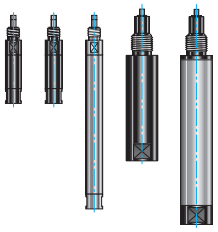
### Centering Holder

Automated Centering Holder for Measurement that corrects axial deviation of the workpiece center, preventing damage to the head or workpiece.



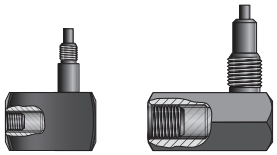
### Extension Rod

For extension in depth direction.



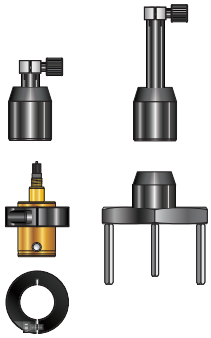
### Right-Angle Extension

For changing the measurement direction to a right angle. Can also be combined with an extension rod.



### Depth Stopper

For measurements at a constant depth.



# S-LINE BORE GAUGE

S line series

S-line series, high-end model for high-performance.
High precision measurement is possible by using with S-LINE DIAL COMPARATOR GAUGE (separately sold).

Zero pint setting▶
Ring Gauge
P62 ~65

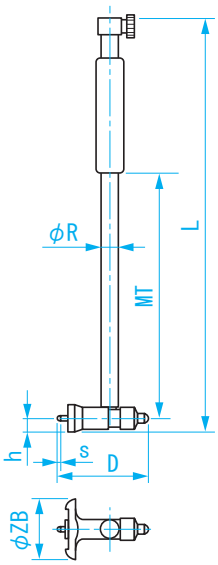
Precise measurement with 0.001 mm accuracy▶
S-Line Dial Comparator
P239

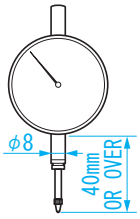
Rust prevention▶
Zerust Film for Steel
P370

SCDI-100S

SCDI-100S

## ● DIMENSIONS




※ Mountable dial gauge

USE
- For bore measurement

MATERIAL
- Body: Steel
- Probe: Ruby

FEATURES
- For high precision bore measurement
- High precision measurement is possible by using with S-LINE DIAL COMPARATOR GAUGE (separately sold)

SPECIFICATIONS
- Stem dia. of mountable measuring instrument: ϕ8mm
- Mountable dial gauge: Refer to the DIMEMSIONS

※Measuring device such as dial gauge not included

Units: mm

| Model No. | ϕ R | L | MT | h | s | ϕ ZB |
|---|---|---|---|---|---|---|
| SCDI-8S | 5 | 165 | 100 | 2.6 | 0.5 | 5.2 |
| SCDI-12S | 5 | 166 | 100 | 3.25 | 0.7 | 6.5 |
| SCDI-20S | 8 | 199 | 114 | 4.5 | 0.9 | 9 |
| SCDI-35S | 8 | 201 | 116 | 5.4 | 1.3 | 14.8 |
| SCDI-60S | 12 | 294 | 179 | 8.5 | 1.3 | 28 |
| SCDI-100S | 12 | 295 | 179 | 8.5 | 1.4 | 45 |
| SCDI-160S | 18 | 367 | 235 | 11.5 | 1.6 | 75 |

＊ Dial gauge (separately sold) not included

| Order No. | Model No. | Measuring Range D (mm) | Wide Range Accuracy (μm) | Repeatability* (μm) | Effective Stroke of Contact Point(mm) | Interchangeable Anvil | Interchangeable Washer | Weight |
|---|---|---|---|---|---|---|---|---|
| 151841 | SCDI-8S | 6- 8 | 3 | 0.5 | 0.5 | 7 pcs | – | 65g |
| 151842 | SCDI-12S | 8- 12 | | | 0.7 | 9 pcs | – | 65g |
| 151843 | SCDI-20S | 12- 20 | | | 0.9 | 9 pcs | 1 pc | 95g |
| 151844 | SCDI-35S | 18- 35 | | | 1.3 | 9 pcs | 2 pcs | 85g |
| 151845 | SCDI-60S | 35- 60 | | | 1.3 | 6 pcs | 3 pcs | 175g |
| 151846 | SCDI-100S | 50-100 | | | 1.4 | 11 pcs | 3 pcs | 190g |
| 151847 | SCDI-160S | 100-160 | | | 1.6 | 7 pcs | 4 pcs | 530g |

DAIAL GAUGE
DIAL INDICATOR
MAGNETIC BASE
THICKNESS GAUGE
CALIPER GAUGE
BORE GAUGE
OTHER DIAL GAUGES
HARDNESS
FILM THICKNESS

# DIGITAL BORE GAUGE

Digital gauge included.
Good performance and reasonable price.


| Zero pint setting▶ | Replacement part▶ | Rust prevention▶ |
|---|---|---|
| Ring Gauge P62 ～65 | Parts for Bore Gauge P267 | Zerust Film for Steel P370 |


## Digital indicator included

WCDI-6D

WCDI-160D

WCDI-6D Measuring Head
[Two point measurement]

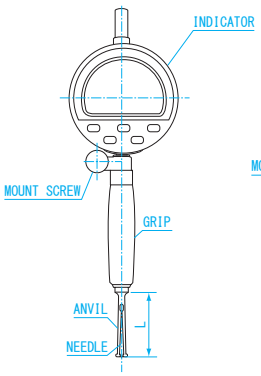
WCDI-18D
Measuring Head

WCDI-10D
Measuring Head

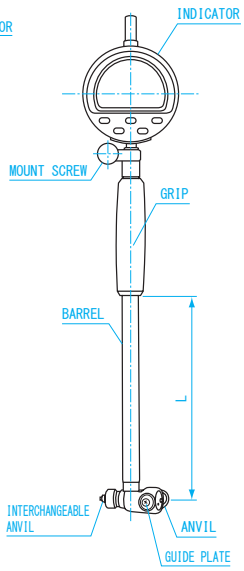
WCDI-35D
Measuring Head

WCDI-50D・100D・160D
Measuring Head

● DIMENSIONS・PARTS NAME Units: mm




WCDI-6D




USE
- ●Bore measurement

MATERIAL
- ●Body: Steel

FEATURES
- ●Digital indicator included
- ●Digital display for easy reading

POWER
- ●One CR2032 (Lithium) battery included for testing

Parts for Bore Gauge⇒P267

※ Quantization Error ( ± 1 digit) not included
＊ Including attached digital gauge

| Order No. | Model No. | Measuring Range (mm) | Measurement Depth L(mm) | Weight |
|---|---|---|---|---|
| 151868 | WCDI-6D | 4-6 | 34 | 255g |
| 151869 | WCDI-10D | 6-10 | 48 | 265g |
| 151870 | WCDI-18D | 10-18 | 95 | 300g |
| 151871 | WCDI-35D | 18-35 | 150 | 360g |
| 151872 | WCDI-50D | 35-50 | 150 | 450g |
| 151873 | WCDI-100D | 50-100 | 150 | 475g |
| 151874 | WCDI-160D | 50-160 | 150 | 570g |

| Resolution (mm) | Error over Entire Range＊(μm)＊ | Adjacent Error＊ (μm)＊ | Repeatability＊ (μm)＊ | Effective Stroke of Contact Point(mm) | Measuring Head | Interchangeable Anvil | Interchangeable Washer |
|---|---|---|---|---|---|---|---|
| 0.002 | 10 | 5 | 3 | 0.6 | [Two point measurement] 4pcs (0.5mm step) | – | None |
| 0.002 | 12 | 5 | 3 | 0.7 | – | 9 pcs (0.5mm step) | None |
| 0.002 | 12 | 5 | 3 | 0.9 | – | 9 pcs (1.0mm step) | 0.5mm 1pc |
| 0.002 | 15 | 5 | 3 | 1.2 | – | 9 pcs (2.0mm step) | 0.5･1mm 1pc each |
| 0.002 | 15 | 5 | 3 | 1.2 | – | 4 pcs (5.0mm step) | |
| 0.002 | 18 | 6 | 3 | 1.6 | – | 11 pcs (5.0mm step) | 0.5･1･2･3mm 1pc each |
| 0.002 | 18 | 6 | 3 | 1.6 | – | 12 pcs (5.0mm step) 1pc extension anvil | |

# DIAL BORE GAUGE

Dial gauge included.
Good performance and reasonable price.

Zero pint setting▶ Ring Gauge P62～65
Replacement part▶ Parts for Bore Gauge P267
Rust prevention▶ Zerust Film for Steel P370

## Dial gauge included

WCDI-6

WCDI-100

WCDI-6 Measuring Head
[Two point measurement]

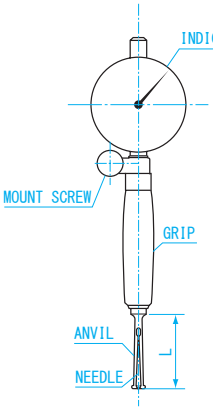
WCDI-18
Measuring Head

WCDI-10
Measuring Head

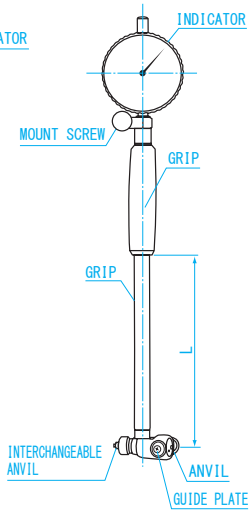
WCDI-35
Measuring Head

WCDI-50・100・160
Measuring Head

● DIMENSIONS・PARTS NAME Units: mm



WCDI-6




USE
●Bore measurement
MATERIAL
●Body: Steel
FEATURES
●Dial gauge included

Parts for Bore Gauge⇒P267

＊ Including attached dial gauge

| Order No. | Model No. | Measuring Range (mm) | Measurement Depth L(mm) | Weight |
|---|---|---|---|---|
| 151861 | WCDI-6 | 4～6 | 34 | 175g |
| 151862 | WCDI-10 | 6～10 | 48 | 180g |
| 151863 | WCDI-18 | 10～18 | 95 | 195g |
| 151864 | WCDI-35 | 18～35 | 130 | 300g |
| 151865 | WCDI-50 | 35～ 50 | 150 | 440g |
| 151866 | WCDI-100 | 50～100 | 150 | 465g |
| 151867 | WCDI-160 | 50～160 | 150 | 540g |

| Resolution (mm) | Error over Entire Range＊(μm)＊ | Adjacent Error＊ (μm)＊ | Repeatability＊ (μm)＊ | Effective Stroke of Contact Point(mm) | Measuring Head | Interchangeable Anvil | Interchangeable Washer |
|---|---|---|---|---|---|---|---|
| 0.01 | 10 | 5 | 3 | 0.6 | [Two point measurement] 4 pcs (0.5mm step) | – | None |
| 0.01 | 12 | 5 | 3 | 0.7 | – | 9 pcs (0.5mm step) | None |
| 0.01 | 12 | 5 | 3 | 0.9 | – | 9 pcs (1.0mm step) | 0.5mm 1 pc |
| 0.01 | 15 | 5 | 3 | 1.0 | – | 7 pcs (2.5mm step) | None |
| 0.01 | 15 | 5 | 3 | 1.2 | – | 4 pcs (5.0mm step) | 0.5・1・2・3mm 1 pc each |
| 0.01 | 18 | 6 | 3 | 1.6 | – | 11 pcs (5.0mm step) | |
| 0.01 | 18 | 6 | 3 | 1.6 | – | 12 pcs (5.0mm step) 1 pc extension anvil | |

# PARTS FOR BORE GAUGE

Rust prevention▶
Zerust Film for Steel
P370

■ INTERCHANGEABLE ANVIL

| Order No. | Model No. | Size (mm) | applicable Model No. |
|---|---|---|---|
| 151600 | AC-1060 | 6.0 | |
| 151601 | AC-1065 | 6.5 | WCDI-10D<br>WCDI-10 |
| 151602 | AC-1070 | 7.0 | |
| 151603 | AC-1075 | 7.5 | |
| 151604 | AC-1080 | 8.0 | ·Ex-model No.<br>CDI-10D<br>CDI-10 |
| 151605 | AC-1085 | 8.5 | |
| 151606 | AC-1090 | 9.0 | |
| 151607 | AC-1095 | 9.5 | |
| 151608 | AC-10100 | 10.0 | |
| 151609 | AC-1810 | 10.0 | |
| 151610 | AC-1811 | 11.0 | WCDI-18D<br>WCDI-18 |
| 151611 | AC-1812 | 12.0 | |
| 151612 | AC-1813 | 13.0 | |
| 151613 | AC-1814 | 14.0 | ·Ex-model No.<br>CDI-18D<br>CDI-18 |
| 151614 | AC-1815 | 15.0 | |
| 151615 | AC-1816 | 16.0 | |
| 151616 | AC-1817 | 17.0 | |
| 151617 | AC-1818 | 18.0 | |
| 151641 | AC-35180D | 18.0 | |
| 151642 | AC-35200D | 20.0 | |
| 151643 | AC-35220D | 22.0 | WCDI-35D |
| 151644 | AC-35240D | 24.0 | |
| 151645 | AC-35260D | 26.0 | ·Ex-model No.<br>CDI-35D |
| 151646 | AC-35280D | 28.0 | |
| 151647 | AC-35300D | 30.0 | |
| 151648 | AC-35320D | 32.0 | |
| 151649 | AC-35340D | 34.0 | |
| 151618 | AC-35180 | 18.0 | |
| 151619 | AC-35205 | 20.5 | WCDI-35 |
| 151620 | AC-35230 | 23.0 | |
| 151621 | AC-35255 | 25.5 | ·Ex-model No.<br>CDI-35 |
| 151622 | AC-35280 | 28.0 | |
| 151623 | AC-35305 | 30.5 | |
| 151624 | AC-35330 | 33.0 | |

■ INTERCHANGEABLE ANVIL

| Order No. | Model No. | Size (mm) | applicable Model No. | |
|---|---|---|---|---|
| 151625 | AC-5035 | 35.0 | | ·Ex-model No. |
| 151626 | AC-5040 | 40.0 | WCDI-50D | CDI-50D |
| 151627 | AC-5045 | 45.0 | WCDI-50 | CDI-50 |
| 151628 | AC-5050 | 50.0 | | |
| 151629 | AC-10050 | 50.0 | | |
| 151630 | AC-10055 | 55.0 | | |
| 151631 | AC-10060 | 60.0 | | |
| 151632 | AC-10065 | 65.0 | | ·Ex-model No. |
| 151633 | AC-10070 | 70.0 | WCDI-100D | CDI-100D |
| 151634 | AC-10075 | 75.0 | WCDI-160D | CDI-160D |
| 151635 | AC-10080 | 80.0 | WCDI-100 | CDI-100 |
| 151636 | AC-10085 | 85.0 | WCDI-160 | CDI-160 |
| 151637 | AC-10090 | 90.0 | | |
| 151638 | AC-10095 | 95.0 | | |
| 151639 | AC-16100 | 100.0 | | |
| 151640 | AC-16105 | 105.0 | | |

■ EXTENTIONAL ANVIL

| Order No. | Model No. | Size (mm) | applicable Model No. | | | |
|---|---|---|---|---|---|---|
| 151650 | ALC-55 | 55.0 | | WCDI-160D | WCDI-160 | |
| | | | ·Ex-model No. | CDI-160D | CDI-160 | |

■ WASHERS

| Order No. | Model No. | Size (mm) | applicable Model No. | | | |
|---|---|---|---|---|---|---|
| 151660 | W-1805 | 0.5 | ·Ex-model No. | WCDI-18<br>CDI-18 | WCDI-18D<br>CDI-18D | |
| 151661 | W-5005 | 0.5 | WCDI-35D<br>·Ex-model No.<br>CDI-35D | WCDI-50<br>WCDI-100<br>WCDI-160<br>WCDI-50D<br>WCDI-100D<br>WCDI-160D | ·Ex-model No.<br>CDI-50<br>CDI-100<br>CDI-160<br>CDI-50D<br>CDI-100D<br>CDI-160D | |
| 151662 | W-5010 | 1.0 | | | | |
| 151663 | W-5020 | 2.0 | | | | |
| 151664 | W-5030 | 3.0 | | | | |

# DIAL TENSION GAUGE

PDI

## Measures button pressing force and spring tension

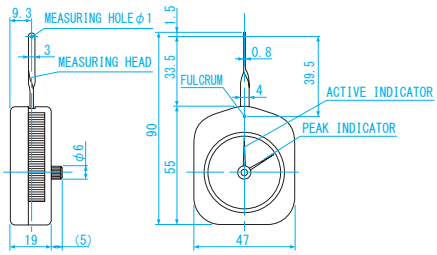
Rust prevention▶
Zerust Film for Steel
P370

DITG-50PJ

Measuring head

USE
●Measuring button pressing force and spring tension
MATERIAL
●Main body: ABS ●Measuring head: Steel
FEATURES
●Peak indicator type for easily reading peak force

● DIMENSIONS Units: mm




| Order No. | Model No. | Range | Resolution | Accuracy | Reading | Weight |
|---|---|---|---|---|---|---|
| 151525 | DITG-30PJ | 30 ~ 300mN | 10mN | ± 0.5 graduation | 30-300-30 | 55g |
| 151526 | DITG-50PJ | 0.06 ~ 0.5N | 0.02N | | 0.06-0.5-0.06 | |
| 151527 | DITG-100PJ | 0.1 ~ 1N | 0.05N | | 0.1-1-0.1 | |
| 151528 | DITG-150PJ | 0.15 ~ 1.5N | 0.05N | | 0.15-1.5-0.15 | |
| 151529 | DITG-300PJ | 0.3 ~ 3N | 0.1N | | 0.3-3-0.3 | |
| 151530 | DITG-500PJ | 0.6 ~ 5N | 0.2N | | 0.6-5-0.6 | |

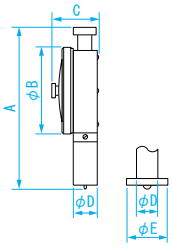
# DUROMETER

Measure hardness of rubber or plastic. Conforms to JIS, ISO standards.

Stand to provide stable measurement ▶ Durometer Stand P268
Rust prevention ▶ Zerust Film for Steel P370

ADM-A

● DIMENSIONS




ADM-A・ADM-D　ADM-E

Units: mm

| Model No. | A | B | C | D | E |
|---|---|---|---|---|---|
| ADM-A | 113 | 60 | 31 | 18 | - |
| ADM-D | | | | | - |
| ADM-E | | | | 16 | 31 |

USE
- ●Checking hardness of material such as rubber or plastic

MATERIAL
- ●Body: Aluminum
- ●Presser foot: HM35 (SKH55) tool steel

FEATURES
- ●Presser foot geometry and spring force in compliance with the following standards:
- ●JIS K 6253-3: 2012 (Rubber, vulcanized or thermoplastic -- Determination of hardness)
- ●ISO 7619-1: 2010

ACCESSORIES
- ●Block to check wear (ADM-A, ADM-D)

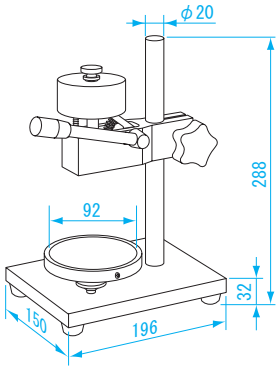
| Model No. | ADM-A | ADM-D | ADM-E |
|---|---|---|---|
| Hardness Range | A20 ~ A90 | Greater than A90 | Less than A20 |
| Material for test | Rubber, Soft plastic, Tires, Medium hardness elastomers | Hard rubber, Plastic, Ebonite rubber, High hardness elastomers | Soft rubber, Eraser, Roll film, Low hardness elastomers |
| Specimen thickness | 6.0mm or greater | 6.0mm or greater | 10.0mm or greater |
| Display accuracy | ± 1 gradation | | |

| Order No. | Model No. | Weight |
|---|---|---|
| 151721 | ADM-A | 160g |
| 151722 | ADM-D | 160g |
| 151723 | ADM-E | 170g |

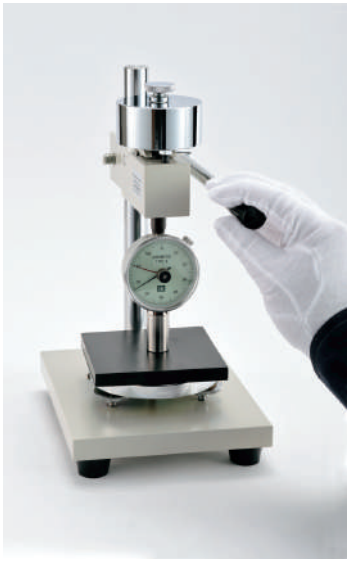
# DUROMETER STAND

Stand to provide stable measurements for durometer testing

● DIMENSIONS　Units: mm



DMS-AE



USE
- ●Stand for holding durometer

MATERIAL
- ●Stem&weight: Iron
- ●Base: Cast iron

FEATURES
- ●When durometer is attached, provides constant pressure for consistent measurements

| Order No. | Model No. | Applicable Durometer | Weight |
|---|---|---|---|
| 151713 | DMS-AE | ADM-A, ADM-E | 7.3kg |
| 151714 | DMS-D | ADM-D | 11.4kg |

DAIAL GAUGE
DIAL INDICATOR
MAGNETIC BASE
THICKNESS GAUGE
CALIPER GAUGE
BORE GAUGE
OTHER DIAL GAUGES
HARDNESS
FILM THICKNESS

# LEEB HARDNESS TESTER NEW!

Portable hardness tester for measuring hardness of metals.
With auto-angle correction function for measuring 360° in any direction.

LHT-400plus

LHT-B

LHT-BR

LHT-D-S

LHT-DL-S

USE
- ●Formeasuring hardness of metal

MATERIAL
- ●Body: ABS resin ●Probe: Tungsten (hardness HV 1600)

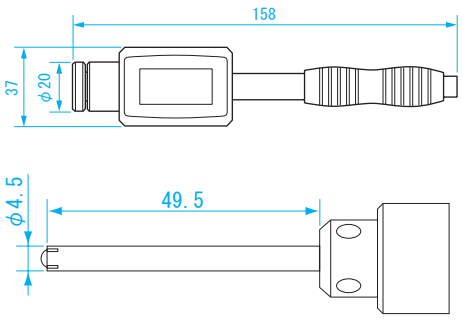
FEATURES
- ●For general metal hardness testing. Wide measuring range which is especially suitable for testing hardness of large objects.
- ●Can be converted to display in any of 7 hardness scale ·HRC, HV, HL, HRB, HS,HB and σB
- ●Average can be automatically calculated between 2 to 8 measurements
- ●Measured value recorded can be easily edited on PC by connecting the USB cable
- ●Carrying case included

SPECIFICATIONS
- ●Measurable material: ·Steel, cast steel ·Alloy tool steel ·Stainless steel, high temperature steel ·Cast iron ·Ductile iron ·Aluminum alloy ·Brass ·Bronze ·Copper

ACCESSORIES
- ●Master block ●AC adapter (AC100V~240V)
- ●USB cable ●Cleaning brush ●Measuring ring (small) ●Carrying case

POWER
- ●AC adapter for battery charge (lithium battery)

● DIMENSION Units: mm




DL TYPE PROBE (LHT-DL-S)

| Order No. | Model No. | Measuring Range | Accuracy | Weight |
|---|---|---|---|---|
| 151756 | LHT-400plus | Minimum 170 to Maximum 878 HL | Within ±19 HL | 90g |

■ Optional accessories : D TYPE PROBE【Standard probe provided with LHT-400 plus】

| Order No. | Model No. | Weight |
|---|---|---|
| 151755 | LHT-D-S | 5g |

■ Optional accessories : DL TYPE PROBE【Suitable for measuring hardness in narrow space such as bottom of groove or in a large gear】

| Order No. | Model No. | Weight |
|---|---|---|
| 151754 | LHT-DL-S | 25g |

■ Optional accessories : Master block【Standard probe provided with LHT-400 plus】

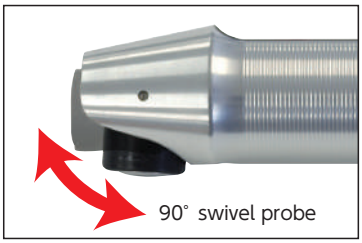
| Order No. | Model No. | Weight |
|---|---|---|
| NEW! 151757 | LHT-B | 2.9kg |

■ Optional accessories : Measuring ring【Standard probe provided with LHT-400 plus】

| Order No. | Model No. | Weight |
|---|---|---|
| NEW! 151758 | LHT-BR | 3g |

# FILM THICKNESS METER FOR Fe AND NON-Fe MATERIALS

Compact and lightweight for coating thickness measurement.
Can rotate 90° for measuring tight spaces such as inside pipe.



FTM-52FN FTM-50FE

| Model No. | Measurable basis material | Measurable coating material |
|---|---|---|
| FTM-50FE for Fe materials | ● Ferrous material thickness more than 300μm (Magnetic material such as iron except nickel) | ● Measurable max. 5.0mm of all kind of non-magnetic coating on ferrous material (paints, varnish, synthetic coating, enamel, rubber, ceramic, zinc plating and etc.) |
| FTM-52FN for Fe&Non-Fe materials | ● Ferrous material thickness more than 300μm (Magnetic material such as iron except nickel)<br>● Non-ferrous material thickness more than 50μm (Conductive material such as aluminum, brass, bronze, zinc, lead, copper etc.) | ● Measurable max. 5.0mm of all kind of non-magnetic coating on ferrous material (paints, varnish, synthetic coating, enamel, rubber, ceramic, zinc plating and etc.)<br>● Measurable max. 2.0mm of non-conductive coating on non-ferrous material (paints, varnish, synthetic coating, almite, rubber and etc.) |

USE
- ●Thickness measurement of coated surface

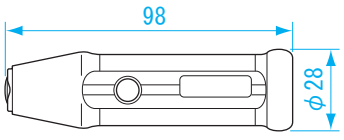
MATERIAL
- ●Probe: Ruby

FEATURES
- ●Automatically determines the object to be measured
- ●Probe rotates and it allows to measure inside of pipe or measure a part that is difficult to measure
- ● It can be easily operated with one hand at high places and narrow places
- ●Auto power off function.

SPECIFICATIONS
- ●Accuracy…Under 300μm: ±2μm
  300~1000μm: ±1%
  1000~2000μm: ±3%
  2000μm or over: ±5%

POWER
- ●One AA battery (not included)

● DIMENSIONS Units: mm




| Order No. | Model No. | Measurement Method | Measuring Range (μm) | Resolution | Weight |
|---|---|---|---|---|---|
| 152081 | FTM-50FE | Electromagnetic Induction | Fe materials: 0 ~ 5000 | Under 100μm: 0.1μm<br>Under 1000μm: 1μm<br>1.00mm or over: 0.01mm | 72g |
| 152082 | FTM-52FN | Dual Type (Eddy Current/Electromagnetic Induction) | Fe materials: 0 ~ 5000<br>Non-Fe materials: 0 ~ 2000 | | |

# STANDARD TOOL

272p~273p

272p~273p

272p~273p

272p

274p

274p

275p

275p

276p

277p

277p

277p

278p

278p

279p

279p

280p

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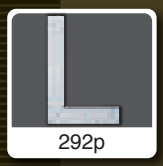
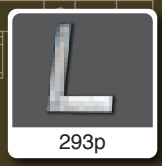

292p

293p


293p

294p

294p

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296p

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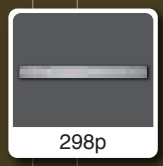
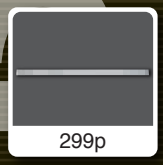
297p

297p


298p

298p


299p

299p

300p

COMPARATOR
GRANITE PRODUCTS
CAST IRON SURFACE PLATE
PARALLEL BLOCK
V BLOCK
SQUARE
STRAIGHT EDGE
PARALLEL CLAMP

S line series

# RUN-OUT GAUGE SYSTEM

T

MADE IN JAPAN.

Run-out gauge system with a roller applicable to small work pieces of OD ϕ 1 ～ 8mm is now available.

Concentricity measurement by mounting your current indicator or electronic micrometer to this system.

Measuring instruments ▶
Electronic Micrometer
P165

Measuring instruments ▶
Dial Gauge・Indicator
P233 ～246

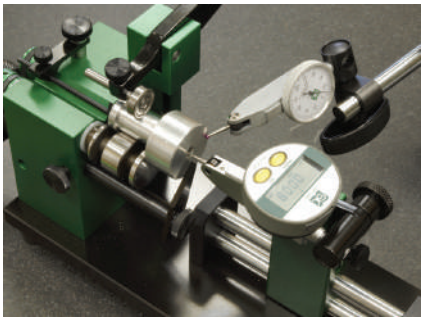
For multiple measurement ▶
Magnetic Base
P247 ～255

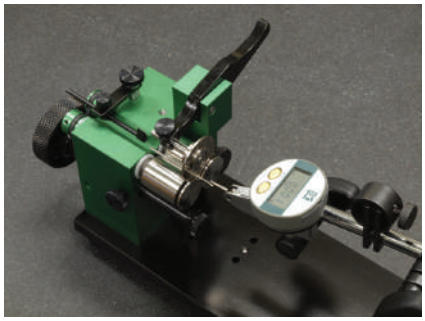
**With aluminum carrying case**

ROG-225SS

ROG-351LS

ROG-103S





【Slit roller (for small diameter)】

## ADJUSTABLE ROLLER HOLDER NEW!

Combined with S-LINE RUN-OUT GAUGE SYSTEM, it enables measurement of long or stepped workpieces!

USE

- Measurements that require a S-LINE RUN-OUT GAUGE SYSTEM to be held in fixed position

MATERIAL

- Body: Aluminum
- Roller: Stainless steel
- Base:Rolled steel for general structure

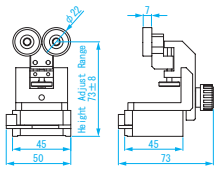
FEATURES

- With fine adjust for easy height adjustment
- With ON/OFF switchable magnet on the base

SPECIFICATIONS

- Applicable products: ROG-221S、223S、225S、351S、353S、355S、101S、103S、105S、251SM
- Height Adjust Range: 73±8mm (Base bottom surface to Roller center)
- Fine Adjust Stroke: Over 2.5mm

● DIMENSIONS Units: mm



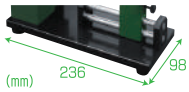

| Order No. | Model No. | Weight |
|---|---|---|
| NEW! 010219 | LRH-Y1 | 400g |

COMPARATOR
GRANITE PRODUCTS
CAST IRON SURFACE PLATE
PARALLEL BLOCK
V BLOCK
SQUARE
STRAIGHT EDGE
PARALLEL CLAMP

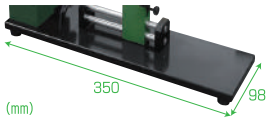
# S-LINE RUN-OUT GAUGE SYSTEM

## Base type (3 options)

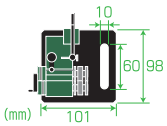
### Short Base
Compact type




### Long Base
Allows simultaneous multiple measurements using magnetic base

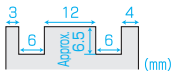



### Clamp Base
Can be mounted on stage of large measuring instruments



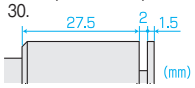

## Roller type (3 options)

### Slit Roller
Roller with slit. Ideal for measuring flanged workpiece.



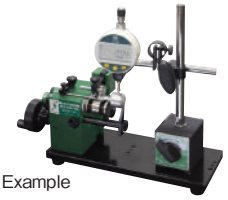
### Flat Roller
Plain roller type. Ideal for a measuring round bar.

### Slit Roller (for small diameter)
Roller for small workpiece sized $\phi$1~8mm Applicable to workpieces from $\phi$4 to 30.



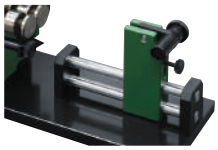
## Carrier type (3 options)

### No Carrier
Magnetic base can be mounted on the base

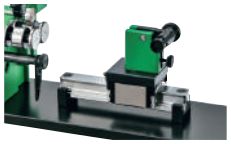


※Usage Example

### Shaft Carrier
Shaft slide carrier can be positioned along length of workpiece



### Linear Carrier
Linear slide carrier provides smooth movement for accurate positioning



USE

- Concentricity measurement by mounting your current indicator or electronic micrometer to this system

FEATURES

- Three base lengths, three rollers and three carriers, total 21 product configurations available
- Up to 2$\mu$m※ accuracy. Highly accurate measurement is possible.
  ※When measuring $\phi$20mm workpiece
- Smooth measurement with grip handle and timing belt & pulley operation system
- Carrier with angle fine adjustment for easy zero-setting of measuring instruments. Free movement in Z direction enables measurement at the optimum position.
- Equipped with work retainer for holding front and rear of workpiece and to enable measurement of axial run-out
- As for the Slit Roller type for small diameter, two types of rollers are included.

MATERIAL

- Base: Carbon steel ●Roller: Tool steel

SPECIFICATIONS

- Provided with aluminum carrying case

MEASURABLE WORK CONDITIONS

- OD: Please refer to the following chart
- Length: 5~80mm
- Shape: Cylindrical
- Reference portion of the workpiece must have enough length to clamp to roller
  ※Measurement error increases at with increasing distance from rollers

| Order No. | Model No. | Base Type | Roller Type | Carrier Type | Applicable Work OD (mm) | Accuracy | Weight |
|---|---|---|---|---|---|---|---|
| 010201 | ROG-221S | Short Base | Slit Roller | No carrier | $\phi$4~30 | Within 2~3.5$\mu$m ※2$\mu$m= when measuring $\phi$20mm workpiece (In-house measurements) | 3.6kg |
| 010202 | ROG-221SS | | | Shaft Carrier | | | 4.0kg |
| 010203 | ROG-221LS | | | Linear Carrier | | | 4.3kg |
| 010204 | ROG-223S | | Flat Roller | No carrier | | | 3.7kg |
| 010205 | ROG-223SS | | | Shaft Carrier | | | 4.1kg |
| 010206 | ROG-223LS | | | Linear Carrier | | | 4.4kg |
| 010207 | ROG-351S | Long Base | Slit Roller | No carrier | | | 4.6kg |
| 010208 | ROG-351SS | | | Shaft Carrier | | | 5.0kg |
| 010209 | ROG-351LS | | | Linear Carrier | | | 5.3kg |
| 010210 | ROG-353S | | Flat Roller | No carrier | | | 4.7kg |
| 010211 | ROG-353SS | | | Shaft Carrier | | | 5.1kg |
| 010212 | ROG-353LS | | | Linear Carrier | | | 5.4kg |
| 010213 | ROG-101S | Clamp Base | Slit Roller | No carrier | | | 2.5kg |
| 010214 | ROG-103S | | Flat Roller | | | | 2.6kg |
| 010224 | ROG-225S | Short Base | Slit Roller (for small diameter) | No carrier | $\phi$1~30 ※Top Roller Replaceable ●Standard Roller: $\phi$4-30 ●Small Diameter Roller: $\phi$1-8 | Within 2~6.5 $\mu$m ※2 $\mu$m = When measuring $\phi$20 mm workpiece ※3 $\mu$m = When measuring $\phi$8 mm workpiece (In-house measurements) | 3.7kg |
| 010225 | ROG-225SS | | | Shaft Carrier | | | 4.1kg |
| 010226 | ROG-225LS | | | Linear Carrier | | | 4.4kg |
| 010227 | ROG-355S | Long Base | | No carrier | | | 4.7kg |
| 010228 | ROG-355SS | | | Shaft Carrier | | | 5.1kg |
| 010229 | ROG-355LS | | | Linear Carrier | | | 5.4kg |
| 010230 | ROG-105S | Clamp Base | | No carrier | | | 2.6kg |

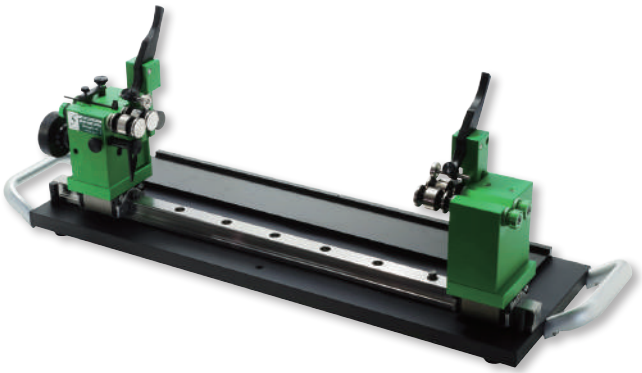
S line series

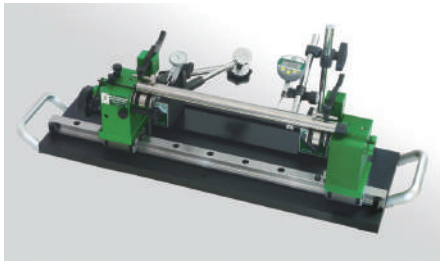
## S-LINE RUN-OUT GAUGE SYSTEM (FOR LONG OBJECTS)

T

Capable of measuring up to 300mm length work.
Concentricity measurement by mounting your current indicator or electronic micrometer to this gaging system.

Measuring instruments ▶ Electronic Micrometer P165
Measuring instruments ▶ Dial Gauge・Indicator P233 ～246
For multiple measurement ▶ Magnetic Base P247 ～255





※Magnet base and indicator not included.

USE
- Concentricity measurement by mounting your current indicator or electronic micrometer to this system

MATERIAL
- Base: Aluminum, Carbon steel ●Roller: Tool steel

FEATURES
- Capable of measuring up to 300mm length work
- Up to 4μm accuracy. Highly accurate masurement is possible.
- Smooth measurement with grip handle and timing belt & pulley operation system
- Equipped with work retainer for holding front and rear of workpiece and to enable measurement, of axial run-out

SPECIFICATIONS
- Accuracy: within 4μm ●Provided with aluminum carrying case

MEASURING CONDITIONS
- OD of workpiece: φ4～30mm
- Length of workpiece: 5～300mm
- Weight:Less than 1.7Kg
- Shape of workpiece: Cylindrical
- Reference portion of the workpiece must have enough length to clamp to roller

※Measurement error increases at with increasing distance from rollers

※ Please refer to P273 to see parts configuration.

| Order No. | Model No. | Base size (mm) | Roller type※ | Carrier type※ | Weight |
|---|---|---|---|---|---|
| 010215 | ROG-581S | 580 × 190 | Slit Roller | Basic type (no carrier) | 13kg |

S line series

## S-LINE RUN-OUT GAUGE SYSTEM (FOR LARGE DIAMETER)

T

Capable of measuring up to φ 110mm of work OD.
Concentricity measurement by mounting your current indicator or electronic micrometer to this system.

Measuring instruments ▶ Electronic Micrometer P165
Measuring instruments ▶ Dial Gauge・Indicator P233 ～246
For multiple measurement ▶ Magnetic Base P247 ～255

※Magnet base and indicator not included.

USE
- Concentricity measurement by mounting your current indicator or electronic micrometer to this gaging system

MATERIAL
- Base: Aluminum, Carbon steel ●Roller: Tool steell

FEATURES
- Capable of measuring up to φ110 of work OD
- Up to 4μm accuracy. Highly accurate masurement is possible.
  Smooth measurement with grip handle and timing belt & pulley operation system
  Equipped with work retainer for holding front and rear of workpiece and to enable measurement of axial run-out

SPECIFICATIONS
- Accuracy: within 4μm ●Provided with aluminum carrying case

MEASURING CONDITIONS
- OD of workpiece: φ10～110mm
- Length of workpiece: 5～80mm
- Weight:Less than 6.0Kg
- Shape of workpiece: Cylindrical
- Reference portion of the workpiece must have enough length to clamp to roller

※Measurement error increases at with increasing distance from rollers

※ Please refer to P273 to see parts configuration.

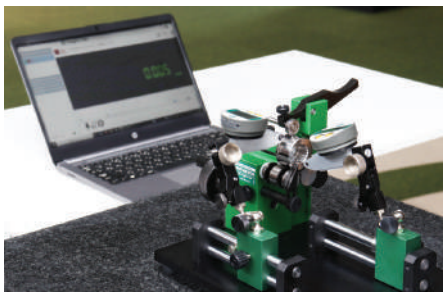
| Order No. | Model No. | Base size (mm) | Roller type※ | Carrier type※ | Weight |
|---|---|---|---|---|---|
| 010216 | ROG-307S | 300 × 160 | Flat Roller | Basic type (no carrier) | 13kg |

S line series

## S-LINE RUN-OUT GAUGE SYSTEM (DOUBLE CARRIER TYPE)

T

Capable of simultaneous measurement for front and rear of workpiece.
Concentricity measurement by mounting your current indicator or electronic micrometer to this system.



Measuring instruments ▶ Electronic Micrometer P165
Measuring instruments ▶ Dial Gauge・Indicator P233 ～246
For multiple measurement ▶ Magnetic Base P247 ～255

USE
- ●Concentricity measurement by mounting your current indicator or electronic micrometer to this system

MATERIAL
- ●Base: Carbon steel ●Roller: Tool steel

FEARTURES
- ●Capable of simultaneous measurement for front and rear of workpiece
- ●Up to 2μm※ accuracy. Highly accurate measurement is possible.
- ※When measuring φ20mm workpiece
- ●Smooth measurement with grip handle and timing belt & pulley operation system
- ●With carrier stopper for repeated measurements at the same location
- ●Carrier with angle fine adjustment for easy zero-setting of measuring instruments
- ●Free movement in XYZ directions enables measurement at the optimum position
- ●Equipped with work retainer for holding front and rear of workpiece and to enable measurement of axial run-out

SPECIFICATIONS
- ●Accuracy: Within 2～3.5μm ※2μm=when measuring φ20mm workpiece
- ●Provided with aluminum carrying case

MEASUARABLE WORK CONDITIONS
- ●OD: φ4-30mm
- ※Precision roller for measurements under φ4 workpiece is also available on request
- ●Length: 5～80mm
- ●Weight:Less than 450g
- ●Shape: Cylindrical
- ●Reference portion of the workpiece must have enough length to clamp to roller
- ※Measurement error increases at with increasing distance from rollers

※ Please refer to P273 to see type configurations

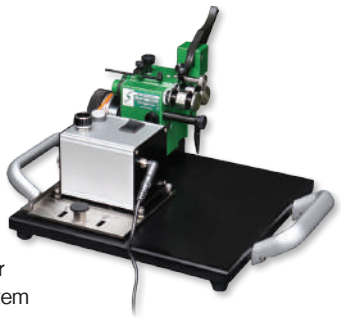
| Order No. | Model No. | Base Size (mm) | Roller Type※ | Callier Type※ | Weight |
|---|---|---|---|---|---|
| 010217 | ROG-241SSW | 236 × 185 | Slit Roller | Shaft Callier | 6.3kg |

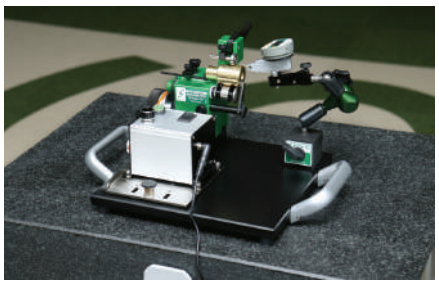
S line series

## S-LINE RUN-OUT GAUGE SYSTEM (MOTOR TYPE)

T

Motor drive enables repeated run-out measurement. (Motor drive or manual is switchable)
Concentricity measurement by mounting your current indicator or electronic micrometer to this system.





Measuring instruments ▶ Electronic Micrometer P165
Measuring instruments ▶ Dial Gauge・Indicator P233 ～246
For multiple measurement ▶ Magnetic Base P247 ～255

USE
- ●Concentricity measurement by mounting your current indicator or electronic micrometer to this system

MATERIAL
- ●Base: Carbon steel ●Roller: Tool steel

FEATURES
- ●Up to 2μm※ accuracy. Highly accurate measurement is possible.
- ※When measuring φ20mm workpiece
- ●When motor drive is on, rotation speed of workpiece is adjustable and rotation direction is switchable (forward/ reverse)
- ●Manual operation with handle by loosening the belt

SPECIFICATIONS
- ●Accuracy: Within 2～3.5μm ※2μm=when measuring φ20mm workpiece
- ●Power: AC100～240V 50/60Hz (Use the included AC adapter)
- ●Power consumption: Max. 5W
- ●Speed setting range of main roller: 5.5～9.5min$^{-1}$ (OD of Main roller: φ21.9mm)
- ●AC adaptor code length: Approx. 1.5m ●Provided with aluminum carrying case

MEASUARABLE WORK CONDITIONS
- ●OD: φ4-30mm
- ※Precision roller for measurements under φ4 workpiece is also available on request
- ●Length: 5～80mm
- ●Weight:Less than 450g
- ●Shape: Cylindricall
- ●Reference portion of the workpiece must have enough length to clamp to roller
- ※Measurement error increases at with increasing distance from rollers

※ Please refer to P273 to see type configurations

| Order No. | Model No. | Base Size (mm) | Roller Type※ | Callier Type※ | Weight |
|---|---|---|---|---|---|
| 010218 | ROG-251SM | 250 × 240 | Slit Roller | No Callier | 10kg |

# RUN-OUT GAUGE SYSTEM P-TYPE

Made in Japan.
Concentricity measurement on granite surface plate or work table by mounting your indicator to this unit.

Measuring instruments▶
Dial Gauge・Indicator
P233
～246

BCPG-380J (P-1)

※Indicator is not included

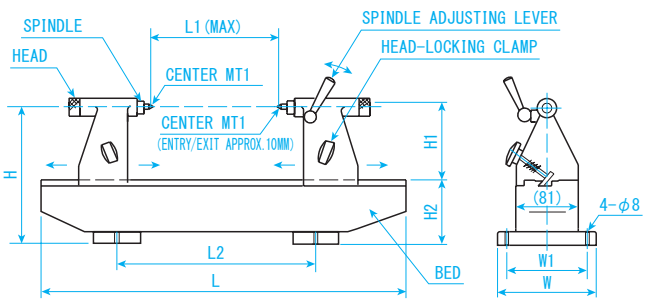
USE
- For eccentricity check of cylindrical work piece and cutting tool

MATERIAL
- Main body: Cast iron(FC250)
- Other: Machine grade carbon steel

FEATURES
- Concentricity measurement on granite surface plate or work table by mounting your indicator to this unit
- Distance between the center and head is short for convenience when measuring cutting tool
- Dedicated stand included
  ※Dial gauge or test indicator is not included

SPECIFICATIONS
- Parallelism between upper surface of the bed and center: within 5μm
- Flatness of the surface of the bed: within 5μm
- Parallelism of side surface of center: 10μm
- Spindle ravel distance: approx. 10mm

## ● DIMENSIONS




Units: mm

| Model No. | L | H | L1 | L2 | H1 | H2 | W | W1 |
|---|---|---|---|---|---|---|---|---|
| BCPG-380J | 380 | 175 | 150 | 200 | 110 | 65 | 120 | 100 |
| BCPG-420J | 420 | 182 | 200 | 240 | | 72 | | |
| BCPG-530J | 530 | 200 | 300 | 280 | | 90 | 130 | 110 |

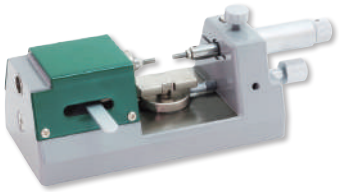
| Order No. | Model No. | Center Distance L1 (mm) | Weight |
|---|---|---|---|
| 010221 | BCPG-380J (P-1) | 150 | 14kg |
| 010222 | BCPG-420J (P-2) | 200 | 16kg |
| 010223 | BCPG-530J (P-3) | 300 | 20kg |

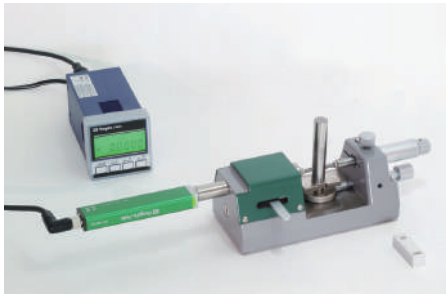
COMPARATOR
GRANITE PRODUCTS
CAST IRON SURFACE PLATE
PARALLEL BLOCK
V BLOCK
SQUARE
STRAIGHT EDGE
PARALLEL CLAMP

## BENCH TABLE FOR OUTSIDE NEW!

Great news for those struggling with in-House inspection of pin gauges and plug gauges!
High-precision measurement of mass-produced products is possible by attaching digital precision indicators or electric micrometers.

High-Precision Indicator▶
Measurement Sensor
P164 ～165





＜ Connection Example ＞
Digital Precision Indicator DPI-1001SC,
Bench table for outside BTO-25C, LCD display for DPI DPI-DRC,
Connection Cable for DPI (L) DPI-CL2C,
Mounting Jig BTO-SPC
BTO-SPC

USE●Enables high-precision measurement of mass-produced items by attaching digital precision indicators or electric micrometers.
MATERIAL●Body: Cast Iron ●Probe Tip: Carbide
FEATURES●An outer diameter measuring device that supports high-precision comparative measurements by attaching optional dial gauges or indicators.
●Compact and portable, allowing for space-saving usage.
●Equipped with a lever for moving the probe back and forth, ensuring consistent and stable measurement force.
●Equipped with a stage that allows for front, back, up, and down adjustments.
Specifications●Table vertical movement range: 13 mm
●Included probe: Parallelism: Within 1.2 μm
Accessories●Probe (BTO-P3C) ●Hexagon Wrenches x2
※This product is a comparative measuring device. Please prepare a master gauge tailored to the dimensions of your workpiece.

| Order No. | Model No. | Measuring Range (mm) | Probe Stroke (mm) | Measuring Force (N) | Weight |
|---|---|---|---|---|---|
| NEW! 152417 | BTO-25C | 0～25 | 25 | Depends on the Indicator. | 1.6kg |

■ Optional Accessory: Mounting Jig 【Required mounting jig for using the precision indicator in combination with Bench table for outside BTO-25C.】

| Order No. | Model No. |
|---|---|
| NEW! 152421 | BTO-SPC |

## BENCH TABLE FOR INSIDE NEW!

MTO products
(BTI-260C)

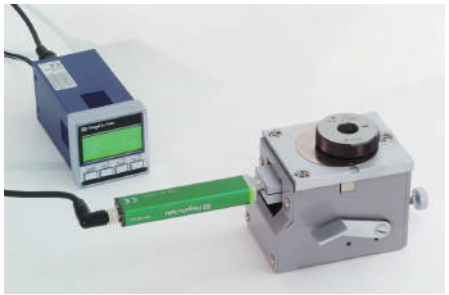
For stable inner diameter measurement of mass-produced products!
Achieve high-precision measurements by conducting comparative measurements using our ring gauges as masters.

Zero pint setting▶
Ring Gauge
P62 ～66

High-Precision Indicator▶
Measurement Sensor
P164 ～165

BTI-23C

BTI-67C



USE●Enables high-precision measurement of mass-produced items by attaching digital precision indicators or electric micrometers.
MATERIAL●Body: Cast Iron ●Probe: Carbon Tool Steel
FEATURES●An inner diameter measuring device that supports high-precision comparative measurements by attaching optional dial gauges or indicators.
●Equipped with a lever for moving the probe back and forth, ensuring consistent and stable measurement force.
●Achieve high-precision measurements by conducting comparative measurements using our ring gauges as masters.
●The BTI-260C comes with four types of probes, making it versatile enough to handle both small and large components.
※This product is a comparative measuring device. Please prepare a ring gauge tailored to the dimensions of your workpiece.

| Order No. | Model No. | Measuring Range (mm) | Probe Stroke (mm) | Measuring Force (N) | Measurement Depth (mm) | Table Size (mm) | Weight |
|---|---|---|---|---|---|---|---|
| NEW! 152419 | BTI-23C | φ2～φ20 (Maximum φ23 with optional probe replacement) | 1 | 1.47 | 0～2 (Maximum φ5 with optional probe replacement) | φ50 (Center plate) | 1.3kg |
| NEW! 152418 | BTI-67C | φ4～φ59 (Maximum φ67 with optional probe replacement) | 3 | 0.98～2.94 | 0～7 (Maximum φ12 with optional probe replacement) | 170×140 | 6kg |
| NEW! 152420 | BTI-260C | φ10～φ260 | 5 | 0.98～2.94 | 0～28 | 303×220 | 30kg |

# MEASURING BENCH SET

Ideal for measuring outer diameter of small precision parts.
Use with electric micrometer or digital indicator.


Master for standard setting ▶ Block Gauge・Pin Gauge P32 ~51
Measuring instruments ▶ Electronic Micrometer P165
Measuring instruments ▶ Digital Indicator P233~235・P238
Parallelism adjustment of anvils ▶ Lapping Machine P279
Rust prevention ▶ Zerust Film for Steel P370

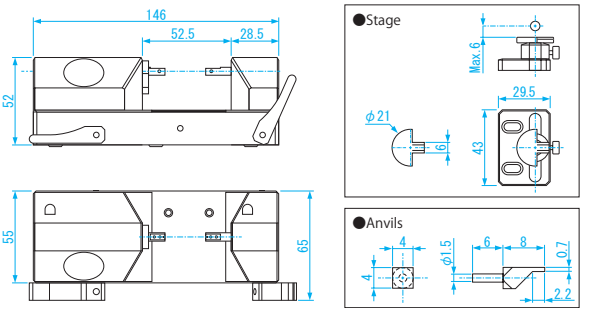
※Indicator NOT included

USE
- Enables measurement of small and precision parts by attaching digital precison indicators (stem diameter:$\phi$8mm) or electric micrometers.

FEATURES
- Compact and light weight for carrying and saving space
- Equipped with two retraction levers
- XYZ stage with fine adjustment
- Adjustable measuring force (0.3~1.0N)
- Bench table can also be installed vertically

SPECIFICATIONS
- Standard probe: blade probe (0.7mm thickness)
- Repeatability: within 1$\mu$m
  - ※This product is a Measuring Comparison Tool and therefore it will require a gauge that has the same presicion measurement for comparison standard
  - ※The probe attachement of this product is in parallel condition when produced in factory.
    Paralle adjusment by using wrapping device (Model LD-SET) is required when the probe angle or the attachement.
    Also the direction of anvil is able to be adjusted to requested specification when ordered.

● DIMENSIONS Units: mm




| Order No. | Model No. | Measuring Range (mm) | Weight |
|---|---|---|---|
| 151771 | BT-10-SET | 0-10 | 1.9kg |

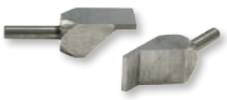
# MEASURING BENCH OPTIONAL ACCESSORIES

## ■ BLADE PROBE FOR MEASURING BENCH

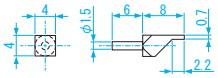
USE
- Replacement knife-shaped probe 0.7mm thickness for BT-10-SET. Standard anvils of BT-10-SET.

MATERIAL
- Carbide

SPECIFICATIONS
- Knife-shaped probe (0.7mm thickness) (2 pcs/set)



● DIMENSIONS Units: mm




Rust prevention ▶ Zerust Film for Steel P370

※ After replacing probe, parallelism adjustment of anvils is required with dedicated lapping device (Model No.LD-SET)

| Order No. | Model No. | Weight (per piece) |
|---|---|---|
| 151774 | BT-KA07 | 1g |

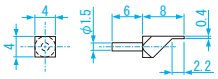
## ■ BLADE PROBE FOR MEASURING BENCH

USE
- Replacement knife-shaped probe 0.4mm thickness for BT-10-SET

MATERIAL
- Carbide

SPECIFICATIONS
- Knife-shaped probe (0.4mm thickness) (2 pcs/set)

● DIMENSIONS Units: mm




※ After replacing probe, parallelism adjustment of anvils is required with dedicated lapping device (Model No.LD-SET)

| Order No. | Model No. | Weight (per piece) |
|---|---|---|
| 151775 | BT-KA04 | 1g |

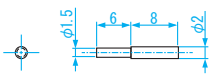
## ■ PIN PROBE FOR MEASURING BENCH

USE
- Replacement cylindrical probe ($\phi$1.5mm) for Bench Table BT-10-SET

MATERIAL
- Carbide

SPECIFICATIONS
- $\phi$1.5mm cylindrical probe (tip: flat face, 2 pcs/set)

● DIMENSIONS Units: mm




※ After replacing probe, parallelism adjustment of anvils is required with dedicated lapping device (Model No.LD-SET)

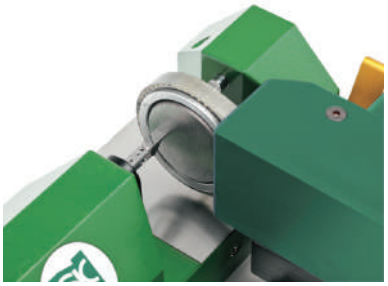
| Order No. | Model No. | Weight (per piece) |
|---|---|---|
| 151776 | BT-CA20 | 0.5g |


COMPARATOR
GRANITE PRODUCTS
CAST IRON SURFACE PLATE
PARALLEL BLOCK
V BLOCK
SQUARE
STRAIGHT EDGE
PARALLEL CLAMP

## LAPPING MACHINE

Worn probe, parallel adjustment after probe repracement

Rust prevention▶
Zerust Film for Steel
P370



USE
- ●After replacement of BENCH TABLE probes, used to parallel adjustment after probe repracement when it worn out

FEATURES
- ●Easy operation with built-in motor

INCLUDED IN SET
- ●Lapping device (Power: AC100V~240V)
- ●Lapping stone LD-LB30×3pcs
- ●Lapping liquid #4-8 LD-LL48
- ●Blow case

### ■ REPLACEMENT LAPPING STONE

| Order No. | Model No. | Material | Weight |
|---|---|---|---|
| 151778 | LD-LB30 | Cast iron | 45g |

### ■ LAPPING LIQUID #4-8

| Order No. | Model No. | Content | Weight |
|---|---|---|---|
| 151779 | LD-LL48 | 30ml | 30g |

| Order No. | Model No. | Weight |
|---|---|---|
| 151777 | LD-SET | 2.4kg |

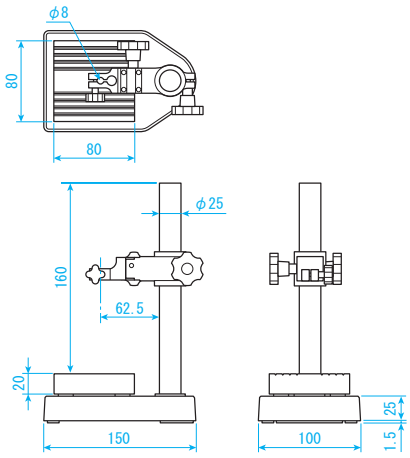
## CERAMIC COMPARATOR STAND

Ceramic measuring table is used! Highly resistant to rust and corrosion, and easy maintenance!

Measuring instruments▶
Electronic Micrometer
P165

Measuring instruments▶
Dial Gauge
P233~235・
P238~241

● DIMENSIONS Units: mm




USE
- ●Provides flat measuring surface for measurement using dial gauge or other instrument

MATERIAL
- ●Base: Cast iron ●Main Post: Stainless steel
- ●Bracket: Aluminum ●Table: Ceramic

SPECIFICATION
- ●Compact and convenient in comparison measurement using dial gauge, etc.
- ●Groove finished table to prevent wringing between the table and objects to be measured
- ●Highly resistant to rust and corrosion, and easy maintenance after use

| Order No. | Model No. | Vertical Stroke Length (mm) | Table Size (mm) | Table Flatness (μm) | Stem Mounting Hole (mm) | Fine Adjust Vertical Stroke Length (mm) | Weight |
|---|---|---|---|---|---|---|---|
| 150995 | WCC-80 | 120 | 80 × 80 | 3 | ϕ8 | 1 and more | 2.0kg |

# GRANITE COMPARATOR STAND

Made in Japan. As a precise measurment table by mounting measuring device such as dial gauge.

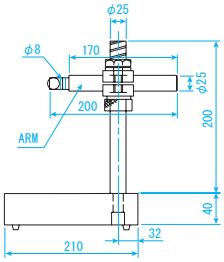
Measuring instruments▶ Electronic Micrometer P165
Measuring instruments▶ Dial Gauge P233~255・P238~241

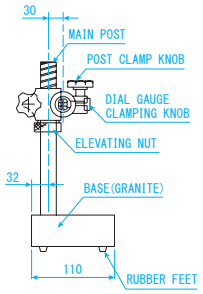
USE
- Provides flat measuring surface for measurement using dial gauge or other instruments
- Suitable for comparison measurement of outer diameter or thickness of round parts

MATERIAL
- Base: Granite
- Main post and bracket: Carbon steel for machine structual use

FEATURES
- This precise measurment table use granite.
- Granite is abrasion resistant. Unlike cast iron, granite does not rust or deteriorate with time.

● DIMENSIONS Units: mm




| Order No. | Model No. | Measuring Range (mm) | Base Flatness (μm) | Dial Indicator Mounting hole (mm) | Weight |
|---|---|---|---|---|---|
| 150969 | GC-110CJ | 0～150 | 5 | ϕ8 | 4.6kg |

# GRANITE COMPARATOR STAND NEW! (151679)

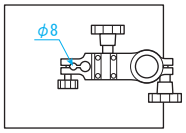
As a precise measurment table by mounting measuring device such as dial gauge

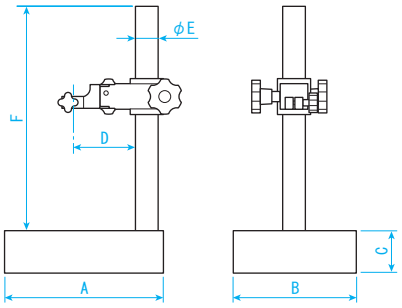
Measuring instruments▶ Electronic Micrometer P165
Measuring instruments▶ Dial Gauge P233~255・P238~241

WGC-150

WGC-400

● DIMENSIONS




USE
- Provides flat measuring surface for measurement using dial gauge or other instruments

MATERIAL
- BASE: Granite ●Main Post: Stainless steel
- Bracket: Aluminum

FEATURES
- This precise measurment table use granite.
- Granite is abrasion resistant.Granite does not rust or deteriorate with time.
- Can be used with a handle attached for easy carrying (WGC-400)

Units: mm

| Model No. | A | B | C | D | E | F |
|---|---|---|---|---|---|---|
| WGC-150 | 150 | 100 | 40 | 62.5 | 25 | 180 |
| WGC-200 | 200 | 150 | 50 | 80 | 30 | 300 |
| WGC-400 | 400 | 500 | 50 | 80 | 30 | 300 |

| Order No. | Model No. | Measuring Range (mm) | Base Flatness (μm) | Dial Indicator Mounting hole (mm) | Fine Adjust Vertical Stroke Length (mm) | Weight |
|---|---|---|---|---|---|---|
| 150953 | WGC-150 | 0～135 | 2 | ϕ8 | 1 and more | 3.0kg |
| 150954 | WGC-200 | 0～250 | | | | 6.9kg |
| NEW! 151679 | WGC-400 | 250 | 4 | | | 34.5kg |

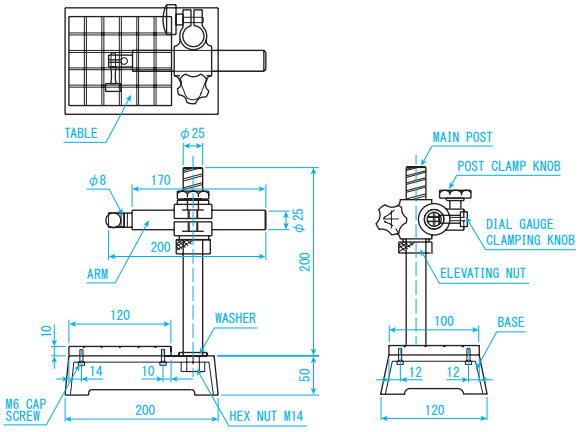
COMPARATOR
GRANITE PRODUCTS
CAST IRON SURFACE PLATE
PARALLEL BLOCK
V BLOCK
SQUARE
STRAIGHT EDGE
PARALLEL CLAMP

## STEEL COMPARATOR STAND

Made in Japan. As a precise measurment table by mounting measuring device such as dial gauge.

Measuring instruments▶ Electronic Micrometer P165
Measuring instruments▶ Dial Gauge P233~255・P238~241
Rust prevention▶ Zerust Film for Steel P370

● DIMENSIONS Units: mm




USE
- ●Provides flat measuring surface for measurement using dial gauge or other instruments
- ●Suitable for comparison measurement of outer diameter or thickness of round parts

MATERIAL
- ●Base: Cast iron(FC250) ●Table: Carbon tool steel

FEATURES
- ●Groove finished hardened table to prevent wringing between the table and objects to be measured

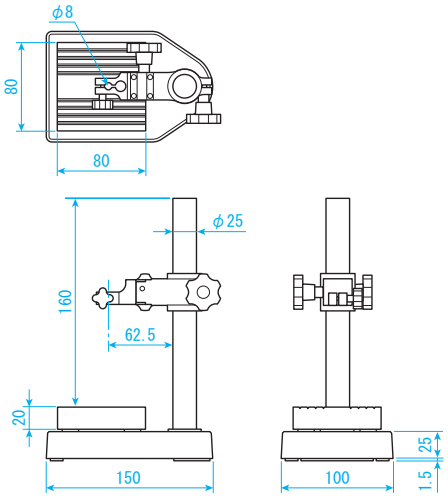
| Order No. | Model No. | Measuring Range (mm) | Table size (mm) | Table Flatness (μm) | Dial Indicator Mounting hole (mm) | Weight |
|---|---|---|---|---|---|---|
| 150968 | SC-120CJ | 0～145 | 120×100 | 5 | ϕ8 | 6kg |

## STEEL COMPARATOR STAND

As a precise measurment table by mounting measuring device such as dial gauge

Measuring instruments▶ Electronic Micrometer P165
Measuring instruments▶ Dial Gauge P233~255・P238~241
Rust prevention▶ Zerust Film for Steel P370

● DIMENSIONS Units: mm




USE
- ●Provides flat measuring surface for measurement using dial gauge or other instruments

MATERIAL
- ●Base: Cast iron ●Main Post: Stainless steel ●Bracket: Aluminum

FEATURES
- ●Compact and convenient in comparison measurement using dial gauge
- ●Groove finished hardened table to prevent wringing between the table and objects to be measured

| Order No. | Model No. | Vertical Stroke Length (mm) | Table Size (mm) | Table Flatness (μm) | Stem Mounting Hole (mm) | Fine Adjust Vertical Stroke Length (mm) | Weight |
|---|---|---|---|---|---|---|---|
| 150955 | WSC-80 | 120 | 80×80 | 3 | ϕ8 | 1 and more | 2.5kg |

S line series

# S-LINE SNAP GAUGE AND SNAP GAUGE STAND

For high precision inspection by using electric micrometer probe and display, and digital indicator (each sold separately)

Master for standard setting▶
Block Gauge・Pin Gauge
P32 ~51

Measuring instruments▶
Electronic Micrometer
P165

Measuring instruments▶
Digital Indicator
P233~235 ・P238

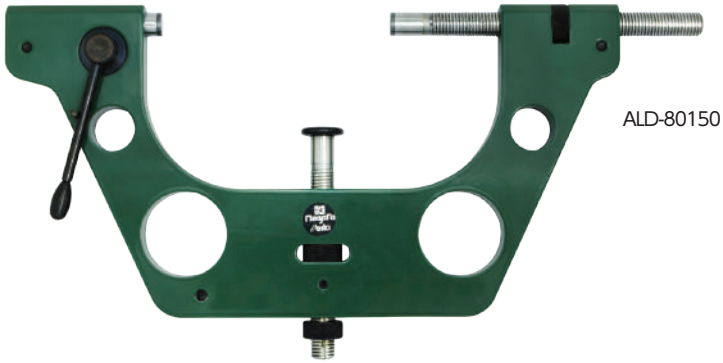
Rust prevention▶
Zerust Film for Steel
P370

ALD-040

ALD-4080

ALD-080

SNAP GAUGE STAND
ASD-1


ALD-80150

USE
- ●Outer measurement

MATERIAL
- ●Body: Steel ●Probe sensor: Carbide steel

FEATURES
- ●Electric micrometer probe EM-PHTS and EM-PHTL or indicators can be attached
- ●Compatible with sensors (for electronic micrometer and liner sensor) a mounting dimension of $\phi$8mm.
- ●Optional stand ASD-1 (sold separately)

SPECIFICATIONS
- ●Parallelism: Under 1$\mu$m ●Flatness: Under 0.2$\mu$m
- ●Repeat accuracy: Under 0.5$\mu$m ●Sensor mount: $\phi$8mm

| Order No. | Model No. | Measuring range (mm) | Probe sensor movement range (mm) | Measurement unit (mm) | Weight |
|---|---|---|---|---|---|
| 151901 | ALD-040 | 0-35 | 6 | $\phi$ 2 L6 | 380g |
| 151905 | ALD-040W | 0-35 | | $\phi$ 8 | 380g |
| 151902 | ALD-4080 | 35-75 | | $\phi$ 9 | 630g |
| 151903 | ALD-080 | 0-70 | | | 650g |
| 151904 | ALD-80150 | 75-140 | | $\phi$ 11 | 1.78kg |

■ SNAP GAUGE STAND

| Order No. | Model No. | Material | Base size (mm) | Applicable Models | Weight |
|---|---|---|---|---|---|
| 151900 | ASD-1 | Steel | 80 × 120 | ALD-040, ALD-040W, ALD-4080, ALD-080, ALD-80150 | 1.3kg |

COMPARATOR
GRANITE PRODUCTS
CAST IRON SURFACE PLATE
PARALLEL BLOCK
V BLOCK
SQUARE
STRAIGHT EDGE
PARALLEL CLAMP

# GRANITE SURFACE PLATE

T (Granite surface plate) PDI O (Granite surface plate)

Granite does not rust or deteriorate with time

## GRANITE SURFACE PLATE

USE
- ●Measurement of flatness, parallelism and squareness
- ●For tooling set up, precision inspection etc.

MATERIAL
- ●Granite

FEATURES
- ●Granite is abrasion resistant and unlike cast iron, granite does not rust or deteriorate with time
- ●Equivalent to JIS Grade 0

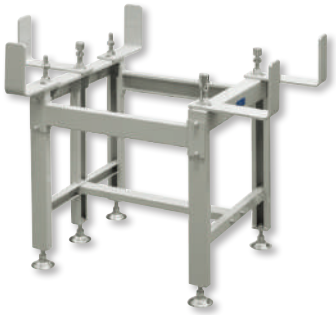
G6060

Plate protection▶ Granite Surface Plate Cover P285
Leveling of surface plate▶ LEVELLING JACK P285
Cleaning surface of granite surface plate▶ GRANITE PLATE CLERNER P288
Slip improvement and abrasion resistance▶ GRANITE SURFACE PLATE LIQUID WAX P288

| Order No. | Model No. | W × D × H (mm) | Flatness (μm) | Weight |
|---|---|---|---|---|
| 151102 | G1520 | 150 × 200 × 50 | 3 | 5kg |
| 151103 | G2020 | 200 × 200 × 50 | | 7kg |
| 151104 | G2525 | 250 × 250 × 70 | | 14kg |
| 151001 | G3030 | 300 × 300 × 100 | | 29kg |
| 151002 | G3045 | 300 × 450 × 100 | | 43kg |
| 151007 | G5050 | 500 × 500 × 100 | 4 | 79kg |
| 151003 | G4560 | 450 × 600 × 100 | | 85kg |
| 151008 | G5075 | 500 × 750 × 130 | 5 | 152kg |
| 151004 | G6060 | 600 × 600 × 130 | | 146kg |
| 151005 | G75100 | 750 × 1000 × 150 | 7 | 350kg |
| 151006 | G10100 | 1000 × 1000 × 150 | 8 | 466kg |
| 151000 | G10150 | 1000 × 1500 × 200 | 9 | 930kg |
| 151105 | G10200 | 1000 × 2000 × 200 | 12 | 1240kg |

## GRANITE SURFACE PLATE STEEL STAND

GT-5075J + G5075



GT-75100J

＜ Combination examples ＞

USE
- ●This is steel stand manufactured according to the size of our GRANITE SURFACE PLATE

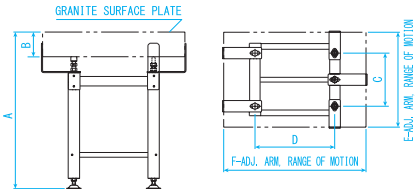
MATERIAL
- ●Hot rolled mild steel plate (Gray painted finish)

FEATURES
- ●Assembly type
- ●Leveling bolts for horizontal adjustment
- ●With anti-shake arm

※Please prepare spanner (24mm, 27mm) for assembly

Anti-tip auxiliary plate for granite surface plate▶ Anchoring Plate P284

● DIMENSIONS




Units: mm

| Model No. | A | B | C | D | E | F |
|---|---|---|---|---|---|---|
| GT-5050J | Approx. 800～850 | 100 | 280 | 280 | 485～515 | 485～515 |
| GT-4560J | Approx. 800～850 | 100 | 252 | 336 | 435～465 | 585～615 |
| GT-5075J | Approx. 800～850 | 130 | 280 | 420 | 485～515 | 735～765 |
| GT-6060J | Approx. 800～850 | 130 | 336 | 336 | 585～615 | 585～615 |
| GT-75100J | Approx. 800～850 | 150 | 420 | 560 | 735～765 | 985～1015 |
| GT-10100J | Approx. 800～850 | 150 | 560 | 560 | 985～1015 | 985～1015 |
| GT-10150J | Approx. 800～850 | 200 | 560 | 840 | 985～1015 | 1485～1515 |

| Order No. | Model No. | Applicable Surface Plate Size (mm) | Weight |
|---|---|---|---|
| 151241 | GT-5050J | 500 × 500 × 100 | 17kg |
| 151242 | GT-4560J | 450 × 600 × 100 | 17kg |
| 151243 | GT-5075J | 500 × 750 × 130 | 18kg |
| 151244 | GT-6060J | 600 × 600 × 130 | 18kg |
| 151245 | GT-75100J | 750 × 1000 × 150 | 30.5kg |
| 151246 | GT-10100J | 1000 × 1000 × 150 | 32.5kg |
| 151247 | GT-10150J | 1000 × 1500 × 200 | 35.5kg |

# GRANITE SURFACE PLATE STAND WITH CASTER

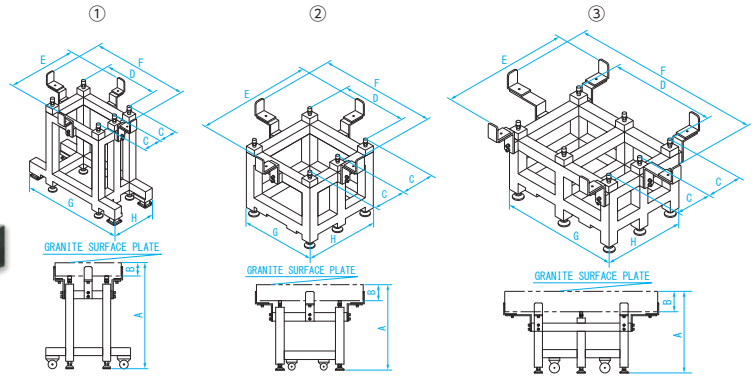
Anti-tip auxiliary plate for granite surface plate▶
Anchoring Plate
P284

## With heavy duty casters for smooth moving

GTW-5075J

GTW-5075J + G5075

● DIMENSIONS




Units: mm

| DIMENSIONS | Model No. | A | B | C | D | G | H |
|---|---|---|---|---|---|---|---|
| ① | GTW-5050J | Approx. 800～850 | 100 | 140 | 280 | 640 | 330 |
| ① | GTW-4560J | Approx. 800～850 | 100 | 126 | 336 | 696 | 302 |
| ① | GTW-6060J | Approx. 800～850 | 130 | 168 | 336 | 696 | 386 |
| ① | GTW-5075J | Approx. 800～850 | 130 | 140 | 420 | 780 | 330 |
| ② | GTW-75100J | Approx. 800～850 | 150 | 210 | 560 | 620 | 480 |
| ② | GTW-10100J | Approx. 800～850 | 150 | 280 | 560 | 620 | 620 |
| ③ | GTW-10150J | Approx. 800～850 | 200 | 280 | 420 | 915 | 635 |
| ③ | GTW-10200J | Approx. 800～850 | 200 | 280 | 560 | 1195 | 635 |

< Combination examples >

USE

●This is steel stand manufactured according to the size of our GRANITE SURFACE PLATE

MATERIAL

●Square steel pipe for general structure(Gray painted finish)

FEATURES

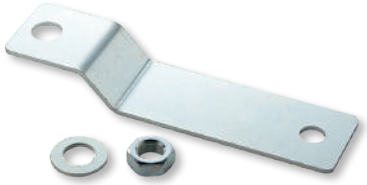
●The legs are pre-completed, so there is little shaking and robust.
●Casters for eazy movement
●Leveling bolts for horizontal adjustment
●With anti-shake arm

| Order No. | Model No. | Surface Plate Size (mm) | Anti-shake arm range of motion (mm) E | Anti-shake arm range of motion (mm) F | Weight |
|---|---|---|---|---|---|
| 151253 | GTW-5050J | 500 × 500 × 100 | Approx. 485～515 | Approx. 485～515 | 29kg |
| 151254 | GTW-4560J | 450 × 600 × 100 | Approx. 590～615 | Approx. 440～465 | 30kg |
| 151255 | GTW-6060J | 600 × 600 × 130 | Approx. 590～615 | Approx. 590～615 | 33kg |
| 151256 | GTW-5075J | 500 × 750 × 130 | Approx. 735～765 | Approx. 485～515 | 31kg |
| 151257 | GTW-75100J | 750 × 1000 × 150 | Approx. 980～1020 | Approx. 730～770 | 43kg |
| 151258 | GTW-10100J | 1000 × 1000 × 150 | Approx. 980～1040 | Approx. 980～1040 | 50kg |
| 151259 | GTW-10150J | 1000 × 1500 × 200 | Approx. 1480～1540 | Approx. 980～1040 | 77kg |
| 151260 | GTW-10200J | 1000 × 2000 × 200 | Approx. 1980～2040 | Approx. 980～1040 | 102kg |

# ANCHORING PLATE

Steel stand for SK granite surface plate▶
Granite Surface Plate Steel Stand
P283～284

## Prevention of GRANITE SURFACE PLATE from tipping over



USE

Fall prevention aid for GRANITE SURFACE PLATE

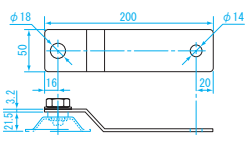
MATERIAL

●Standard steel plate

SPECIFICATIONS

●4 pcs
●Applicable steel stand model:
GT-4560J, GT-5050J, GT-5075J, GT-6060J, GT-75100J, GT-10100J, GT-10150J, GW-4560J, GTW-5050J, GTW-5075J, GTW-6060J, GTW-75100J, GTW-10100J, GTW-10150J, GTW-10200J

● DIMENSIONS Units: mm



| Order No. | Model No. |
|---|---|
| 151250 | GPL-13 |

COMPARATOR
GRANITE PRODUCTS
CAST IRON SURFACE PLATE
PARALLEL BLOCK
V BLOCK
SQUARE
STRAIGHT EDGE
PARALLEL CLAMP

# LEVELLING JACK

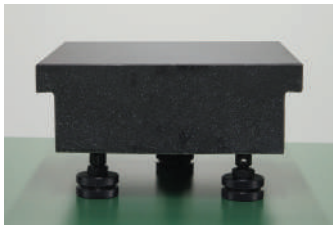
Levelling for smaller granite surface plate

Precision surface plate▶ Granite Surface Plate P283
T-shape granite surface plate▶ Granite Surface Plate T type P286
Rust prevention▶ Zerust Film for Steel P370

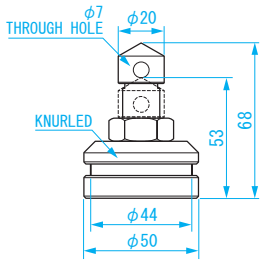
USE
- For levelling of smaller SK GRANITE SURFACE PLATE which does not have its dedicated stand

MATERIAL
- Main body: Carbon steel for machine structural use
- Fixing nut: Carbon steel for cold heading

FEATURES
- To be used 3pcs in 1 set
- Easy for precise levelling by through-adjustment hole
- With nut for fixing the height after adjustment



● DIMENTIONS Units: mm



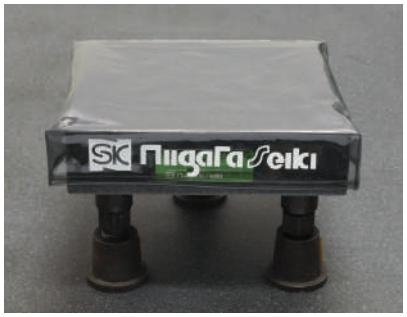

| Order No. | Model No. | Quantity | Applicable Product | Stroke (mm) | Allowable Load (N) | Weight / Each |
|---|---|---|---|---|---|---|
| 150648 | LVJ-1 | 1 | G1520・G2020・G2525 G3030・G3045・G5050 G3030T・G3045T | 15 | 16,520 ※ When using 1 set | 417g |
| 150649 | LVJ-3 | 3 (1 set) | | | | |

# GRANITE SURFACE PLATE COVER

Protect the plate from scratches or dust. Simply place the cover over it at the end of the workday or when not in use to protect it.

Precision surface plate▶ Granite Surface Plate P283
T-shape granite surface plate▶ Granite Surface Plate T type P286

CV-G3030




USE
- Protected surface plate from scratches or dust while not in use
- Suitable for covering board materials

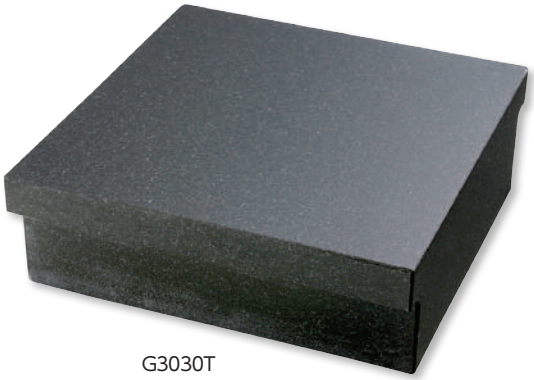
MATERIAL
- Flexible PVC

| Order No. | Model No. | Applicable surface plate |
|---|---|---|
| 150630 | CV-G1520 | G1520 |
| 150631 | CV-G2020 | G2020 |
| 150632 | CV-G2525 | G2525 |
| 150633 | CV-G3030 | G3030, G3030T |
| 150634 | CV-G3045 | G3045, G3045T |
| 150635 | CV-G5050 | G5050 |
| 150636 | CV-G4560 | G4560, S4560C |
| 150637 | CV-G5075 | G5075 |
| 150638 | CV-G6060 | G6060 |
| 150639 | CV-S3030 | S3030C |
| 150640 | CV-S5050 | S5050C |

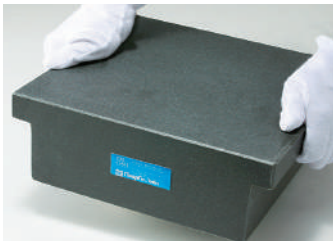
# GRANITE SURFACE PLATE T TYPE

T PDI

## Convenient size for portable use



G3030T



T-shape for easy lifting


Plate protection▶ Granite Surface Plate Cover P285

Leveling of surface plate▶ LEVELLING JACK P285

Cleaning surface of granite surface plate▶ GRANITE PLATE CLERNER P288

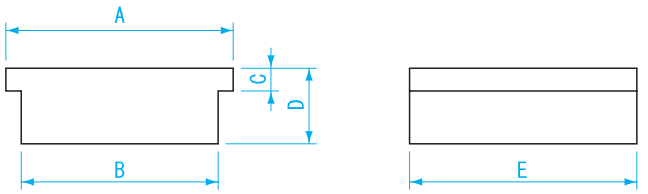
Slip improvement and abrasion resistance▶ GRANITE SURFACE PLATE LIQUID WAX P288


USE
- ●Measurement of flatness, parallelism and squareness
- ●For tooling set up, precision inspection, etc.

MATERIAL
- ●Granite

FEATURES
- ●T-shape for convenient to lift and move
- ●Granite is abrasion resistant and unlike cast iron, granite does not rust or deteriorate with time

● DIMENSIONS




Units: mm

| Model No. | A | B | C | D | E |
|---|---|---|---|---|---|
| G3030T | 300 | 260 | 30 | 100 | 300 |
| G3045T | 450 | 410 | 30 | 100 | 300 |

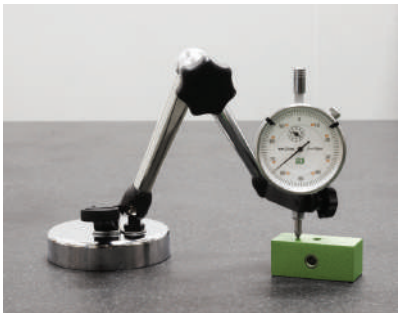
| Order No. | Model No. | W × D × H (mm) | Flatness (μm) | Weight |
|---|---|---|---|---|
| 150710 | G3030T | 300 × 300 × 100 | 3.5 | 22kg |
| 150711 | G3045T | 300 × 450 × 100 | 4.5 | 40kg |

# VACUUM CLAMPING BASE

## Dial gauge or test indicator can be used on the precision surface plate


Measuring instruments▶ Dial Gauge・Indicator P233 ～246

Precision surface plate▶ Granite Surface Plate P283

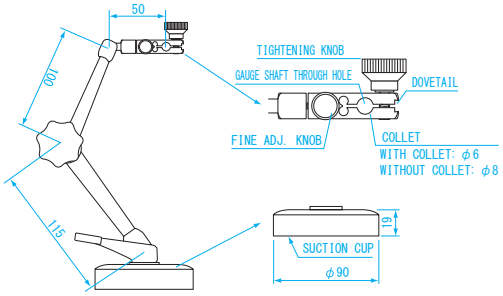
USE
- ●For mounting dial gauge and dial indicator

MATERIAL
- ●Main body: Aluminum
- ●Suction cup: Rubber

FEATURES
- ●Suction cup for fixing to non-magnetic surface such as granite surface plate

SPECIFICATIONS
- ●Holding force: **Approx. 200N**
- ●Stem holder: ϕ6, ϕ8mm
- ●With dovetail groove

● DIMENSIONS Units: mm




| Order No. | Model No. | Base Dimension (mm) | Weight |
|---|---|---|---|
| 011756 | VB-200 | ϕ90×19 | 540g |

# GRANITE SURFACE PLATE WITH THREADED INSERTS

Screw holes in the granite surface.
Fixtures and tools can be fixed onto it.

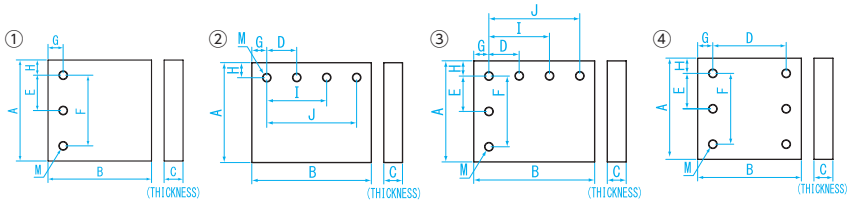
※ Customization of screw hole location and size is also available on request.

Cleaning surface of granite surface plate▶ GRANITE PLATE CLERNER P288
Slip improvement and abrasion resistance▶ GRANITE SURFACE PLATE LIQUID WAX P288

3030I-6

〈Example of use〉

● DIMENSIONS




Units: mm

| DIMENSIONS | Model No. | A | B | C | D | E | F | G | H | I | J | M |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ① | 2020I-3 | 200 | 200 | 30 | – | 70 | 140 | 30 | 30 | – | – | M6×P1.0(D)12mm |
| ④ | 2020I-6 | 200 | 200 | 30 | 140 | 70 | 140 | 30 | 30 | – | – | M6×P1.0(D)12mm |
| ② | 2025I-4 | 200 | 250 | 40 | 60 | – | – | 30 | 30 | 120 | 180 | M6×P1.0(D)12mm |
| ③ | 2025L-6 | 200 | 250 | 40 | 60 | 70 | 140 | 30 | 30 | 120 | 180 | M6×P1.0(D)12mm |
| ② | 2530I-4 | 250 | 300 | 40 | 80 | – | – | 30 | 30 | 160 | 240 | M6×P1.0(D)12mm |
| ③ | 2530L-6 | 250 | 300 | 40 | 80 | 95 | 190 | 30 | 30 | 160 | 240 | M6×P1.0(D)12mm |
| ① | 3030I-3 | 300 | 300 | 40 | – | 120 | 240 | 30 | 30 | – | – | M6×P1.0(D)12mm |
| ④ | 3030I-6 | 300 | 300 | 40 | 240 | 120 | 240 | 30 | 30 | – | – | M6×P1.0(D)12mm |

※ Positional tolerance of screw holes: ± 1mm

USE
Fixed with clamps as jig plates for inspection

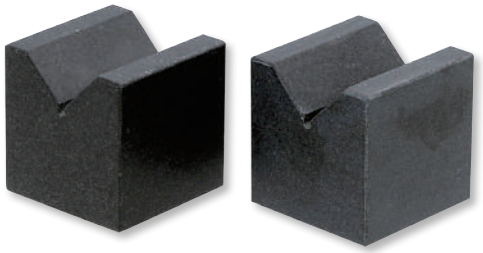
MATERIAL
- Granite
- Screw holes: Stainless steel

FEATURES
- Screw holes in the surface of the plate.
  Granite is abrasion resistant and unlike cast iron, granite does not rust or deteriorate with time.

※ Customization of screw hole location and size is also available on request

| Order No. | Model No. | W × D × H (mm) | Flatness (μm) | Weight |
|---|---|---|---|---|
| 151170 | 2020I-3 | 200×200×30 | 5 | 4kg |
| 151171 | 2020I-6 | | | |
| 151172 | 2025I-4 | 200×250×40 | | 6kg |
| 151173 | 2025L-6 | | | |
| 151174 | 2530I-4 | 250×300×40 | | 9kg |
| 151175 | 2530L-6 | | | |
| 151176 | 3030I-3 | 300×300×40 | | 11kg |
| 151177 | 3030I-6 | | | |

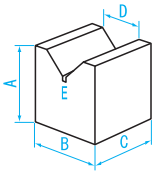
# GRANITE V BLOCKS (MATCHED PAIR)



GV-75

Cleaning surface of granite surface plate▶ GRANITE PLATE CLERNER P288
Slip improvement and abrasion resistance▶ GRANITE SURFACE PLATE LIQUID WAX P288

● DIMENSIONS




Units: mm

| Model No. | A | B | C | D | E※ |
|---|---|---|---|---|---|
| GV-50 | 50 ± 1 | | | 40 ± 1 | Approx. 4 |
| GV-75 | 75 ± 1 | | | 50 ± 1 | Approx. 4 |
| GV-100 | 100 ± 1 | | | 63 ± 1 | Approx. 6 |
| GV-150 | 150 ± 1 | | | 110 ± 1 | Approx. 8 |

※ Reference value

USE
- Tools for precise marking

MATERIAL
- Granite

FEATURES
- Granite is abrasion resistant. Unlike cast iron, granite does not rust or deteriorate with time.
- 2 pcs (matched pair)

| Order No. | Model No. | Nominal size (mm) | V groove squareness Squareness of paralles sides | Weight (per block) |
|---|---|---|---|---|
| 150961 | GV-50 | 50 | 5μm／100mm | 330g |
| 150962 | GV-75 | 75 | | 1.2kg |
| 150963 | GV-100 | 100 | | 2.8kg |
| 150964 | GV-150 | 150 | | 9.1kg |

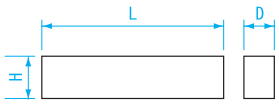
## GRANITE STRAIGHT EDGE

For use as a straight ruler, or checking straightness on a granite surface plate. Granite does not rust or deteriorate with time.

Cleaning surface of granite surface plate▶ GRANITE PLATE CLERNER P288
Slip improvement and abrasion resistance▶ GRANITE SURFACE PLATE LIQUID WAX P288

GS-750

● DIMENSIONS




Units: mm

| Model No. | L | H | D |
|---|---|---|---|
| GS-750 | 790 ± 2 | 100 ± 1 | 50 ± 1 |
| GS-1000 | 1040 ± 3 | 125 ± 1 | 60 ± 1 |

USE
- ●For inspecting flatness of standards

MATERIAL
- ●Granite

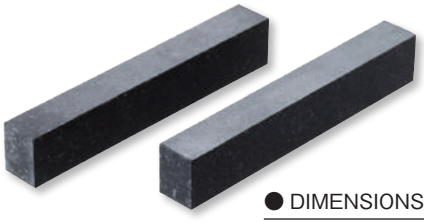
FEATURES
- ●Granite is abrasion resistant. Unlike cast iron, granite does not rust or deteriorate with time.

| Order No. | Model No. | Nominal Size (mm) | Straightness (μm) | Parallelism (μm) | Weight |
|---|---|---|---|---|---|
| 150951 | GS-750 | 750 | 3 | 5 | 12kg |
| 150952 | GS-1000 | 1000 | 4 | 6 | 25kg |

## GRANITE PARALLEL BLOCKS (MATCHED PAIR)

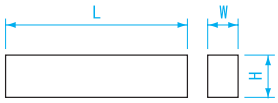
For use as parallel table when measuring on a surface plate. Granite does not rust or deteriorate with time.

Cleaning surface of granite surface plate▶ GRANITE PLATE CLERNER P288
Slip improvement and abrasion resistance▶ GRANITE SURFACE PLATE LIQUID WAX P288



GP-150

● DIMENSIONS




Units: mm

| Model No. | L | W | H |
|---|---|---|---|
| GP-150 | 150 ± 1 | 20 ± 1 | 25 ± 1 |
| GP-200 | 200 ± 1 | 20 ± 1 | 40 ± 1 |
| GP-300 | 300 ± 1 | 35 ± 1 | 50 ± 1 |

USE
- ●For parallel unit

MATERIAL
- ●Granite

FEATURES
- ●Granite is abrasion resistant. Unlike cast iron, granite does not rust or deteriorate with time.
- ●Precision surface on four sides ●2 pcs(matched pair)

| Order No. | Model No. | Nominal Size (mm) | Squareness/Parallelism (μm) | Weight (per block) |
|---|---|---|---|---|
| 150965 | GP-150 | 150 | 1.5 | 230g |
| 150966 | GP-200 | 200 | 2 | 490g |
| 150967 | GP-300 | 300 | 3 | 1.6kg |

## GRANITE PLATE CLERNER

Clean dirty measurement surface

Precision surface plate▶ Granite Products P280・P283～288

GSC-300Y

GSC-1000Y

USE
- ●For cleaning surface of granite surface plate

INGREDIENT
- ●Sodium linear alkylbenzene sulfonate and others

FEARTURES
- ●Removes dirt and grease without damaging stone surface

SPECIFICATIONS
- ●pH: 6～8 (neutral)

HOW TO USE
- ●Estimated usage: 8 squirts per 1㎡ or proper amount on wiping cloth

| Order No. | Model No. | Content |
|---|---|---|
| 150641 | GSC-300Y | 300mL |
| 150642 | GSC-1000Y | 1000mL |

## GRANITE SURFACE PLATE LIQUID WAX NEW!

For prevention of dirt adhesion and protection of granite surface plate surfaces!

Precision surface plate▶ Granite Products P280・P283～288

USE
- ●The surface of the granite surface plate can be protected.

INGREDIENT
- ●Carnauba wax etc.

FEATURES
- ●Protects the surface of the granite surface plate from dirt.
- ●Dirt can be easily removed even if it adheres to the surface.
- ●Effective in preventing wear of the granite surface plate, measuring instruments, and gauges.

SPECTIONS
- ●PH: liquid state ●pH: Approx. 6

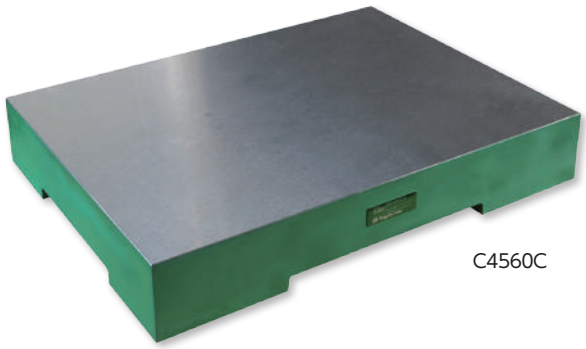
HOW TO USE
- ●wipe off with the proper amount by weste (cloth)

| Order No. | Model No. | Content |
|---|---|---|
| NEW! 150644 | GW-300Y2 | 300mL |

## CAST IRON SURFACE PLATE

For marking work and tooling set up.
Made with cast iron material for tasks requiring magnetic base.

Plate protection▶
Granite Surface Plate Cover
P285



C4560C

USE
- For centering and marking of workpiece, tooling set up etc.

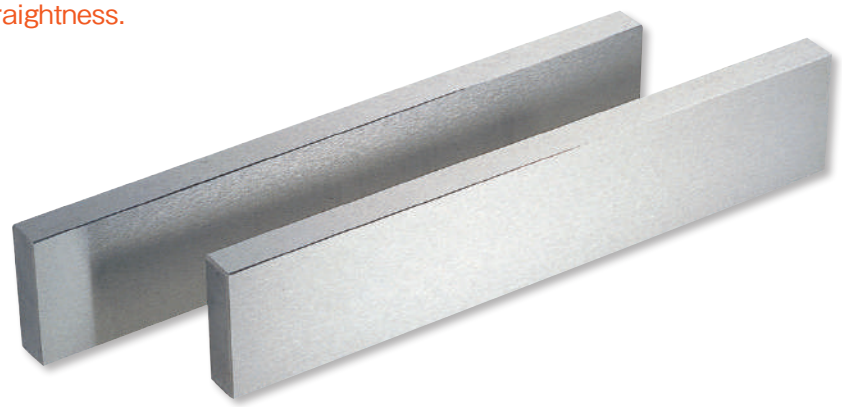
MATERIAL
- Cast iron

FEATURES
- Machine finish

| Order No. | Model No. | W × D × H (mm) | Flatness (μm) | Weight |
|---|---|---|---|---|
| 150716 | C5050C | 500 × 500 × 75 | 57 | 45kg |
| 150717 | C4560C | 600 × 450 ×100 | 60 | 59kg |

## STEEL PARALLEL BLOCKS (MATCHED PAIR)

2 pcs (matched pair). For high-precision machining.
Can be maintain parallelism and straightness.



USE
- To be placed between machine table and work piece or fixture during high-precision machining to maintain parallelism and straightness
- Indispensable for inspection and layout work or for miscellaneous setup work in grinding, marking, drilling and milling, in addition to protecting machinery from blade damage

MATERIAL
- Carbon steel for machine structual use

FEATURES
- Completely hardened and high ground finish
- 2 pcs (matched pair)

SPECIFICATIONS
- Parallelism/ Straightness accuracy: 5μm
- Hardness: HV510~590

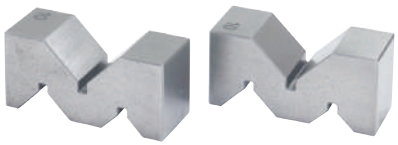
| Order No. | Model No. | Dimension (mm) | Weight (per block) |
|---|---|---|---|
| 150651 | P-1 | 6 × 10 × 150 | 70g |
| 150652 | P-2 | 6 × 15 × 150 | 100g |
| 150653 | P-3 | 6 × 20 × 150 | 150g |
| 150654 | P-4 | 10 × 15 × 150 | 200g |
| 150655 | P-5 | 10 × 20 × 150 | 235g |
| 150656 | P-6 | 15 × 20 × 150 | 355g |
| 150657 | P-7 | 15 × 25 × 150 | 440g |
| 150658 | P-8 | 15 × 20 × 230 | 545g |
| 150659 | P-9 | 15 × 25 × 230 | 680g |
| 150660 | P-10 | 20 × 25 × 230 | 900g |

| Order No. | Model No. | Dimension (mm) | Weight (per block) |
|---|---|---|---|
| 150661 | P-11 | 20 × 35 × 230 | 1.3kg |
| 150662 | P-12 | 20 × 25 × 300 | 1.2kg |
| 150663 | P-13 | 20 × 30 × 300 | 1.4kg |
| 150664 | P-14 | 25 × 30 × 300 | 1.8kg |
| 150665 | P-15 | 25 × 40 × 300 | 2.4kg |
| 150666 | P-16 | 25 × 50 × 300 | 3kg |
| 150667 | P-17 | 30 × 40 × 300 | 2.9kg |
| 150668 | P-18 | 30 × 50 × 300 | 3.6kg |
| 150669 | P-19 | 40 × 50 × 300 | 4.8kg |
| 150670 | P-20 | 40 × 75 × 300 | 7.1kg |

# CAST IRON V BLOCKS (MATCHED PAIR) A TYPE • B TYPE NEW!

2 pcs per unit. For marking work or fixture of cylindrical parts during inspection.

For marking work▶ Scribes P324 ~325
Rust prevention▶ Zerust Film for Steel P370



DCV-50AN

DCV-75BN

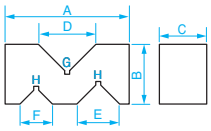
USE
- For marking work and fixture of cylindrical parts

MATERIAL
- Cast iron

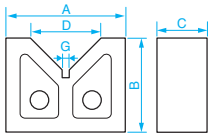
FEATURES
- Machine finish
- 2 pcs per unit
- Made in Japan

● DIMENSIONS

■A Type




■B Type




Units: mm

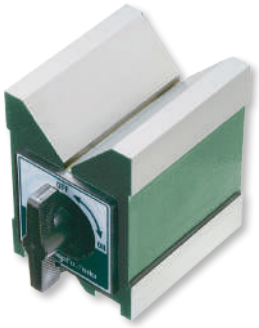
| Model No. | A | B | C | D | E | F | G | H |
|---|---|---|---|---|---|---|---|---|
| DCV-50AN | 50 | 24 | 19 | 24 | 17 | 13 | 2.5 | 2.5 |
| DCV-75AN | 75 | 35 | 24 | 37 | 24 | 16 | 4 | 4 |
| DCV-100AN | 100 | 52 | 33 | 50 | 30 | 20 | 4 | 4 |
| DCV-125AN | 125 | 69 | 44 | 63 | 37 | 26 | 5 | 5 |
| DCV-150AN | 150 | 80 | 50 | 75 | 45 | 30 | 5 | 5 |
| DCV-200AN | 200 | 110 | 70 | 100 | 60 | 40 | 6 | 6 |
| DCV-75BN | 76 | 60 | 32 | 45 | – | – | 4 | – |
| DCV-100BN | 102 | 67 | 41 | 55 | – | – | 5 | – |
| DCV-125BN | 127 | 79 | 51 | 60 | – | – | 5 | – |
| DCV-150BN | 152 | 89 | 63 | 80 | – | – | 5 | – |

| Order No. | Model No. | Type | Nominal Size (mm) | Parallelism between base and V groove/ Paired V groove height tolerance (mm) | Weight (2pcs/ set) |
|---|---|---|---|---|---|
| NEW! 150021 | DCV-50AN | A type | 50 | 0.05 | 300g |
| NEW! 150022 | DCV-75AN | | 75 | | 700g |
| NEW! 150023 | DCV-100AN | | 100 | | 2.2kg |
| NEW! 150024 | DCV-125AN | | 125 | | 4.8kg |
| NEW! 150025 | DCV-150AN | | 150 | | 8kg |
| NEW! 150026 | DCV-200AN | | 200 | | 19.4kg |
| NEW! 150027 | DCV-75BN | B type | 75 | | 1.5kg |
| NEW! 150028 | DCV-100BN | | 100 | | 2.5kg |
| NEW! 150029 | DCV-125BN | | 125 | | 3.4kg |
| NEW! 150030 | DCV-150BN | | 150 | | 8.1kg |

# MAGNETIC V-BLOCK

Magnet can be turned ON and OFF. For using precise marking, or use as a holder of cylindrical parts during inspection.

Rust prevention▶ Zerust Film for Steel P370



MV-80G

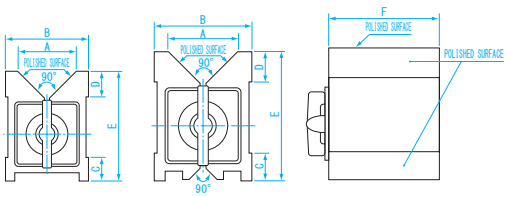
USE
- Tool for precise marking
- For holding cylindrical parts

MATERIAL
- Body: Cast iron
- Magnet: Ferrite

FEATURES
- Squareness / Parallelism: 0.025mm/100mm
- The magnet can be turned ON/OFF by lever operation
- Ground finish

※Due to individual differences, please be careful when using a pair of 2 pcs.

● DIMENSIONS




MV-70G　MV-80G ~ MV-120G

Units: mm

| Model No. | A | B | C | D | E | F |
|---|---|---|---|---|---|---|
| MV-70G | 38 | 60 | 10 | 10 | 73 | 70 |
| MV-80G | 50 | 70 | 20 | 22 | 95 | 80 |
| MV-100G | 50 | 70 | 20 | 22 | 95 | 100 |
| MV-120G | 50 | 70 | 20 | 22 | 95 | 120 |

※Magnetic power when used with φ20mm cylindrical workpiece

| Order No. | Model No. | H × W × D (mm) | Magnetic Power ※ N | Weight |
|---|---|---|---|---|
| 151181 | MV-70G | 73×60× 70 | 80 | 1.7kg |
| 151178 | MV-80G | 95×70× 80 | 140 | 2.9kg |
| 151179 | MV-100G | 95×70×100 | 180 | 3.7kg |
| 151180 | MV-120G | 95×70×120 | 200 | 4.5kg |

# STEEL SQUARE (AA TYPE)

T PDI MTO products
1st grade, hardened
400mm or larger

Hardened. Convenient for measuring the squareness of any machining process and for marking work.

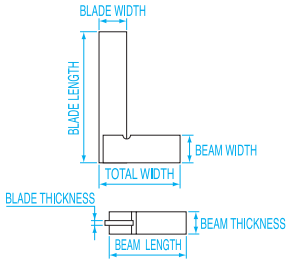
Rust prevention▶
Zerust Film for Steel
P370

## FIRST GRADE(Hardened)

Corner

AA-F150

● DIMENSIONS




USE
- ●Measurement of squareness

MATERIAL
- ●Carbon steel for machine structual use (hardened measuring face)
- ●Hardness: over HV450

FEATURES
- ●Accuracy equivalent to JIS B 7526 (※exceeds JIS)
- ●Hardened measuring face for abrasion resistance
- ●All hardened, first grade squares are provided with inspection report

Squareness $\pm(10+\frac{L}{20})\ \mu m$ (L: Nominal Size)

| Order No. | Model No. | Nominal Size (mm) | Blade Length (mm) | Blade Width (mm) | Blade Thickness (mm) | Beam Length (mm) | Beam Width (mm) | Beam Thickness (mm) | Squareness Accuracy (±mm) | Weight |
|---|---|---|---|---|---|---|---|---|---|---|
| 002101 | AA-F50 | ※50 | 50 | 16 | 2 | 37 | 16 | 10 | 0.013 | 54g |
| 002102 | AA-F75 | 75 | 75 | | | 50 | | | 0.014 | 72g |
| 002103 | AA-F100 | 100 | 100 | 20 | 2.5 | 70 | 18 | 12 | 0.015 | 150g |
| 002105 | AA-F150 | 150 | 150 | 24 | 3 | 100 | 22 | 18 | 0.018 | 365g |
| 002107 | AA-F200 | 200 | 200 | 29 | 3.5 | 130 | 26 | 22 | 0.02 | 685g |
| 002109 | AA-F300 | 300 | 300 | 35 | 4 | 200 | 32 | 27 | 0.025 | 1.5kg |
| 002111 | AA-F400 | ※400 | 400 | 40 | 5 | | 40 | | 0.03 | 2.1kg |
| 002113 | AA-F500 | 500 | 500 | 46 | | 300 | 45 | 35 | 0.035 | 4.3kg |
| 002114 | AA-F600 | ※600 | 600 | 50 | | 320 | 55 | | 0.04 | 5.7kg |
| 002115 | AA-F750 | 750 | 750 | 58 | 6 | 400 | 63 | 50 | 0.048 | 11.3kg |
| 002117 | AA-F1000 | 1000 | 1000 | 65 | 10 | 550 | 80 | 65 | 0.06 | 24.5kg |
| 002119 | AA-F1500 | ※1500 | 1500 | 90 | | 600 | 90 | 80 | 0.085 | 39.1kg |
| 002121 | AA-F2000 | ※2000 | 2000 | 100 | | 800 | 105 | 90 | 0.11 | 72.5kg |

## SECOND GRADE (Non-hardened)

FEATURES
- ●Accuracy equivalent to JIS B 7526 (※exceeds JIS)
- ●Non-hardened・Ground finish

Squareness $\pm(20+\frac{L}{10})\ \mu m$ (L: Nominal Size)

| Order No. | Model No. | Nominal Size (mm) | Blade Length (mm) | Blade Width (mm) | Blade Thickness (mm) | Beam Length (mm) | Beam Width (mm) | Beam Thickness (mm) | Squareness Accuracy (±mm) | Weight |
|---|---|---|---|---|---|---|---|---|---|---|
| 002201 | AA-S50 | ※50 | 50 | 16 | 2 | 37 | 16 | 10 | 0.025 | 54g |
| 002202 | AA-S75 | 75 | 75 | | | 50 | | | 0.027 | 72g |
| 002203 | AA-S100 | 100 | 100 | 20 | 2.5 | 70 | 18 | 12 | 0.03 | 150g |
| 002205 | AA-S150 | 150 | 150 | 24 | 3 | 100 | 22 | 18 | 0.035 | 365g |
| 002207 | AA-S200 | 200 | 200 | 29 | 3.5 | 130 | 26 | 22 | 0.04 | 695g |
| 002209 | AA-S300 | 300 | 300 | 35 | 4 | 200 | 32 | 27 | 0.05 | 1.5kg |
| 002211 | AA-S400 | ※400 | 400 | 40 | 5 | | 40 | | 0.06 | 2.1kg |
| 002213 | AA-S500 | 500 | 500 | 46 | | 300 | 45 | 35 | 0.07 | 4.3kg |
| 002214 | AA-S600 | ※600 | 600 | 50 | | 320 | 55 | | 0.08 | 5.7kg |
| 002215 | AA-S750 | 750 | 750 | 58 | 6 | 400 | 63 | 50 | 0.095 | 11.3kg |
| 002217 | AA-S1000 | 1000 | 1000 | 65 | 10 | 550 | 80 | 65 | 0.12 | 24.2kg |
| 002219 | AA-S1500 | ※1500 | 1500 | 90 | | 600 | 90 | 80 | 0.17 | 38.2kg |
| 002221 | AA-S2000 | ※2000 | 2000 | 100 | | 800 | 105 | 90 | 0.22 | 70.9kg |

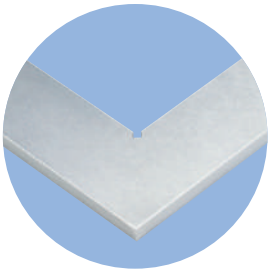
# STEEL SQUARE (DD TYPE)

T PDI 1st grade, hardened | MTO products 400mm or larger

Hardened. Convenient for measuring the squareness of any machining process and for marking work.

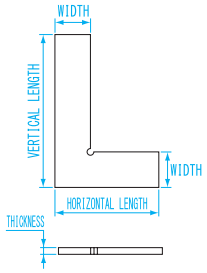
Rust prevention▶
Zerust Film for Steel
P370

## FIRST GRADE(Hardened)



Corner

● DIMENSIONS




USE
- ●Measurement of squareness

MATERIAL
- ●Carbon steel for machine structual use (hardened measuring face)
- ●Hardness: over HV450

FEATURES
- ●Accuracy equivalent to JIS B 7526 (※exceeds JIS)
- ●Hardened measuring face for abrasion resistance
- ●All hardened, first grade squares are provided with inspection report

Squareness± $(10+\frac{L}{20})$ μm (L: Nominal Size)

| Order No. | Model No. | Nominal Size (mm) | Vertical Length (mm) | Horizontal Length (mm) | Width (mm) | Thickness (mm) | Squareness Accuracy (±mm) | Weight |
|---|---|---|---|---|---|---|---|---|
| 002301 | DD-F50 | ※50 | 50 | 38 | 16 | 3 | 0.013 | 27g |
| 002302 | DD-F75 | 75 | 75 | 50 | 18 | | 0.014 | 45g |
| 002303 | DD-F100 | 100 | 100 | 70 | 20 | 4 | 0.015 | 94g |
| 002305 | DD-F150 | 150 | 150 | 100 | 25 | 5 | 0.018 | 220g |
| 002307 | DD-F200 | 200 | 200 | 130 | | 6 | 0.02 | 360g |
| 002309 | DD-F300 | 300 | 300 | 200 | 30 | | 0.025 | 660g |
| 002311 | DD-F400 | ※400 | 400 | | 40 | 8 | 0.03 | 1.5kg |
| 002313 | DD-F500 | 500 | 500 | 300 | | | 0.035 | 2.0kg |
| 002314 | DD-F600 | ※600 | 600 | 325 | 50 | 10 | 0.04 | 3.4kg |
| 002315 | DD-F750 | 750 | 750 | 400 | | | 0.048 | 4.2kg |
| 002317 | DD-F1000 | 1000 | 1000 | 550 | 60 | 12 | 0.06 | 8.3kg |
| 002319 | DD-F1500 | ※1500 | 1500 | 750 | 80 | | 0.085 | 17.4kg |

## SECOND GRADE (Non-Hardened)

FEATURES
- ●Accuracy equivalent to JIS B 7526 (※exceeds JIS)
- ●Non-hardened・Ground finish

Squareness± $(20+\frac{L}{10})$ μm (L: Nominal Size)

| Order No. | Model No. | Nominal Size (mm) | Vertical Length (mm) | Horizontal Length (mm) | Width (mm) | Thickness (mm) | Squareness Accuracy (±mm) | Weight |
|---|---|---|---|---|---|---|---|---|
| 002401 | DD-S50 | ※50 | 50 | 38 | 16 | 3 | 0.025 | 27g |
| 002402 | DD-S75 | 75 | 75 | 50 | 18 | | 0.027 | 45g |
| 002403 | DD-S100 | 100 | 100 | 70 | 20 | 4 | 0.03 | 94g |
| 002405 | DD-S150 | 150 | 150 | 100 | 25 | 5 | 0.035 | 220g |
| 002407 | DD-S200 | 200 | 200 | 130 | | 6 | 0.04 | 360g |
| 002409 | DD-S300 | 300 | 300 | 200 | 30 | | 0.05 | 660g |
| 002411 | DD-S400 | ※400 | 400 | | 40 | 8 | 0.06 | 1.5kg |
| 002413 | DD-S500 | 500 | 500 | 300 | | | 0.07 | 2.0kg |
| 002414 | DD-S600 | ※600 | 600 | 325 | 50 | 10 | 0.08 | 3.4kg |
| 002415 | DD-S750 | 750 | 750 | 400 | | | 0.095 | 4.2kg |
| 002417 | DD-S1000 | 1000 | 1000 | 550 | 60 | 12 | 0.12 | 8.3kg |
| 002419 | DD-S1500 | ※1500 | 1500 | 750 | 80 | | 0.17 | 17.4kg |

COMPARATOR
GRANITE PRODUCTS
CAST IRON SURFACE PLATE
PARALLEL BLOCK
V BLOCK
SQUARE
STRAIGHT EDGE
PARALLEL CLAMP

## STEEL SQUARE WITH METRIC GRADUATED BLADE (C TYPE)

T MTO products
400mm or larger

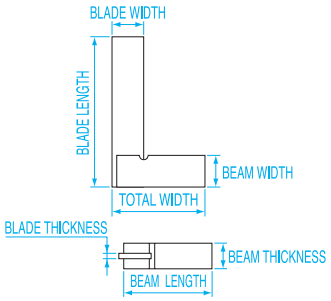
Rust prevention▶
Zerust Film for Steel
P370

Convenient for measuring the squareness of any machining process and for marking work.

### SECOND GRADE

C-150

● DIMENSIONS




USE
●Measurement of squareness
MATERIAL
●Carbon steel for machine structual use
FEATURES
●Accuracy equivalent to JIS B 7526
(※exceeds JIS)
●Graduated with 1mm division

Squareness± $(20+\frac{L}{10})$ μm (L: Nominal Size)

| Order No. | Model No. | Nominal Size (mm) | Blade Length (mm) | Blade Width (mm) | Blade Thickness (mm) | Base Length (mm) | Base Width (mm) | Base Thickness (mm) | Graduation Accuracy (±mm) | Squareness (±mm) | Weight |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 002503 | C-100 | 100 | 100 | 20 | 2.5 | 70 | 19 | 12 | 0.4 | 0.03 | 150g |
| 002505 | C-150 | 150 | 150 | 24 | 3 | 100 | 22 | 18 | | 0.035 | 365g |
| 002507 | C-200 | 200 | 200 | 29 | 3.5 | 130 | 26 | 22 | | 0.04 | 700g |
| 002509 | C-300 | 300 | 300 | 35 | 4 | 200 | 32 | 27 | | 0.05 | 1.5kg |
| 002511 | C-400 | ※400 | 400 | 40 | 5 | | 40 | | | 0.06 | 2.1kg |
| 002513 | C-500 | 500 | 500 | 46 | | 300 | 45 | 35 | | 0.07 | 4.3kg |
| 002515 | C-600 | ※600 | 600 | 50 | | 320 | 55 | | | 0.08 | 5.7kg |
| 002523 | C-1000 | 1000 | 1000 | 65 | 10 | 550 | 80 | 65 | | 0.12 | 24.2kg |

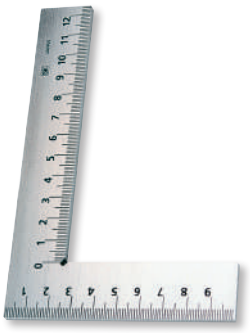
## PRECISION SQUARE WITH METRIC GRADUATED BLADE (E TYPE)

T MTO products
400mm or larger

Rust prevention▶
Zerust Film for Steel
P370

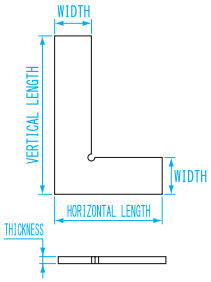
Convenient for measuring the squareness of any machining process and for marking work.

### SECOND GRADE



E-150

● DIMENSIONS




USE
●Measurement of squareness
MATERIAL
●Carbon steel for machine structual use
FEATURES
●Accuracy equivalent to JIS B 7526
(※exceeds JIS)
●Graduated with 1mm division

Squareness± $(20+\frac{L}{10})$ μm (L: Nominal Size)

| Order No. | Model No. | Nominal Size (mm) | Vertical Length (mm) | Horizontal Length (mm) | Width (mm) | Thickness (mm) | Graduation Accuracy (±mm) | Squareness (±mm) | Weight |
|---|---|---|---|---|---|---|---|---|---|
| 002603 | E-100 | 100 | 100 | 70 | 20 | 4 | 0.4 | 0.03 | 94g |
| 002605 | E-150 | 150 | 150 | 100 | 25 | 5 | | 0.035 | 220g |
| 002607 | E-200 | 200 | 200 | 130 | | 6 | | 0.04 | 360g |
| 002609 | E-300 | 300 | 300 | 200 | 40 | 8 | | 0.05 | 660g |
| 002611 | E-400 | ※400 | 400 | | | | | 0.06 | 1.5kg |
| 002613 | E-500 | 500 | 500 | 300 | | | | 0.07 | 2.0kg |
| 002615 | E-600 | ※600 | 600 | 325 | 50 | 10 | | 0.08 | 3.4kg |
| 002623 | E-1000 | 1000 | 1000 | 550 | 60 | 12 | | 0.12 | 8.3kg |

## HEAVY DUTY STEEL SQUARE (HDD TYPE)

T PDI

Rust prevention▶
Zerust Film for Steel
P370

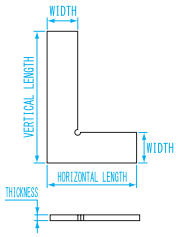
Hardened. Convenient for measuring the squareness of any machining process and for marking work.

USE
- Measurement of squareness

MATERIAL
- Carbon steel for machine structual use (hardened measuring face)
- Hardness: over HV450

FEATURES
- While ordinary squares may lack stability due to their thin thickness, this product is made thicker to compensate for this
- Provided with inspection report

● DIMENSIONS




Squareness ± $(10+\frac{L}{20})$ μm (L: Nominal Size)

| Order No. | Model No. | Nominal Size (mm) | Vertical Length (mm) | Base Length (mm) | Width (mm) | Thickness (mm) | Squareness Accuracy (±mm) | Weight |
|---|---|---|---|---|---|---|---|---|
| 003501 | HDD-50 | 50 | 50 | 35 | 15 | 10 | 0.013 | 82g |
| 003502 | HDD-75 | 75 | 75 | 50 | 18 | 12 | 0.014 | 180g |
| 003503 | HDD-100 | 100 | 100 | 70 | 20 | 15 | 0.015 | 350g |
| 003505 | HDD-150 | 150 | 150 | 100 | 25 | 20 | 0.018 | 880g |
| 003507 | HDD-200 | 200 | 200 | 130 | 30 | | 0.02 | 1.4kg |
| 003509 | HDD-300 | 300 | 300 | 200 | 35 | 25 | 0.025 | 3.2kg |

## STEEL SQUARE WITH FLUSH MOUNTED BEAM

T MTO products

Rust prevention▶
Zerust Film for Steel
P370

Convenient for measuring the squareness of any machining process and for marking work.

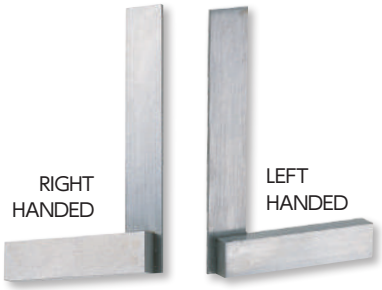
### SECOND GRADE

USE
- Measurement of squareness

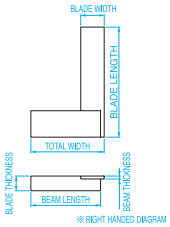
MATERIAL
- Carbon steel for machine structual use

FEATURES
- Accuracy equivalent to JIS B 7526 (※exceeds JIS)
- Right handed: blade mounted on the right side toward the base
  Left handed: blade mounted on the left side toward the base

The product with it's accuracy equivalent to JIS Grade 1 is also available on request
(Squareness ± $(10+\frac{L}{20})$ μm) is made to order




● DIMENSIONS




Squareness ± $(20+\frac{L}{10})$ μm (L: Nominal Size)

### RIGHT HANDED

| Order No. | Model No. | Nominal Size (mm) | Blade Length (mm) | Blade Width (mm) | Blade Thickness (mm) | Beam Length (mm) | Beam Thickness (mm) | Squareness (±mm) | Weight |
|---|---|---|---|---|---|---|---|---|---|
| 003002 | TRS-R75 | 75 | 75 | 16 | 2 | 50 | 10 | 0.027 | 72g |
| 003003 | TRS-R100 | 100 | 100 | 20 | 2.5 | 70 | 12 | 0.03 | 150g |
| 003005 | TRS-R150 | 150 | 150 | 24 | 3 | 100 | 18 | 0.035 | 365g |
| 003007 | TRS-R200 | 200 | 200 | 29 | 3.5 | 130 | 22 | 0.04 | 700g |
| 003009 | TRS-R300 | 300 | 300 | 35 | 4 | 200 | 27 | 0.05 | 1.5kg |
| 003011 | TRS-R400 | ※400 | 400 | 40 | | | | 0.06 | 2.1kg |
| 003013 | TRS-R500 | 500 | 500 | 46 | 5 | 300 | 35 | 0.07 | 4.3kg |
| 003015 | TRS-R600 | ※600 | 600 | 50 | | 320 | | 0.08 | 5.7kg |
| 003018 | TRS-R750 | 750 | 750 | 58 | 6 | 400 | 50 | 0.095 | 11.3kg |
| 003023 | TRS-R1000 | 1000 | 1000 | 65 | | 550 | 65 | 0.12 | 24.2kg |
| 003025 | TRS-R1500 | ※1500 | 1500 | 90 | 10 | 600 | 80 | 0.17 | 38.2kg |
| 003027 | TRS-R2000 | ※2000 | 2000 | 100 | | 800 | 90 | 0.22 | 70.9kg |

### LEFT HANDED

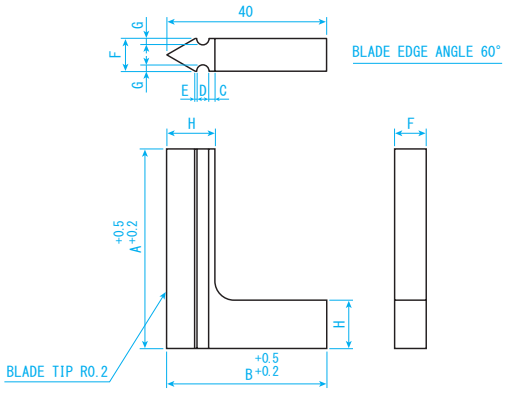
| Order No. | Model No. | Nominal Size (mm) | Blade Length (mm) | Blade Width (mm) | Blade Thickness (mm) | Beam Length (mm) | Beam Thickness (mm) | Squareness (±mm) | Weight |
|---|---|---|---|---|---|---|---|---|---|
| 003102 | TRS-L75 | 75 | 75 | 16 | 2 | 50 | 10 | 0.027 | 72g |
| 003103 | TRS-L100 | 100 | 100 | 20 | 2.5 | 70 | 12 | 0.03 | 150g |
| 003105 | TRS-L150 | 150 | 150 | 24 | 3 | 100 | 18 | 0.035 | 365g |
| 003107 | TRS-L200 | 200 | 200 | 29 | 3.5 | 130 | 22 | 0.04 | 700g |
| 003109 | TRS-L300 | 300 | 300 | 35 | 4 | 200 | 27 | 0.05 | 1.5kg |
| 003111 | TRS-L400 | ※400 | 400 | 40 | | | | 0.06 | 2.1kg |
| 003113 | TRS-L500 | 500 | 500 | 46 | 5 | 300 | 35 | 0.07 | 4.3kg |
| 003115 | TRS-L600 | ※600 | 600 | 50 | | 320 | | 0.08 | 5.7kg |
| 003118 | TRS-L750 | 750 | 750 | 58 | 6 | 400 | 50 | 0.095 | 11.3kg |
| 003123 | TRS-L1000 | 1000 | 1000 | 65 | | 550 | 65 | 0.12 | 24.2kg |
| 003125 | TRS-L1500 | ※1500 | 1500 | 90 | 10 | 600 | 80 | 0.17 | 38.2kg |
| 003127 | TRS-L2000 | ※2000 | 2000 | 100 | | 800 | 90 | 0.22 | 70.9kg |

## BLADE STEEL SQUARE I-TYPE

Hardened. Precise squareness check can be easily performed on the measuring face of the blade.

AAI-150K

● DIMENSIONS




USE
- ●For precise right angle measurement

MATERIAL
- ●Carbon steel for machine structual use (hardened)

FEATURES
- ●Knife-shaped outer blade reflects light ray on object to be measured for clearance inspection

Units: mm

| Model No. | A | B | C | D | E | F | G | H |
|---|---|---|---|---|---|---|---|---|
| AAI-100K | 100 | 70 | 2.5 | 6 | 1.5 | 12 | 2 | 20 |
| AAI-150K | 150 | 100 | | 8 | | 14 | | 24 |

Squareness $\pm(2+\frac{L}{100})\ \mu m$ (L: Nominal Size)

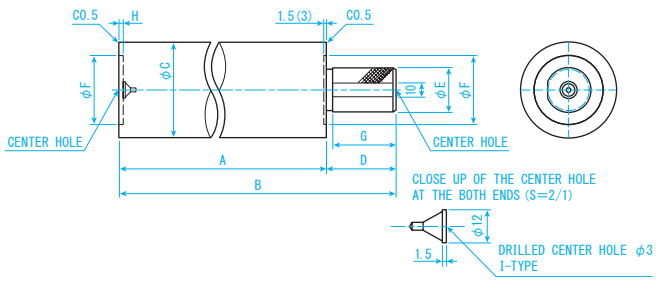
| Order No. | Model No. | Nominal Size (mm) | Squareness Accuracy (± μm) | Weight |
|---|---|---|---|---|
| 003601 | AAI-100K | 100 | 3.0 | 240g |
| 003602 | AAI-150K | 150 | 3.5 | 530g |

## CYLINDRICAL SQUARE

Hardened. The highest squareness accuracy in the square products.

CS-F100

● DIMENSIONS




USE
- ●For precise right angle measurement

MATERIAL
- ●Alloy tool steel (hardened)

FEATURES
- ●The highest squareness accuracy in the square products
- ●Non-conductive handle is less thermal expansion when in use

Units: mm

| Model No. | A | B | C | D | E | F | G | H |
|---|---|---|---|---|---|---|---|---|
| CS-F100 | 100 | 140 | 60 | 40 | 30 | 45 | 35 | 3 |
| CS-F150 | 150 | 200 | 70 | 50 | 32 | 50 | 45 | |
| CS-F200 | 200 | 260 | 80 | 60 | | 60 | 55 | 4 |

Squareness and perpendicularity to the axis $\pm(2+\frac{L}{200})\ \mu m$ (L: Nominal Size)

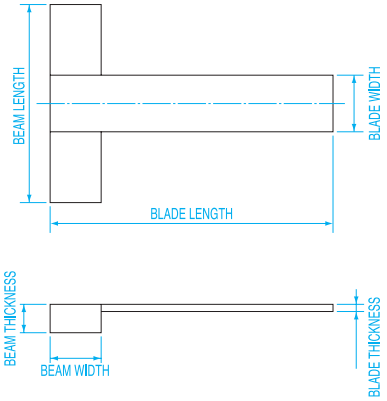
| Order No. | Model No. | Nominal Size (mm) | Squareness Accuracy (± μm) | Weight |
|---|---|---|---|---|
| 003621 | CS-F100 | 100 | 2.5 | 2.5kg |
| 003622 | CS-F150 | 150 | 2.8 | 4.9kg |
| 003623 | CS-F200 | 200 | 3.0 | 8.3kg |

## T-SQUARE

T MTO products

Ideal for right angle marking work from edge face.

● DIMENSIONS




USE
- For general work and marking

MATERIAL
- Carbon steel for machine structual use

FEATURES
- The blade is a square that is cut into the center side of the beam and riveted in place.

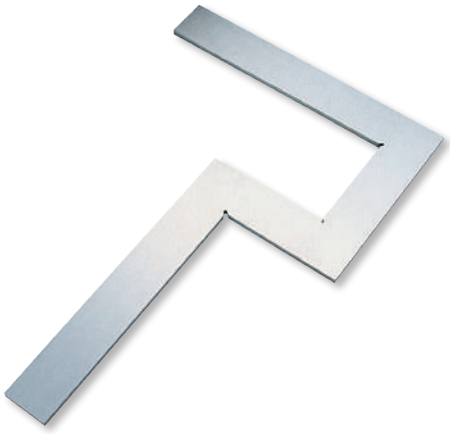
Squareness $\pm(20+\frac{L}{10})\ \mu m$ (L: Nominal Size)

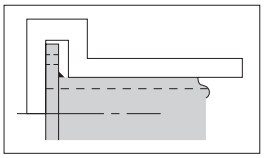
| Order No. | Model No. | Nominal Size (mm) | Blade Length (mm) | Blade Width (mm) | Blade Thickness (mm) | Beam Length (mm) | Beam Width (mm) | Beam Thickness (mm) | Straightness (±mm) | Weight |
|---|---|---|---|---|---|---|---|---|---|---|
| 003201 | TS-100 | 100 | 100 | 20 | 2.5 | 70 | 18 | 10 | 0.03 | 130g |
| 003202 | TS-150 | 150 | 150 | 24 | 3 | 100 | 20 | 12 | 0.035 | 260g |
| 003203 | TS-200 | 200 | 200 | 29 | 3.5 | 140 | 24 | 14 | 0.04 | 500g |
| 003205 | TS-300 | 300 | 300 | 35 | 4 | 200 | 30 | 18 | 0.05 | 1.2kg |
| 003207 | TS-400 | 400 | 400 | 40 | | 260 | 34 | 20 | 0.06 | 2.0kg |
| 003209 | TS-500 | 500 | 500 | 46 | 5 | 330 | 36 | 22 | 0.07 | 2.9kg |
| 003211 | TS-600 | 600 | 600 | 50 | | 360 | 38 | 24 | 0.08 | 3.6kg |
| 003219 | TS-1000 | 1000 | 1000 | 65 | 8 | 640 | 45 | 30 | 0.12 | 10.9kg |

## FLANGE SQUARE

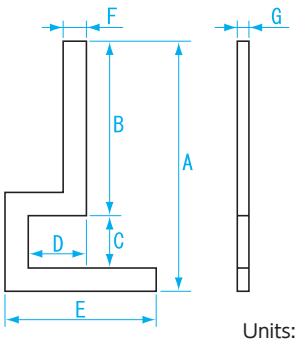
T MTO products

Very useful for checking accuracy, squareness and inspection after flange welding.





● DIMENSIONS




USE
- For adjustment squareness and inspection of oil feed pipe and water pipe flange

MATERIAL
- Rolled steel for general structure

Units: mm

| Model No. | A | B | C | D | E | F | G |
|---|---|---|---|---|---|---|---|
| FS-1 | 300 | 200 | 70 | 80 | 200 | 30 | 4 |
| FS-2 | 400 | 280 | 90 | 120 | 300 | 30 | 4 |
| FS-3 | 750 | 500 | 200 | 250 | 680 | 50 | 6 |

| Order No. | Model No. | Nominal Size (mm) | Straightness (±mm) | Weight |
|---|---|---|---|---|
| 003320 | FS-1 | 200×300 | 0.037 | 520g |
| 003330 | FS-2 | 300×400 | 0.045 | 750g |
| 003368 | FS-3 | 680×750 | 0.071 | 3.7kg |

## I-BEAM TYPE PRECISION STRAIGHT EDGE

T PDI MTO products

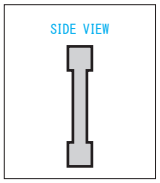
A necessity for machine installation and surface plate installation. Measurement of flatness, parallelism and straightness, useful as a leveling jig

Reference standard for calibration ▶ Thickness Gauge P81 ~84

USE
- Measurement of of flatness, parallelism and straightness

MATERIAL
- Carbon steel for machine structual use

FEATURES
- Provided with Inspection report




### Grade A / Hardened ● Hardness: HV490 ~ 620

Straightness $(2+\frac{L}{100})$ μm (L: Nominal Size)

| Order No. | Model No. | Nominal Size (mm) | Straightness (μm) | Length (mm) | Height (mm) | Width (mm) | Weight |
|---|---|---|---|---|---|---|---|
| 004113 | IBM-A500H | 500 | 7 | 500 | 50 | 10 | 1.9kg |
| 004115 | IBM-A750H | 750 | 9.5 | 750 | | | 2.9kg |
| 004117 | IBM-A1000H | 1000 | 12 | 1000 | 60 | 12 | 4.5kg |
| 004119 | IBM-A1500H | 1500 | 17 | 1500 | 70 | 15 | 9.5kg |
| 004121 | IBM-A2000H | 2000 | 22 | 2000 | 90 | 20 | 24kg |
| 004122 | IBM-A2500H | 2500 | 27 | 2500 | 100 | | 29kg |
| 004123 | IBM-A3000H | 3000 | 32 | 3000 | 120 | | 41kg |

### Grade A / Non-hardened

Straightness $(2+\frac{L}{100})$ μm (L: Nominal Size)

| Order No. | Model No. | Nominal Size (mm) | Straightness (μm) | Length (mm) | Height (mm) | Width (mm) | Weight |
|---|---|---|---|---|---|---|---|
| 004013 | IBM-A500 | 500 | 7 | 500 | 50 | 10 | 1.9kg |
| 004015 | IBM-A750 | 750 | 9.5 | 750 | | | 2.9kg |
| 004017 | IBM-A1000 | 1000 | 12 | 1000 | 60 | 12 | 4.5kg |
| 004019 | IBM-A1500 | 1500 | 17 | 1500 | 70 | 15 | 9.5kg |
| 004021 | IBM-A2000 | 2000 | 22 | 2000 | 90 | 20 | 24kg |
| 004022 | IBM-A2500 | 2500 | 27 | 2500 | | | 29kg |
| 004023 | IBM-A3000 | 3000 | 32 | 3000 | 120 | | 41kg |

## RAIL TYPE PRECISION STRAIGHT EDGE

T PDI MTO products

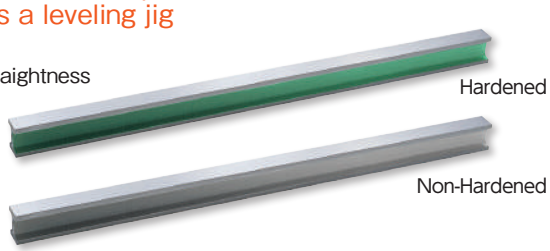
A necessity for machine installation and surface plate installation. Measurement of flatness, parallelism and straightness, useful as a leveling jig

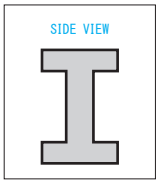
Reference standard for calibration ▶ Thickness Gauge P81 ~84

USE
- Measurement of flatness, parallelism and straightness

MATERIAL
- Carbon steel for machine structual use

FEATURES
- Usable for precison machine installation, flatness inspection of surface plate etc.
- Ground finish
- Provided with Inspection report




### Grade A / Hardened ● Hardness: HV490 ~ 620

Straightness $(2+\frac{L}{250})$ μm (L: Nominal Size)

| Order No. | Model No. | Nominal Size (mm) | Straightness (μm) | Length (mm) | Height (mm) | Width (mm) | Weight |
|---|---|---|---|---|---|---|---|
| 004417 | R-A1000H | 1000 | 6 | 1000 | 75 | 50 | 22kg |
| 004419 | R-A1500H | 1500 | 8 | 1500 | 90 | | 32kg |
| 004421 | R-A2000H | 2000 | 10 | 2000 | 120 | | 52kg |
| 004422 | R-A2500H | 2500 | 12 | 2500 | 140 | | 77kg |
| 004423 | R-A3000H | 3000 | 14 | 3000 | 150 | | 99kg |

### Grade A / Non-hardened

Straightness $(2+\frac{L}{250})$ μm (L: Nominal Size)

| Order No. | Model No. | Nominal Size (mm) | Straightness (μm) | Length (mm) | Height (mm) | Width (mm) | Weight |
|---|---|---|---|---|---|---|---|
| 004317 | R-A1000 | 1000 | 6 | 1000 | 75 | 50 | 22kg |
| 004319 | R-A1500 | 1500 | 8 | 1500 | 90 | | 32kg |
| 004321 | R-A2000 | 2000 | 10 | 2000 | 120 | | 52kg |
| 004322 | R-A2500 | 2500 | 12 | 2500 | 140 | | 77kg |
| 004323 | R-A3000 | 3000 | 14 | 3000 | 150 | | 99kg |

### Grade B / Hardened ● Hardness: HV490 ~ 620

Straightness $(4+\frac{L}{50})$ μm (L: Nominal Size)

| Order No. | Model No. | Nominal Size (mm) | Straightness (μm) | Length (mm) | Height (mm) | Width (mm) | Weight |
|---|---|---|---|---|---|---|---|
| 004617 | R-B1000H | 1000 | 24 | 1000 | 75 | 50 | 22kg |
| 004619 | R-B1500H | 1500 | 34 | 1500 | 90 | | 32kg |
| 004621 | R-B2000H | 2000 | 44 | 2000 | 120 | | 52kg |
| 004622 | R-B2500H | 2500 | 54 | 2500 | 140 | | 77kg |
| 004623 | R-B3000H | 3000 | 64 | 3000 | 150 | | 99kg |

### Grade B / Non-hardened

Straightness $(4+\frac{L}{50})$ μm (L: Nominal Size)

| Order No. | Model No. | Nominal Size (mm) | Straightness (μm) | Length (mm) | Height (mm) | Width (mm) | Weight |
|---|---|---|---|---|---|---|---|
| 004517 | R-B1000 | 1000 | 24 | 1000 | 75 | 50 | 22kg |
| 004519 | R-B1500 | 1500 | 34 | 1500 | 90 | | 32kg |
| 004521 | R-B2000 | 2000 | 44 | 2000 | 120 | | 52kg |
| 004522 | R-B2500 | 2500 | 54 | 2500 | 140 | | 77kg |
| 004523 | R-B3000 | 3000 | 64 | 3000 | 150 | | 99kg |

# STEEL STANDARD STRAIGHT EDGE

T PDI MTO products

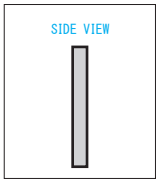
## Measurement of flatness, parallelism, straightness

Reference standard for calibration ▶
Thickness Gauge
P81 ~84

USE
- Measurement of flatness, parallelism, straightness

MATERIAL
- Carbon steel for machine structual use

FEATURES
- Measuring face: ground finish
- Provided with inspection report




### Grade A/ Hardened (Hardness: HV490-620)

Straightness $(2+\frac{L}{100})\ \mu m$ (L: Nominal Size)

| Order No. | Model No. | Nominal Size (mm) | Length (mm) | Width (mm) | Thickness (mm) | Weight |
|---|---|---|---|---|---|---|
| 004913 | ST-A500H | 500 | 500 | 50 | 10 | 2.0kg |
| 004915 | ST-A750H | 750 | 750 | | | 3.0kg |
| 004917 | ST-A1000H | 1000 | 1000 | 60 | 12 | 5.7kg |
| 004919 | ST-A1500H | 1500 | 1500 | 70 | 15 | 12kg |
| 004921 | ST-A2000H | 2000 | 2000 | 80 | 18 | 23kg |
| 004922 | ST-A2500H | 2500 | 2500 | 100 | | 35kg |
| 004923 | ST-A3000H | 3000 | 3000 | 140 | 25 | 82kg |

### Grade A/ Non-hardened

Straightness $(2+\frac{L}{100})\ \mu m$ (L: Nominal Size)

| Order No. | Model No. | Nominal Size (mm) | Length (mm) | Width (mm) | Thickness (mm) | Weight |
|---|---|---|---|---|---|---|
| 004813 | ST-A500 | 500 | 500 | 50 | 10 | 2.0kg |
| 004815 | ST-A750 | 750 | 750 | | | 3.0kg |
| 004817 | ST-A1000 | 1000 | 1000 | 60 | 12 | 5.7kg |
| 004819 | ST-A1500 | 1500 | 1500 | 70 | 15 | 12kg |
| 004821 | ST-A2000 | 2000 | 2000 | 80 | 18 | 23kg |
| 004822 | ST-A2500 | 2500 | 2500 | 100 | | 35kg |
| 004823 | ST-A3000 | 3000 | 3000 | 140 | 25 | 82kg |

# STEEL STANDARD STRAIGHT EDGE WITH GRADUATIONS

T PDI MTO products

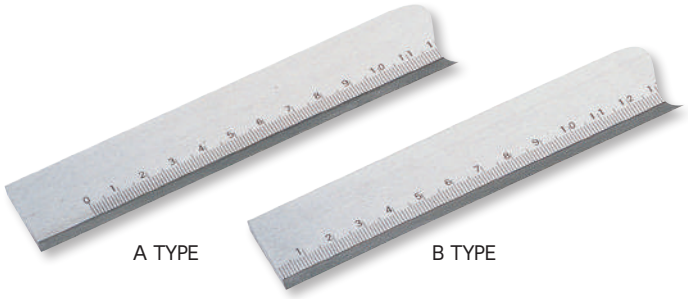
## Measurement of flatness, parallelism, straightness or use for precision marking

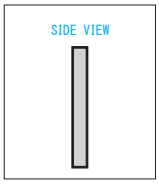
Reference standard for calibration ▶
Thickness Gauge
P81 ~84

USE
- Measurement of flatness, parallelism, straightness or use for precision marking

MATERIAL
- Carbon steel for machine structual use

FEATURES
- Measuring face: ground finish
- A type: Scale interval of 1 mm, graduated on single side (20mm blank space on both edges)
- B type: 0 point starts from left edge
- Provided with inspection report




### A TYPE

A type: Straightness $(10+\frac{L}{50})\ \mu m$ (L: Nominal Size)

| Order No. | Model No. | Nominal Size (mm) | Length (mm) | Width (mm) | Thickness (mm) | Weight |
|---|---|---|---|---|---|---|
| 005013 | STG-A500 | 500 | 540 | 25 | 6 | 630g |
| 005015 | STG-A750 | 750 | 790 | 30 | | 1.1kg |
| 005017 | STG-A1000 | 1000 | 1040 | | | 1.5kg |
| 005019 | STG-A1500 | 1500 | 1540 | 32 | | 2.3kg |
| 005021 | STG-A2000 | 2000 | 2040 | 40 | 8 | 5.1kg |

### B TYPE

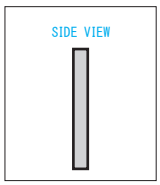
B type: Straightness $(10+\frac{L}{25})\ \mu m$ (L: Nominal Size)

| Order No. | Model No. | Nominal Size (mm) | Length (mm) | Width (mm) | Thickness (mm) | Weight |
|---|---|---|---|---|---|---|
| 005113 | STG-B500 | 500 | 500 | 25 | 6 | 600g |
| 005115 | STG-B750 | 750 | 750 | | | 900g |
| 005117 | STG-B1000 | 1000 | 1000 | 30 | | 1.4kg |
| 005119 | STG-B1500 | 1500 | 1500 | 32 | | 2.2kg |
| 005121 | STG-B2000 | 2000 | 2000 | 40 | 8 | 5.0kg |

# STRAIGHT EDGE STANDARD TYPE

T PDI MTO products

## Inspection of flatness and straightness or use for precision marking
## Recommended for can and sheet metal workers




Reference standard for calibration ▶
Thickness Gauge
P81 ~84

USE
- Inspection of flatness and straightness or use for precision marking

MATERIAL
- Carbon steel for machine structual use

FEATURES
- Measuring face: ground finish
- Provided with inspection report (except S-A150 to S-A600)

### Grade A /Hardened

●Hardness: HV490～620 ●Grade A: Straightness $(10+\frac{L}{50})\ \mu m$ ●Grade B: Straightness $(20+\frac{L}{25})\ \mu m$ ※ L: Nominal Size

| Order No. | Model No. | Nominal Size (mm) | Length (mm) | Width (mm) | Thickness (mm) | Weight |
|---|---|---|---|---|---|---|
| 005305 | S-A150H | 150 | 150 | 24 | 3 | 84g |
| 005307 | S-A200H | 200 | 200 | | | 112g |
| 005308 | S-A250H | 250 | 250 | 30 | 4 | 234g |
| 005309 | S-A300H | 300 | 300 | 35 | 5 | 410g |
| 005312 | S-A450H | 450 | 450 | 40 | | 700g |
| 005313 | S-A500H | 500 | 500 | | | 780g |
| 005314 | S-A600H | 600 | 600 | | | 940g |
| 005315 | S-A750H | 750 | 750 | 50 | 6 | 1.8kg |
| 005317 | S-A1000H | 1000 | 1000 | | | 2.4kg |
| 005319 | S-A1500H | 1500 | 1500 | 75 | | 5.3kg |
| 005321 | S-A2000H | 2000 | 2000 | 85 | 8 | 10.7kg |
| 005322 | S-A2500H | 2500 | 2500 | 95 | 10 | 19kg |
| 005323 | S-A3000H | 3000 | 3000 | 100 | | 24kg |

### Grade A / Non-hardened

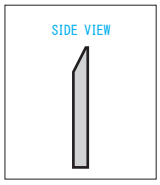
●Grade A: Straightness $(10+\frac{L}{50})\ \mu m$ ●Grade B: Straightness $(20+\frac{L}{25})\ \mu m$ ※ L: Nominal Size

| Order No. | Model No. | Nominal Size (mm) | Length (mm) | Width (mm) | Thickness (mm) | Weight |
|---|---|---|---|---|---|---|
| 005205 | S-A150 | 150 | 150 | 24 | 3 | 84g |
| 005207 | S-A200 | 200 | 200 | | | 112g |
| 005208 | S-A250 | 250 | 250 | 30 | 4 | 234g |
| 005209 | S-A300 | 300 | 300 | 35 | 5 | 410g |
| 005212 | S-A450 | 450 | 450 | 40 | | 700g |
| 005213 | S-A500 | 500 | 500 | | | 780g |
| 005214 | S-A600 | 600 | 600 | | | 940g |
| 005215 | S-A750 | 750 | 750 | 50 | 6 | 1.8kg |
| 005217 | S-A1000 | 1000 | 1000 | | | 2.4kg |
| 005219 | S-A1500 | 1500 | 1500 | 75 | | 5.3kg |
| 005221 | S-A2000 | 2000 | 2000 | 85 | 8 | 10.7kg |
| 005222 | S-A2500 | 2500 | 2500 | 95 | 10 | 19kg |
| 005223 | S-A3000 | 3000 | 3000 | 100 | | 24kg |

# STRAIGHT EDGE BEVELED TYPE

T PDI MTO products

## Inspection of flatness and straightness or use for precision marking
## Recommended for can and sheet metal workers




Reference standard for calibration ▶
Thickness Gauge
P81 ~84

USE
- Inspection of flatness and straightness or use for precision marking

MATERIAL
- Carbon steel for machine structual use

FEATURES
- Measuring face: ground finish
- Provided with inspection report (except B-A150 to B-A600)

### Grade A /Hardened

●Hardness: HV490～620 ●Grade A: Straightness $(10+\frac{L}{50})\ \mu m$ ●Grade B: Straightness $(20+\frac{L}{25})\ \mu m$ ※ L: Nominal Size

| Order No. | Model No. | Nominal Size (mm) | Length (mm) | Width (mm) | Thickness (mm) | Taper (mm) | Blade Thickness (mm) | Weight |
|---|---|---|---|---|---|---|---|---|
| 005505 | B-A150H | 150 | 150 | 24 | 3 | 5.5 | 0.5 | 78g |
| 005507 | B-A200H | 200 | 200 | | | | | 105g |
| 005508 | B-A250H | 250 | 250 | 30 | 4 | 8.0 | | 215g |
| 005509 | B-A300H | 300 | 300 | 35 | 5 | 10.0 | | 370g |
| 005512 | B-A450H | 450 | 450 | 40 | | | | 640g |
| 005513 | B-A500H | 500 | 500 | | | | | 710g |
| 005514 | B-A600H | 600 | 600 | | | 12.0 | | 860g |
| 005515 | B-A750H | 750 | 750 | 50 | 6 | 12.6 | 0.8 | 1.7kg |
| 005517 | B-A1000H | 1000 | 1000 | | | | | 2.2kg |
| 005519 | B-A1500H | 1500 | 1500 | 75 | | | | 5.0kg |
| 005521 | B-A2000H | 2000 | 2000 | 85 | 8 | 14.6 | 1.5 | 10.1kg |
| 005522 | B-A2500H | 2500 | 2500 | 95 | 10 | 19.0 | | 18kg |
| 005523 | B-A3000H | 3000 | 3000 | 100 | | | 2.0 | 23kg |

### Grade A / Non-hardened

●Grade A: Straightness $(10+\frac{L}{50})\ \mu m$ ●Grade B: Straightness $(20+\frac{L}{25})\ \mu m$ ※ L: Nominal Size

| Order No. | Model No. | Nominal Size (mm) | Length (mm) | Width (mm) | Thickness (mm) | Taper (mm) | Blade Thickness (mm) | Weight |
|---|---|---|---|---|---|---|---|---|
| 005405 | B-A150 | 150 | 150 | 24 | 3 | 5.5 | 0.5 | 78g |
| 005407 | B-A200 | 200 | 200 | | | | | 105g |
| 005408 | B-A250 | 250 | 250 | 30 | 4 | 8.0 | | 215g |
| 005409 | B-A300 | 300 | 300 | 35 | 5 | 10.0 | | 370g |
| 005412 | B-A450 | 450 | 450 | 40 | | | | 640g |
| 005413 | B-A500 | 500 | 500 | | | | | 710g |
| 005414 | B-A600 | 600 | 600 | | | 12.0 | | 860g |
| 005415 | B-A750 | 750 | 750 | 50 | 6 | 12.6 | 0.8 | 1.7kg |
| 005417 | B-A1000 | 1000 | 1000 | | | | | 2.2kg |
| 005419 | B-A1500 | 1500 | 1500 | 75 | | | | 5.0kg |
| 005421 | B-A2000 | 2000 | 2000 | 85 | 8 | 14.6 | 1.5 | 10.1kg |
| 005422 | B-A2500 | 2500 | 2500 | 95 | 10 | 19.0 | | 18kg |
| 005423 | B-A3000 | 3000 | 3000 | 100 | | | 2.0 | 23kg |

# HARDENED PARALLEL CLAMP

2 pcs per unit. For clamping work piece.

PC-100

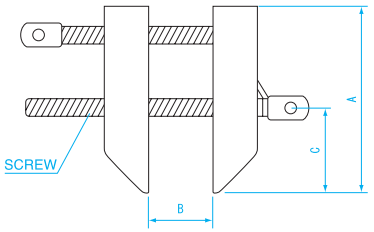
USE
- For holding or clamping work together

MATERIAL
- Carbon steel for machine structual use

SPECIFICATIONS
- Hardness: HV390~450

FEATURES
- These parallel clamps are designed to maximize clamping leverage
- Body and screws are hardened
- 2 pcs (matched pair)

● DIMENSIONS




| Order No. | Model No. | Nominal Size (mm) | A (mm) | B(Max) (mm) | C (mm) | Thread size | Weight (per unit) |
|---|---|---|---|---|---|---|---|
| 006501 | PC-38 | 38 | 40 | 20 | 18 | M5×P0.9 | 67g |
| 006502 | PC-50 | 50 | 50 | 30 | 20 | | 90g |
| 006503 | PC-65 | 65 | 65 | 40 | 25 | M6×P1.0 | 160g |
| 006504 | PC-75 | 75 | 75 | 60 | 30 | | 195g |
| 006505 | PC-100 | 100 | 100 | 60 | 38 | M7×P1.0 | 325g |
| 006506 | PC-125 | 125 | 125 | 80 | 50 | M8×P1.25 | 560g |
| 006507 | PC-150 | 150 | 150 | 100 | 58 | M10×P1.5 | 950g |
| 006508 | PC-200 | 200 | 200 | 120 | 65 | W1/2×12 | 2.2kg |
| 006509 | PC-250 | 250 | 250 | 180 | 100 | M16×P2.0 | 4.35kg |
| 006510 | PC-300 | 300 | 300 | 230 | 120 | M20×P2.5 | 7.5kg |

## ■ SPARE PARTS - FULL THREAD

| Order No. | Product Name | Nominal Size |
|---|---|---|
| 006601 | Full thread for parallel clamps | 38mm |
| 006602 | | 50mm |
| 006603 | | 65mm |
| 006604 | | 75mm |
| 006605 | | 100mm |
| 006606 | | 125mm |
| 006607 | | 150mm |
| 006608 | | 200mm |
| 006609 | | 250mm |
| 006610 | | 300mm |

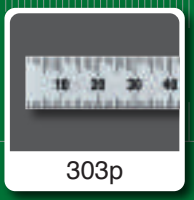
## ■ SPARE PARTS - HALF THREAD

| Order No. | Product Name | Nominal Size |
|---|---|---|
| 006701 | Half thread for parallel clamps | 38mm |
| 006702 | | 50mm |
| 006703 | | 65mm |
| 006704 | | 75mm |
| 006705 | | 100mm |
| 006706 | | 125mm |
| 006707 | | 150mm |
| 006708 | | 200mm |
| 006709 | | 250mm |
| 006710 | | 300mm |

# RULER

302p

303p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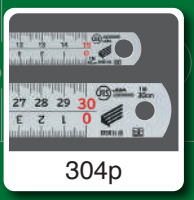
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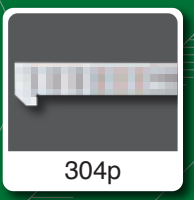
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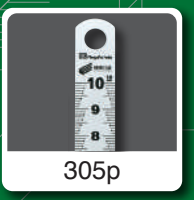
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305p

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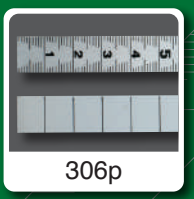
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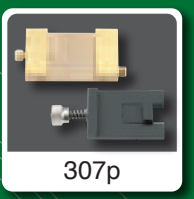
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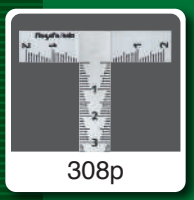
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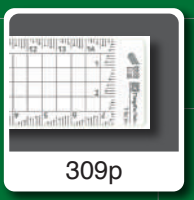
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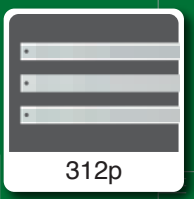
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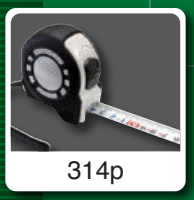
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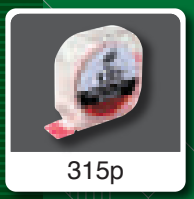
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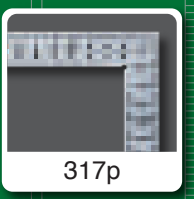
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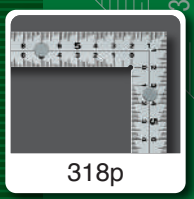
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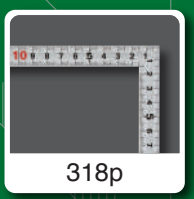
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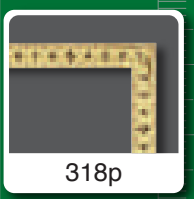
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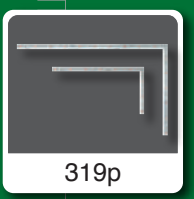
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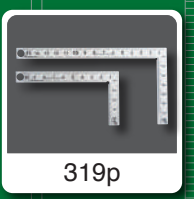

319p

320p

320p

# STAINLESS STEEL RULER KAIDAN (SATIN)

T

New stepped millimeter graduations prevents misreading

JIS mark indicates that product is certified compliant to JIS (Japan Industrial Standards) quality requirements.
JIS B 7516 Metal Rules
JIS B 7534 Metal Squares

For marking and depth measurement▶
Ruler Stopper for Attachment
P307

For marking work▶
Scribes
P324 ～325

FRONT

BACK

SV-150KD

FRONT

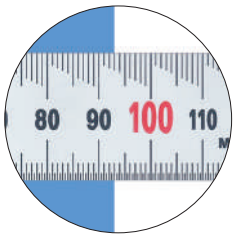
BACK

SV-300KD

USE
- For measuring dimensions, drawing a straight line and scribing

MATERIAL
- Stainless steel (SUS420J2)

FEATURES
- Stepped length of linear graduations by 1mm for easy-to-read
- Sequential graduation numbers for prevention of misreading
- Suitable for detailed work by 0.5mm graduations
- Edges are finished smoothly to prevent marring surfaces
- JIS B7516




Linerar graduations every 0.5mm

| Order No. | Model No. | Nominal Size (mm) | Finish | Accuracy (mm) | Graduation (mm) | Length (mm) | Width (mm) | Thickness (mm) | Weight |
|---|---|---|---|---|---|---|---|---|---|
| 111287 | SV-150KD | 150 | Satin | ± 0.15 | 1・0.5 | 175 | 15 | 0.5 | 10g |
| 111288 | SV-300KD | 300 | | | | 335 | 25 | 1 | 65g |
| 111289 | SV-600KD | 600 | | ± 0.20 | | 640 | 30 | 1.2 | 180g |
| 111290 | SV-1000KD | 1000 | | | | 1050 | 35 | 1.5 | 425g |
| 111291 | SV-1500KD | 1500 | | ± 0.25 | 1 | 1565 | 40 | 2 | 950g |
| 111292 | SV-2000KD | 2000 | | ± 0.30 | | 2065 | | | 1250g |

RULER
TRIANGLE RULER
TAPE MEASURE
CARPENTERS SQUARE

# CATCH UP STAINLESS STEEL RULER KAIDAN / KAIDAN FINE

Easy to pick up with on hand.
New stepped millimeter graduations prevents misreading.

JIS mark indicates that product is certified compliant to JIS (Japan Industrial Standards) quality requirements.
JIS B 7516 Metal Rules
JIS B 7534 Metal Squares

For marking and depth measurement▶
Ruler Stopper for Attachment
P307

For marking work▶
Scribes
P324 ~325

FRONT

BACK

CU-15KD

FRONT

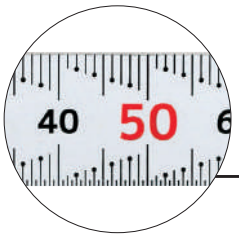
BACK

CU-30KD

USE
- For measuring dimensions, drawing a straight line and scribing

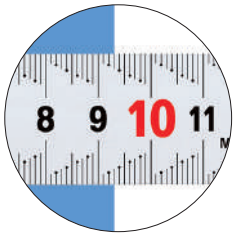
MATERIAL
- Stainless steel (SUS420J2)

FEATURES
- Stepped length of linear graduations by 1mm for easy-to-read
- Sequential graduation numbers and dot marking every 2mm for prevention of misreading
- Linear graduations every 0.5mm (CU-15KDF)
- Bent-up edge for easy to pick up with one hand
- Edges are finished smoothly to prevent marring surfaces
- JIS B7516



Linear graduations every 0.5mm

CU-15KDF



| Order No. | Model No. | Nominal Size (cm) | Finish | Accuracy (mm) | Graduation (mm) | Length (mm) | Width (mm) | Thickness (mm) | Weight |
|---|---|---|---|---|---|---|---|---|---|
| 111158 | CU-15KD | 15 | Satin | ± 0.15 | 1 | 175 | 15 | 0.5 | 10g |
| 111159 | CU-30KD | 30 | | | | 335 | 25 | 1 | 65g |
| 111293 | CU-60KD | 60 | | ± 0.20 | | 640 | 30 | 1.2 | 180g |
| 111294 | CU-100KD | 100 | | | | 1050 | 35 | 1.5 | 425g |
| 111261 | CU-15KDF | 15 | | ± 0.15 | 1・0.5 | 175 | 15 | 0.5 | 10g |

# STAINLESS STEEL RULER KAIDAN NARROW TYPE

New stepped millimeter graduations prevents misreading

For marking work▶
Scribes
P324 ~325

USE
- For measuring dimensions, drawing a straight line and scribing

MATERIAL
- Stainless steel (SUS420J2)

FEATURES
- Stepped length of linear graduations by 1mm for easy-to-read
- Sequential graduation numbers for prevention of misreading
- Suitable for detailed work by 0.5mm graduations
- Thin, Narrow type, can also be mounted on machine

0.5mm graduations

| Order No. | Model No. | Nominal Size (mm) | Finish | Accuracy (mm) | Graduation (mm) | Length (mm) | Width (mm) | Thickness (mm) | Weight |
|---|---|---|---|---|---|---|---|---|---|
| 111295 | HS-300KD | 300 | Satin | ± 0.15 | 1・0.5 | 325 | 15 | 0.5 | 18g |

# STAINLESS STEEL RULER KAIDAN (DOUBLE-SIDED SCALE)

Double-sided scale by 1mm and 0.5mm.
The back side graduation is 150mm vertical (SV-150KDDF), and 300mm center-origined (SV-300KDDF).

JIS mark indicates that product is certified compliant to JIS (Japan Industrial Standards) quality requirements.
JIS B 7516 Metal Rules
JIS B 7534 Metal Squares

For marking and depth measurement ▶
Ruler Stopper for Attachment
P307

For marking work ▶
Scribes
P324 ~325

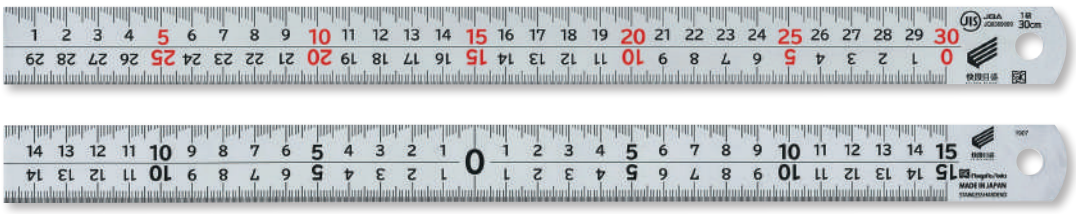
FRONT

BACK

SV-150KDDF

FRONT

BACK

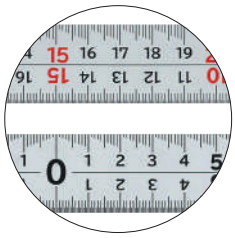


SV-300KDDF

USE
- For measuring dimensions, drawing a straight line and scribing

MATERIAL
- Stainless steel (SUS420J2)

FEATURES
- Back side graduation is vertical (SV-150KDDF), center-origined (SV-300KDDF) which can be used according to purpose
- Stepped length of linear graduations by 1mm for easy-to-read
- Sequential graduation numbers for prevention of misreading
- Suitable for detailed work by 0.5mm graduations
- JIS B7516



0.5mm graduation

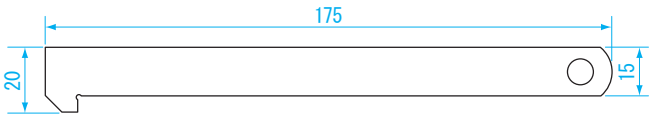
| Order No. | Model No. | Nominal Size (mm) | Finish | Accuracy (mm) | Graduation (mm) | Back Graduation | Length (mm) | Width (mm) | Thickness (mm) | Weight |
|---|---|---|---|---|---|---|---|---|---|---|
| 111374 | SV-150KDDF | 150 | Satin | ± 0.15 | 1・0.5 | Vertical | 175 | 15 | 0.5 | 10g |
| 111375 | SV-300KDDF | 300 | | | | Center-origined | 335 | 25 | 1 | 65g |

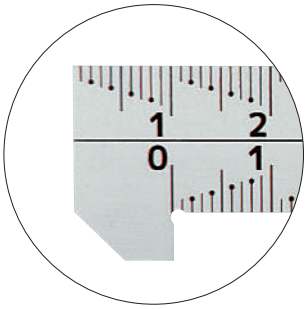
# HOOK STAINLESS STEEL RULER KAIDAN

Multi use scale with hook

● DIMENSIONS

Units: mm

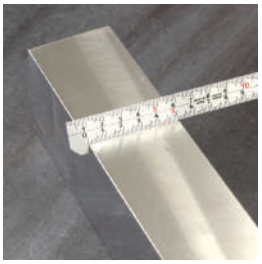


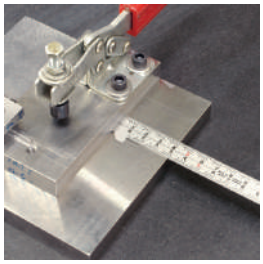



USE
- Dimensional measurement from the end side and simplified measurement of C chamfering

MATERIAL
- Stainless steel (SUS420J2)

FEATURES
- Ruler with hook on the end of scale
- Stepped length of linear graduations by 1mm for easy-to-read
- Sequential graduation numbers and dot marking every 2mm for prevention of misreading
- Edges are finished smoothly to prevent marring surfaces





| Order No. | Model No. | Nominal Size (cm) | Finish | Accuracy (mm) | Graduation (mm) | Length (mm) | Width (mm) | Thickness (mm) | Weight |
|---|---|---|---|---|---|---|---|---|---|
| 111105 | FS-15KD | 15 | Satin | ± 0.15 | 1 | 175 | 20 | 0.5 | 10g |

## VERTICAL STAINLESS STEEL RULER KAIDAN

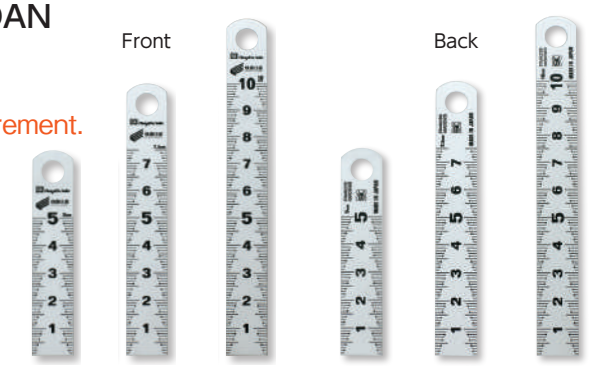
T

For depth measurement of machines and jigs.
Convenient vertical graduation numbers for depth measurement.

USE
- For depth measurement of machines and jigs

MATERIAL
- Stainless steel (SUS 420J2)

FEATURES
- Convenient vertical graduation numbers for depth measurement
- Stepped length of linear graduations by 1mm and point marking every 2mm for easy-to-read




VG-50KD VG-75KD VG-100KD VG-50KD VG-75KD VG-100KD

| Order No. | Model No. | Nominal Size (cm) | Finish | Accuracy (mm) | Graduation (mm) | Length (mm) | Width (mm) | Thickness (mm) | Weight |
|---|---|---|---|---|---|---|---|---|---|
| 111426 | VG-50KD | 5 | Satin | ± 0.15 | 1 | 75.2 | 15 | 0.5 | 4.0g |
| 111427 | VG-75KD | 7.5 | | | | 100.3 | | | 5.5g |
| 111428 | VG-100KD | 10 | | | | 125.2 | | | 7.0g |

## STAINLESS STEEL RULER KAIDAN

T

Convenient vertical graduation numbers for depth measurement.
Suitable for detailed work by 0.5mm graduations.

USE
- For depth measurement of machines and jigs

MATERIAL
- Stainless steel (SUS420J2)

FEATURES
- Convenient vertical graduation numbers for depth measurement
- Suitable for detailed work by 0.5mm graduations
- Stepped length of liner graduations by 1mm for easy-to-read

0.5mm graduation

SV-05KD SV-07HKD SV-10KD SV-05KD SV-07HKD SV-10KD

| Order No. | Model No. | Nominal Size (cm) | Finish | Accuracy (mm) | Graduation (mm) | Length (mm) | Width (mm) | Thickness (mm) | Weight |
|---|---|---|---|---|---|---|---|---|---|
| 111367 | SV-05KD | 5 | Satin | ± 0.15 | 1・0.5 | 75.2 | 15 | 0.5 | 4.0g |
| 111368 | SV-07HKD | 7.5 | | | | 100.3 | | | 5.5g |
| 111369 | SV-10KD | 10 | | | | 125.2 | | | 7.0g |

## MOBILE RULER KAIDAN

T

Compact size and clip design for easy-carrying in pencil case or pocket

FRONT

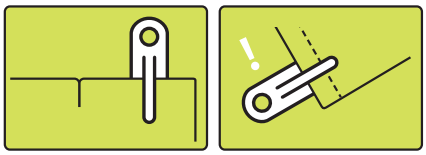
BACK

USE
- For measuring dimensions, drawing a straight line and scribing

MATERIAL
- Stainless steel (SUS420J2)

FEATURES
- Clip design to prevent dropping
- Compact size for easy-carrying in pencil case or pocket
- Convenient vertical graduation numbers for depth measurement
- Stepped length of linear graduations by 1mm for easy-to-read
- Suitable for detailed work by 0.5mm graduations
- Light-chamfered edges

Clip design



For notebook or pocket Securely hold

Convenient size for carrying around

| Order No. | Model No. | Nominal Size (mm) | Finish | Accuracy (mm) | Graduation (mm) | Length (mm) | Width (mm) | Thickness (mm) | Weight |
|---|---|---|---|---|---|---|---|---|---|
| 111376 | MS-100KD | 100 | Satin | ± 0.15 | 1・0.5 | 125 | 15 | 0.5 | 6.5g |

## POCKET RULER WITH DEPTH CLIP KAIDAN

New stepped millimeter graduations prevents misreading

With clip for easy carrying

USE
- For measuring dimensions, drawing and scribing

MATERIAL
- Stainless steel (SUS420J2)

FEATURES
- Stepped length of linear graduations by 1mm for easy-to-read
- Sequential graduation numbers and dot marking every 2mm for prevention of misreading
- Can be used as depth gauge by sliding clip along scale
- With clip for not-to-fall-off
- Edges are finished smoothly to prevent marring surfaces

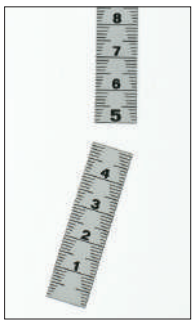
| Order No. | Model No. | Nominal Size (cm) | Finish | Accuracy (mm) | Length (mm) | Width (mm) | Thickness (mm) | Weight |
|---|---|---|---|---|---|---|---|---|
| 009903 | SVC-15KD | 15 | Satin | ± 0.15 | 160 | 12 | 0.5 | 8g |

## SNAP-OFF RULER KAIDAN

Solution for those who cut and customize ruler at a desired length.
Snappable with hand at every 10mm.

Front

Back



Snappable at every 10mm

USE
- For length measurement of short range

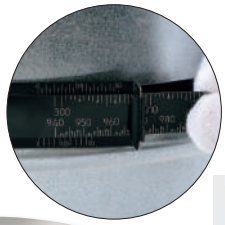
MATERIAL
- Carbon tool steel

FEATURES
- Snappable at every 10mm
- No cutter needed
- Stepped length of graduations by 1mm for easy-to-read

| Order No. | Model No. | Nominal Size (cm) | Accuracy (mm) | Graduation (mm) | Length (mm) | Width (mm) | Thickness (mm) | Weight |
|---|---|---|---|---|---|---|---|---|
| 111429 | BS-150KD | 12 | ± 0.15 | 1 | 146 | 12.7 | 0.2 | 4.1g |

## CIRCUMFERENCE MEASURING TAPE (CIRCO METER) KAIDAN

For circumference and diameter measurement at the same time



CJU-2200BKD

USE
- For measuring circumference and diameter of large round parts

MATERIAL
- Stainless steel

FEASTURES
- The white line on the black body can make measuring easier
- Circumference and diameter measurement at the same time

SPECIFICATIONS
- Tape width: 16mm
- Dimensions of reading area: W25×L130mm

| Order No. | Model No. | Measuring Range [dia.] (mm) | Measuring Range [circumference] (mm) | Accuracy [dia.] (mm) | Weight |
|---|---|---|---|---|---|
| 111362 | CJU-950BKD | ϕ 20～300 | 60～950 | ± 0.55 | 50g |
| 111363 | CJU-2200BKD | ϕ 300～700 | 940～2200 | ± 0.60 | 82g |
| 111364 | CJU-3460BKD | ϕ 700～1100 | 2190～3460 | | 114g |
| 111365 | CJU-4720BKD | ϕ 1100～1500 | 3450～4720 | ± 0.65 | 150g |

# RULER STOPPER FOR DEPTH MEASUREMENT

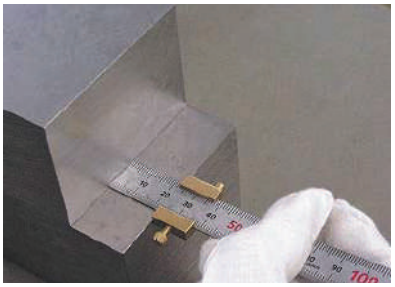
Attach to ruler for scribing and depth measurement

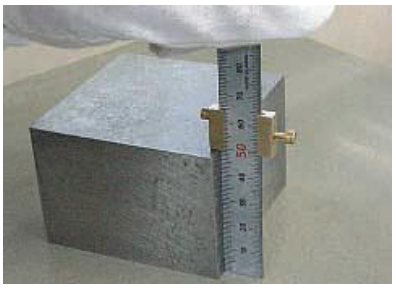
Stepped graduation for easy reading ▶
Stainless Steel Ruler KAIDAN
P302 ·304

Stepped graduation for easy reading ▶
Catch up Stainless Ruler KAIDAN
P303

SD-300

SD-6010





USE
- For accurate scribing and measurement of width, height and depth

FEATURES
- Slide and screw on ruler for depth measurement
- Convenient size for metal and woodworking use
- Attachable to JIS rulers

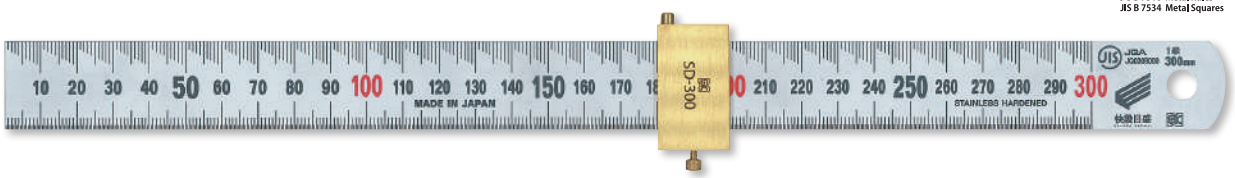
| Order No. | Model No. | Type | Material | Length (mm) | Thickness (mm) | Weight |
|---|---|---|---|---|---|---|
| 006843 | SD-150 | For 150mm ruler | Brass | 15 | 5 | 10g |
| 006844 | SD-300 | For 300mm ruler | | 20 | 6 | 23g |
| 006845 | SD-6010 | For 600・1000mm ruler | Aluminum | 30 | 13 | 26g |

# STAINLESS STEEL RULER KAIDAN WITH RULER STOPPER

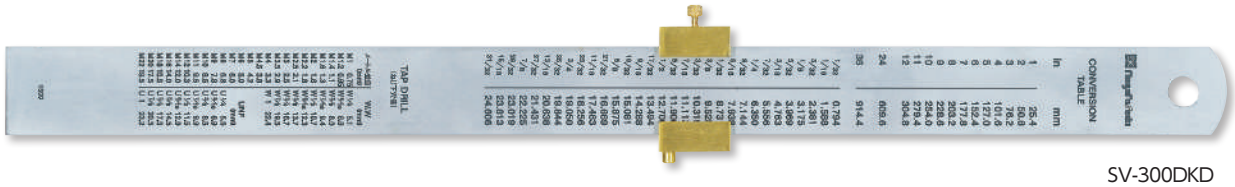
Ruler stopper for repeated scribing and depth measurement.
Ruler comes with ruler stopper.

JIS mark indicates that product is certified compliant to JIS (Japan Industrial Standards) quality requirements.
JIS B 7516 Metal Rules
JIS B 7534 Metal Squares

FRONT




BACK




SV-300DKD

USE
- Accurate scribing and measuring depth, height, width

MATERIAL
- Ruler: Stainless steel (SUS420J2)
- Ruler stopper: Brass

FEATURES
- Ruler with ruler stopper
- Edges are thread-chamfered for safety
- JIS B7516

| Order No. | Model No. | Nominal Size (mm) | Finish | Accuracy (mm) | Length (mm) | Width (mm) | Thickness (mm) | Weight |
|---|---|---|---|---|---|---|---|---|
| 111298 | SV-150DKD | 150 | Satin | ± 0.15 | 175 | 32 | 5 | 20g |
| 111299 | SV-300DKD | 300 | | | 335 | 45 | 6 | 86g |

## T-SHAPE RULER KAIDAN

T

For working on small works and scribing.
0mm at cross point to hook on works and measure.

For working on small works and scribing

USE
- For working on small works and scribing

MATERIAL
- Stainless steel (SUS420J2)

FEATURES
- 0mm at crossing point to hook on works and measure
- Suitable for scribing and drawing parallel lines on small works by holding it with one hand
- Stepped length of liner graduations by 1mm for easy-to-read

| Order No. | Model No. | Nominal Size (cm) | Finish | Accuracy (mm) | Length (mm) | Width (mm) | Thickness (mm) | Weight |
|---|---|---|---|---|---|---|---|---|
| 111366 | T-08KD | 2 × 8 | Satin | ± 0.15 | 112 | 58 | 1 | 15g |

## T-SHAPE RULER KAIDAN

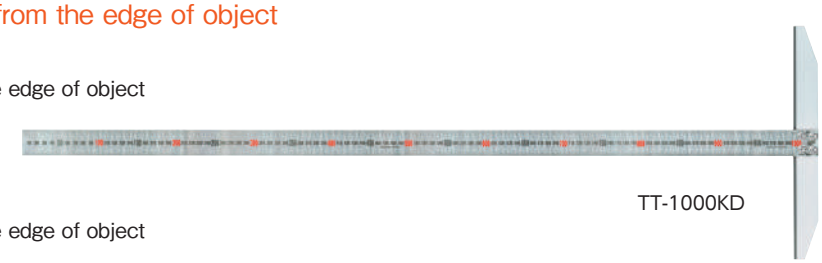
T

For measuring dimensions and scribing from the edge of object

USE
- For measuring dimensions and scribing from the edge of object

MATERIAL
- Base: Aluminum
- Scale: Stainless steel (SUS420J2)

FEATURES
- For measuring dimensions and scribing from the edge of object



TT-1000KD

| Order No. | Model No. | Nominal Size (mm) | Accuracy (mm) | Graduation (mm) | Length (mm) | Base Width (mm) | Thickness (mm) | Weight |
|---|---|---|---|---|---|---|---|---|
| 111300 | TT-1000KD | 1000 | ± 0.20 | 1・0.5 | 1030 | 300 | 16 | 640g |
| 111301 | TT-2000KD | 2000 | ± 0.30 | 1 | 2040 | | | 1530g |

## ALUMINUM RULER KAIDAN

T 0

New stepped millimeter graduations prevents misreading

FRONT

BACK

With non-slip sticker (except AS-15), and grip groove

AS-60

USE
- For measuring distance, cutting and scribing

MATERIAL
- Aluminum

FEATURES
- Stepped length of linear graduations by 1mm for easy-to-read
- Colored numbers and graduations (Navy & Red) is easy to distinguish the lines and graduations when drawing
- Centered-zero secondary markings (AS-30・AS-60・AS-100)
- With non-slip sticker (except AS-15), and grip groove

| Order No. | Model No. | Nominal Size (cm) | Center-zero secondary marking (Yes/No) | Accuracy (mm) | Length (mm) | Width (mm) | Thickness (mm) | Weight |
|---|---|---|---|---|---|---|---|---|
| 111165 | AS-15 | 15 | None | ± 0.16 | 180 | 35 | 5 | 36g |
| 111166 | AS-30 | 30 | Yes | ± 0.20 | 330 | | | 65g |
| 111167 | AS-45 | 45 | None | ± 0.25 | 480 | | | 95g |
| 111168 | AS-60 | 60 | Yes | ± 0.28 | 630 | | | 124g |
| 111169 | AS-100 | 100 | | ± 0.40 | 1030 | | | 203g |

## PLASTIC FOLDING RULER KAIDAN

### Handy ruler made by anti-rust and energize-retardant material

PFR-100CKD

PFR-100SKD

USE
- For length measurement

MATERIAL
- Glass fiber plastic

FEASTURES
- Stepped length of linear graduations by 1mm for easy-to-read
- Handy and foldable
- Click locking joints at 90° and 180°

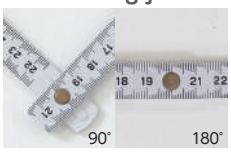
SPECIFICATIONS
- Five folds
- Accuracy full length: ±1.5mm / 1m

5 folds

Glass fiber plastic

Anti-rust and energize-retardant material

Click locking joints

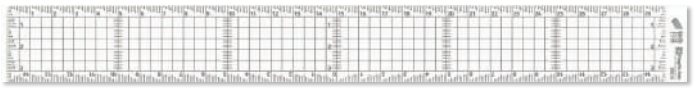



Stop at 90° and 180°

| Order No. | Model No. | Nominal Size | Width (mm) | Thickness (mm) | Weight |
|---|---|---|---|---|---|
| 111349 | PFR-100CKD | 1m | 15 | 3.1 | 60g |
| 111350 | PFR-100SKD | | | | |

## ACRYLIC GRID RULER KAIDAN / CUTTING ACTYLIC GRID RULER KAIDAN

### Available in three different sizes and two different types



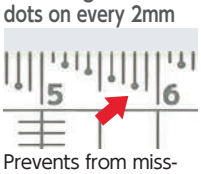
AGS-30KD、CAGS-30KD

USE
- For measuring and drawing
- For cutting work (CAGS-15KD, CAGS-30KD, CAGS-50KD)

MATERIAL
- Acrylic (AGS-15KD, AGS-30KD, AGS-50KD)
- Acrylic and stainless steel (CAGS-15KD, CAGS-30KD, CAGS-50KD)

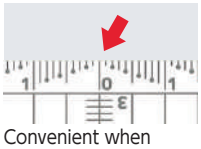
FEATURES
- Stepped length of linear graduations by 1mm and dot marking every 2mm for easy-to-read
- Back side scale: "0" in the center
- Gray colored graduations and numbers
- "0" origin at end edge for height and depth measurement

KAIDAN graduation & dots on every 2mm



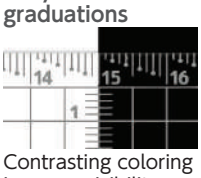
Prevents from miss-scale reading

"0" origin on the center (Back side ruler)



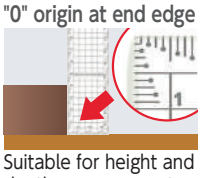
Convenient when measuring in sideways

Gray colored graduations



Contrasting coloring improve visibility

"0" origin at end edge



Suitable for height and depth measurement

With stainless steel plate

Protect the product from cutter scratch (CAGS series only)

| Order No. | Model No. | Nominal Size (cm) | Product type | Length (mm) | Width (mm) | Thickness (mm) | Weight |
|---|---|---|---|---|---|---|---|
| 111307 | AGS-15KD | 15 | — | 160 | 30 | 2 | 11g |
| 111308 | AGS-30KD | 30 | | 310 | 35 | 2 | 26g |
| 111309 | AGS-50KD | 50 | | 526 | 60 | 2 | 75g |
| 111310 | CAGS-15KD | 15 | Cutting | 160 | 30 | 3 | 17g |
| 111311 | CAGS-30KD | 30 | | 310 | 35 | 3 | 38g |
| 111312 | CAGS-50KD | 50 | | 526 | 60 | 3 | 111g |

## BAMBOO RULER KAIDAN

### High quality Japanese bamboo material

USE
- For length measurement

MATERIAL
- Bamboo

FEASTURES
- Stepped length of linear graduations by 1mm for easy-to read
- Upper graduation: "0" origin on the left edge, Lower graduation: "0" origin on the right edge

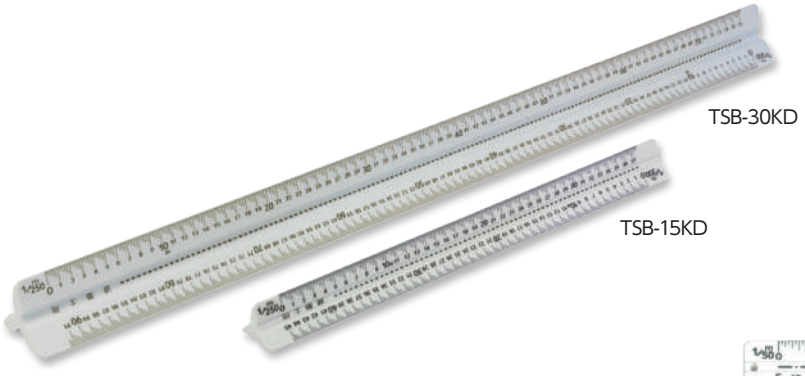
SPECIFICATIONS
- Graduation: 10cm from both ends: every 1mm / 10cm in the center: every 2mm

BR-30CKD

| Order No. | Model No. | Nominal Size (cm) | Length (mm) | Width (mm) | Thickness (mm) | Weight |
|---|---|---|---|---|---|---|
| 111304 | BR-30CKD | 30 | 300 | 22 | 3.5 | 23g |
| 111305 | BR-50CKD | 50 | 500 | 22 | 3.5 | 36g |
| 111306 | BR-100CKD | 100 | 1000 | 28 | 4.5 | 99g |

## TRIANGULAR SCALE RULER KAIDAN (ARCHITECTURE USE)

New stepped millimeter graduations prevents misreading




### Accuracy

| Length (mm) | Tolerance (mm) |
|---|---|
| 50 and less | ± 0.1 |
| More than 50 to less than 100 | ± 0.2 |
| More than 100 to less than 150 | ± 0.3 |
| More than 150 to less than 300 | ± 0.4 |

USE
- For drafting reading scaled drawing

MATERIAL
- ABS

FEATURES
- Stepped length of linear graduations for easy-to-read
- All number reading type
- Laser marked graduation

SCALE SPECIFICATIONS
- Scale: 1/20, 1/50, 1/100, 1/200, 1/250, 1/300

1/50・1/20m

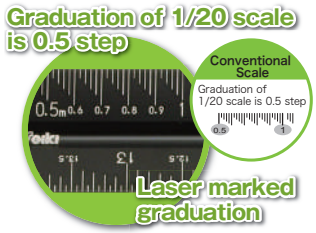
1/100・1/200m

1/300・1/250m

| Order No. | Model No. | Length (mm) | Width (mm) | Thickness (mm) | Weight |
|---|---|---|---|---|---|
| 111148 | TSB-15KD | 170 | 15 | 14 | 11g |
| 111149 | TSB-30KD | 325 | 25 | 22 | 54g |

## ALUMINUM TRIANGULAR SCALE RULER KAIDAN (ARCHITECTURE USE)

New stepped millimeter graduations prevents misreading



### Accuracy

| Length (mm) | Tolerance (mm) |
|---|---|
| 50 and less | ± 0.06 |
| More than 50 to less than 100 | ± 0.07 |
| More than 100 to less than 150 | ± 0.08 |
| More than 150 to less than 300 | ± 0.09 |

USE
- For drafting reading scaled drawing

MATERIAL
- Aluminum

FEATURES
- Stepped length of linear graduations for easy-to-read
- All number reading type
- Laser marked graduation

SCALE SPECIFICATIONS
- Scale: 1/20, 1/50, 1/100, 1/200, 1/250, 1/300

1/20・1/50m

1/100・1/200m

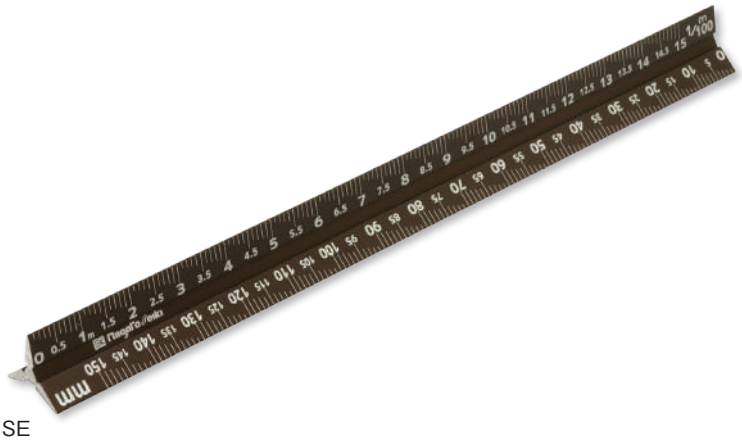
1/250・1/300m

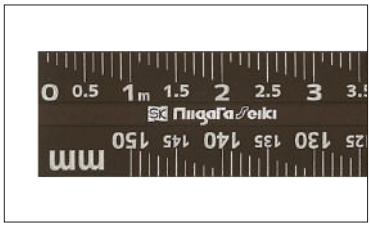
| Order No. | Model No. | Length (mm) | Width (mm) | Thickness (mm) | Weight |
|---|---|---|---|---|---|
| 111250 | TSBA-15KD | 170 | 14 | 12 | 16g |
| 111251 | TSBA-30KD | 325 | 21 | 18.5 | 60g |

## ALUMINUM TRIANGULAR SCALE RULER KAIDAN (GENERAL USE)

T

New stepped millimeter graduations prevents misreading





Enlarged view (scale: 1/100m, 1/1mm)

### Accuracy

| Length (mm) | Tolerance (mm) |
|---|---|
| 50 and less | ±0.06 |
| More than 50 to less than 100 | ±0.07 |
| More than 100 to less than 150 | ±0.08 |
| An end face origin | ±0.20 |

USE
- For drafting reading scaled drawing

MATERIAL
- Aluminum

FEATURES
- Scale origin starts from the end face
- Stepped length of linear graduations for easy-to-read
- All number reading type
- Laser marked graduation

SCALE SPECIFICATIONS
- Scale: 1/1, 1/100, 1/150, 1/200, 1/250, 1/300

1/100m・1/1 (0-150) mm

1/150・1/200m

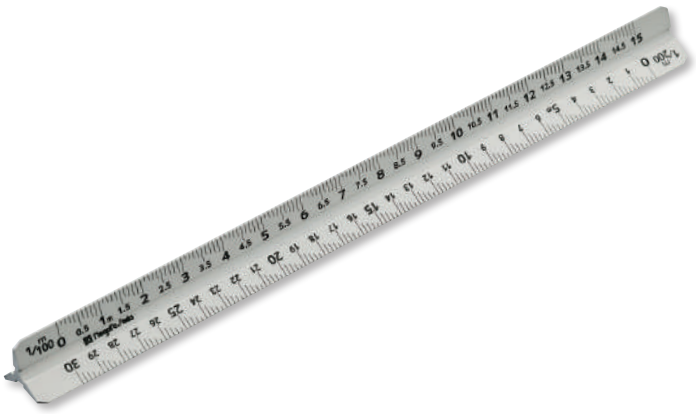
1/250・1/300m

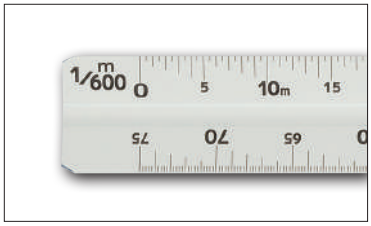
| Order No. | Model No. | Length (mm) | Width (mm) | Thickness (mm) | Weight |
|---|---|---|---|---|---|
| 111254 | TSGA-15KD | 160 | 14 | 12 | 15g |

## ALUMINUM TRIANGULAR SCALE RULER KAIDAN (REAL-ESTATE SURVEYOR USE)

T

New stepped millimeter graduations prevents misreading





Enlarged view (scale: 1/500, 1/600m)

### Accuracy

| Length (mm) | Tolerance (mm) |
|---|---|
| 50 and less | ±0.06 |
| More than 50 to less than 100 | ±0.07 |
| More than 100 to less than 150 | ±0.08 |

USE
- For drafting reading scaled drawing

MATERIAL
- Aluminum

FEATURES
- Stepped length of linear graduations for easy-to-read
- All number reading type
- Laser marked graduation

SCALE SPECIFICATIONS
- Scale: 1/100, 1/200, 1/250, 1/300, 1/500, 1/600

1/100・1/200m

1/250・1/300m

1/500・1/600m

| Order No. | Model No. | Length (mm) | Width (mm) | Thickness (mm) | Weight |
|---|---|---|---|---|---|
| 111255 | TSIA-15KD | 170 | 14 | 12 | 16g |

# MACHINE RULER KAIDAN

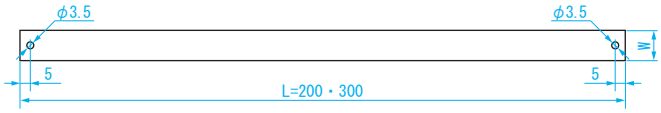
Narrow and thin ruler suitable for mounting on machines and jigs.
Three different types of graduation (left origin, center origin and right origin) available.

MSL-300KD
(Left origin)

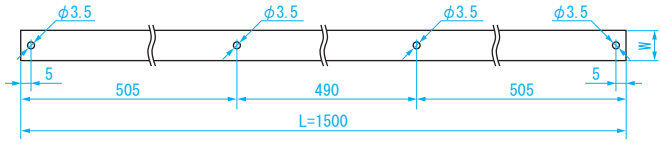
MSR-300KD
(Right origin)

MSC-300KD
(Center origin)

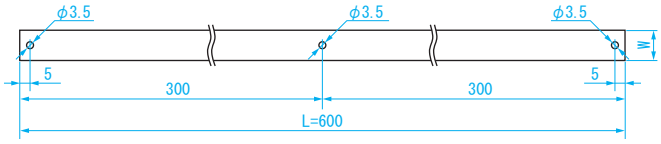
● DIMENSIONS Units: mm



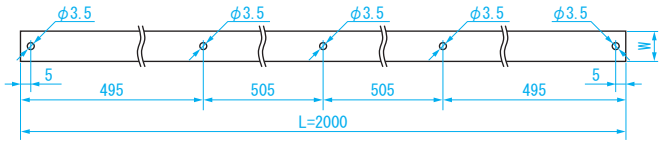

NOMINAL SIZE 200・300mm



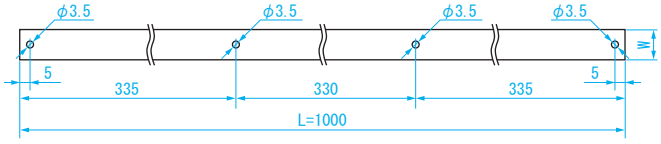

NOMINAL SIZE 1500mm




NOMINAL SIZE 600mm




NOMINAL SIZE 2000mm




NOMINAL SIZE 1000mm

USE
- For measuring dimensions by mounting on machines and jigs

MATERIAL
- Stainless steel (SUS420J2)

FEATURES
- Stepped length of liner graduations by 1mm for easy-to-read
- Three different types of graduation (left, center and right origin) available
- With mounting hole
- Satin finish

| Order No. | Model No. | Nominal Size (mm) | Graduation (Origin) | Accuracy (mm) | Length (mm) | Width (mm) | Thickness (mm) | Weight |
|---|---|---|---|---|---|---|---|---|
| 111431 | MSL-200KD | 200 | Left | ± 0.15 | 200 | 15 | 0.5 | 12g |
| 111432 | MSR-200KD | | Right | | | | | |
| 111433 | MSC-200KD | | Center | | | | | |
| 111434 | MSL-300KD | 300 | Left | | 300 | | | 18g |
| 111435 | MSR-300KD | | Right | | | | | |
| 111436 | MSC-300KD | | Center | | | | | |
| 111437 | MSL-600KD | 600 | Left | ± 0.25 | 600 | | | 35g |
| 111438 | MSR-600KD | | Right | | | | | |
| 111439 | MSC-600KD | | Center | | | | | |
| 111440 | MSL-1000KD | 1000 | Left | ± 0.30 | 1000 | | | 59g |
| 111441 | MSR-1000KD | | Right | | | | | |
| 111442 | MSC-1000KD | | Center | | | | | |
| 111443 | MSL-1500KD | 1500 | Left | ± 0.35 | 1500 | 25 | 1.5 | 439g |
| 111444 | MSR-1500KD | | Right | | | | | |
| 111445 | MSC-1500KD | | Center | | | | | |
| 111446 | MSL-2000KD | 2000 | Left | ± 0.40 | 2000 | | | 585g |
| 111447 | MSR-2000KD | | Right | | | | | |
| 111448 | MSC-2000KD | | Center | | | | | |

## RULER TAPE

Scale tape to be sticked on work table, machinery or anywhere

With adhesive tape on back side

Can be cut

USE
- Stick the ruler tape to the work table for measuring length

MATERIAL
- SK steel (Nylon coated)

FEATURES
- Friction resistant nylon coating
- With $\phi$2mm hole for versatile use
- Adhesive tape on back for ready-to-use

| Order No. | Model No. | Max measuring length (m) | Tape Width (mm) | Tape Thickness (mm) | Weight |
|---|---|---|---|---|---|
| 111195 | PM-1320KD | 2.0 | 13 | 0.3 (Including adhesive tape) | 32g |

## SCALE STICKER KAIDAN

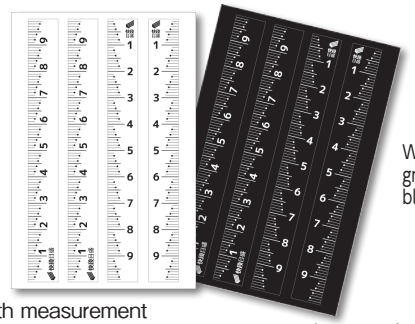
Useful scale sticker with KAIDAN graduation

Stick and be a ruler

Mobile phone, planner...

Scales (for weight and length measurement at once)

Black colored graduation on white sheet



White colored graduation on black sheet

※The actual product has a white back sheet

USE
- For length measurement

MATERIAL
- PET (Polyethylene terephthalate)

FEATURES
- Strong adhesion but easily removable

SPECIFICATIONS
- Two stickers (black & white 1 each)

| Order No. | Model No. | Nominal Size (cm) | Sticker length (mm) | Sticker width (mm) | Weight |
|---|---|---|---|---|---|
| 111329 | MSL-10KD | 9.9 | 100 | 10.0 | 1g |

## AUTO LOCK TAPE MEASURE PRO KAIDAN

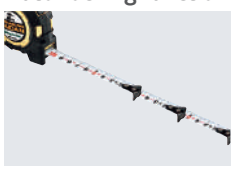
With auto-locking and anti-retraction tape measure

ALCP-2555KD

Rubber body

Non-slip rubber grip perfectly fits hand

Auto-locking function



Auto-lock is engaged when tape is pulled for anti-retraction

With belt clip and strap

Easy to carry around

Nylon coating tape

Highly durable against wear

Hardened end-hook

Ensures durability

USE
- Measure dimensions

MATERIAL
- Body: ABS, Rubber
- Tape: SK4 tool steel (Nylon coated)

FEATURES
- Stepped length of linear graduations by 1mm for easy-to-read
- Repeating digit type for large, easy to read numbers
- Auto-lock is engaged when tape is pulled for anti-retraction
- Water resistant Nylon-coated tape
- JIS class 1 tape
- Non-slip rubber grip

| Order No. | Model No. | Max measuring length (m) | Tape width (mm) | Body Color | Weight |
|---|---|---|---|---|---|
| 111196 | ALCP-1620KD | 2.0 | 16 | Gold | 110g |
| 111197 | ALCP-1635KD | 3.5 | | | 140g |
| 111198 | ALCP-1955KD | 5.5 | 19 | | 270g |
| 111199 | ALCP-2555KD | | 25 | | 340g |

## TAPE MEASURE (KAIDAN LOCK GUARD)

Strong rigidity tape resists to bending and deflection.
Black background and white line for easy identification. (LCG-2550BKD)

LCG-2550KD

LCG-2550BKD

LCG-1950KD

Three colored printing(black, red and blue), easy to distinguish the graduations

Black background and white graduations (LCG-2550BKD)

Back side is vertical scale

USE
- Measure dimensions

MATERIAL
- Body: ABS, Rubber
- Tape: SK4 tool steel (Nylon coated)

FEATURES
- Strong rigidity tape resists to bending and deflection
- Repeating digit type for large, easy to read numbers
- Water resistant Nylon-coated tape
- JIS class 1 tape
- Non-slip rubber grip
- With belt hook
- With magetic hook (LCG-2550BKD)

| Order No. | Model No. | Max measuring length (m) | Tape Width (mm) | Body Color | Tape Color | Number Color | Weight |
|---|---|---|---|---|---|---|---|
| 111256 | LCG-1950KD | 5.0 | 19 | White | White | Black・Red・Blue／Black・Red | 270g |
| 111257 | LCG-2550KD | | 25 | Black | | | 320g |
| 111379 | LCG-2550BKD | | 25 | Pink | Black／White | White・Red／Black・Red | 330g |

## KAIDAN LOCK GUARD WITH HOLDER / TAPE MEASURE HOLDER

KAIDAN LOCK GUARD with holder

LCG-2550HKD


Simple "slot-in" design

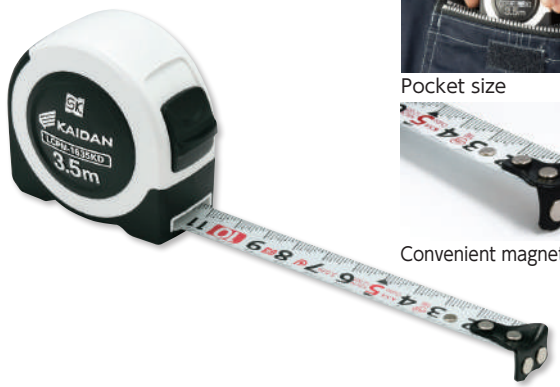
MATERIAL
- CVH-45: ABS

FEATURES
- CVH-45: Dedicated holder for KAIDAN LOCK GUARD. Easy and quick operation when attaching / detaching the tape measure to / from the holder.
- LCG-2550HKD: KAIDAN LOCK GUARD LCG-2550KD plus TAPE MEASURE HOLDER CVH-45 in one set

| Order No. | Product Name | Model No. | Max Measuring Length | Tape Width (mm) | Attachable Belt Size | | Weight |
|---|---|---|---|---|---|---|---|
| | | | | | Width (mm) | Thickness (mm) | |
| 111348 | KAIDAN LOCK GUARD WITH HOLDER | LCG-2550HKD | 5.0m | 25 | 50 | 7 | 340g |
| 111361 | TAPE MEASURE HOLDER | CVH-45 | - | - | | | 27g |

## TAPE MEASURE (KAIDAN LOCK POCKET)

With convenient magnetic hook for attaching to metal surface



Pocket size

Convenient magnetic hook

USE
- For length measurement

Sequential marking tape with dot on every 2mm for easy scale reading

MATERIAL
- Body: ABS,Rubber
- Tape: SK4 (Resin coated)

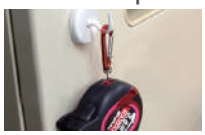
FEATURES
- Neodymium magnetic hook for attaching to metal surface
- Pocket size
- Stepped length of linear graduations by 1mm for easy-to-read
- JIS class 1 tape

| Order No. | Model No. | Max Measuring length (m) | Tape Width (mm) | Weight |
|---|---|---|---|---|
| 111360 | LCPM-1635KD | 3.5 | 16 | 123g |

## TAPE MEASURE (AUTO LOCK KAIDAN) T 0

With auto-locking and anti-retraction tape. Handy model of AUTO LOCK series.

With convenient carabiner clip



For attaching to belt loop or storing everywhere with hook

Rubber plating on both sides

Designed to fit for both right and left handed

ALC-1635KD

Sequential graduation numbers and dot marking every 2mm for easy-to-read

USE
- For length measurement

MATERIAL
- Body: ABS,Rubber
- Tape: 65Mn (Resin coated)

FEATURES
- Auto-lock is engaged when tape is pulled for anti-retraction
- With convenient carabiner clip. Light weight and handy.
- Stepped length of linear graduations by 1mm for easy-to-read
- Dot marking-every 2mm

| Order No. | Model No. | Max Measuring Length (m) | Tape Width (mm) | Weight |
|---|---|---|---|---|
| 111342 | ALC-1320KD | 2.0 | 13 | 88g |
| 111343 | ALC-1635KD | 3.5 | 16 | 135g |

## TAPE MEASURE (KAIDAN LOCK) T 0

New stepped millimeter graduations prevents misreading

Hardened end-hook

Ensures durability

LC-1955KD

With convenient belt clip

Easy to carry around

LC-1620KD LC-1635KD LC-2555KD

Sequential graduation numbers and dot marking every 2mm for easy-to-read

USE
- For length measurement

MATERIAL
- Body: ABS,Rubber
- Tape: SK4 (Resin coated)

FEATURES
- Stepped length of linear graduations by 1mm for easy-to-read
- Dot marking-every 2mm
- Sequential marking tape

| Order No. | Model No. | Max Measuring Length (m) | Tape Width (mm) | Body Color | Weight |
|---|---|---|---|---|---|
| 111336 | LC-1620KD | 2.0 | 16 | Pink | 90g |
| 111337 | LC-1635KD | 3.5 | | Yellow | 122g |
| 111338 | LC-1955KD | 5.5 | 19 | Green | 210g |
| 111339 | LC-2555KD | | 25 | Blue | 270g |

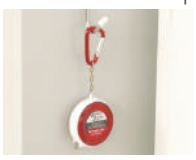
## TAPE MEASURE (KAIDAN MINI) 0

Mini tape measure with quality JIS CLASS 1 tape

Compact

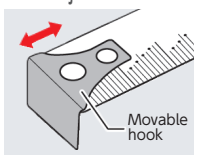
Handy size

With convenient carabiner clip



Portable and easy to store

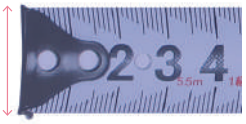
With 0 adjustment end-hook




For fine-adjustment of measuring point

25mm width

Comparison with 25mm width tape



Convenient when measuring small objects

USE
- For length measurement

MATERIAL
- Body: ABS
- Tape: SK4 (Resin coated)

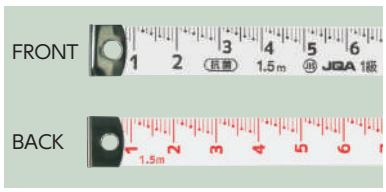
FEATURES
- 9mm width tape, convenient when measuring small objects
- With 0 adjustment end-hook
- JIS class 1 tape
- Stepped length of linear graduations by 1mm for easy-to-read
- Dot marking-every 2mm
- Sequential marking tape

| Order No. | Model No. | Max Measuring Length (m) | Tape Width (mm) | Weight |
|---|---|---|---|---|
| 111335 | MMF-0902KD | 2.0 | 9 | 45g |

## SEWING TAPE MEASURE KAIDAN

Made in Japan. JIS class 1 and antimicrobial tape.

DMA-1215KD



DMB-1215KD

USE
- For length measurement

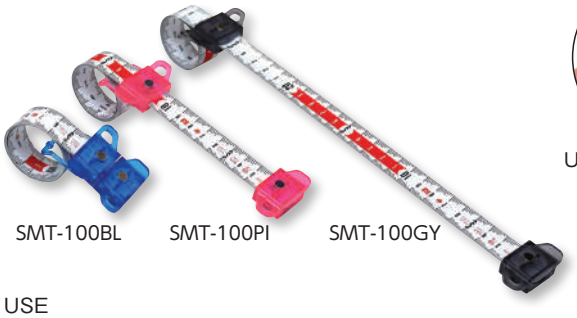
MATERIAL
- Core tape: Fiberglass
- Tape coating: Polyvinyl chloride (Antimicrobial)
- Case: ABS (DMA-1215KD)

FEATURES
- Low elasticity fiberglass tape
- Silent when pulling out the tape (DMA-1215KD)
- Antimicrobial tape
- Stepped length of linear graduations by 1mm for easy-to-read
- Dot marking-every 2mm
- JIS class 1 tape

| Order No. | Model No. | Type | Max Measuring Length (m) | Tape Width (mm) | Tape Thickness (mm) | Weight |
|---|---|---|---|---|---|---|
| 111333 | DMA-1215KD | Cased | 1.5 | 12 | 0.3 | 25g |
| 111334 | DMB-1215KD | Tape | | | | 10g |

## SPIRAL MEASURE

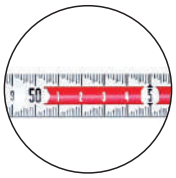
A compact and lightweight measuring tape that makes measuring easier.
Without a body case, it offers a new and simple way to use.



SMT-100BL SMT-100PI SMT-100GY

Ultimate Lightweight Design Without a Storage Case

Equipped with magnets on both end sliders for easy attachment to steel structures



KAIDAN Stepped scale & red-white color scheme every 10 cm (on both sides)

The tape end can be rolled into the slider guide for storage.

Can be fully extended and used as a measuring scale.

USE
- For measuring dimensions
- As a scale for recording photos

MATERIAL
- Slider: Polycarbonate
- Tape: SK4 (Nylon coated)
- Magnet: Neodymium magnet

FEATURES
- 1/3 lighter than conventional tape measures by eliminating the case
- Awarded the 2020 Good Design Best 100. Developed in collaboration with major construction company.
- The slider can be moved to any position, making it easy to measure in tight spaces where conventional tape measures are difficult to use
- High-visibility red and white color scheme every 10 cm, making it easy to recognize in recorded photos
- Easy-to-read stepped scale with 1mm increments
- 2mm dot scale for quick even-number readings
- Tape standard: JIS Class 1

### ■ Effective Measuring Length : 1.0m

| Order No. | Model No. | Slider Color | Total Length (m) | Tape Width (mm) | Weight |
|---|---|---|---|---|---|
| 180501 | SMT-100GY | Gray | 1.1 | 19 | 35g |
| 180502 | SMT-100PI | Pink | | | |
| 180503 | SMT-100OR | Orange | | | |
| 180504 | SMT-100GR | Green | | | |
| 180505 | SMT-100WH | White | | | |
| 180506 | SMT-100BL | Blue | | | |
| 180507 | SMT-100PU | Purple | | | |

### ■ Effective Measuring Length : 2.0m

| Order No. | Model No. | Slider Color | Total Length (m) | Tape Width (mm) | Weight |
|---|---|---|---|---|---|
| 180508 | SMT-200GY | Gray | 2.1 | 19 | 53g |
| 180509 | SMT-200PI | Pink | | | |
| 180510 | SMT-200OR | Orange | | | |
| 180511 | SMT-200GR | Green | | | |
| 180512 | SMT-200WH | White | | | |
| 180513 | SMT-200BL | Blue | | | |
| 180514 | SMT-200PU | Purple | | | |

## LONG TAPE MEASURE KAIDAN

Triple speed tape retraction and dust remover attached

Triple Speed tape retraction

**Comfortable smooth gear handle**

Original New Mechanics

**DUST REMOVER MDR-12 prevents sand and dust from getting into the entrance**

MDR-12 GFM-30KD

USE
- For distance measurement

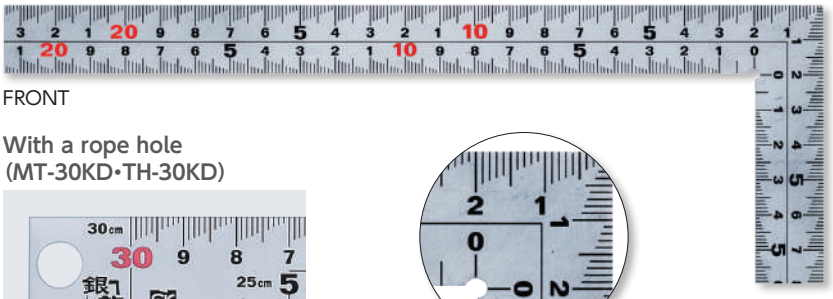
MATERIAL
- Case: ABS
- Core tape: Fiberglass
- Tape coating: Polyvinyl chloride

FEATURES
- Four planetary gears and rotation axis allow smooth and quick (triple speed) tape retraction
- Resistant to wear, heart and energize
- Washable
- Stepped length of linear graduations by 1mm for easy-to-read
- Dot marking-every 2mm
- JIS class 1 tape

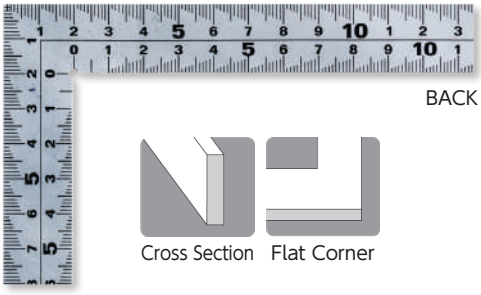
| Order No. | Product name | Model No. | Max Measuring Length (m) | Tape Width (mm) | Tape Thickness (mm) | Tensile force | Accuracy (L=Measuring Length (m)) | Weight |
|---|---|---|---|---|---|---|---|---|
| 111331 | LONG TAPE MEASURE KAIDAN | GFM-30KD | 30 | 12.5 | 0.47 | 20N | ±(0.6+0.4L)mm | 640g |
| 111332 | LONG TAPE MEASURE KAIDAN | GFM-50KD | 50 | | | | | 890g |
| 111359 | DUST REMOVER FOR TAPE MEASURE | MDR-12 | - | - | - | - | - | 5g |

# CARPENTER'S SQUARE KAIDAN

New stepped millimeter graduations prevents misreading



FRONT



BACK

With a rope hole
(MT-30KD･TH-30KD)

Cross Section Flat Corner

USE
- ●Measure dimensions and marking for stone or metal work

MATERIAL
- ●Stainless steel

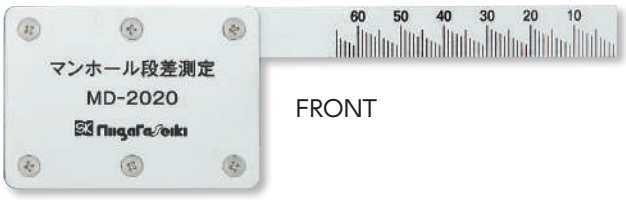
FEATURES
- ●Highly legible repeated numerals
- ●Thick blade type protects the product from shock and keep the product shape (MT-30KD･MT-50KD)
- ●Thin blade type for easy handling (TH-30KD,TH-50KD)
- ●With a rope hole (MT-30KD,TH-30KD)

| Order No. | Model No. | Size | Type | Long blade (Short blade) × Width × Thickness (mm) | Front Scale (cm) | | Back Scale (cm) | | Accuracy | | Weight |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Long blade | Short blade | Long blade | Short blade | Deviation from a right angle | Tolerance of length | |
| 111190 | MT-30KD | 30cm | Thick and wide | 320(160)×20×2.0 | 30<br>25 | 15<br>10 | 30<br>25 | 15<br>10 | Less than 0.1mm per 100mm length | 300mm ±0.2mm | 145g |
| 111191 | MT-50KD | 50cm | | 520(260)×20×2.0 | 50<br>45 | 25<br>20 | 50<br>45 | 25<br>20 | | 500mm ±0.2mm | 235g |
| 111303 | TH-30KD | 30cm | Thin and wide | 320(160)×20×1.0 | 30<br>25 | 15<br>10 | 30<br>25 | 15<br>10 | | 300mm ±0.2mm | 75g |
| 111302 | TH-50KD | 50cm | | 520(260)×20×1.0 | 50<br>45 | 25<br>20 | 50<br>45 | 25<br>20 | | 500mm ±0.2mm | 120g |

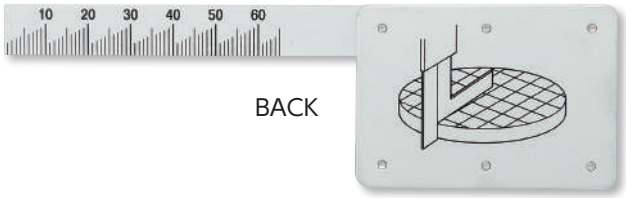
## MANHOLE DEPTH MEASURING ADAPTER

Measure the step between manhole and road surface when attached to steel square

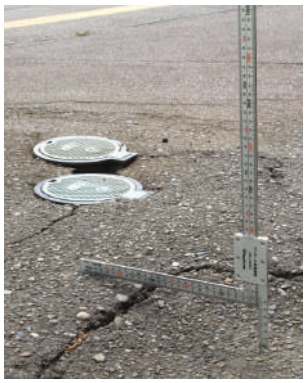
Stepped graduation for easy reading
Carpenter's Square KAIDAN
P317



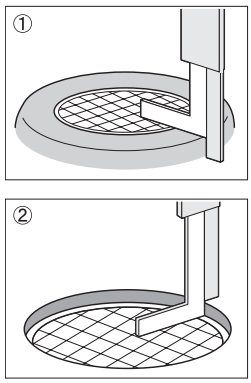

FRONT




BACK



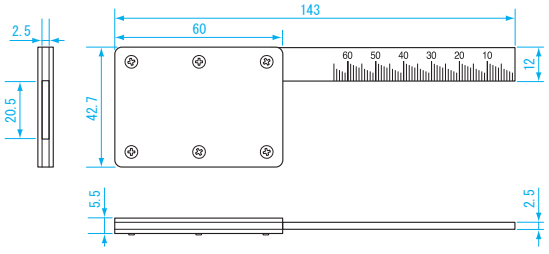
Mount on steel square




Step measurement between manhole and road surface

● DIMENSIONS

Units : mm




USE
- ●For measuring gaps between manhole and road surface
- ●Applicable steel square: MT-30KD, MT-50KD

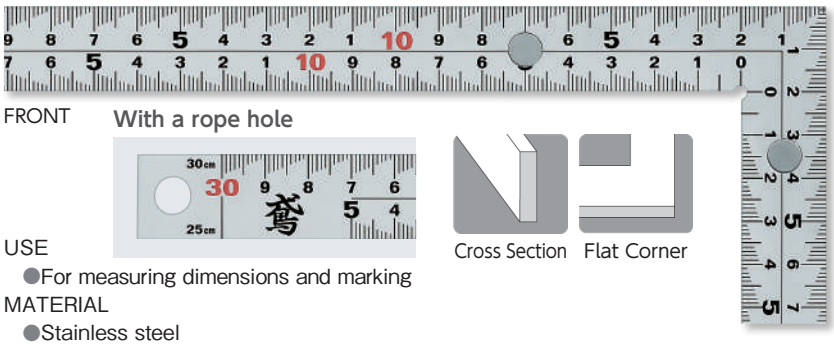
MATERIAL
- ●Stainless steel

FEATURES
- ●Measuring range: ①65mm
  ②Horizontal length: 143mm

| Order No. | Model No. | Accuracy (mm) | Applicable square size (mm) | Weight |
|---|---|---|---|---|
| 006991 | MD-2020 | ± 0.2 | Width 20 × Thickness 2.0 | 100g |

## CARPENTER'S SQUARE KAIDAN WITH MAGNETS

### With strong magnets to firmly place it onto metal surface



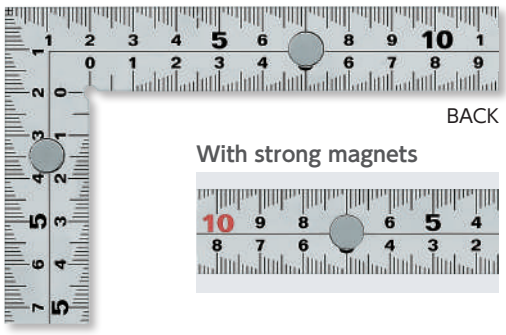
FRONT

With a rope hole





Cross Section Flat Corner



BACK

With strong magnets



USE

- For measuring dimensions and marking

MATERIAL

- Stainless steel

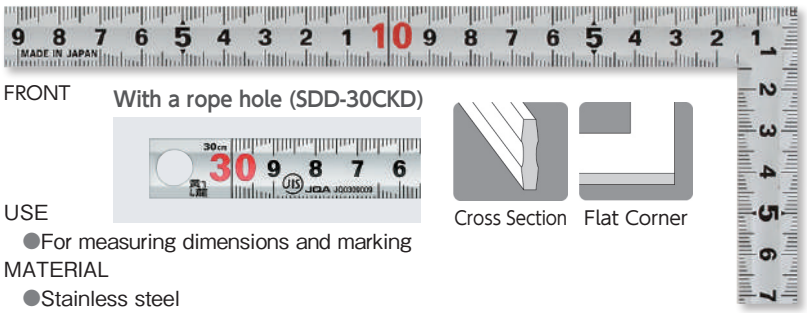
FEATURES

- With a rope hole
- Suitable size to carry around in a tool bag
- Thick blades protect the product from shock and keep the product shape

| Order No. | Model No. | Size | Type | Long blade (Short blade) × Width × Thickness (mm) | Front Scale | | Back Scale | | Accuracy | | Weight |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Long blade | Short blade | Long blade | Short blade | Deviation from a right angle | Tolerance of length | |
| 111317 | MT-30CMGKD | 30cm | Magnet attached | 320(160)×20×2.0 | 30cm | 15cm | 30cm | 15cm | Less than 0.1mm per 100mm length | 300mm ±0.2mm | 142g |

## CARPENTER'S SQUARE KAIDAN (IDENTICAL OUTER / INNER SCALES )

### Flat corner thickness type



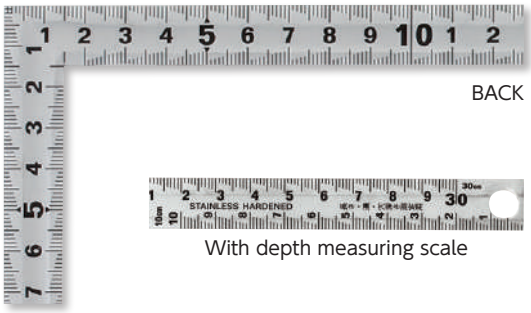
FRONT

With a rope hole (SDD-30CKD)





Cross Section Flat Corner



BACK



With depth measuring scale

USE

- For measuring dimensions and marking

MATERIAL

- Stainless steel

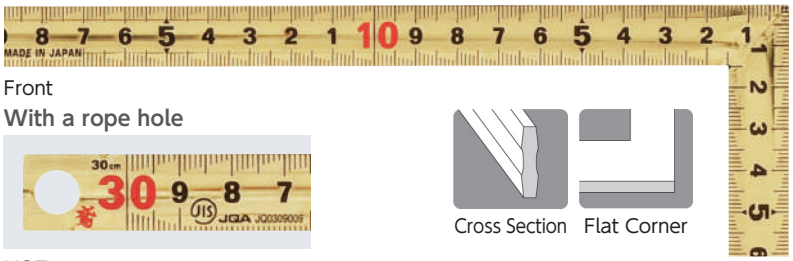
FEATURES

- Repeated numerals
- Flat corner thickness
- With a rope hole (SDD-30CKD)

| Order No. | Model No. | Size | Type | Long blade (Short blade) × Width × Thickness (mm) | Front Scale | | Back Scale | | Accuracy | | Weight |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Long blade | Short blade | Long blade | Short blade | Deviation from a right angle | Tolerance of length | |
| 111188 | SDD-30CKD | 30cm | Flat corner thickness | 320(160)×15×1.3 | 30cm | 15cm | 30cm | 15cm | Less than 0.1mm per 100mm length | 300mm ±0.2mm | 50g |
| 111189 | SDD-50CKD | 50cm | | 520(260)×15×1.3 | 50cm | 25cm | 50cm | 25cm | | 500mm ±0.2mm | 90g |

## CARPENTER'S SQUARE KAIDAN NEW!

### Gold carpenter's square with special coating that repels ink for easy-to-read scales



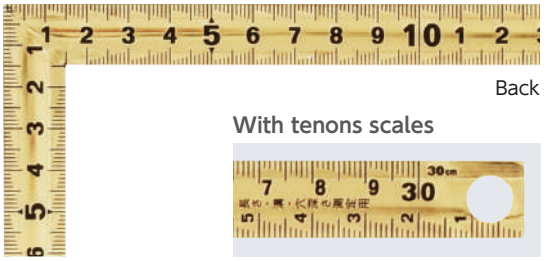
Front

With a rope hole





Cross Section Flat Corner



Back

With tenons scales



USE

- For dimensional measurement and scribing work

MATERIAL

- Stainless steel

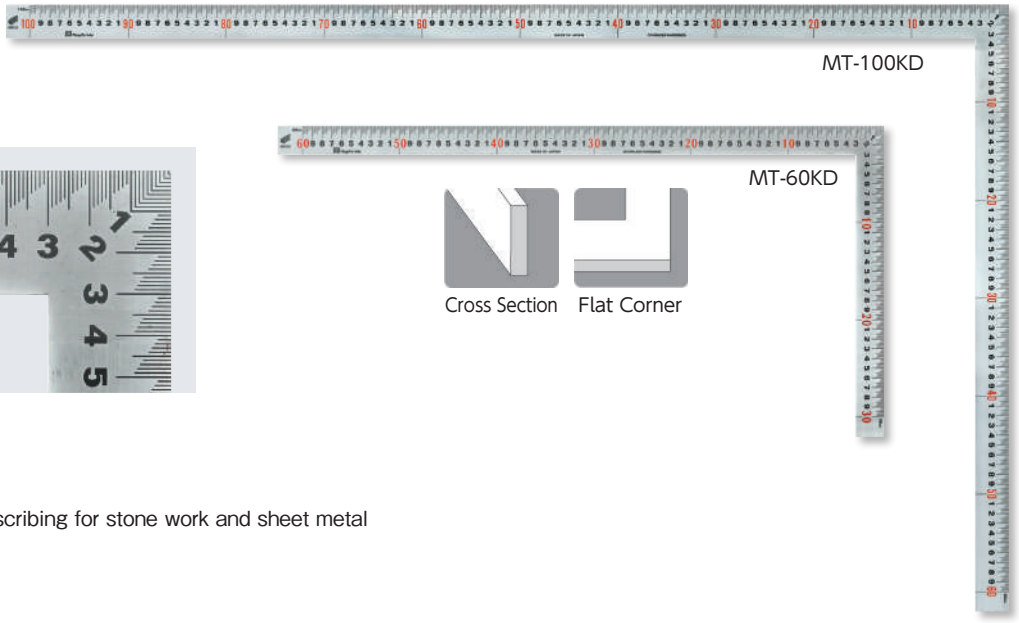
FEATURES

- Uses special coating that repels ink
- Equipped with a safety rope attachment hole, ideal for high-altitude work

| Order No. | Model No. | Size | Type | Long blade (Short blade) × Width × Thickness (mm) | Front Scale | | Back Scale | | Accuracy | | Weight |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Long blade | Short blade | Long blade | Short blade | Deviation from a right angle | Tolerance of length | |
| 111384 | GDD-30CKD | 30cm | Gold Carpenter's Square | 320(160)×15×1.3 | 30cm | 15cm | 30cm Tenons | 15cm | Within 0.1mm per 100mm | 300mm ±0.2mm | 61g |

## MEDIUM / LARGE CARPENTER'S SQUARE KAIDAN

Sheet metal workshop essential. Measure dimensions, check right angles, and marking work.




USE
- Measuring dimensions and scribing for stone work and sheet metal

MATERIAL
- Stainless steel

FEATURES
- For working with large material

| Order No. | Model No. | Size | Type | Length of Long blade (Short blade) × Width × Thickness (mm) | Front Scale | | Back Scale | | Accuracy | | Weight |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Long blade | Short blade | Long blade | Short blade | Deviation from a right angle | Tolerance of length | |
| 111296 | MT-60KD | 60cm | Medium | 631(325)×30×2.0 | 60cm | 30cm | 60cm | 30cm | Less than 0.1mm per 100mm length | 600mm ±0.6mm | 420g |
| 111297 | MT-100KD | 100cm | Large | 1026(629)×35×2.5 | 100cm | 60cm | 100cm | 60cm | | 1000mm ±0.8mm | 1080g |

## CARPENTER'S SQUARE KAIDAN MINI

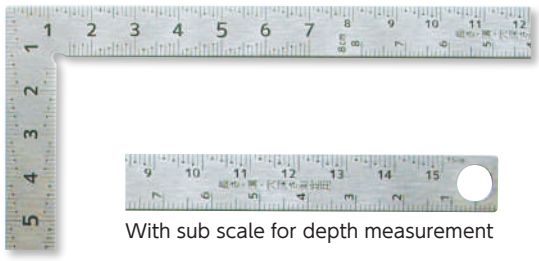
Small but useful. Easy to carry around.

FRONT

CM-15KD

CM-10KD

BACK





With sub scale for depth measurement

Cross Section Flat Corner

Compact and handy

USE
- For measuring dimensions and marking

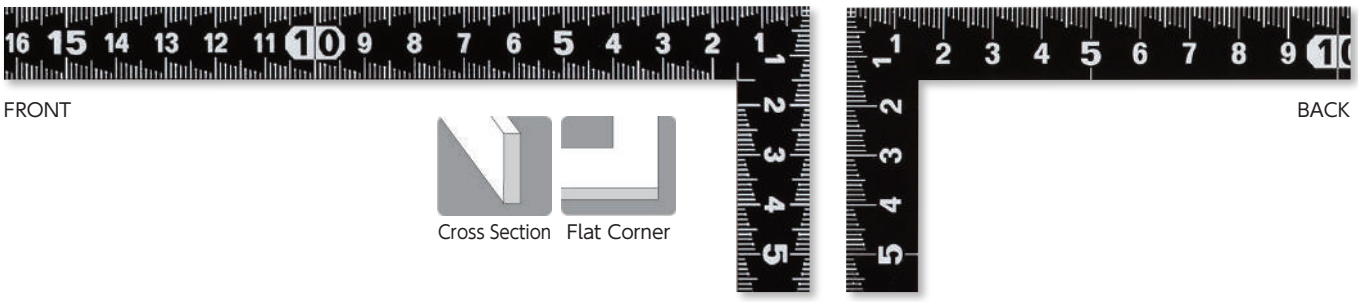
MATERIAL
- Stainless steel

FEATURES
- Comact and handy
- With sub scale for depth measurement (Back side)
- With a rope hole

| Order No. | Model No. | Size | Long blade (Short blade) × Width × Thickness (mm) | Front Scale | | Back Scale | | Weight |
|---|---|---|---|---|---|---|---|---|
| | | | | Long blade | Short blade | Long blade | Short blade | |
| 111325 | CM-10KD | 10cm | 110(58)×12×1.2 | 10cm | 5cm | 10cm | 5cm | 20g |
| 111326 | CM-15KD | 15cm | 162(83)×12×1.2 | 15cm | 7.5cm | 15cm | 7.5cm | 26g |

## CARPENTER'S SQUARE KAIDAN

Dot marking every 2mm and sequential graduation numbers




USE
- For measuring dimensions and scribing

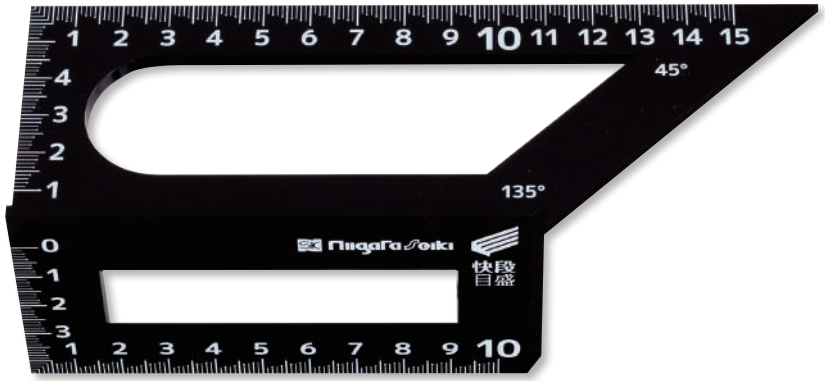
MATERIAL
- Steel

FEATURES
- Dot marking-every 2mm
- Sequential graduation numbers for prevention of misreading

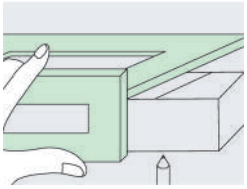
| Order No. | Model No. | Size | Long blade (Short blade) × Width × Thickness (mm) | Front Scale | | Back Scale | | Weight |
|---|---|---|---|---|---|---|---|---|
| | | | | Long blade | Short blade | Long blade | Short blade | |
| 111192 | CB-15KD | 30cm | 325(165)×15×1.2 | 30cm | 15cm | 30cm | 15cm | 68g |

## DURABLE PLASTIC 3D ANGLE SCRIBING MITRE SQUERE

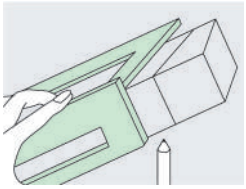
For marking at 45, 90 and 135 deg. Polycarbonate material allows scratch-free contact to workpiece.




Use example - at 45 deg



Use example - at 90 deg



USE
- For measuring dimensions and marking

MATERIAL
- Polycarbonate

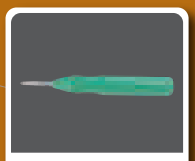
FEATURES
- Polycarbonate material for scratch-free contact to workpiece
- With 45deg / 135deg angle indication
- Stepped length of linear graduations by 1mm for easy-to-read

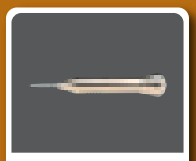
| Order No. | Model No. | Size | Total Length x Total Width x Thickness (mm) | Weight |
|---|---|---|---|---|
| 111330 | ASQ-100PCKD | 15cm | 169×63×55 | 35g |

# SCRIBER

322p

322p


322p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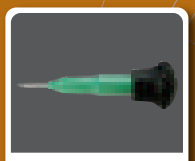
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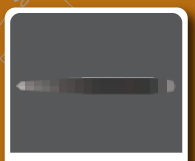
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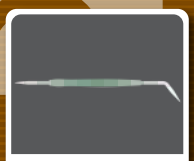
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324p

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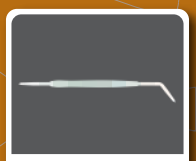
324p

324p

324p

324p

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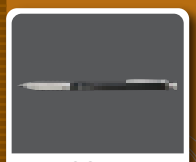
325p

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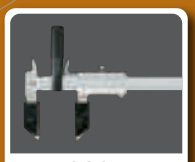
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327p

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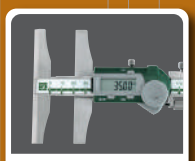
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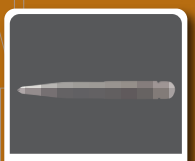
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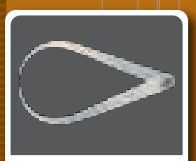
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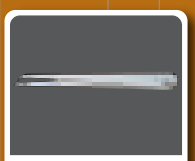
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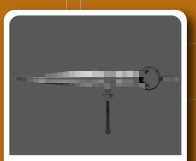
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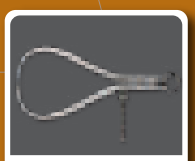

330p

331p

331p

## COMBINATION CARBIDE TIP SCRIBER AND AUTOMATIC PUNCH [SS TYPE]

Ultra-Compact!　An automatic punch with a total length of approximately 10 cm, even with the cap attached.

USE
- For scribing and punching tasks

MATERIAL
- Body: Aluminum (anodized)
- Tip: Tungsten carbide
- Tip hardness: HRA87

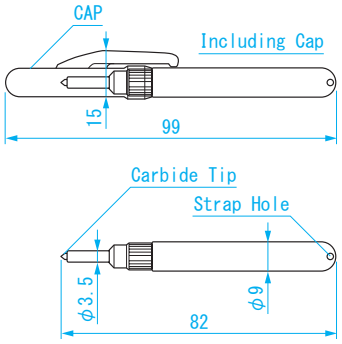
FEATURES
- No hammer required for punching (auto-return type)
- Tungsten carbide tip allows for scribing work
- Strap hole on the end of the body

※Punching force adjustment is not available.

Punching Work

Scribing Work

● OUTLINE DIMENSIONS　Unit: mm




Replacement parts available P332

| Order No. | Model No. | Weight |
|---|---|---|
| 000011 | AP-SS | 14g |

## COMBINATION CARBIDE TIP SCRIBER AND AUTOMATIC CENTER PUNCH S

Long-seller product. For center-punching without hammer and for scribiing.

USE
- For center punch and scribing work

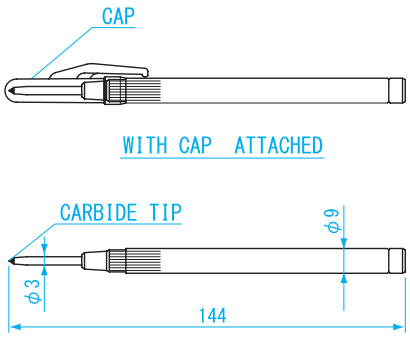
MATERIAL
- Body: Aluminum (anodized)
- Tip: Carbide tip (G5)
- Tip hardness: HRA87

FEATURES
- Spring loaded, no hammer needed
- Can be used as center punch and as scriber
- Strength of the driving force can be adjustable by rotating the rear cap

Punching work

Scribing work

● OUTLINE DIMENSIONS　Unit: mm




Replacement parts available P332

| Order No. | Model No. | Weight |
|---|---|---|
| 000001 | AP-S | 21g |

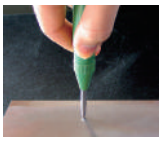
## CARBIDE TIP AUTOMATIC CENTER PUNCH M

Long-seller product. For center-punching without hammer.

USE
- For center punch

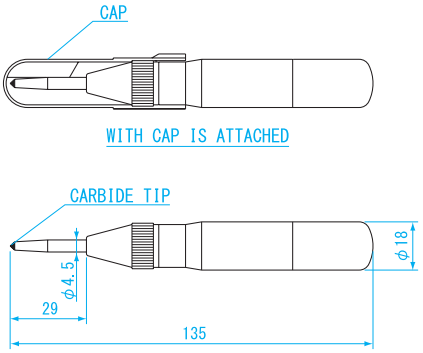
MATERIAL
- Body: Plastic
- Tip: Carbide tip (G5)
- Tip hardness: HRA87

FEATURES
- Spring loaded, no hammer needed
- Strength of the driving force can be adjustable by rotating the rear cap


Punching work

Piercing empty spray can for safe disposal

● OUTLINE DIMENSIONS　Unit: mm




Replacement parts available P332

| Order No. | Model No. | Weight |
|---|---|---|
| 000002 | AP-M | 53g |

## CARBIDE TIP AUTOMATIC CENTER PUNCH M2

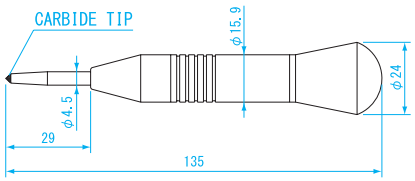
Long-seller product. For center-punching without hammer.

USE
- For center punch

MATERIAL
- Body: Brass (nickel plated)
- Tip: Carbide tip (G5)
- Tip hardness: HRA87

FEATURES
- Spring loaded, no hammer needed
- Strength of the driving force can be adjustable by rotating the rear cap

● OUTLINE DIMENSIONS Unit: mm




| Order No. | Model No. | Weight |
|---|---|---|
| 000004 | AP-M2 | 155g |

## CARBIDE TIP AUTOMATIC CENTER PUNCH L

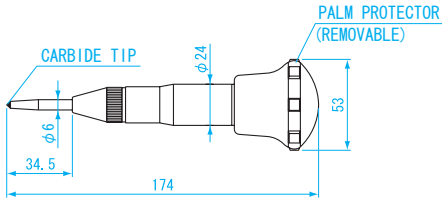
Long-seller product. For center-punching without hammer.

USE
- For center punch

MATERIAL
- Body: Plastic
- Tip: Carbide tip (G5)
- Tip hardness: HRA87

FEATURES
- Spring loaded, no hammer needed
- Strength of the driving force can be adjustable by rotating the rear cap
- Wide grip for palm protection. Can be used continuously without impact on hand.

● OUTLINE DIMENSIONS Unit: mm




Replacement parts available P332

| Order No. | Model No. | Weight |
|---|---|---|
| 000003 | AP-L | 114g |

## CARBIDE TIP CENTER PUNCH

Long-seller product. For center-punching.

Rust prevention▶
Zerust Film for Steel
P370

USE
- For punch work

MATERIAL
- Body: Sulfur free cutting steel
- Tip: Carbide tip (G5)

FEATURES
- Black oxide knurled grip
- Punchable material: Up to approx. HV520 (hardened steel)

TCP-M

| Order No. | Model No. | Length (mm) | Knurled part Diameter (mm) | Tip angle | Weight |
|---|---|---|---|---|---|
| 000021 | TCP-S | 77 | φ 8 | 85° | 23g |
| 000022 | TCP-M | 100 | φ 10 | | 48g |
| 000023 | TCP-L | 110 | φ 15 | | 115g |
| 000024 | TCP-LL | 125 | φ 17 | | 170g |
| 000025 | TCP-XL | 177 | φ 20 | | 310g |

## ETCHING SCRIBER

Long-seller product. Plated finish for anti-rust.

Stepped graduation for easy reading
Metal Ruler KAIDAN
P302 ~308

Stepped graduation for easy reading
Metal Square KAIDAN
P317 ~320

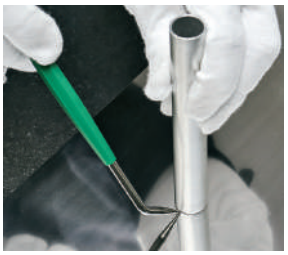
KS

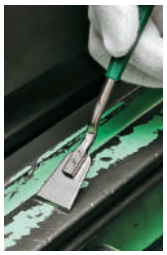
NS

USE
- For scribing work

MATERIAL
- Body: Carbon tool steel for machine use (nickel plated)
- Grip: Plastic
- Hardened tip
- Tip hardness: HV520~590

FEATURES
- Plated for rust-resistance





| Order No. | Model No. | Length (mm) | Diameter (mm) | Grip Length (mm) | Grip Diameter (mm) | Spatula Width (mm) | Weight |
|---|---|---|---|---|---|---|---|
| 000131 | KS | 227 | 5 | 127 | (hex)10 | – | 39g |
| 000132 | NS | 240 | | | | 20 | 42g |

## CARBIDE TIP ETCHING SCRIBER

Carbide tipped for better durability

Stepped graduation for easy reading
Metal Ruler KAIDAN
P302 ~308

Stepped graduation for easy reading
Metal Square KAIDAN
P317 ~320

KW

PST

A

H

S

USE
- For scribing and drawing on steel, brass, plastic and glass

MATERIAL
- Tip: Carbide tip (G2)
- Tip hardness: HRA87

FEATURES
- Carbide tipped for scribing on hard steel and glass
- Less abrasion, tipping and burrs
- Tip angle: 55°
- Replacement scriber tip sold separatly (KW, A)

| Order No. | Model No. | Length (mm) | Diameter (mm) | Grip Length (mm) | Grip Diameter (mm) | Material | Weight |
|---|---|---|---|---|---|---|---|
| 000160 | KW | 224 | 4.5 | – | – | Sulphur free-cutting steel | 36g |
| 000133 | PST | 227 | 5 | 127 | (hex)10 | Sulphur free-cutting steel | 39g |
| 000180 | A | 170(stored•110) | 5 | 97 | ϕ10 | Carbon steel | 25g |
| 000190 | H | 150 | (hex)6 | – | – | Carbon tool steel | 32g |
| 000200 | S | 156 | 6 | – | – | Carbon tool steel | 25g |

### ■ Replacement Rod

| Order No. | Model No. | Specifications |
|---|---|---|
| 000161 | – | KW Straight Replacement Rod |
| 000162 | KW-B | KW Curved Replacement Rod |
| 000181 | – | A Replacement Rod |

PUNCH
SCRIBER
DIVIDER
CALIPER
SURFACE GAUGE

## CARBIDE TIP SCRIBER

For highly accurate scribing work▶
Scribing Caliper
P327

Pencil type for easy-to-carry.
Carbide tipped.

SC-P10

USE
- Scribing and drawing work on steel, brass, plastic and glass

MATERIAL
- Body: ABS resin
- Tip: Carbide tip (G2)

FEATURES
- Carbide tipped for scribing on hard steel and glass
- Less abrasion, tipping and burrs
- Cap with clip for storage and carrying

| Order No. | Model No. | Size | Length (mm) | Diameter (mm) | Carbide tip Dia. (mm) | Carbide tip Angle | Weight |
|---|---|---|---|---|---|---|---|
| 000260 | SC-P05 | 0.5mm | 125 | 10 | 0.5 | 50° | 10g |
| 000262 | SC-P10 | 1.0mm | | | 1.0 | | |
| 000264 | SC-P20 | 2.0mm | | | 2.0 | | |
| 000261 | SC-PE05 | Spare tip 0.5mm | – | – | 0.5 | | 2g |
| 000263 | SC-PE10 | Spare tip 1.0mm | – | – | 1.0 | | |
| 000265 | SC-PE20 | Spare tip 2.0mm | – | – | 2.0 | | |

## CARBIDE TIP SCRIBER

For highly accurate scribing work▶
Scribing Caliper
P327

Pencil type for easy-to-carry.
Carbide tipped.

USE
- For scribing work

MATERIAL
- Body: Plastic (DX- metal)
- Tip: Carbide tip (G2)

FEATURES
- Clip for convenient carrying
- Scriber tip retracts into body like click pen
- Durable carbide tip for scribing on hard stee, glass etc.
- Less abrasion, tipping and burrs
- Tip angle: 50°

SC-P

SC-PDX

| Order No. | Model No. | Standard | Tip Angle (mm) | Length (mm) | Diameter (mm) | Weight |
|---|---|---|---|---|---|---|
| 000210 | SC-P | – | 1 | 145 | 7.2 | 19g |
| 000215 | SC-PDX | DX | 1 | 132 | 8 | 25g |

## REPLACEMENT TIP (5pcs) FOR SC-P, SC-PDX

USE
- Replacement tip with tip holder for SC-P, SC-PDX

MATERIAL
- Tip holder: Brass
- Tip: Carbide tip (G2)

SPECIFICATIONS
- Tip Diameter: 1mm
- Applicable product: SC-P, SC-PDX

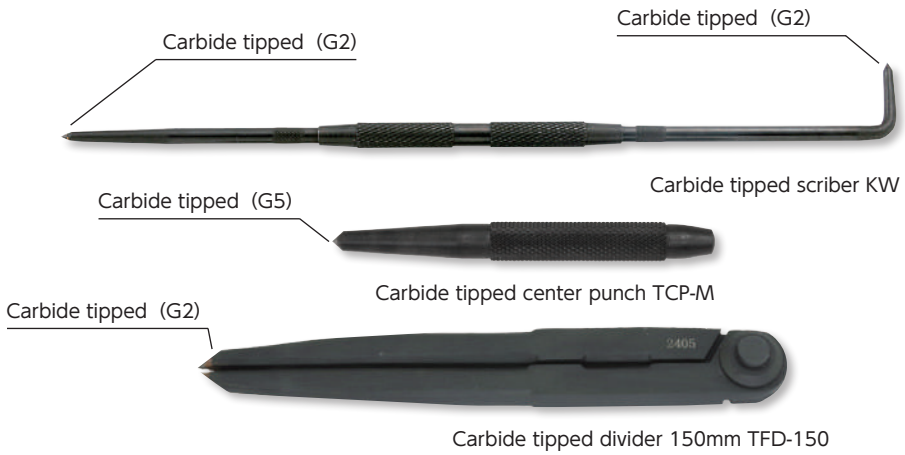
| Order No. | Model No. | Quantity | Length (mm) | Weight (each) |
|---|---|---|---|---|
| 000213 | SC-PE5 | 5本 | 40 | 1g |

# CARBIDE SCRIBING / ENGRAVING TOOL SET

(TBFD-150)

Set of all carbide tipped tools

Stepped graduation for easy reading▶ Metal Ruler KAIDAN P302 ~308
Stepped graduation for easy reading▶ Metal Square KAIDAN P317 ~320
Rust prevention▶ Zerust Film for Steel P370




USE
- ●For scribing materials such as glass, brass, plastic, copper
- ●For punch work
- ●For scribing circles and dividing distances

FEATURES
- ●Plastic carrying case

CONTENTS
- ●Carbide tipped scriber KW
- ●Carbide tipped center punch TCP-M
- ●Carbide tipped divider 150mm TFD-150 (one each)

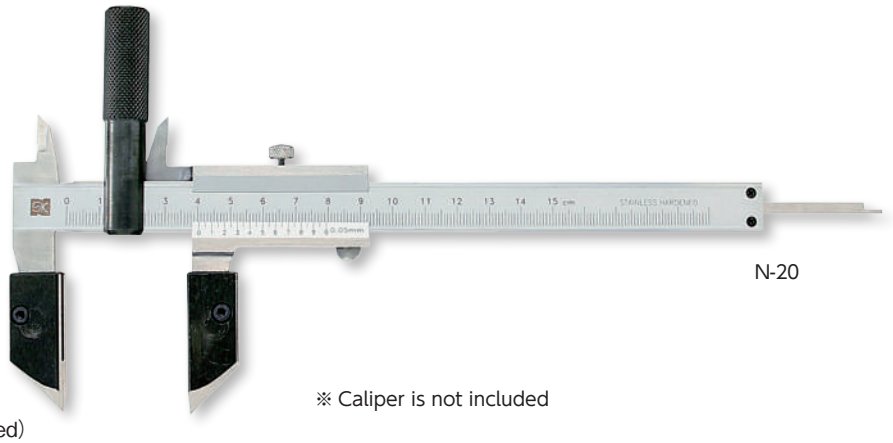
Replacement parts available P324

| Order No. | Model No. | Weight |
|---|---|---|
| 000303 | CTS-3 | 240g |

# ATTACHMENT SCRIBER FOR CALIPER

Transform your standard caliper into a precision scribing caliper!

Mounting on caliper for scribing▶ Caliper P171 ~188
Rust prevention▶ Zerust Film for Steel P370



N-20

※ Caliper is not included

USE
- ●Mounting on caliper for scribing

MATERIAL
- ●Body: Carbon steel (black oxide coated)
- ●Tip: Carbide tipped (G2)

FEATURES
- ●Attach to the jaw of calipers for accurate scribing

ACCESSORIES
- ●Hex wrench

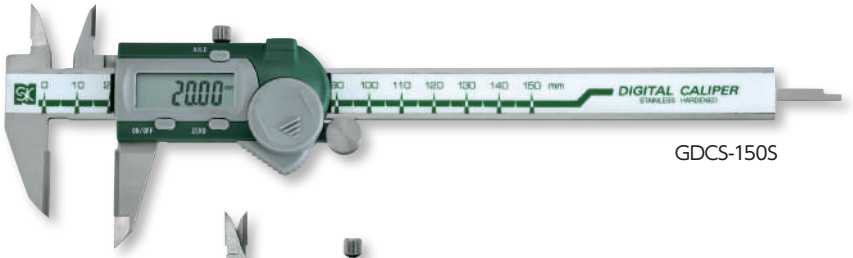
| Order No. | Model No. | Applicable caliper size | Length (mm) | Groove Width (mm) | Weight |
|---|---|---|---|---|---|
| 000112 | N-20 | 150·200mm | 43 | 4 | 175g |
| 000113 | N-30 | 250·300mm | 72 | 4.5 | 425g |

## SCRIBING VERNIER CALIPER

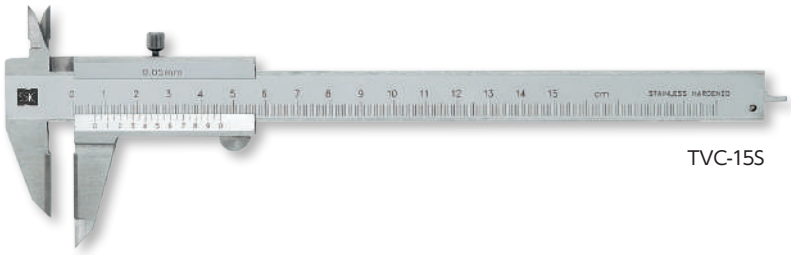
For high precise scribing

Reference standard for calibration▶ Block Gauge P32 ~40
Rust prevention▶ Zerust Film for Steel P370

※ Please refer to Page 189 for dimensions or detailed specifications for this item




GDCS-150S



TVC-15S

USE
- Outside diameter, inside diameter, step and depth measurement, and also scribing

MATERIAL
- stainless steel

FEATURES
- Carbide-tipped measuring faces

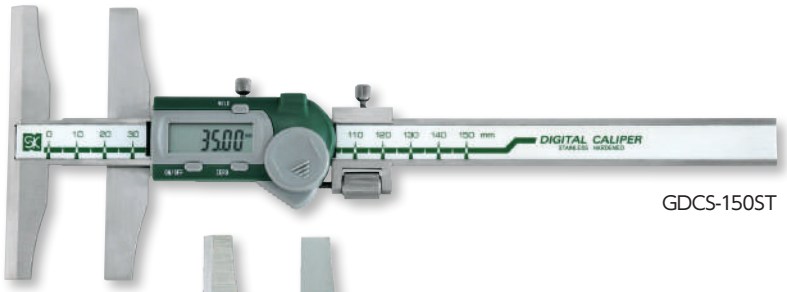
| Order No. | Model No. | Measuring Range (mm) | Resolution (mm) | Weight |
|---|---|---|---|---|
| 151983 | GDCS-150S | 0 - 150 | 0.01 | 170g |
| 151279 | TVC-15S | | 0.05 | 150g |

## SCRIBING VERNIER CALIPER

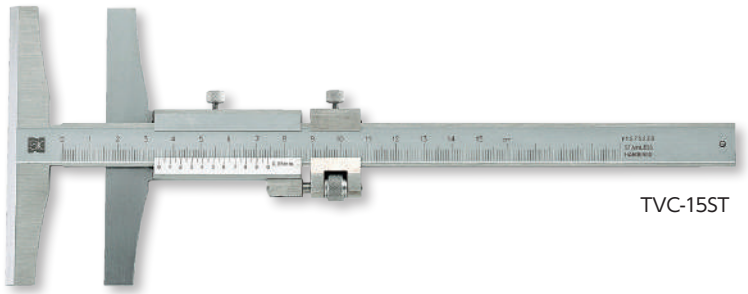
For high precise scribing

For marking work▶ Scribes P324 ~325
Rust prevention▶ Zerust Film for Steel P370

※ Please refer to Page 190 for dimensions or detailed specifications for this item




GDCS-150ST



TVC-15ST

USE
- Measures distance from caliper base to scribe edge

MATERIAL
- Stainless steel

ACCESSORIES
- Carbide tip scriber SC-P

| Order No. | Model No. | Measuring Range (mm) | Resolution (mm) | Weight |
|---|---|---|---|---|
| 151995 | GDCS-150ST | 0 - 150 | 0.01 | 295g |
| 151996 | GDCS-300ST | 0 - 300 | | 360g |
| 151803 | TVC-15ST | 0 - 150 | 0.05 | 240g |
| 151804 | TVC-30ST | 0 - 300 | | 370g |

## CARBIDE TIP FIRM JOINT DIVIDERS NEW!

An essential tool for fieldwork!
Adjustable riveted joints for extended use, even if loosened.

Rust prevention▶ Zerust Film for Steel P370

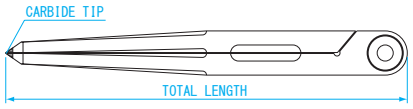
TBFD-200

USE
- For scribing arcs, circles, and dividing into equal parts.

MATERIAL
- Body: Carbon steel for machine structural use (phosphate blackened)
- Tip: Carbide

FEATURES
- Equipped with a carbide tip, allowing scribing on hard steel, glass, and other materials
- Riveted joint with washers and pins

● OUTLINE DIMENSIONS




※ The compass radius values are approximate values measured at a 45° spread

| Order No. | Model No. | Length (mm) | Compass Circle (mm) | Weight |
|---|---|---|---|---|
| NEW! 000421 | TBFD-100 | 95 | 140 | 120g |
| NEW! 000423 | TBFD-150 | 148 | 200 | 140g |
| NEW! 000424 | TBFD-200 | 198 | 260 | 240g |
| NEW! 000425 | TBFD-250 | 245 | 350 | 350g |
| NEW! 000426 | TBFD-300 | 295 | 420 | 470g |



## FIRM JOINT DIVIDER

Yarnished finish for anti-rust

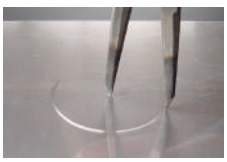
Rust prevention▶ Zerust Film for Steel P370

FD-150

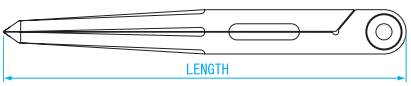
USE
- For scribing circles, and dividing distances

MATERIAL
- Body: Carbon tool steel for machine use
- Tip: Hardened tip

FEATURES
- Hardened tip for clear scribing
- Construction: Riveted with washer



● OUTLINE DIMENSIONS




※ Compass circle is approx. diameter of circle transcribed wtih jaws open 45° angle

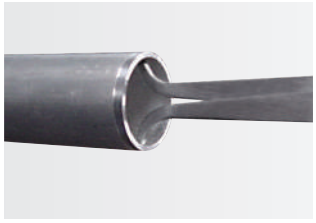
| Order No. | Model No. | Length (mm) | Compass Circle (mm) | Weight |
|---|---|---|---|---|
| 000503 | FD-100 | 100 | 150 | 45g |
| 000505 | FD-150 | 150 | 230 | 135g |
| 000507 | FD-200 | 200 | 300 | 240g |
| 000508 | FD-250 | 250 | 380 | 340g |
| 000509 | FD-300 | 300 | 460 | 440g |

## INSIDE CALIPERS NEW!

An essential tool for fieldwork!
Convenient for transferring inner diameter measurements.

Rust prevention▶
Zerust Film for Steel
P370

IC-150



USE
- For transferring measurements of grooves and inner diameters

MATERIAL
- Cold-rolled steel (IC-150 to IC-200)
- Stainless steel (IC2-300 to IC2-600)

FEATURES
- Smooth opening and closing, allowing precise transfer of measurements to the scale

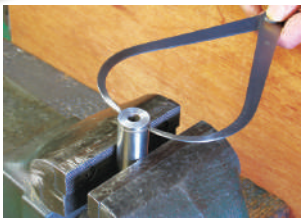
| Order No. | Model No. | Nominal Size (mm) | Thickness (mm) | Weight |
|---|---|---|---|---|
| 001105 | IC-150 | 150 | 1.6 | 50g |
| 001107 | IC-200 | 200 | | 60g |
| NEW! 001137 | IC2-300 | 300 | 2.7 | 220g |
| NEW! 001138 | IC2-400 | 400 | | 300g |
| NEW! 001140 | IC2-600 | 600 | | 420g |

## OUTSIDE CALIPERS NEW!

An essential tool for fieldwork!
Convenient for transferring outer dimensions of round bars, pipes, etc!

Rust prevention▶
Zerust Film for Steel
P370

OC-150



USE
- For transferring measurements of the outer diameter and thickness of round bars

MATERIAL
- Cold-rolled steel (OC-150 to OC-200)
- Stainless steel (OC2-300 to OC2-1000)

FEATURES
- Smooth opening and closing, allowing precise transfer of measurements to the scale

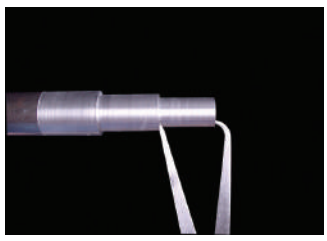
| Order No. | Model No. | Nominal Size (mm) | Thickness (mm) | Weight |
|---|---|---|---|---|
| 001205 | OC-150 | 150 | 1.6 | 60g |
| 001207 | OC-200 | 200 | | 75g |
| NEW! 001237 | OC2-300 | 300 | 2.7 | 280g |
| NEW! 001238 | OC2-400 | 400 | | 360g |
| NEW! 001240 | OC2-600 | 600 | | 480g |
| NEW! 001242 | OC2-1000 | 1000 | | 1000g |

## HERMAPHRODITE CALIPER

For scribing lines at a specific distance from the edge

Rust prevention▶
Zerust Film for Steel
P370

HC-150



USE
- For scribing lines at a specific distance from the edge

MATERIAL
- Cold rolled steel

FEATURES
- Smooth opening and closing, scribing on steel, brass and aluminum

| Order No. | Model No. | Length (mm) | Thickness (mm) | Weight |
|---|---|---|---|---|
| 001305 | HC-150 | 150 | 1.6 | 50g |
| 001307 | HC-200 | 200 | | 70g |

## DIVIDER (SPRING TYPE)

For taking dimentions and scribing circles by fine adjustment

Rust prevention▶
Zerust Film for Steel
P370

SD-150

USE
- Scribing circles, and dividing distance

MATERIAL
- Body: Carbon tool steel

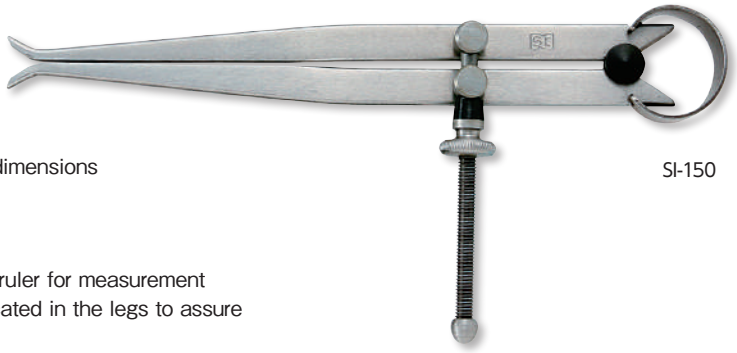
FEATURES
- Hardened tip
- Opening/closing screw is centrally located in the legs to assure sensitive and smooth action

| Order No. | Model No. | Nominal Size (mm) | Length (Tip to Pivot Center) | Thickness (mm) | Weight |
|---|---|---|---|---|---|
| 000805 | SD-150 | 150 | 150mm | 3.2 | 90g |
| 000807 | SD-200 | 200 | 200mm | | 115g |

## INSIDE CALIPER (SPRING TYPE)

For taking inner diameter by fine adjustment

Rust prevention▶
Zerust Film for Steel
P370



SI-150

USE
- For taking inner diameter and groove dimensions

MATERIAL
- Body: Carbon tool steel

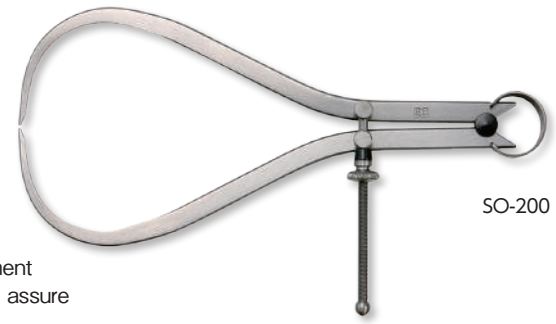
FEATURES
- Set to proper dimension, and move to ruler for measurement
- Opening/closing screw is centrally located in the legs to assure sensitive and smooth action

| Order No. | Model No. | Nominal Size (mm) | Length (Tip to Pivot Center) | Thickness (mm) | Weight |
|---|---|---|---|---|---|
| 000905 | SI-150 | 150 | 150mm | 3.2 | 85g |
| 000907 | SI-200 | 200 | 200mm | | 105g |

## OUTSIDE CALIPER (SPRING TYPE)

For taking outside diameter of pipe and round objects by fine adjustment

Rust prevention▶
Zerust Film for Steel
P370



SO-200

USE
- For taking outside diameter and thicknes of round objects

MATERIAL
- Body: Carbon tool steel

FEATURES
- Set to proper dimension, and move to ruler for measurement
- Opening/closing screw is centrally located in the legs to assure sensitive and smooth action

| Order No. | Model No. | Nominal Size (mm) | Length (Tip to Pivot Center) | Thickness (mm) | Weight |
|---|---|---|---|---|---|
| 001005 | SO-150 | 150 | 150mm | 3.2 | 95g |
| 001007 | SO-200 | 200 | 200mm | | 120g |

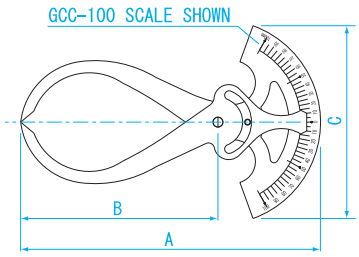
# COMBINATION CALIPER WITH METRIC GRADUATIONS

For measuring outside diameter, inner diameter and thickness, and taking dimensions as tips can be crossed

Rust prevention▶ Zerust Film for Steel P370

GCC-150

● OUTLINE DIMENSIONS




USE
- ●OD, ID, Thickness and groove measurement

MATERIAL
- ●Stainless steel (hardened tip)

FEATURES
- ●Graduated in millimeters from the center by photo etching on the head of the calipers
- ●Combination calipers are engineered for measuring both inner and outer diameters

Unit: mm

| Model No. | A | B | C | Thickness |
|---|---|---|---|---|
| GCC-100 | 152 | 100 | 98 | 1.5 |
| GCC-150 | 225 | 150 | 143 | |
| GCC-200 | 300 | 200 | 190 | 2.0 |
| GCC-300 | 450 | 300 | 268 | 2.5 |
| GCC-400 | 600 | 400 | 360 | |
| GCC-600 | 900 | 600 | 545 | 3.0 |

| Order No. | Model No. | Nominal Size (mm) | Graduation (mm) | Accuracy (mm) | Weight |
|---|---|---|---|---|---|
| 002003 | GCC-100 | 100 | 1 | ± 0.5 | 70g |
| 002005 | GCC-150 | 150 | | | 155g |
| 002007 | GCC-200 | 200 | | | 340g |
| 002009 | GCC-300 | 300 | | | 700g |
| 002011 | GCC-400 | 400 | | | 1040g |
| 002014 | GCC-600 | 600 | | | 2600g |

# TOOL MARKER SURFACE GAUGE

For highly accurate scribing work▶ Height Gauge P201・202～206
Reference of scribing work▶ Granite Surface Plate P283
Rust prevention▶ Zerust Film for Steel P370

TSG-150C

USE
- ●Alignment work, scribing on steel

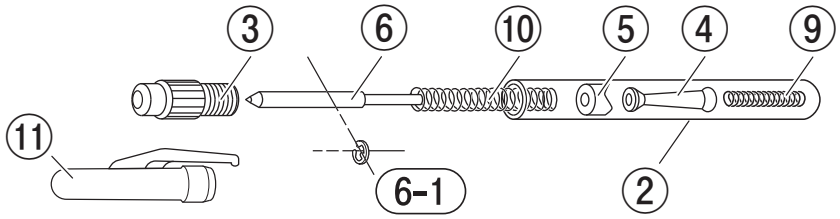
MATERIAL
- ●Scribe: Carbon tool steel (hardened scribe tip)
- ●Base: Cast iron

FEATURES
- ●Scribe height can be easily adjusted by sliding up or down in slotted hole

| Order No. | Model No. | Nominal Size (mm) | Scribe Length (mm) | Length (mm) | Base Length (mm) | Base Width (mm) | Base Height (mm) | Weight |
|---|---|---|---|---|---|---|---|---|
| 151188 | TSG-150C | 150 | 130 | 150 | 70 | 45 | 23 | 505g |
| 151189 | TSG-200C | 200 | 170 | 200 | | | | 560g |
| 151190 | TSG-300C | 300 | 265 | 300 | 80 | 55 | 25 | 750g |

# AUTOMATIC PUNCH PARTS DRAWINGS

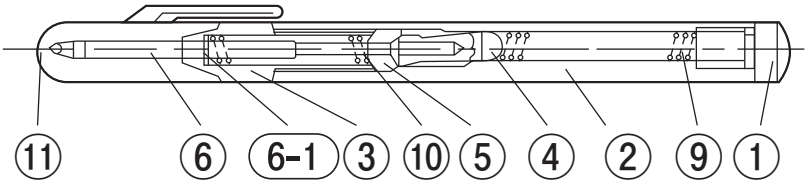
## Automatic Center Punch SS




※The SS type does not have a cap bolt.
The striking force cannot be adjusted.

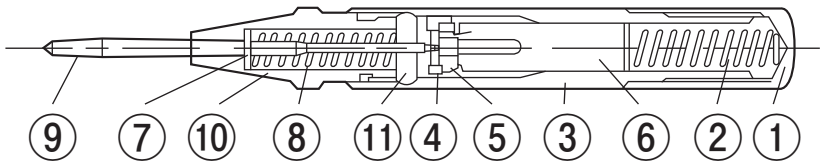
| Parts No. | Parts Name | Parts No. | Parts Name | Parts No. | Parts Name |
|---|---|---|---|---|---|
| ② | HAMMER GUIDE | ⑤ | ECCENTRIC GUIDE | ⑨ | MAIN SPRING |
| ③ | PILOT CAP | ⑥ | MARKER ROD | ⑩ | RETURN SPRING |
| ④ | HAMMER | 6-1 | E-RING | ⑪ | CAP |

## Automatic Center Punch S

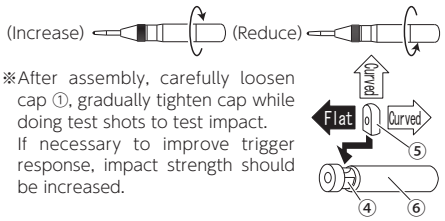



| Parts No. | Parts Name | Parts No. | Parts Name | Parts No. | Parts Name |
|---|---|---|---|---|---|
| ① | PORT CAP | ⑤ | ECCENTRIC GUIDE | ⑨ | MAIN SPRING |
| ② | HAMMER GUIDE | ⑥ | MARKER ROD | ⑩ | RETURN SPRING |
| ③ | PILOT CAP | 6-1 | E-RING | ⑪ | CAP |
| ④ | HAMMER | | | | |

## Automatic Center Punch M



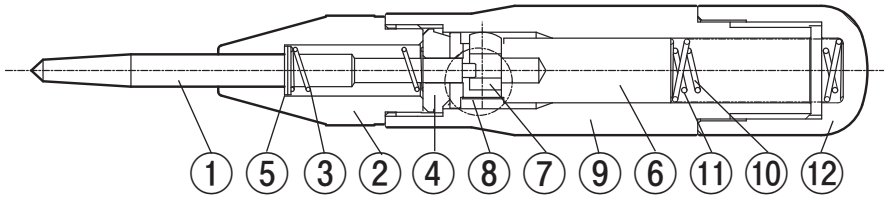

●Impact strength adjustment
(AP-S・AP-M・AP-M2)




※After assembly, carefully loosen cap ①, gradually tighten cap while doing test shots to test impact. If necessary to improve trigger response, impact strength should be increased.

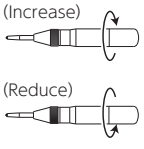
| Parts No. | Parts Name | Parts No. | Parts Name | Parts No. | Parts Name |
|---|---|---|---|---|---|
| ① | CAP | ⑤ | TRIGGER | ⑨ | MARKER ROD |
| ② | MAIN SPRING | ⑥ | HAMMER | ⑩ | PILOT CAP |
| ③ | TRIGGER GUIDE | ⑦ | E-RING | ⑪ | GUIDE ROD |
| ④ | SPRING TRIGGER | ⑧ | RETURN SPRING | | |

## Automatic Center Punch L



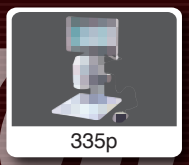

●Impact strength adjustment

※After assembly, carefully loosen cap ⑫, gradually tighten cap while doing test shots to test impact. If necessary to improve trigger response, impact strength should be increased.




| Parts No. | Parts Name | Parts No. | Parts Name | Parts No. | Parts Name |
|---|---|---|---|---|---|
| ① | MARKING ROD | ⑤ | E-RING | ⑨ | TRIGGER GUIDE |
| ② | PILOT CAP | ⑥ | HAMMER | ⑩ | MAIN SPRING |
| ③ | RETURN SPRING | ⑦ | TRIGGER | ⑪ | SUB SPRING |
| ④ | GUIDE ROD | ⑧ | SPRING TRIGGER | ⑫ | CAP |

# MICROSCOPE


335p

336p

336p

337p

337p

337p

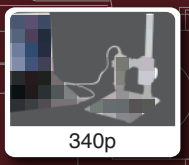
338p

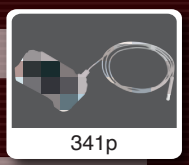
338p

339p

339p

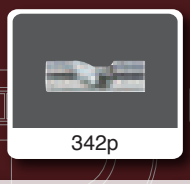
340p


340p


341p

342p

342p


342p

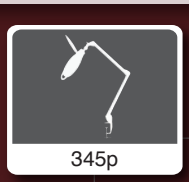
343p

343p

343p

344p

344p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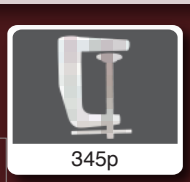
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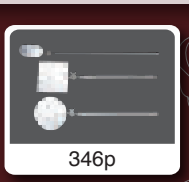
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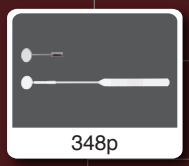
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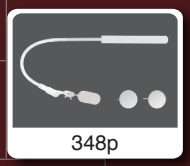
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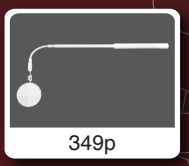
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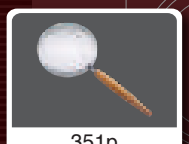
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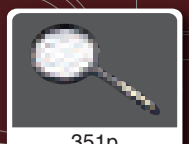
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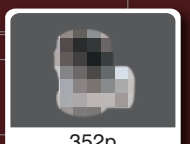
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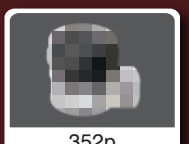
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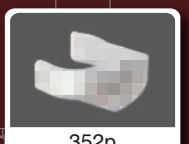
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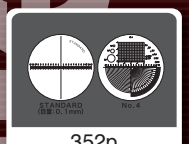
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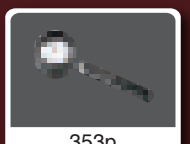
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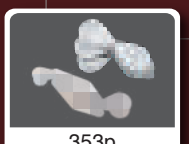
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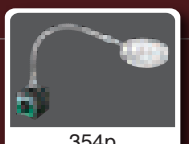
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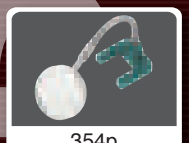
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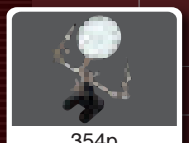
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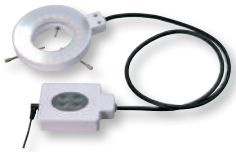
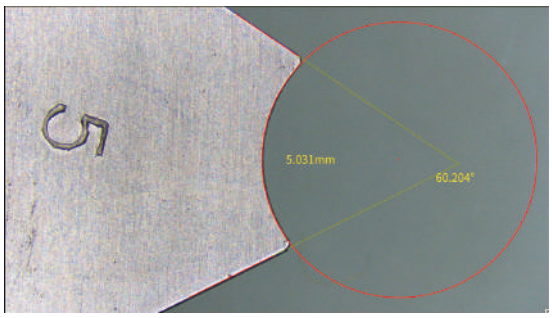
MICROSCOPE
FIBER SCOPE
MAGNIFIER
INSPECTION MIRROR
LOUPE

# ■ MICROSCOPE SPECIFICATION SUMMARY

| Product Name | DIGITAL MEASURING MICROSCOPE | ZOOM STEREO MICROSCOPE | | | VARIABLE POWER STEREO MICROSCOPE | VARIABLE POWER TURRET STYLE STEREO MICROSCOPE |
|---|---|---|---|---|---|---|
| Model No. | MMS-1498 | XTS2021 | XTS-SP2 | XZ-45N | XT-2040 | XTDB-SP2N |
| Page Referred | 335 | 336 | 336 | 337 | 337 | 337 |
| | | | | | | |
| Type | Turret Type | Zoom Type | | | Turret Type | |
| Magnification | 14x~98x | 6.5x~45x<br>13x~90x | | 10x~45x | 20x<br>40x | 10x<br>30x |
| Objective | 0.7x, 1x, 1.5x, 2x,<br>2.5x, 3x, 4x, 5x | 0.65x~4.5x<br>(Zoom Ratio 1:7) | | 1x~4.5x<br>(Zoom Ratio 1:4.5) | 2x<br>4x | 1x<br>3x |
| Eyepiece | – | WF10x (FOV 20mm)<br>WF20x (FOV 10mm) | | WF10x<br>(FOV 20mm) | WF10x<br>(FOV 19mm) | WF10x<br>(FOV 20mm) |
| Working Distance | 100mm | 95mm | | 97mm | 105mm | 100mm |
| Eyepiece Angle | – | 45° | | 60° | 45° | |
| Eyepiece Width adj. Range | – | 55~75mm | | – | 55~75mm | |
| Lighting | Built-in<br>●Epi-illumination<br>●White LED x 144pcs | Built-in<br>●Epi-illumination (halogen bulb:6V・15W)<br>●Transmitted illumination (5W fluorescent bulb) | Separately Sold | | | |
| Applicable Lighting (separately sold) | Not attachable | Not attachable | LED RING ILLUMINATOR ⇒ P338~339<br> <br>●Model No. L-21D<br>Number of LED: 21<br>Illuminance Adjustment Function | |  <br>●Model No. L-48D<br>Number of LED: 48<br>(Switchable lighting sections)<br>Illuminance Adjustment Function | <br>●Model No. L-120DF<br>Number of LED:120<br>Equipped with a polarizing filter to reduce glare |
| Mounting Size | – | – | M48 attachment included | ϕ53mm | M48 attachment included | |
| Base Dimensions | 320 x 260 x 20mm | 245 x 190 x 60mm | 245 x 170 x 40mm | 255 x 200 x 25mm | 295 x 285 x 33mm | 255 x 200 x 25mm |
| Diopter adj. Range | – | ±5 diopter | | | | |
| Stand | Rack & pinion | Rack & pinion | Pole stand (ϕ25mm) | Pole stand (ϕ32mm) | Pole stand (ϕ30mm) | Pole stand (ϕ32mm) |

# DIGITAL MEASURING MICROSCOPE NEW!

Standard Monitor Included.
A microscope capable of measurement and recording. Equipped with an automatic detection function to recognize the workpiece's contour, allowing for intuitive operation.



USE
- For inspecting cracks, surface degradation, etc., in mechanical parts made of metal, fiber, resin, etc.
- For measuring hard-to-reach areas on images that are difficult to measure with hand tools

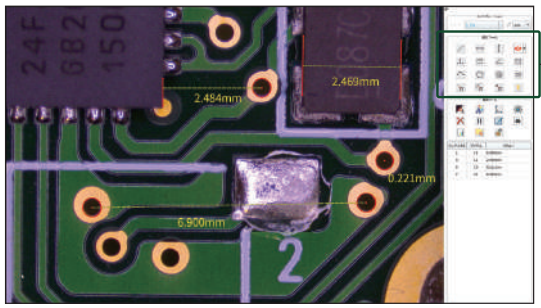
MATERIAL
- Body: PVC
- Column and Base: Aluminum

FEATURES
- A digital microscope with an integrated optical system and monitor
- Various measurements such as length, parallel/ vertical distance, circle dimensions, and angles can be performed on images
- By connecting a USB flash memory, image and measurement data can be exported
- Comes with standard dimmable white LED ring lighting
- The accuracy of the scale can be checked using a separately sold calibration slide

SPECIFICATIONS
- Total magnification: 14 to 98x
- Objective lens: 0.7x, 1x, 1.5x, 2x, 2.5x, 3x, 4x, 5x
- Field of view: Approx. 16 x 11 to 2.2 x 1.5mm (with menu display)
- Guaranteed accuracy at shipment: 0.7x: ±0.05mm
  4.0x, 5.0x: ±0.03mm
  (For higher accuracy, calibration can be performed with an optional calibration slide)
- Working distance: 100mm
- Maximum observable Height: Approx. 60mm
- Focus adjustment: Main body vert. position control
- Stand: Rack and pinion system
- Image sensor: 1/3 CMOS
- Pixel count: 1980 x 1080 pixels, approx. 2 million pixels
- Frame rate: 25, 30, 50, 60 frames per second (selectable)
- Interface: USB 2.0 x 2
- Illumination: White LED x 144
- Main functions: Image RGB, contrast adjustment, still image storage, measurement (length, parallel/vertical distance, circle dimensions, angle, etc.) and measurement data storage

POWER SUPPLY
- Included AC Adapter

ACCESSORIES
- AC Adapter (AC100-240V), Mouse, Protective cover




**[Measurement Tools]**

- **Length** — Length · Angle
- **Horizontal Length** — Length · Angle
- **Vertical Length** — Length · Angle
- **Perpendicular Distance from Line** — Distance · Center Line
- **Distance between Parallel Lines** — Distance · Center Line
- **Angle** — Angle · Auxiliary Angle · Bisected Angle
- **Rectangle** — Width · Height · Perimeter · Area
- **Arc** — Radius · Diameter · Arc Length · Angle · Center Coordinates
- **Circle** — Radius · Diameter · Perimeter · Angle · Center Coordinates
- **Concentric Circles** — Radius 1 · Radius 2 · Radius Difference · Area Difference · Center Coordinates
- **Polygon** — Perimeter · Area
- **Distance from Point to Circle Center** — Distance
- **Distance from Line to Circle Center** — Distance
- **Distance from Circle Center to Circle Center** — Distance · X Difference · Y Difference

| Order No. | Model No. | Body Size | Weight |
|---|---|---|---|
| NEW! 140153 | MMS-1498 | 290 × 320 × 443mm | 4.4kg |

Also Available: CALIBRATION SLIDE for Accuracy Verification CS-MMS-10 (Sold separately) / 3D ATTACHMENT for stereoscopic observation from an angle 3D-MMS (Sold separately).

# ZOOM STEREO MICROSCOPE

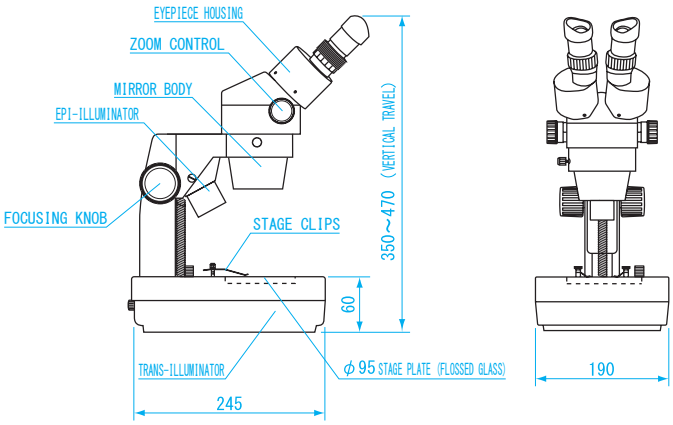
Zoom type that is ideal for enlarging and inspecting precision parts

USE
- Ideal for inspection of semiconductors, electronics, and precision parts

FEATURES
- Zoom type binocular stereoscopic microscope
- With epi-illumination (halogen) and transmitted illumination (fluorescent)
- With two pcs of stage plates (flossed glass and reversible black & white plastic plate)

SPECIFICATIONS
- Rated Voltage: AC100V

● DIMENSIONS Units : mm




## 5W FLUORESCENT BULB FOR TRANSMITTED ILLUMINATION

| Order No. | Model No. | Rated Power |
|---|---|---|
| 140014 | 2021-5W-OS | 5W |

## 15W HALOGEN LAMP

| Order No. | Model No. | Rated Power |
|---|---|---|
| 140005 | 6V-15W | 15W |

| Order No. | Model No. | Magnification | Objective | Eye Piece | Working Distance | Focus Adjustment | Eye Width Adjustment | Eye Piece Inclination | Diopter Adjustment Range | Stand | Lighting System | Weight |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 140003 | XTS2021 | 6.5~45x<br>13~90x | 0.65~4.5x<br>(Zoom Ratio 1:7) | WF10x<br>(FOV 20mm)<br>WF20x<br>(FOV 10mm) | 95mm | Main body vert. position control | 55~<br>75mm | 45° | ±5 diopter | Rack & pinion | Epifluorescence<br>--6V·15W<br>Transillumination<br>--5W | 5.7kg |

# ZOOM STEREO MICROSCOPE

Zoom type that is ideal for enlarging and inspecting precision parts

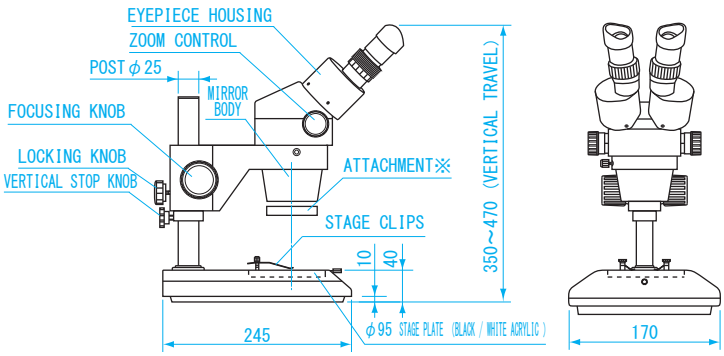
Adjustment of sample position ▶
XY Stage
P338

Lighting for stereo microscope ▶
Ring Illuminator
P338 ~339

USE
- Ideal for inspection of semiconductors, electronics, and precision parts

FEATURES
- Zoom type binocular stereoscopic microscope
- Optional lighting unit attachable (separately sold)

● DIMENSIONS Units : mm




※ For installing an optional lighting

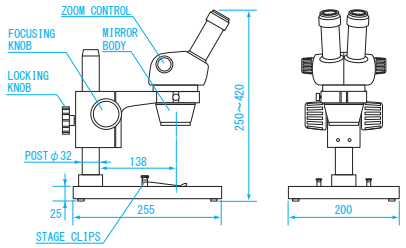
| Order No. | Model No. | Magnification | Objective | Eye Piece | Working Distance | Focus Adjustment | Eye Width Adjustment | Eye Piece Inclination | Diopter Adjustment Range | Stand | Weight |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 140000 | XTS-SP2 | 6.5~45x<br>13~90x | 0.65~4.5x<br>(Zoom Ratio 1:7) | WF10x<br>(FOV 20mm)<br>WF20x<br>(FOV 10mm) | 95mm | Main body vert. position control | 55~<br>75mm | 45° | ±5 diopter | Pole stand | 5.4kg |

## ZOOM STEREO MICROSCOPE

Zoom type that is ideal for enlarging and inspecting precision parts

Adjustment of sample position ▶ XY Stage P338
Lighting for stereo microscope ▶ Ring Illuminator P338 ~339

● DIMENSIONS Units : mm




USE
- Ideal for inspection of semiconductors, electronics, and precision parts

FEATURES
- Zoom type binocular stereoscopic microscope
- Optional lighting unit attachable (separately sdd)

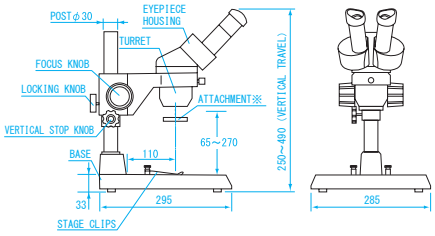
| Order No. | Model No. | Magnification | Objective | Eye Piece | Working Distance | Focus Distance | Eye Piece Inclination | Diopter Adjustment Range | Stand | Weight |
|---|---|---|---|---|---|---|---|---|---|---|
| 140102 | XZ-45N | 10~45x | 1~4.5x (Zoom Ratio 1:4.5) | WF10x (FOV 20mm) | 97mm | Main body vert. position control | 60° | ±5 diopter | Pole stand | 3.6kg |

## VARIABLE POWER STEREO MICROSCOPE TURRET TYPE

Two magnifications with switchable objective lens

Adjustment of sample position ▶ XY Stage P338
Lighting for stereo microscope ▶ Ring Illuminator P338 ~339

● DIMENSIONS Units : mm




※ For installing an optional lighting

USE
- Ideal for continuous inspection of components of similar size

FEATURES
- Binocular turret type stereo microscope with switchable objective lens
- Optional lighting unit attachable (separately sold)

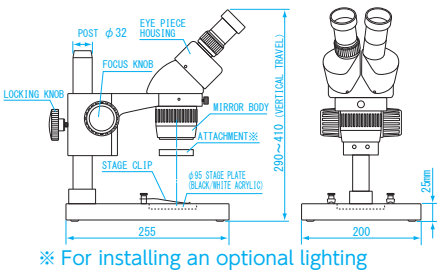
| Order No. | Model No. | Magnification | Objective | Eye Piece | Working Distance | Focus Adjustment | Eye Width Adjustment | Eye Piece Inclination | Diopter Adjustment Range | Stand | Weight |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 140101 | XT-2040 | 20x 40x | 2x 4x | WF10x (FOV 19mm) | 105mm | Main body vert. position control | 55~ 75mm | 45° | ±5 diopter | Pole stand | 3.7kg |

## VARIABLE POWER STEREO MICROSCOPE TURRET TYPE

Two magnifications with switchable objective lens

Adjustment of sample position ▶ XY Stage P338
Lighting for stereo microscope ▶ Ring Illuminator P338 ~339

● DIMENSIONS Units : mm




※ For installing an optional lighting

USE
- Ideal for continuous inspection of components of similar size

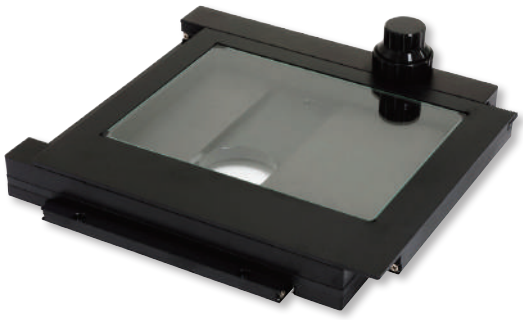
FEATURES
- Binocular turret type stereo microscope with switchable objective lens
- Optional lighting unit attachable (separately sold)

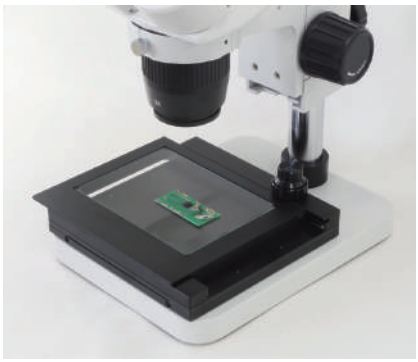
| Order No. | Model No. | Magnification | Objective | Eye Piece | Working Distance | Focus Adjustment | Eye Width Adjustment | Eye Piece Inclination | Diopter Adjustment Range | Stand | Weight |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 140007 | XTDB-SP2N | 10x 30x | 1x 3x | WF10x (FOV 20mm) | 100mm | Main body vert. position control | 55~ 75mm | 45° | ±5 diopter | Pole stand | 3.6kg |

# XY STAGE FOR MICROSCOPE NEW!

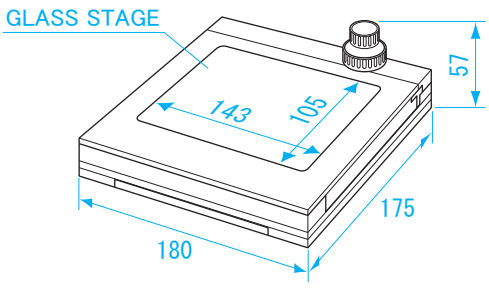
For fine adjustments of the sample position with separate vertical and horizontal dials

Compatible stereo microscope ▶
Stereo Microscope
P336
～337





● DIMENSIONS Units : mm




USE
- For adjusting sample position

FEATURES
- Body: Aluminum
- Stage: Glass
- Adjustment dial: Plastic

ACCESSORIES
- Movable stage allows easy adjustment of sample position
- With a non-slip mat
- Even microscopes with incompatible base hole diameters can be used by removing the guide on the back of the device

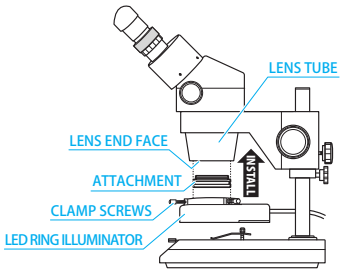
| Order No. | Model No. | Maximum Load Capacity | Stage Movement Range (mm) | Compatible Microscope Base Hole Diameter (mm) | Weight |
|---|---|---|---|---|---|
| NEW! 140024 | STD-8090 | Up to 5.5kg | Vertical 80 x Horizontal 90 | ϕ95 | 1.7kg |

# LED RING ILLUMINATOR FOR STEREO MICROSCOPE

High brightness and long life LED illuminator for STEREO MICROSCOPE

Compatible stereo microscope ▶
Stereo Microscope
P336
～337

● Example of mounting




USE
- Compact and lightweight lighting for stereo microscope

MATERIAL
- Polycarbonate, steel

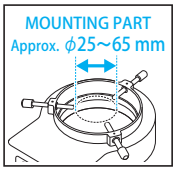
FEATURES
- For mounting on microscopes with bottom tube diameter 65mm and less
- High brightness and long life LED light
- Illuminance adjustment function
- Applicable product: XTS-SP2, XZ-45N, XT-2040, XTDB-SP2N

SPECIFICATIONS
- Power: AC100-240V 50/60Hz (with included AC adaptor)
- Power consumption: Approx. 3W (max. brightness)
- Illuminance: Approx. 280～3,400lx (100mm distance from lens to object)

ACCESSORIES
- AC adaptor (code length: approx. 1.5m)

● How to mount

Tighten three clamp screws to fix illuminator on lens tube
※ Attachment is required if lens tube is not cylindrical



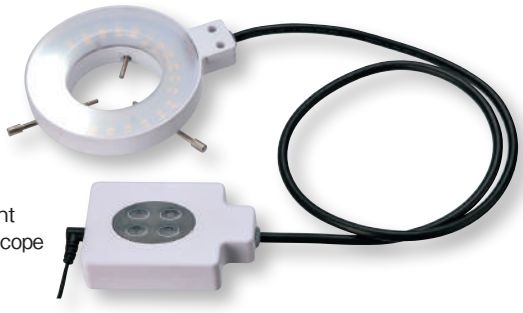

| Order No. | Model No. | Illuminant | Color Temperature | Operating Temperature | Mounting Part | Weight |
|---|---|---|---|---|---|---|
| 140207 | L-21D | White LED 21pcs | Approx. 5,000K (daylight white) | 0～40℃ | ϕ25～ϕ65mm | 112g |

# LED RING ILLUMINATOR FOR STEREO MICROSCOPE

High brightness and long life LED illuminator for STEREO MICROSCOPE

Compatible stereo microscope ▶
Stereo Microscope
P336 ～337

## Switchable lighting type



USE
- Compact and lightweight lighting for stereo microscope

MATERIAL
- Polycarbonate, steel

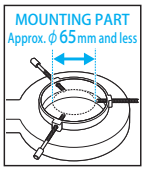
FEATURES
- For mounting on microscopes with bottom tube diameter 65mm and less
- High brightness and long life LED light
- Switchable lighting pattern in all-lit and 4-split partial-lit, and with illuminance adjustment function
- Separated controller
- Applicable product: XTS-SP2, XZ-45N, XT-2040, XTDB-SP2N

SPECIFICATIONS
- Power: AC100-240V 50/60Hz (with included AC adaptor)
- Power consumption: Approx. 6W (max. brightness)
- Illuminance (all-lit) : Approx. 1,300～6,800lx (100mm distance from lens to object)
- Illuminance (partial-lit) : Approx. 300～1,200lx (100mm distance from lens to object)

ACCESSORIES
- AC adaptor (code length: approx. 1.5m)

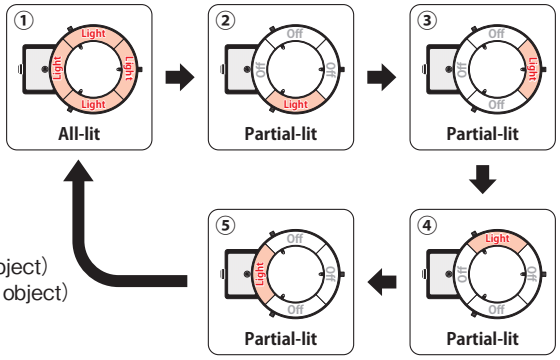
● How to mount

Tighten three clamp screws to fix illuminator on lens tube
※ Attachment is required if lens tube is not cylindrical




■ Lighting pattern

Switchable in five different patterns of lighting depending on the purpose

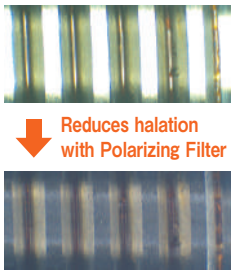



| Order No. | Model No. | Illuminant | Color Temperature | Operating Temperature | Mounting Part | Weight |
|---|---|---|---|---|---|---|
| 140208 | L-48D | White LED 48pcs | Approx. 5,000K (daylight white) | 0～40℃ | ϕ65mm and less | 320g |

# LED RING ILLUMINATOR WITH POLARIZING FILTER NEW!

High brightness and long life LED illuminator for STEREO MICROSCOPE
Polarizing filters can reduce halation that interferes with observation.

Compatible stereo microscope ▶
Stereo Microscope
P336 ～337




USE
- A compact and lightweight lighting system for stereo microscopes

MATERIAL
- Aluminum

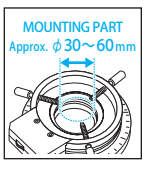
FEATURES
- For mounting on microscopes with bottom tube diameter 60mm and less
- High brightness and long life LED light
- Equipped with a polarizing filter, allowing adjustment of the filter strength by rotating the memory section
- Illuminance adjustment function
- Applicable product: XTS-SP2, XZ-45N, XT-2040, XTDB-SP2N

SPECIFICATIONS
- Power: AC100-240V 50/60Hz (with included AC adapter)
- Power consumption: Approx. 5W (max. brightness)
- Illuminance: Approx. 14,000lx (100mm distance from lens to object)

ACCESSORIES
- AC adapter (cord length: approx. 1.4m), Polarizing filter

● How to mount

Tighten three clamp screws to fix illuminator on lens tube
※ Attachment is required if lens tube is not cylindrical

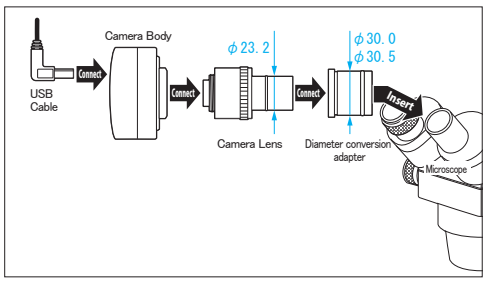



| Order No. | Model No. | Light Source | Color Temperature | Microscope mounting part | Weight |
|---|---|---|---|---|---|
| NEW! 140026 | L-120DF | White LED 120pcs | Approx. 6,500K (Daylight color) | ϕ30-60mm | 240g |

## USB CAMERA FOR MICROSCOPE NEW!

Easy to install. View images from your stereo microscope on your computer.
Compatible with microscopes other than our own products.

Compatible stereo microscope ▶ Stereo Microscope P336 ~337
Lighting for stereo microscope ▶ Ring Illuminator P338 ~339




USE
- Insert into the eyepiece of a stereo microscope and use it as a camera

FEATURES
- Affordable USB camera for microscopes
- High-resolution type with 1.3 million pixels
- Supported OS: Windows 7, 8, 10, 11

ACCESSORIES
- Viewer software
- Diameter conversion adapter
  (ϕ23.2 to ϕ30.0mm... 1 piece, ϕ23.2 to ϕ30.5mm... 1 piece)
- USB Cable (approx. 2m)

Viewer software included

| Order No. | Model No. | Image Sensor | Pixel Count | Frame Rate | Interface | Power Supply | Weight |
|---|---|---|---|---|---|---|---|
| NEW! 140025 | MU-130Plus | 1/3 CMOS | 1.3 million pixels | 15fps (1280 x 1024)<br>26fps (640 x 512) | USB Type-B 2.0 | via USB port | 240g |

## NSK MINI MICROSCOPE WITH BASE

Resolution 1,300,000 pixels and high quality image can be captured and saved

USE
- For inspection of machine parts, metal, fiber, paper, resin, biological tissue, crack, surface deterioration and corrosion
  Resolution 1,300,000 pixels and high quality image can be captured and saved for making reports and documents
- For meeting and presentation by sharing image in real time with multiple people

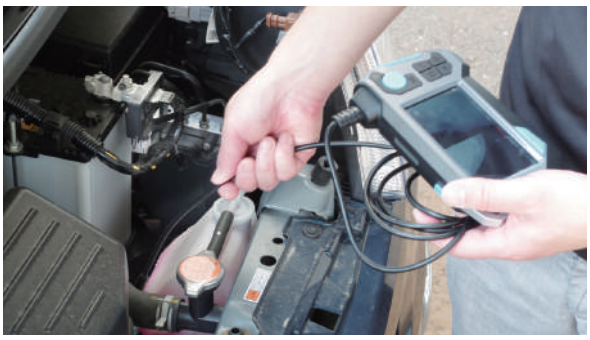
FEATURES
- Simple measurement and calibration function
- Stand base (included) for easy-focus
- Shutter release button on camera body for easy-capture without using mouse
- PL filter installed
- Natural color image close to actual color
- Improved processing speed for smooth image without flicker in screen
- Improved sensor sensitivity captures dark subjects with fine image quality
- Supported OS: Windows XP, Vista, 7, 8, 10, 11 Mac OS 10.14 or later

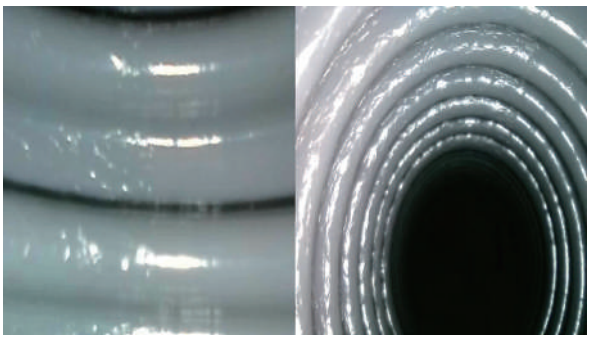
| Order No. | Model No. | Type | Imaging Sensor | Resolution | Magnification | Light |
|---|---|---|---|---|---|---|
| 140184 | MMS-130PLM3 | With PL filter | 1/4 inch CMOS sensor | 1,280 x 1,024 pixels (SXGA)<br>Approx. 1,300,000 pixels | Approx. 10~230x | Internal LED 8 pcs |

| Frame Rate | Exposure | Interface | Main Functions | Weight | |
|---|---|---|---|---|---|
| | | | | Body | Base |
| 30 frames / sec | Auto-exposure | USB2.0 | ●Still image (bmp) capture and save<br>●Video (AVI) capture and save<br>●Simple measurement (line, continuous line, radius, diameter, three-point circle and angle) | 102g | 1.1kg |

# 360-DEG ROTATING DUAL CAMERA BORE SCOPE NEW!

Equipped with a 360-degree rotating dual camera, enabling simultaneous front and side view inspection.
This industrial endoscope allows you to inspect and record inside curved pipes with its IP68-rated cable.





Features a dual camera for simultaneous front and side view inspection.

USE
- Industrial endoscope for inspecting inside of curved pipes
- Dual cameras allow simultaneous viewing of the front and side
- For recording still images and videos

MATERIAL
- Body: Plastic
- Cable: Plastic

FEATURES
- The dual cameras allow detailed inspection of the front and side simultaneously, with the ability to save both still images and videos
- The dual camera can rotate 360 degrees via body controls, eliminating the need for a side-view adapter
- Equipped with a large and easy-to-view 4.5-inch IPS display
- The camera is IP68-rated for dustproof and waterproof performance and is also oil-resistant, making it suitable for harsh environments
- Videos and still images in 1920 x 1080 resolution can be saved to a microSD card.
  With a 32GB microSD, you can store approximately 280,000 images or 180 minutes of video.
- Equipped with white LEDs that illuminate both the front and side of the camera, allowing for bright recording even in dark pipes

SPECIFICATIONS
- Storage: microSD card (Class 10 or higher, up to 128GB)
- Interface: USB-Type C
- Display: 4.5-inch IPS display
- Protection rating: IP68
- Camera field of view: 70 degree
- Camera focal distance: 20mm to 50mm
- Camera illumination: Front: White LED x 8pcs, Side: White LED x 1pc, Body: White LED x 4pcs
- Operating temperature range: Camera lens: 0°C to 90°C, Body: 5°C to 40°C
- Body dimensions: 145 x 85 x 18mm

POWER SUPPLY
- Built-in lithium-ion battery (Standard operating time when fully charged: 3 hours)

ACCESSORIES
- 32GB microSD card
- USB charging cable (approx. 50cm)
- Camera protection adapter
- Magnet adapter
- Hook adapter

| Order No. | Model No. | Cable Size | Camera Diameter | Recording File Format | Weight |
|---|---|---|---|---|---|
| NEW! 140220 | E902-RD | Approx. ϕ4.5mm x L2m | ϕ9.0mm | Still images: JPEG format (Resolution: 1920 x 1080)<br>Videos: AVI format (Resolution: 1920 x 1080) | 310g |
| NEW! 140221 | E905-RD | Approx. ϕ4.5mm x L5m | | | 310g |
| NEW! 140222 | E910-RD | Approx. ϕ4.5mm x L10m | | | 310g |

# BORESCOPE WITH MONITOR

Borescope can shoot still images and movies.
You can view images directly, or connect to your computer via USB.

USE
- Industrial borescope can inspect inside holes and around corners

MATERIAL
- Body: Plastic

FEATURES
- Integrated monitor allows real time viewing and capture to memory
- Can view images directly, or connect to PC with USB
- Video output
- Cable is compliant to IP66

SPECIFICATIONS
- Continuous use: Approx. 3 hrs. (without recording)

ACCESSORIES
- ϕ5.5mm×1m semi-hard type cable camera
- View adapter 45°
- AC adapter
- Two lithium-ion batteries included

| Order No. | Model No. | Cable Size | Monitor Size | Number of pixels | View Angle | Depth of Focus | Power | AV Output |
|---|---|---|---|---|---|---|---|---|
| 140210 | MIS-5510G | ϕ 5.5mm x (L) 1m | 3.5 inch | 300,000 pixels | Approx. 67° | Approx. 20-50mm | DC5V | NTSC/ PAL |

| Lighting | Still Image Recording Pixels | Video Recording Pixels | File Format | Recording Media | Dimensions (mm) | Weight |
|---|---|---|---|---|---|---|
| White LED (Dimming) | 640 x 480 pixels | 640 x 480 pixels | JPEG (still image Recording pixels) AVI (video) | SD card (less than 4 GB) | Approx. L210 × W100 × H45 | 410g |

# OPTIONAL ACCESSORIES FOR MIS SERIES

## ■ Camera for MIS

C-MIS-5530G

USE
- Optional camera for MIS series bore scope (IP66 equivalent)

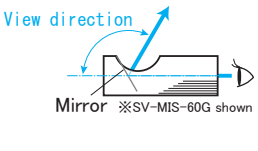
MATERIAL
- ϕ5.5 model: Stainless cable

FEATURES
- ϕ5.5 model: High rigidity stainless cable is ideal for inspection of harsh places

| Order No. | Model No. | Cable size | Cable type | Number of Pixels | Resolution | Focal Length (mm) | LED Pcs |
|---|---|---|---|---|---|---|---|
| 140219 | C-MIS-5510G | ϕ5.5mm x 1m | Semi-hard tube | 300,000 pixels | 640 x 480 | Approx. 20~50 | 4 |
| 140214 | C-MIS-5520G | ϕ5.5mm x 2m | Semi-hard tube | 300,000 pixels | 640 x 480 | Approx. 20~50 | 4 |
| 140215 | C-MIS-5530G | ϕ5.5mm x 3m | Semi-hard tube | 300,000 pixels | 640 x 480 | Approx. 20~50 | 4 |

## ■ Side view adapter for MIS series

SV-MIS-35G




USE
- Side view adapter for monitor type industrial borescope

MATERIAL
- Copper plated (excluding mirror), brass

FEATURES
- Install on tip of borescope to change viewing angle

| Order No. | Model No. | Mirror Angle | View Direction | Weight |
|---|---|---|---|---|
| 140217 | SV-MIS-35G | Approx. 35° | Approx. 70° | 2g |
| 140218 | SV-MIS-60G | Approx. 60° | Approx. 120° | 2g |

## ■ LITHIUM-ION BATTERY FOR MIS

USE ●Lithium-ion battery for monitor type industrial bore scope

| Order No. | Model No. | Rated Voltage | Rated Capacity | Weight |
|---|---|---|---|---|
| 140216 | B-MIS-37G | DC 3.7V | 1,880mAh | 42g |

## MAGNIFIER WITH LED LIGHT ARM TYPE

With durable, long-life LED light

Additional Lens 2x, 4x▶
Interchangeable Lens
P343

LS2-175A

For inspection and precise work

Anti-reflective cover to soften the light for less reflection

USE
- For assembly and inspection of precision parts

MATERIAL
- Lens: Hard glass
- Body: Steel, plastic

FEATURES
- Durable and long-life LED light
- Large lens for clear view with both eyes
- With protective lens cover
- Clear glass lens does not affect color or items viewed

SPECIFICATIONS
- Rated voltage: AC100-240V
- Rated frequency: 50/60Hz
- Rated power consumption: 15W
- Illuminance: 5,500lx (with 250mm distance from lens to object)
- Color temperature: Approx. 5,000K <daylight white>
- Number of LED: 84 pcs
- Clamping range: Approx. 10~60mm
- Power cable length: Approx. 1.8m

ACCESSORIES
- Lens cleaning cloth
- Clamp

| Order No. | Model No. | Arm Length | Visible Lens DIA (mm) | Magnification | Weight |
|---|---|---|---|---|---|
| 140121 | LS2-175A | Lower: 435 Upper: 425 Max: 870 | ϕ170 | 2x | 3.4kg |
| 140124 | LS4-150A | | ϕ140 | 4x | 3.6kg |

## MAGNIFIER WITH LED LIGHT DESK STAND TYPE

With durable, long-life LED light

Additional Lens 2x, 4x▶
Interchangeable Lens
P343

LS2-175S

USE
- For assembly and inspection of precision parts

MATERIAL
- Lens: Hard glass
- Body: Steel, plastic

FEATURES
- Durable and long-life LED light
- Large lens for clear view with both eyes
- With protective lens cover
- Clear glass lens does not affect color of items viewed

SPECIFICATIONS
- Rated voltage: AC100-240V
- Rated frequency: 50/60Hz
- Rated power consumption: 15W
- Illuminance: 5,500lx (with 250mm distance from lens to object)
- Color temperature: Approx. 5,000K <daylight white>
- Number of LED: 84 pcs
- Power cable length: Approx. 1.8m

ACCESSORIES
- Lens cleaning cloth
- Hexagonal bar wrench

| Order No. | Model No. | Product Dimensions (mm) | Visible Lens DIA (mm) | Magnification | Weight |
|---|---|---|---|---|---|
| 140122 | LS2-175S | Total height 430 | ϕ170 | 2x | 5.1kg |
| 140125 | LS4-150S | | ϕ140 | 4x | 5.3kg |

## INTERCHANGEABLE LENS FOR MAGNIFIER WITH LED LIGHT

Base unit▶
Magnifier with LED light
P343

SL-4

USE
- Interchangeable lens for MAGNIFIER WITH LED LIGHT

MATERIAL
- Hard glass

FEATURES
- Optional lens for MAGNIFIER WITH LED LIGHT

SPECIFICATIONS
- Applicable product: Swing arm type LS2-175A, LS4-150A
  Deskstand type LS2-175S, LS4-150S

| Order No. | Model No. | Lens Diameter (mm) | Magnification | Weight |
|---|---|---|---|---|
| 140126 | SL-2 | ϕ178 | 2x | 0.9kg |
| 140123 | SL-4 | ϕ150 | 4x | 1.1kg |

## MAGNIFIER WITH DIMMABLE LED LIGHT ARM TYPE

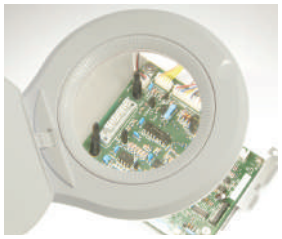
With dimmable LED light.
Brightness is dimmable depending on environment and objects.

USE
- For assembly and inspection of precision parts

MATERIAL
- Lens: Glass
- Body: Steel, ABS

FEATURES
- Durable and long-life LED light
- Brightness is dimmable by dimmer control function steplessly
- Large lens for better view by both eyes
- With protective lens cover
- Clear glass lens does not affect color of view

SPECIFICATIONS
- Power: AC100-240V 50/60Hz (Using included AC adaptor)
- Power consumption: Approx. 10W (Max. brightness)
- Illuminance: Approx. 3100lx (Max. brightness and 250mm distance from lens to object)
- Color temperature: Approx. 5000K (daylight white)
- Number of LED: 60pcs
- Room temperature: 0~40℃
- Clamping range: Approx. 10~60mm
- AC adapter (cable length: Approx. 1.5m)
- Clamp



For inspection and precise work

Brightness is dimmable by dimmer control function

| Order No. | Model No. | Arm length (mm) | Visible Lens DIA (mm) | Magnification | Weight |
|---|---|---|---|---|---|
| 140127 | LS2-125AD | Lower: 480<br>Upper: 490<br>Max.: 700 | ϕ116 | 2x | 2.3kg |

## MAGNIFIER WITH DIMMABLE LED LIGHT ARM TYPE

With dimmable LED light.
Touch switch and rectangular-like lense.

USE
- For assembly and inspection of precision parts

MATERIAL
- Lens: Glass
- Body: Steel, ABS

FEATURES
- Durable and long-life LED light
- Brightness is dimmable by dimmer control function steplessly
- Large lens for better view by both eyes
- With protective lens cover
- Clear glass lens does not affect color of view

SPECIFICATIONS
- Power: AC100-240V 50/60Hz (Using included AC adaptor)
- Power consumption: Approx. 11W (Max. brightness)
- Illuminance: Approx. 3,200lx (Max. brightness) (250mm distance from lens to object)
- Color temperature: Approx. 5,000K (daylight white)
- Number of LED: 72 pcs
- Operating temperature: 0~40℃
- Clamping range: Approx. 10~60mm

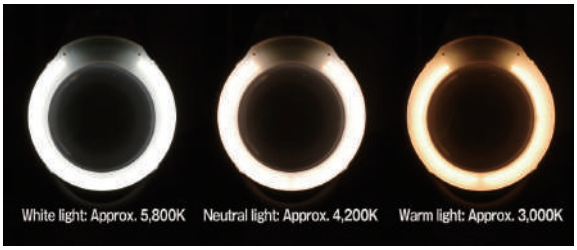
ACCESSORIES
- AC adaptor (cable length: approx. 1.5m)
- Clamp

For inspection and precise work

| Order No. | Model No. | Arm Length (mm) | Visible Lens DIA (mm) | Magnification | Weight |
|---|---|---|---|---|---|
| 140130 | LS2-S170AD | Lower : 480<br>Upper : 490 | 170 x 105 | 2x | 2.8kg |

## MAGNIFIER WITH DIMMABLE LED LIGHT ARM TYPE NEW!

Brightness and light color can be adjusted. Adaptable to various workpieces and measurement environments.
Equipped with a large lens for excellent visibility.



USE
- For assembly and inspection of precision parts

MATERIAL
- Lens: Hard glass
- Body: Steel, Plastic

FEATURES
- Equipped with a color adjustment function that allows the light color to be changed to match the workpiece and work environment (3-color modes)
- Brightness is dimmable by dimmer control function steplessly
- Touch switch type
- Durable and long-life LED light
- Large lens for better view by both eyes
- With protective lens cover
- Clear glass lens does not affect color of view

SPECIFICATIONS
- Rated voltage: AC100-240V
- Rated frequency: 50/60Hz
- Rated power Consumption: 15W
- Illuminance: 3,100lx (With 250mm distance from lens to object)
- Color temperature: Approx. 5,800K <White> / Approx. 4,200K <Neutral> / Approx. 3,000K <Warm>
- Number of LED: 84pcs (White) / 84pcs (Warm)
- Clamping range: Approx. 10-60mm
- Power cable length: Approx. 1.8m

ACCESSORIES
- AC Adapter (Approx. 1.8m) ●Lens Cleaning Cloth ●Clamp

| Order No. | Model No. | Arm Length (mm) | Lens Visible Range (mm) | Magnification | Weight |
|---|---|---|---|---|---|
| NEW! 140131 | LS2-175ADT | Lower: 490<br>Upper: 490 | ϕ172 | 2x | 2.9kg |

## CLAMP FOR ARM TYPE MAGNIFIER

USE
- Replacement clamp for MAGNIFIER WITH LED LIGHT ARM TYPE

MATERIAL
- Steel

SPECIFICATIONS
- Applicable product: LS2-175A, LS4-150A, LS2-125AD, LS2-S170AD, LS2-175ADT
- Clamp Range: Approx. 10-60mm

| Order No. | Model No. | Weight |
|---|---|---|
| 140129 | LSC-125-175 | 310g |

# TELESCOPING INSPECTION MIRROR

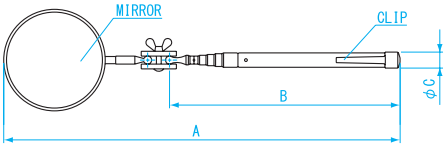
## Suitable for inspection of hard-to-see locations

IMT-50K

IMT-100S

IMT-100R

● DIMENSIONS Units : mm




USE
- ●For inspection of hard-to-see locations

MATERIAL
- ●Mirror: Glass

FEATURES
- ●Extendable reach and easy to carry
- ●Replacement mirror also sold separately
- ●With mirror protective film

| Order No. | Model No. | Mirror Shape (mm) | A : Maximum Length (mm) | B : Telescope Length (mm) | C (mm) | Dimensions | Weight |
|---|---|---|---|---|---|---|---|
| 011140 | IMT-20R | Round φ20 | Approx. 525 | Approx. 130~475 | 9 | Brass | 40g |
| 011150 | IMT-30R | Round φ30 | Approx. 535 | | | | 40g |
| 011160 | IMT-60R | Round φ60 | Approx. 560 | Approx. 145~475 | | | 63g |
| 011170 | IMT-50K | Oval 50 x 25 | Approx. 555 | Approx. 130~475 | | | 45g |
| 011180 | IMT-80K | Oval 80 x 50 | Approx. 575 | Approx. 145~475 | | | 66g |
| 011185 | IMT-85S | Square 100 x 85 | Approx. 745 | Approx. 245~610 | 13 | Stainless steel | 150g |
| 011186 | IMT-100S | Square 100 x 100 | Approx. 745 | | | | 150g |
| 011187 | IMT-100R | Round φ100 | Approx. 745 | | | | 135g |



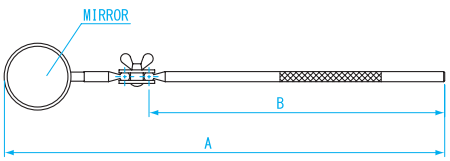
# INSPECTION MIRROR

## Suitable for inspection of hard-to-see locations

IM-30R

IM-50K

● DIMENSIONS Units : mm




USE
- ●For inspection of hard-to-see locations

MATERIAL
- ●Body: Free cutting steel
- ●Mirror: Grass

FEATURES
- ●Enables secure inspection through the mirror
- ●With mirror protective film

| Order No. | Model No. | Mirror shape (mm) | A (mm) | B (mm) | Weight |
|---|---|---|---|---|---|
| 011120 | IM-20R | Round φ20 | Approx. 200 | Approx. 145 | 30g |
| 011130 | IM-30R | Round φ30 | Approx. 210 | | 35g |
| 011110 | IM-50K | Oval 50 x 25 | Approx. 230 | | 35g |

# MAGNIFYING INSPECTION MIRROR WITH TELESCOPING

Suitable for inspection of hard-to-see locations

IMTR-60R

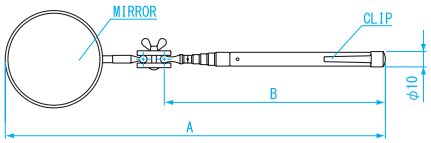
IMTR-50K

USE
- For inspection of hard-to-see locations

MATERIAL
- Body: Brass
- Mirror: Glass

FEATURES
- Extendable reach and easy to carry
- Magnifying mirror provides an enlarged view
- With mirror protective film

● DIMENSIONS Units : mm




| Order No. | Model No. | Mirror shape (mm) | A: Max Length (mm) | B: Telescope Length (mm) | Magnification | Weight |
|---|---|---|---|---|---|---|
| 011195 | IMTR-20R | Round ϕ20 | Approx. 525 | Approx. 130~475 | 2x | 40g |
| 011196 | IMTR-30R | Round ϕ30 | Approx. 535 | | | 40g |
| 011197 | IMTR-60R | Round ϕ60 | Approx. 560 | Approx. 145~475 | 1.5x | 60g |
| 011198 | IMTR-50K | Oval 50 x 25 | Approx. 555 | Approx. 130~475 | 2x | 45g |
| 011199 | IMTR-80K | Oval 80 x 50 | Approx. 575 | Approx. 145~475 | 1.5x | 60g |

# MAGNIFYING INSPECTION MIRROR

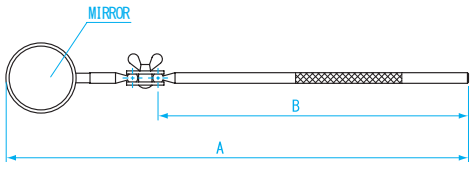
Suitable for inspection of hard-to-see locations.

IMR-20R

IMR-30R

IMR-50K

● DIMENSIONS Units : mm




USE
- For inspection of hard-to-see locations

MATERIAL
- Body: Free-cutting steel
- Mirror: Glass

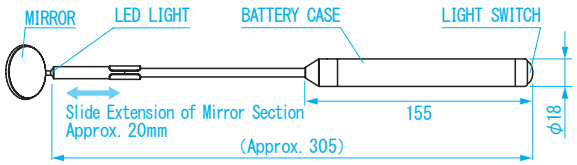
FEATURES
- Magnifying mirror provides an enlarged view
- With mirror protective film

| Order No. | Model No. | Mirror Shape (mm) | A (mm) | B (mm) | Magnification | Weight |
|---|---|---|---|---|---|---|
| 011193 | IMR-20R | Round ϕ20 | 200 | 145 | 2 | 30g |
| 011194 | IMR-30R | Round ϕ30 | 210 | | | 35g |
| 011192 | IMR-50K | Oval 50 x 25 | 230 | | | 35g |

## INSPECTION MIRROR WITH LIGHT NEW!

Inspection mirror that is convenient for use in dim and hard-to-see areas

● DIMENSIONS Units : mm




USE
- For inspecting the back side of machines or areas that are narrow and dark

MATERIAL
- Shaft: Stainless steel
- Grip: Aluminum
- Mirror: Glass

FEATURES
- With two mirror sizes
- Uses bright, energy-efficient LED bulbs
- With mirror protective film
- With a storage case

POWER SUPPLY
- 2x AA batteries (sold separately)

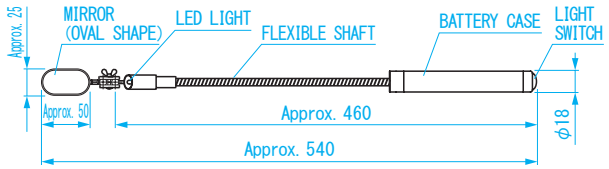
| Order No. | Model No. | Mirror Shape (mm) | Weight |
|---|---|---|---|
| NEW! 011111 | IMLED-2030R | Round ϕ20, Round ϕ30 | 70g※ |

※With round mirror ϕ30mm attached. Batteries not included.

## INSPECTION MIRROR WITH LIGHT NEW!

Inspection mirror convenient for use in dimly lit and hard-to-see areas. Equipped with a flexible shaft for adjustable angles.

● DIMENSIONS Units : mm




USE
- For inspecting the back side of machines or areas that are narrow and dark

MATERIAL
- Flexible Section: Carbon steel
- Grip: Aluminum
- Mirror: Glass

FEATURES
- Flexible shaft allows free bending and angle adjustments
- With 3 mirror sizes
- Uses bright, energy-efficient LED bulbs
- With mirror protective film
- With a storage case

POWER SUPPLY
- 2x AA batteries (sold separately)

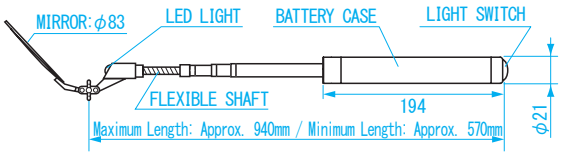
| Order No. | Model No. | Mirror Shape (mm) | Weight |
|---|---|---|---|
| NEW! 011112 | IMLED-50K | Oval 50 x 25, Round ϕ57, ϕ83 | 130g※ |

※With oval mirror 50×25mm attached. Batteries not included.

## INSPECTION MIRROR WITH LIGHT NEW!

Inspection mirror convenient for use in dimly lit and hard-to-see areas. Shaft can be extended and retracted for adjustable length.

● DIMENSIONS Units : mm




USE
- For inspecting the back side of machines or areas that are narrow and dark

MATERIAL
- Extension Section: Stainless steel
- Flexible Section: Carbon steel
- Grip: Aluminum
- Mirror: Glass

FEATURES
- Flexible shaft allows for free bending and angle adjustments
- Telescopic antenna-style shaft for adjustable length
- Uses bright, energy-efficient LED bulbs
- With mirror protective film
- With a storage case

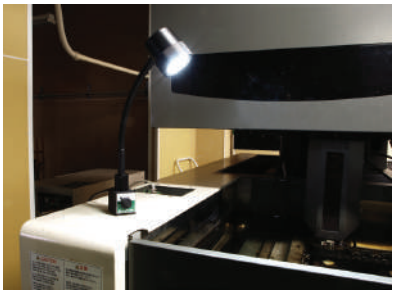
POWER SUPPLY
- Three AA batteries (sold separately)

| Order No. | Model No. | Mirror Shape (mm) | Weight |
|---|---|---|---|
| NEW! 011113 | IMLED-83R | Round ϕ83 | 190g※ |

※With round mirror ϕ83mm attached. Batteries not included.

## MAGNETIC STAND LED WORK LIGHT

As spot light where dim and hard-to-see.
Power saving LED light.



USE
- For second lighting for better view

MATERIAL
- Ferrite magnet

FEATURES
- Strong magnet with ON/OFF lever for easy removal
- Flexible shaft directs light where needed
- LED light, long life and power saving

SPECIFICATIONS
- LED color temperature: 5,500~6,000K
- Luminous flux: Approx. 326 lm
- Magnetice adsorption: Approx. 600N
- Power cable length: Approx. 1m
- Product dimensions: Approx. W70 x H475 x D80mm

| Order No. | Model No. | Base Dimensions (mm) | Rated Voltage | Rated Frequency | Weight |
|---|---|---|---|---|---|
| 011096 | SB-60LED | 50 x 60 x 55 | AC100V | 50/60Hz | 1.6kg |

LOUPE

## HEAD LOUPE WITH ADJUSTABLE LED LIGHT AND INTERCHANGEABLE LENS

For hands-free.
Head loupe with LED light for best work efficiency.

USE
- For assembly and inspection of precision parts

MATERIAL
- Lens: Acrylic resin

FEATURES
- Adjustable belt to stay still on head to free both hands for detailed work
- LED light, long life and power saving. Angle adjustable to up, down, left and right to light up
- With four interchangeable lenses to adjust magnification

SPECIFICATIONS
- Battery life: Approx. 20hrs. with alkaline battery
- LED life: Approx. 40,000hrs. (not replaceable)

POWER
- Three AAA batteries included for testing

ACCESSORIES
- Lens 4 pcs
- Storage case

| Order No. | Model No. | Magnification | Weight |
|---|---|---|---|
| 111241 | HL-LED | 1.2x, 1.8x, 2.5x, 3.5x | 140g |

LOUPE

## LED ILLUMINATED POCKET SIZE MAGNIFIER

A loupe equipped with a power-saving LED light. Ideal for observation in dark environments.

M-100 Ⅱ

M-320 Ⅱ

USE
- Magnifier with LED light

MATERIAL
- M-100Ⅱ…External lens: Glass, Internal lens: Acrylic
- M-320Ⅱ…Lens: Glass

FEATURES
- Magnifier with LED light for inspection in a dimly-lit place

POWER
- Two C batteries (not included)

| Order No. | Model No. | Lens Diameter (mm) | Magnification | Length (mm) | Weight |
|---|---|---|---|---|---|
| 111238 | M-100Ⅱ | 30 | 10x | 180 | 90g |
| 111239 | M-320Ⅱ | 80 | 2x | 235 | 200g |

LOUPE

## LED ILLUMINATED POCKET SIZE MAGNIFIER

Durable 10x & 15x high magnification lens with LED light.
High performance magnifier.

LL-10

LL-15

USE
- Magnifier with LED light

MATERIAL
- Lens: Glass
- Body: ABS resin

FEATURES
- Magnifier with LED light for inspection in a dimly-lit place
- With protective storage case

SPECIFICATIONS
- Battery life: Approx. 40 hrs. with alkaline battery

【LED PART SPECIFICATIONS】
- Diameter: Approx. 5mm
- Voltage: 3V
- Luminosity: 8,000~10,000mcd
- LED Life: Approx. 40,000 hrs.
- Directional angle: Approx. 30°

POWER
- Three AAA batteries (not included)

| Order No. | Model No. | Lens Diameter (mm) | Magnification | Length (mm) | Weight |
|---|---|---|---|---|---|
| 111236 | LL-10 | 30 | 10x | 105 | 41g |
| 111237 | LL-15 | 20 | 15x | | 49g |

## LED ILLUMINATED POCKET SIZE MAGNIFIER

LOUPE

Loupe with power-saving LED light. Three different magnifications in one loupe.

USE
- Magnifier with LED light

MATERIAL
- Lens: Acrylic resin
- Body: ABS ●Case: PVC

FEATURES
- Long-life LED light can light in the dark
- Choosable from three different magnifications depending on purpose
- Provided with storage case

SPECIFICATIONS
- Battery life: Approx. 10hrs.

POWER
- Two CR2032 (lithium) batteries included for testing

| Order No. | Model No. | Lens size (mm) | Magnification | Total Length (mm) | Weight |
|---|---|---|---|---|---|
| 111240 | LL-357 | 70 x 54 | 3x, 5x, 7x | 107 | 38g |

## FOLDING POCKET MAGNIFIER

(No.3150)

For general use as inspecting knife edge and various small parts

No.3150

No.3122-P

USE
- Slide type magnifier

MATERIAL
- Lens: Acrylic resin

FEATURES
- Slide-in-storage for easy-to-carry
- With protective case
- Bifocal lens

| Order No. | Model No. | Lens Dimensions (mm) | Magnification | Weight |
|---|---|---|---|---|
| 011268 | No.3150 | 50 x 40 | 3.5x･5x | 20g |
| 011269 | No.3122-P | ϕ65 | 2.5x･4x | 35g |

## MAGNIFIER WITH WOODEN HANDLE

For general use as inspecting knife edge and various small parts

USE
- Hand magnifier

MATERIAL
- Lens: Glass ●Handle: Wood

FEATURES
- Wooden handle
- Scratch-resistant glass lens

| Order No. | Model No. | Lens Diameter (mm) | Magnification | Length (mm) | Weight |
|---|---|---|---|---|---|
| 011264 | No.1430 | 75 | 2.5x | 185 | 120g |

## MAGNIFIER WITH PLASTIC HANDLE

For general use as inspecting knife edge and various small parts

No.7507

USE
- Hand magnifier

MATERIAL
- Lens: Acrylic resin ●Handle: Plastic

FEATURES
- One lens for two magnifications
- Lightweight acrylic lens
- Plastic handle and frame

| Order No. | Model No. | Lens Diameter (mm) | Magnification | Length (mm) | Weight |
|---|---|---|---|---|---|
| 011266 | No.7507 | 75 | 2x･4x | 185 | 55g |
| 011267 | No.7515 | 90 | 2x･4x | 210 | 86g |

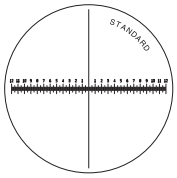
# LED LIGHT SCALE LOUPE

Suitable in dimly-lit place by LED light

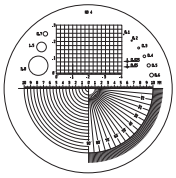
LSL-26

LSL-35

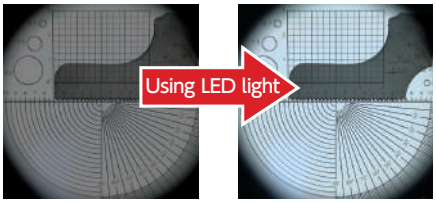
Scale plate




Standard
(graduation: 0.1mm)



No.4




USE
- For precision work

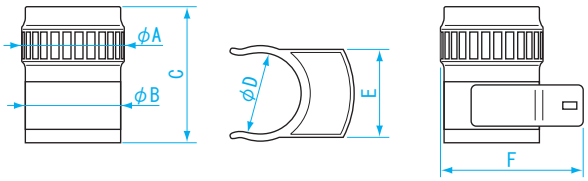
MATERIAL
- Lens: Glass

FEATURES
- Reticle with full width scale, can be used to measure dimensions and diameter of objects
- With LED light to improve visibility for reading scale

ACCESSORIES
- Two reticles (One installed)
- One eyepiece cap
- One cleaning cloth

POWER
- Three LR41 (alkaline button cell) (not included)

● DIMENSIONS




Units : mm

| Model No. | ϕA | ϕB | C (Adjustable) | ϕD | E | F |
|---|---|---|---|---|---|---|
| LSL-26 | 37.2 | 30.6 | 46.5～55.5 | 30 | 30.5 | 51.5 |
| LSL-35 | 45 | 40 | 45 ～54 | 39.5 | 30.5 | 60 |

| Order No. | Model No. | Magnification | Weight |
|---|---|---|---|
| 140141 | LSL-26 | 10x | 45g |
| 140142 | LSL-35 | | 73g |

# LED LIGHT FOR LED LIGHT SCALE LOUPE

L-26

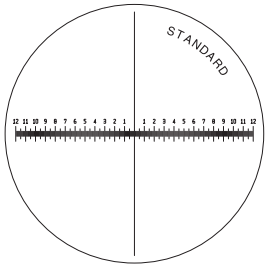
USE
- Single light for LED LIGHT SCALE LOUPE

FEATURES
- LED light that is included in LED LIGHT SCALE LOUPE (LSL-26, LSL-35)

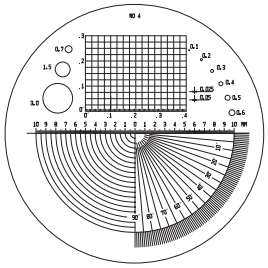
POWER
- Three LR41 (alkaline button cell) (not included)

| Order No. | Model No. | Weight |
|---|---|---|
| 140143 | L-26 | 10g |
| 140144 | L-35 | 11g |

# SCALE PLATE FOR LED LIGHT SCALE LOUPE




Standard
(graduation: 0.1mm)



No.4

USE
- Reticle scale plate for LED LIGHT SCALE LOUPE

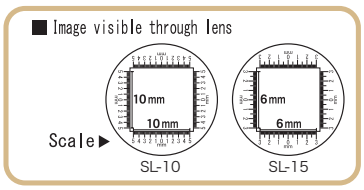
FEATURES
- Reticle scale plate that is included in LED LIGHT SCALE LOUPE (LSL-26, LSL-35)

| Order No. | Model No. | Pattern | Applicable Model | Weight |
|---|---|---|---|---|
| 140146 | S-26-4 | No.4 | LSL-26 | 3g |
| 140147 | S-26-S | STANDARD | | 3g |
| 140148 | S-35-4 | No.4 | LSL-35 | 4g |
| 140149 | S-35-S | STANDARD | | 4g |

## SCALE LOUPE

For precision work.
Use to examine various small parts.

SL-10 SL-15




USE
- For precision work

MATERIAL
- Lens: Glass
- Case: ABS

FEATURES
- Reticle with full width scale, can be used to measure dimensions and diameter of objects
- Reticle can be removed to use as standard loupe
- The cup-shaped allows the lens to maintain the proper distance by simply placing it over the object to be viewed

| Order No. | Model No. | Lens Diameter (mm) | Magnifications | Scale Graduation | Measurement Range (mm) | Weight |
|---|---|---|---|---|---|---|
| 011274 | SL-10 | 28 | 10x | 0.2mm | ±5 | 20g |
| 011275 | SL-15 | 20 | 15x | 0.1mm | ±3 | 15g |

## LOUPE

For precision work.
Use to examine various small parts.

L-10 L-15

USE
- For precision work

MATERIAL
- Lens: Glass
- Case: ABS

FEATURES
- Object is to be directly placed on and be in focus automatically
- Acrylic cover for brighter view

| Order No. | Model No. | Lens Diameter (mm) | Magnification | Weight |
|---|---|---|---|---|
| 011284 | L-10 | 30 | 10x | 25g |
| 011285 | L-15 | 21 | 15x | 20g |

## HIGH MAGNIFICATION LOUPE

For precision work.
Use to examine various small parts.

HL-10

USE
- For appraising microfilms and gemstorns

MATERIAL
- Lens: Glass
- Case: PVC

FEATURES
- High magnification for precision work

| Order No. | Model No. | Lens Diameter (mm) | Magnification | Weight |
|---|---|---|---|---|
| 011276 | HL-10 | 28 | 10x | 38g |
| 011277 | HL-15 | 21 | 15x | 30g |

## METAL MAGNIFIER

(No.7020-W)

For precision work.
Use to examine various small parts.

No.7070

No.7020-W

USE
- For observating minerals, plant, insects, etc.

MATERIAL
- Lens: Glass
- Case: Brass, aluminum (No.7070)
  Copper, zinc (No.7020-W)

FEATURES
- Useful tool in factories and offices
- Slide-in-storage for easy-to-carry

| Order No. | Model No. | Lens Diameter (mm) | Magnification | Weight |
|---|---|---|---|---|
| 011279 | No.7070 | 20 | 3x・4x・5x | 40g |
| 011280 | No.7020-W | 8・13 | 10x・20x | 35g |

## MAGNIFIER WITH MAGNETIC STAND

For precision work.
Use to examine various small parts.

USE
- For detailed work and inspection at factory

MATERIAL
- Lens: Glass
- Magnet: Ferrite magnet

FEATURES
- Flexible arm can be positioned as required
- Magnetice adsorption: 800N

| Order No. | Model No. | Lens Diameter (mm) | Magnification | Base Dimensions (mm) | Weight |
|---|---|---|---|---|---|
| 012876 | SB-80K | 100 | 2x | 50 x 60 x 55 | 1.4kg |

## STAND MAGNIFIER

For precision work.
Use to examine various small parts.

USE
- For detailed work and inspection at factory

MATERIAL
- Lens: Glass
- Base: Cast iron

FEATURES
- Convenient use by both hands-free
- Flexible arm can be positioned as required

| Order No. | Model No. | Lens Diameter (mm) | Magnification | Weight |
|---|---|---|---|---|
| 011281 | No.1650 | 90 | 2.5x | 820g |

## STAND MAGNIFIER WITH CLIPS

For precision work.
Use to examine various small parts.

USE
- For detailed work and inspection at factory

MATERIAL
- Lens: Glass
- Base: Cast iron

FEATURES
- For soldering work

| Order No. | Model No. | Lens Diameter (mm) | Magnification | Weight |
|---|---|---|---|---|
| 011286 | CS-65 | 65 | 2.5x | 460g |

# MAGNETIC TOOL

357p

357p

357p

358p

358p

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360p

360p

360p

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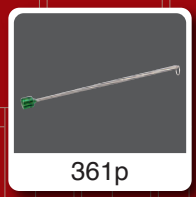
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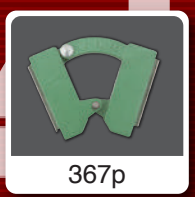
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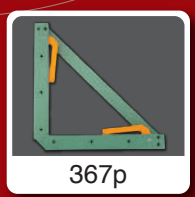
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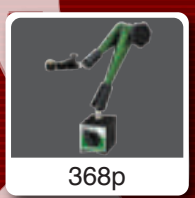
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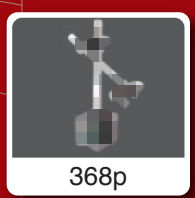
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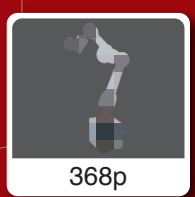
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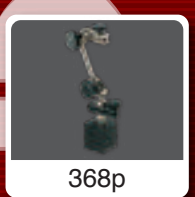
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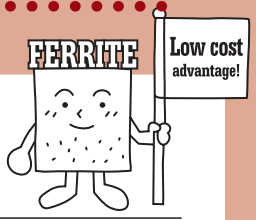
Reference

# Magnet Types and Characteristics

## Ferrite Magnet

The main component is iron oxide. Ferrite magnets are used in various types of goods and products such as automotive motors, audio speakers, etc.



| | |
|---|---|
| **Advantage** | Low cost, corrosion-resistant, does not rust and very little degradation of the magnetic force |
| **Disadvantage** | Fragile. High set up costs make this type ill-suited for custom designs in low volume. |
| **Temperature characteristics** | Thermal demagnetization is large. Magnetic force is greatly reduced above 100℃, and is halved at 200℃. |
| **Magnetic Properties** | Anisotropic: Has preferred direction of magnetization with large magnetic field strength.<br>Isotropic: Can be magnetized in any direction. Isotropic magnets have weaker magnetic field strength. |

## Rare Earth Magnet

Samarium cobalt magnets and Neodymium magnets. High magnetic flux density and coercive force makes these types well suited for applications which require a small, flat size.

■Samarium cobalt

| | |
|---|---|
| **Advantage** | Excellent corrosion resistance and temperature stability |
| **Disadvantage** | Poor mechanical strength and workability |
| **Temperature characteristic** | Relatively low thermal demagnetization. Up to 300℃, most of magnetic force will be recovered upon return to room temperature. |

■Neodymium

| | |
|---|---|
| **Advantage** | One of the highest magnetic properties of common types. Excellent mechanical strength, hard without tendency to chip or crack. |
| **Disadvantage** | Not suitable for high temperature applications, and easy to rust |
| **Temperature characteristics** | Thermal demagnetization is particularly large. Not suitable for use above 80℃. |

## Alnico

Iron alloyed with aluminum, nickel, and cobalt. Elongated shape, this type is commonly used in meters and communication equipment which demand precision.

| | |
|---|---|
| **Advantage** | High magnetic flux density and temperature stability. Also has excellent mechanical strength. |
| **Disadvantage** | Low holding force, and susceptible to demagnetization. High price instability due to main raw materials of cobalt and nickel. |
| **Temperature characteristic** | The lowest thermal demagnetization characteristics. Up to 400℃, most of magnetic force will be recovered upon return to room temperature. |

## MAGNETIC HOLDER NEW!

Can be used for various purposes such as holding down documents, temporary fixation of workpieces, and collecting metal chips!

Rust prevention▶
Zerust Film for Iron
P370

USE
- For holding down drawings, rulers, and paper templates
- Integrated into jigs to hold down workpieces during machining operations

MATERIAL
- T-Handle: Steel
- Magnet: Alnico Magnet

FEATURES
- Uses Alnico magnets, which are resistant to high temperatures and have excellent mechanical strength
- Comes with a T-handle

| Order No. | Model No. | Magnet Dimensions (mm) | Screw Hole Size | Maximum Pull Force | Weight |
|---|---|---|---|---|---|
| NEW! 012806 | SKM-01D | ϕ25×30 | M6 × P1.0 | 80N | 110g |
| NEW! 012807 | SKM-02D | 25×25×25 | M6 × P1.0 | 65N | 120g |
| NEW! 012808 | SKM-03D | 57×25×25 | M6 × P1.0 | 120N | 260g |
| NEW! 012809 | SKM-04D | ϕ40×30 | M8 × P1.25 | 300N | 280g |
| NEW! 012810 | SKM-05D | ϕ50×40 | M8 × P1.25 | 400N | 590g |

## MAGNETIC HOLDER NEW!

Can be used for various purposes such as holding down documents, temporary fixation of workpieces, and collecting metal chips!
Type with ferrite magnets, designed to reduce magnetic force.

Rust prevention▶
Zerust Film for Iron
P370

USE
- For holding down drawings, rulers, and paper templates
- Integrated into jigs to hold down workpieces during machining operations

MATERIAL
- T-Handle: Steel
- Magnet: Ferrite Magnet

FEATURES
- Uses ferrite magnets, which have strong magnetic retention and are resistant to demagnetization
- Comes with a T-handle

| Order No. | Model No. | Magnet Dimensions (mm) | Screw Hole Size | Maximum Pull Force | Weight |
|---|---|---|---|---|---|
| NEW! 012811 | SKM-01F | ϕ25×30 | M6 × P1.0 | 20N | 110g |
| NEW! 012812 | SKM-02F | 25×25×25 | M6 × P1.0 | 12N | 120g |
| NEW! 012813 | SKM-03F | 57×25×25 | M6 × P1.0 | 20N | 270g |
| NEW! 012814 | SKM-04F | ϕ40×30 | M8 × P1.25 | 60N | 280g |
| NEW! 012815 | SKM-05F | ϕ50×40 | M8 × P1.25 | 100N | 570g |

## MAGNETIC HOLDER -ALNICO-

For general purpose

Rust prevention▶
Zerust Film for Steel
P370

USE
- For holding drawings, stencils and rulers
- For holding items during processing

MATERIAL
- Alnico magnet

FEATURES
- Durable and resistant to high temperature

| Order No. | Model No. | Magnet Dimensions (mm) | Screw Hole Size | Maximum Pull Force | Weight |
|---|---|---|---|---|---|
| 012750 | SKM-0005 | ϕ5×13 | – | 1.8N | 8g |
| 012751 | SKM-0007 | ϕ7×13 | – | 4 N | 8g |
| 012710 | SKM-001 | ϕ10×15 | – | 8 N | 10g |
| 012740 | SKM-001TN | ϕ10×18 | M5 × P0.8 | | 10g |
| 012715 | SKM-0015 | ϕ15×15 | – | 12 N | 20g |
| 012741 | SKM-0015TN | ϕ15×18 | M5 × P0.8 | | 20g |
| 012720 | SKM-002 | ϕ20×15 | – | 30 N | 30g |
| 012742 | SKM-002TN | ϕ20×18 | M5 × P0.8 | | 40g |

# MAGNETIC HOLDER -SAMARIUM COBALT-

## Super strong magnet for molding and jigs

SKT-0010

SKT-0018

SKT-0025

USE
- Embed into stamping dies, hold work during EDM (Electric Discharge Machining)

MATERIAL
- Samarium cobalt magnet

FEATURES
- Thin and high magnetic intensity by samarium cobalt

| Order No. | Model No. | Product Dimensions (mm) | Maximum Pull Force | Weight |
|---|---|---|---|---|
| 012735 | SKT-0010 | $\phi$ 10 × 8 | 3N | 8g |
| 012736 | SKT-0018 | $\phi$ 18 × 8 | 50N | 20g |
| 012737 | SKT-0025 | $\phi$ 25 × 10 | 90N | 30g |

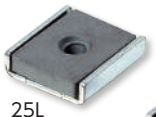
# MAGNETIC HOLDER -ANISOTROPIC FERRITE WITH YOKE-

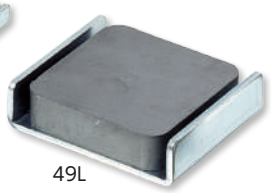
## Combination of ferrite magnet and iron yoke for stronger magnetic force

USE
- For attaching parts of mold, jig to workpiece

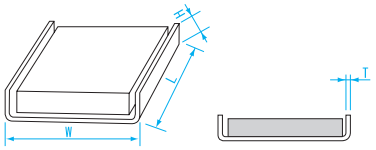
MATERIAL
- Anisotropic ferrite magnet

FEATURES
- Anisotropic ferrite magnet in combination with iron yoke provide a strong magnetic field, concentrated in one direction
- $\phi$5mm hole can be used to mount magnet (25L only)
- Dimensions are reference only (not suitable for precise positioning jig or fixture)


25L


49L

● DIMENSIONS




| Order No. | Model No. | L (mm) | W (mm) | H (mm) | T (mm) | Maximum Pull Force | Weight |
|---|---|---|---|---|---|---|---|
| 012670 | 20L | 20 | 8 | 4 | 0.6 | 9.8N | 3g |
| 012671 | 24L | 24 | 14 | 5.5 | 0.6 | 19.0N | 6g |
| 012672 | 25L | 25.5 | 23.5 | 6.5 | 1.6 | 58.0N | 20g |
| 012673 | 45L | 45 | 30 | 7 | 1.6 | 147.0N | 45g |
| 012674 | 49L | 49 | 41 | 13 | 2.0 | 196.0N | 123g |
| 012675 | 60L | 60 | 24 | 7 | 1.4 | 147.0N | 45g |

# MAGNETIC HOLDER -ANISOTROPIC FERRITE WITH YOKE-

## Combination of ferrite magnet and iron yoke for stronger magnetic force

USE
- For attaching parts of mold, jig to workpiece

MATERIAL
- Anisotropic ferrite magnet

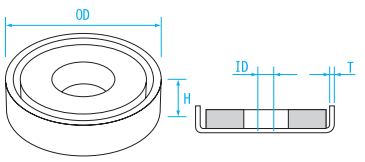
FEATURES
- Anisotropic ferrite magnet in combination with iron yoke provide a strong magnetic field, concentrated in one direction
- Hole can be used to mount magnet (20R, 44R only)
- Dimensions are reference only (not suitable for precise positioning jig or fixture)

24R

44R

20R

● DIMENSIONS




| Order No. | Model No. | OD (mm) | H (mm) | ID (mm) | T (mm) | Maximum Pull Force | Weight |
|---|---|---|---|---|---|---|---|
| 012650 | 18R | $\phi$ 18 | 5 | — | 0.8 | 9.8N | 6g |
| 012651 | 20R | $\phi$ 20 | 4 | $\phi$ 3.5 | 0.8 | 19.0N | 6g |
| 012652 | 24R | $\phi$ 24 | 5 | — | 0.8 | 29.0N | 10g |
| 012653 | 36R | $\phi$ 36 | 7 | — | 1.6 | 68.0N | 35g |
| 012654 | 44R | $\phi$ 44 | 8 | M4×P0.7 | 1.6 | 98.0N | 55g |

# MAGNETIC HOLDER

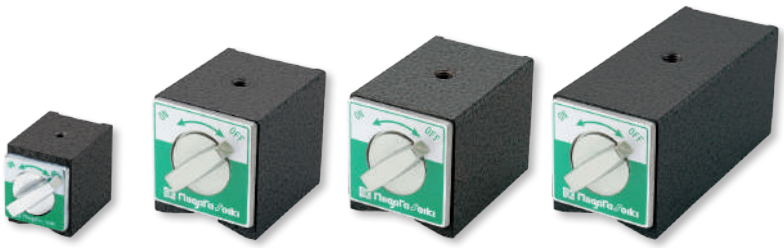
To be various types of jig by screw hole (female) on top

Holding measuring instruments▶
Magnetic Base
P247 ～255
Rust prevention▶
Zerust Film for Steel
P370

USE
- Magnetic holder with ON/OFF switch

MATERIAL
- Ferrite magnet

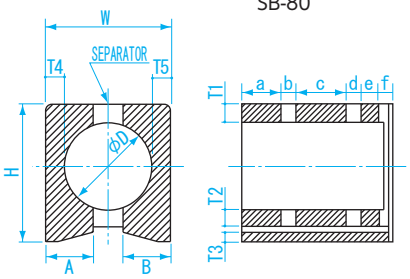
FEATURES
- Compact and highmagnetic intensity



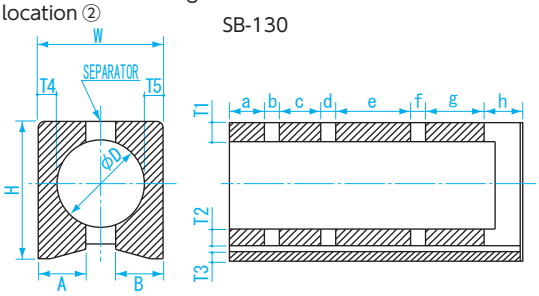
SB-25 SB-80 SB-100 SB-130

## DIMENSIONS

Allowable machining location ①
SB-25
SB-80




Allowable machining location ②
SB-100
SB-130




※ Shaded areas indicate where items can be machined or holes added (holding force will be reduced)

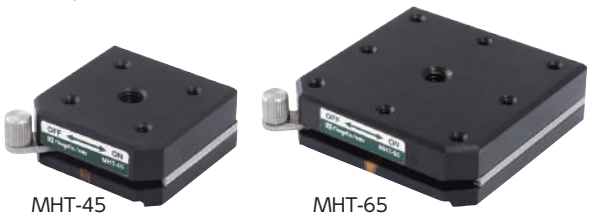
Units: mm

| Model No. | Ref. Fig. | H | W | A | B | ϕD | T1 | T2 | T3 | T4 | T5 | a | b | c | d | e | f | g | h |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SB-25 | ① | 35 | 30 | 10.5 | 10.5 | 24.2 | 4 | 4 | 2.5 | 2.5 | 2.5 | 5 | 6 | 14 | - | - | 9 | - | - |
| SB-80 | ① | 55 | 50 | 19 | 19 | 35.4 | 7.5 | 7.5 | 5 | 7.5 | 7.5 | 12.5 | 6 | 22 | 6 | 7 | 6.5 | - | - |
| SB-100 | ② | 55 | 50 | 19 | 19 | 35.4 | 7.5 | 7.5 | 5 | 7.5 | 7.5 | 13 | 6 | 11 | 6 | 20 | 6 | 5.5 | 5.5 |
| SB-130 | ② | 55 | 50 | 19 | 19 | 35.4 | 7.5 | 7.5 | 5 | 7.5 | 7.5 | 14 | 6 | 15 | 6 | 31 | 6 | 25 | 14 |

| Order No. | Model No. | Maximum Pull Force | Screw Diameter | Surface magnetic flux density (mT) | Weight |
|---|---|---|---|---|---|
| 012885 | SB-25 | Approx. 250N | M5 × P0.8 Depth. 4.5mm | Max. 100 | 200g |
| 012886 | SB-80 | Approx. 800N | M8 × P1.25 Depth. 7.0mm | | 1kg |
| 012887 | SB-100 | Approx. 1000N | | | 1.2kg |
| 012888 | SB-130 | Approx. 1300N | M10 × P1.25 Depth. 7.0mm | | 1.9kg |

# MAGNETIC HOLDER THIN TYPE NEW!

By utilizing the upper female thread, various jigs can be created!
A thin type designed for compactness.



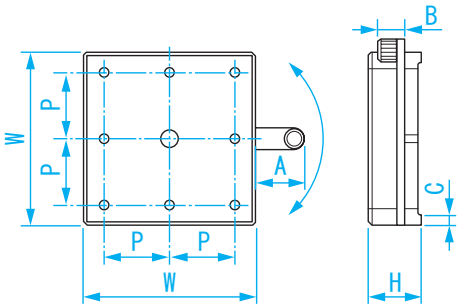
MHT-45 MHT-65

USE
- For jigs and measurement holders

MATERIAL
- Body: Rolled steel for general structural use
- Magnet: Neodymium magnet

FEATURES
- Various jigs can be created by utilizing the upper female thread
- The magnet can be turned ON/OFF with a single lever operation, making it easy to adjust the position of the jigs
- The body is a thin, space-saving type
- Arms and main posts of M8 × P1.25 can be attached. Please use considering the pull force

## DIMENSIONS




Units: mm

| Model No. | W | H | P | A | B | C |
|---|---|---|---|---|---|---|
| MHT-45 | 45 | 20 | 25 | 15 | 9 | 2.5 |
| MHT-65 | 65 | 20 | 25 | 19 | 10 | 4 |

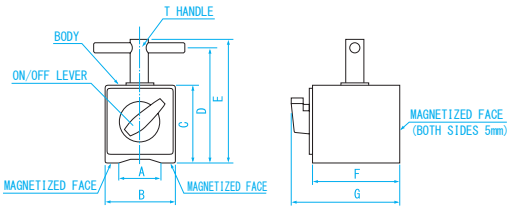
| Order No. | Model No. | Maximum Pull Force | Center Screw Hole Size | Surrounding Thread Size | Number of Surrounding Thread Holes | Weight |
|---|---|---|---|---|---|---|
| NEW! 012841 | MHT-45 | 65N | M8×P1.25 Depth. 8mm | M4×P0.7 Depth. 9mm | 4 | 250g |
| NEW! 012842 | MHT-65 | 200N | | | 8 | 530g |

MAGNETIC HOLDER
MAGNETIC TOOL
FERRITE MAGNET
RARE EARTH MAGNET
WELDING MAGNET

## MAGNETIC RULER HOLDER WITH HANDLE

For holding ruler for scribing.
With T-handle.

● DIMENSIONS




Holding measuring instruments▶
Magnetic Base
P247
~255

For marking work▶
Metal Scale
P302
~304

USE SB-80TH
●For holding ruler on workbench for scribing
MATERIAL
●Ferrite magnet ●T-handle: Iron
FEATURES
●Compact magnet with strong holding force

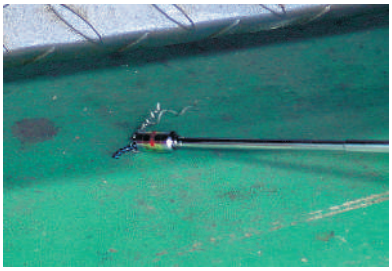
Units: mm

| Model No. | A | B | C | D | E | F | G |
|---|---|---|---|---|---|---|---|
| SB-80TH | 40 | 50 | 55 | 85 | 90 | 60 | 75 |
| SB-100TH | 40 | 50 | 55 | 85 | 90 | 73 | 88 |
| SB-130TH | 40 | 50 | 55 | 85 | 90 | 117 | 132 |

| Order No. | Model No. | Maximum Pull Force | Screw Diameter | Surface magnetic flux density (mT) | Weight |
|---|---|---|---|---|---|
| 012791 | SB-80TH | Approx. 800N | M8 × P1.25 | Max. 100 | 1.1kg |
| 012792 | SB-100TH | Approx. 1000N | | | 1.3kg |
| 012793 | SB-130TH | Approx. 1300N | | | 2kg |

## TELESCOPING PICK UP MAGNET

With clip for carrying in pocket.
For picking up small parts in hard-to-reach places.



USE
●For picking up small parts in hard-to-reach places
MATERIAL
●Alnico magnet
FEATURES
●Easy-to-telescope and can be pocket size
●With clip for carrying in pocket

| Order No. | Model No. | Maximum Pull Force | Stalk Length (mm) | Magnet Dimensions (mm) | Weight |
|---|---|---|---|---|---|
| 012905 | PMA-490 | 3.9N | 135 ~ 490 | ϕ 10 × 20 | 35g |

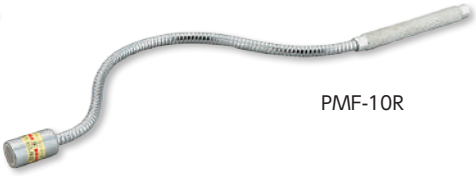
## PICK UP MAGNET

For picking up small parts in hard-to-reach places

### Straight type

PM-10R

### Flexible type



PMF-10R

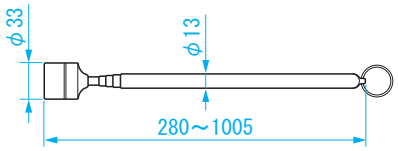
USE
●For picking up small parts from hard-to-reach places
MATERIAL
●Alnico magnet
FEATURES
●Stalk is flexible and freely bent to any desired position (PMF-10R·PMF-15R)

| Order No. | Model No. | Type | Maximum Pull Force | Stalk Length (mm) | Magnet Dimension (mm) | Weight |
|---|---|---|---|---|---|---|
| 012920 | PM-10R | Straight | 4.9N | 290 | ϕ 10 × 20 | 58g |
| 012925 | PM-15R | | 7.8N | | ϕ 15 × 30 | 79g |
| 012910 | PMF-10R | Flexible | 6.8N | 330 | ϕ 10 × 20 | 61g |
| 012915 | PMF-15R | | 15.6N | | ϕ 15 × 30 | 81g |

## MAGNETIC IRON CATCHER SPUA-3310

Compact body for narrow space

● DIMENSIONS Units: mm




USE
- For picking up metal pieces in hard-to-reach places

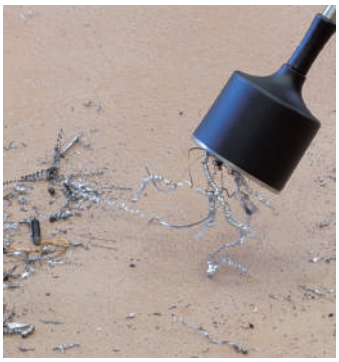
MATERIAL
- Body: Aluminum
- Handle: Stainless steel
- Magnet: Neodymium magnet

FEATURES
- Pulling the body part to release the attracted pieces
- Easy length adjustment
- With a pull ring at the handle end

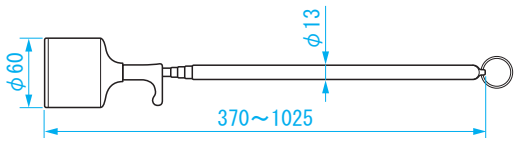
| Order No. | Model No. | Maximum Pull Force | Full Length (mm) | Magnet Dimension (mm) | Weight |
|---|---|---|---|---|---|
| 160212 | SPUA-3310 | 10N | 280～1005 | ϕ 33 | 127g |

## MAGNETIC IRON CATCHER SPUN-6010

The strongest magnetic force model in the series



● DIMENSIONS Units: mm




USE
- For picking up metal pieces in hard-to-reach places

MATERIAL
- Body: Nylon
- Handle: Stainless steel
- Magnet: Neodymium magnet

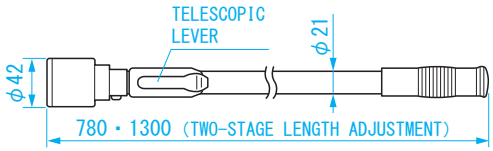
FEATURES
- Pulling the body part to release the attracted pieces
- Easy length adjustment
- With a pull ring at the handle end

| Order No. | Model No. | Maximum Pull Force | Full Length (mm) | Magnet Dimension (mm) | Weight |
|---|---|---|---|---|---|
| 160213 | SPUN-6010 | 45N | 370～1025 | ϕ 60 | 140g |

## MAGNETIC IRON CATCHER SPUL-4213

Magnetic force can be turned on and off by pulling the grip on the hand

● DIMENSIONS Units: mm




USE
- For picking up metal pieces in hard-to-reach places

MATERIAL
- Body: Nylon
- Handle: Aluminum
- Magnet: Neodymium magnet

FEATURES
- Pulling the grip to release the attracted pieces
- Two-stage length adjustment (780mm / 1300mm)
- With a pull ring at the handle end

| Order No. | Model No. | Maximum Pull Force | Full Length (mm) | Magnet Dimension (mm) | Weight |
|---|---|---|---|---|---|
| 160214 | SPUL-4213 | 29N | 780・1300 (Two-stage length adjustment) | ϕ 42 | 400g |

## RELEASING MAGNETIC FINDER WITH WHEELS

For picking up screws and iron scraps in processing area and parking lots

● Example of Use

● How to Use
- Sweep over nails, needles or iron scrap
- Pull the lever to release

USE
- For picking up nails, needles and iron scraps

MATERIAL
- Ferrite magnet
- Body: Aluminum

FEATURES
- Equipped with wheels, easy to maneuver with one hand
- Telescoping handle for a long reach

SPECIFICATIONS
- Telescoping Length: Approx. 725~1040mm
- Receiver surface: 320×55mm
- Wheel diameter: Approx. 95mm

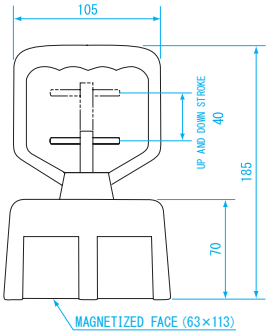
※Replacement wheel is not available

| Order No. | Model No. | Maximum Pull Force | Weight |
|---|---|---|---|
| 160211 | SS-30 | Approx. 80N ※ϕ1.8 × 34mm iron nails approx. 350pcs (250g) | 1.4kg |

## HAND MAGNET

For picking up screws and iron scraps in processing area

● DIMENSIONS Units: mm




USE
- For picking up metal scraps

MATERIAL
- Ferrite magnet
- Body: Steel

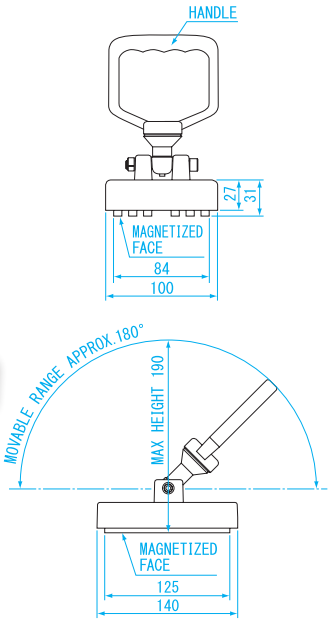
FEATURES
- ON/OFF (magnet) switching lever

| Order No. | Model No. | Maximum Pull Force | Weight |
|---|---|---|---|
| 160221 | HM-10 | Approx. 10N | 1.1kg |

## MAGNET LIFTER

For carrying plate of magnetic material without toching it directly

● DIMENSIONS Units: mm




USE
- For carrying plate of magnetic material

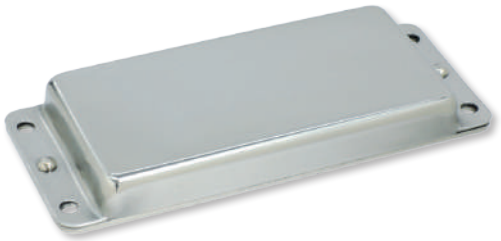
MATERIAL
- Ferrite magnet
- Body: Steel

FEATURES
- ON/OFF (magnet) switching lever

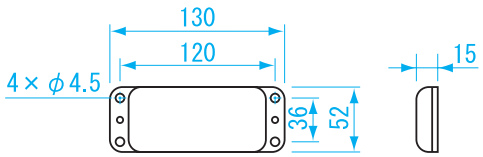
| Order No. | Model No. | Maximum Pull Force | Weight |
|---|---|---|---|
| 160225 | ML-150 | Approx. 1500N | 2.1kg |

## PLATE MAGNET

For collecting iron chips and to be magnet part using hole for jig



● DIMENSIONS Units: mm




USE
- For collecting pieces of iron
- Collecting tramp iron contamination in processing lines

MATERIAL
- Ferrite magnet

SPECIFICATIONS
- Surface magnetic flux density: 100mT

| Order No. | Model No. | Maximum Pull Force | Weight |
|---|---|---|---|
| 012895 | MP-130 | 60N | 350g |

## MAGNETIC TOOL RACK

For organizing and storing work tools on wall

Sample of Use

USE
- For convenient tool storage

MATERIAL
- Ferrite magnet

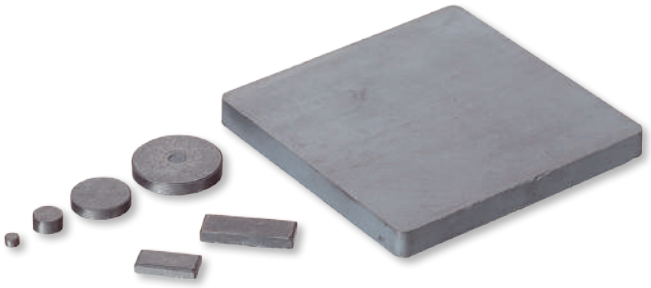
FEATURES
- Keeps tools within easy reach and out of the way with a safe, yet strong magnetic rack
- Recommended to use two racks for the heavier tools

SPECIFICATIONS
- Comes with three screws

| Order No. | Model No. | Product Dimensions L × W × H (mm) | Maximum Pull Force | Weight |
|---|---|---|---|---|
| 012900 | MTH-ST | 445 × 19 × 18 | 88N | 280g |

# FERRITE MAGNET

Excellent corrosion resistance for the price. For multi-purpose.



USE

●Good quality for the price. Commonly used in speakers, motors, and many consumer products

FEATURES

●Excellent corrosion resistance

## Isotropic/ Round

| Order No. | Model No. | OD (mm) | Height (mm) | Magnetic Flux Density (mT) | Weight |
|---|---|---|---|---|---|
| 012000 | FM-5R3 | ϕ 5 | 3 | 63 | 0.3g |
| 012001 | FM-6R3 | ϕ 6 | 3.4 | 70 | 0.5g |
| 012002 | FM-10R3 | ϕ 10 | 3 | 52 | 1.1g |
| 012003 | FM-10R5 | | 5 | 70 | 1.9g |
| 012004 | FM-20R4 | ϕ 20 | 4 | 40 | 6g |
| 012005 | FM-25R4 | ϕ 25 | 4 | 33 | 9.4g |
| 012006 | FM-25R5 | | 5 | 40 | 11.7g |
| 012007 | FM-30R5 | ϕ 30 | 5 | 53 | 17g |

## Isotropic/ Rectangle

| Order No. | Model No. | Height (mm) | Length (mm) | Width (mm) | Magnetic Flux Density (mT) | Weight |
|---|---|---|---|---|---|---|
| 012051 | FM-20L10 | 4 | 20 | 10 | 62 | 3.8g |
| 012053 | FM-30L10 | 5 | 30 | 10 | 48 | 7g |
| 012054 | FM-48L10 | 7 | 48 | 10 | 64 | 16.8g |
| 012055 | FM-20L14 | 4 | 20 | 14 | 42 | 5g |

## Anisotropic/ Round

| Order No. | Model No. | OD (mm) | Height (mm) | Magnetic Flux Density (mT) | Weight |
|---|---|---|---|---|---|
| 012101 | AFM-8R3 | ϕ 8 | 3 | 107 | 0.8g |
| 012102 | AFM-10R3 | ϕ 10 | 3 | 94 | 1.2g |
| 012103 | AFM-10R5 | | 5 | 127 | 2g |
| 012104 | AFM-10R10 | | 10 | 160 | 4g |
| 012105 | AFM-12R4 | ϕ 12.5 | 3.8 | 97 | 2.4g |
| 012107 | AFM-15R4 | ϕ 15 | 4 | 89 | 3.6g |
| 012108 | AFM-15R8 | | 8 | 136 | 7.1g |
| 012109 | AFM-18R8 | ϕ 18 | 8 | 130 | 10g |
| 012110 | AFM-20R4 | ϕ 20 | 4 | 71 | 6.3g |
| 012111 | AFM-20R10 | | 10 | 133 | 15.8g |
| 012113 | AFM-25R4 | ϕ 25 | 4 | 59 | 9.9g |
| 012114 | AFM-30R5 | ϕ 30 | 5 | 61 | 17.7g |
| 012115 | AFM-30R10 | | 10 | 107 | 35.4g |
| 012118 | AFM-38R10 | ϕ 38 | 10 | 90 | 56.8g |

## Anisotropic/ Ring

| Order No. | Model No. | OD (mm) | Height (mm) | ID (mm) | Magnetic Flux Density (mT) | Weight |
|---|---|---|---|---|---|---|
| 012150 | AFM-13R5R | ϕ 13.5 | 2 | 5 | 82 | 1.3g |
| 012151 | AFM-17R7R | ϕ 17.5 | 3 | 7 | 94 | 3.1g |
| 012153 | AFM-29R10R | ϕ 29 | 3.5 | 10 | 75 | 10.2g |
| 012163 | AFM-100R60R | ϕ 100 | 15 | 60 | 119 | 377g |

## Anisotropic/ Rectangle

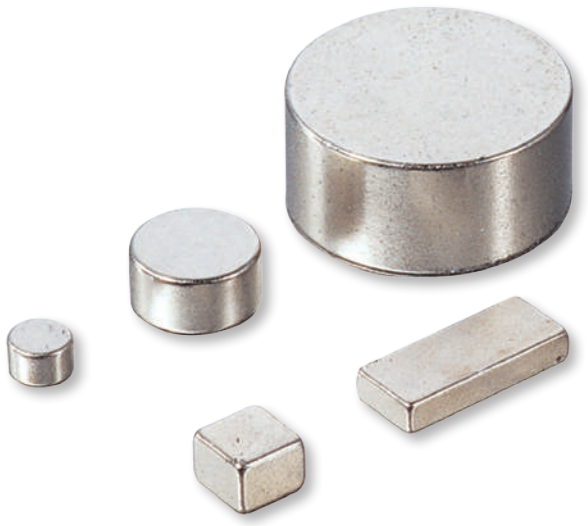
| Order No. | Model No. | Height (mm) | Length (mm) | Width (mm) | Magnetic Flux Density (mT) | Weight |
|---|---|---|---|---|---|---|
| 012201 | AFM-13L8 | 4 | 13 | 8 | 112 | 2.6g |
| 012202 | AFM-20L10 | 4 | 19.7 | 10 | 89 | 4g |
| 012203 | AFM-25L8 | 5 | 25 | 8 | 109 | 5g |
| 012204 | AFM-25L19 | 4.5 | | 19 | 67 | 10.7g |
| 012205 | AFM-30L10 | 5 | 30 | 10 | 98 | 7.5g |
| 012206 | AFM-30L15 | 5 | | 15 | 109 | 10.9g |
| 012209 | AFM-40L12 | 8 | 40 | 12 | 144 | 17.6g |
| 012210 | AFM-40L25 | 10 | | 25 | 97 | 50g |
| 012211 | AFM-40L40 | 10 | | 40 | 79 | 80g |
| 012217 | AFM-100L100 | 10 | 100 | 100 | 20 | 500g |

# RARE EARTH MAGNET

Super strong magnetic force for the size

## Neodymium

- High magnetism and excellent mechanical strength
- Plated finsh as easily be affected by temperature change and rust



Neodymium

USE

●High coercivity and suitable for work that requires small size and flatness

FEATURES

●Strong magnetic force

### Neodymium/ Round

| Order No. | Model No. | OD (mm) | Height (mm) | Magnetic Flux Density (mT) | Weight |
|---|---|---|---|---|---|
| 012301 | NRM-2R3 | ϕ 2 | 3 | 336 | 0.1g |
| 012302 | NRM-3R4 | ϕ 3 | 4 | 400 | 0.3g |
| 012303 | NRM-3R10 | | 10 | 423 | 0.6g |
| 012304 | NRM-4R2 | ϕ 4 | 2 | 332 | 0.2g |
| 012305 | NRM-5R1 | ϕ 5 | 1.5 | 251 | 0.3g |
| 012306 | NRM-5R3 | | 3 | 374 | 0.5g |
| 012307 | NRM-5R5 | | 5 | 436 | 0.8g |
| 012308 | NRM-5R10 | | 10 | 472 | 1.5g |
| 012309 | NRM-6R2 | ϕ 6 | 2 | 284 | 0.5g |
| 012310 | NRM-6R5 | | 5 | 439 | 1.1g |
| 012311 | NRM-6R10 | | 10 | 491 | 2.2g |
| 012312 | NRM-8R8 | ϕ 8 | 8 | 478 | 3.1g |
| 012313 | NRM-10R5 | ϕ 10 | 5 | 388 | 3g |
| 012314 | NRM-12R1 | ϕ 12.5 | 1.5 | 144 | 1.4g |
| 012315 | NRM-15R1 | ϕ 15 | 1.5 | 113 | 2g |
| 012316 | NRM-22R10 | ϕ 22 | 10 | 402 | 28.5g |

### Neodymium/ Rectangle

| Order No. | Model No. | Height (mm) | Length (mm) | Width (mm) | Magnetic Flux Density (mT) | Weight |
|---|---|---|---|---|---|---|
| 012400 | NRM-10L5 | 1 | 10 | 5 | 145 | 0.4g |
| 012401 | NRM-6L6 | 4.5 | 6 | 6 | 417 | 1.3g |
| 012402 | NRM-12L7 | 4 | 12 | 7 | 346 | 2.6g |
| 012403 | NRM-15L2 | 2.8 | 15 | 6 | 300 | 1.9g |

# RARE EARTH MAGNET

Super strong magnetic force for the size

## Samarium cobalt

- Excellent corrosion resistance and temperature stability

Samarium cobalt

USE

- High coercivity and suitable for work that requires small size and flatness

FEATURES

- Strong magnetic force

### Samarium cobalt/ Round

| Order No. | Model No. | OD (mm) | Height (mm) | Magnetic Flux Density (mT) | Weight |
|---|---|---|---|---|---|
| 012500 | CRM-3R1 | ϕ 3 | 1.5 | 267 | 0.1g |
| 012501 | CRM-4R8 | ϕ 4 | 8.5 | 403 | 1g |
| 012502 | CRM-5R1 | ϕ 5 | 1.5 | 221 | 0.3g |
| 012503 | CRM-5R3 | | 3 | 330 | 0.5g |
| 012504 | CRM-5R5 | | 5 | 385 | 0.9g |
| 012505 | CRM-5R10 | | 10 | 424 | 1.7g |
| 012506 | CRM-5R25 | | 25 | 436 | 4.2g |
| 012507 | CRM-6R5 | ϕ 6 | 5 | 388 | 1.2g |
| 012508 | CRM-7R8 | ϕ 7 | 8 | 424 | 2.7g |
| 012509 | CRM-9R1 | ϕ 9.5 | 1.5 | 152 | 0.9g |
| 012510 | CRM-10R2 | ϕ 10 | 2 | 180 | 1.4g |
| 012511 | CRM-10R3 | | 3 | 249 | 2g |
| 012512 | CRM-10R5 | | 5 | 343 | 3.4g |
| 012513 | CRM-10R8 | | 8 | 411 | 5.4g |
| 012516 | CRM-15R5 | ϕ 15 | 5 | 283 | 7.6g |

### Samarium cobalt/ Rectangle

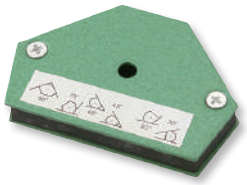
| Order No. | Model No. | Height (mm) | Length (mm) | Width (mm) | Magnetic Flux Density (mT) | Weight |
|---|---|---|---|---|---|---|
| 012600 | CRM-14L2 | 1 | 14 | 2 | 228 | 0.3g |
| 012601 | CRM-14L10 | 4.5 | 14.5 | 10 | 280 | 5.6g |

# MAGNET WELDING CLAMP HOLDER

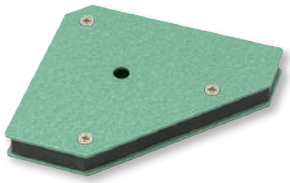
For temporary jig during welding and assembly

Measurements before welding ▶ Welding Gauge P92 ~105
Making work before welding ▶ Scribes P324 ~325

## ■ Compact hand held type



MGW-90



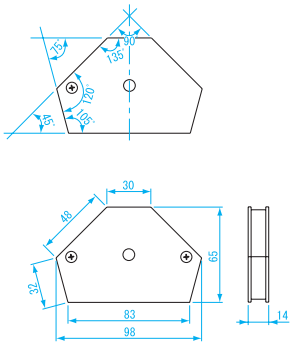
MGW-120

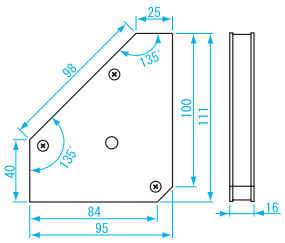
MGW-120A

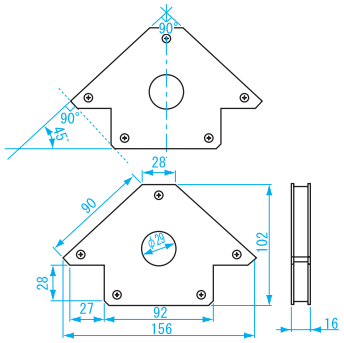
MGW-C145

● DIMENSIONS

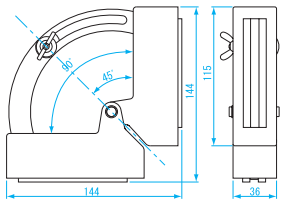
Units: mm



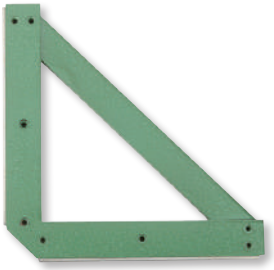




## ■ Freely adjustable type (45°～90°)

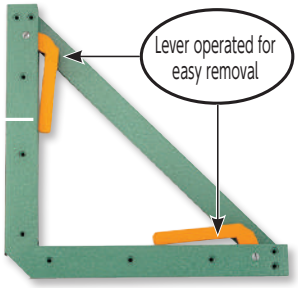



## ■ 90° fixed type

MGW-S145



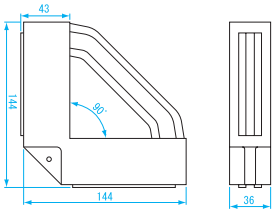
MGW-S200

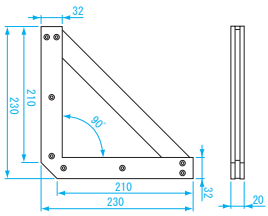


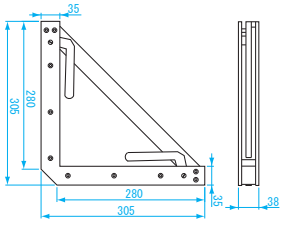

MGW-S300

● DIMENSIONS

Units: mm




USE

●Temporary jig during welding and assembly

MATERIAL

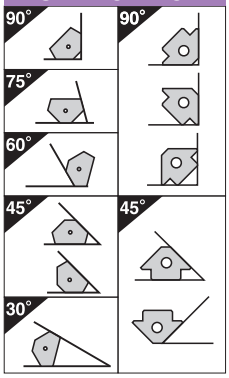
●Ferrite magnet

●Yoke: Rolled steel for general structure

FEATURES

●Strong magnetic force over entire length, can be used for general purpose

HOLDING ANGLE




| Order No. | Model No. | Magnetic Force | Magnet Flux Density (mT) | Weight |
|---|---|---|---|---|
| 012851 | MGW-90 | 98N | 60 | 300g |
| 012852 | MGW-120 | 147N | 100 | 520g |
| 012853 | MGW-120A | | 120 | 600g |
| 012854 | MGW-C145 | 245N | 170 | 1.5kg |
| 012855 | MGW-S145 | | | 1.5kg |
| 012856 | MGW-S200 | 588N | 140 | 2.3kg |
| 012857 | MGW-S300 | 980N | 150 | 5kg |

# MAGNETIC BASE

Refer to Dial section for detailed specifications (P247～P255)

| Model No. | WMB-50G |
|---|---|
| Type | with Lock |

| Model No. | WMB-80G |
|---|---|
| Type | with Lock |

| Model No. | WMB-100G |
|---|---|
| Type | with Lock |

| Model No. | SB-6C |
|---|---|
| Type | Standard |

| Model No. | SB-6B |
|---|---|
| Type | with Fine Adjustment |

| Model No. | SB-80P |
|---|---|
| Type | Extra Thick Main Post |

| Model No. | SB-130PL |
|---|---|
| Type | Extra Thick Main Post |

| Model No. | SB-80F |
|---|---|
| Type | Flexible |

| Model No. | SB-100G |
|---|---|
| Type | with Lock |

| Model No. | WMB-45FR |
|---|---|
| Type | Free Base |

| Model No. | SB-25M |
|---|---|
| Type | Mini |

| Model No. | MB-7 |
|---|---|
| Type | Mini / Lock |

| Model No. | B-2 |
|---|---|
| Type | Mini |

| Model No. | B-3 |
|---|---|
| Type | Mini / Fine Adjustment |

| Model No. | B-4 |
|---|---|
| Type | Mini / Fine Adjustment / Long |

| Model No. | B-5 |
|---|---|
| Type | Universal / Mini |

| Model No. | MB-6 |
|---|---|
| Type | Universal / Mini / Fine Adjustment |

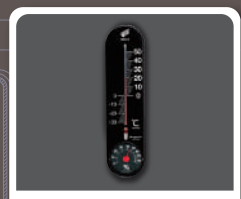
# OTHERS

370p

371p

371p

371p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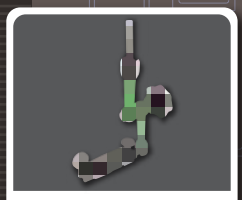
372p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373p

373p

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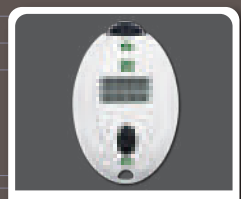
374p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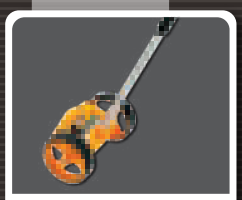
375p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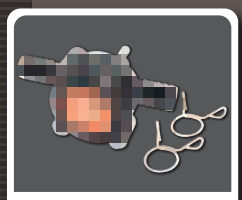
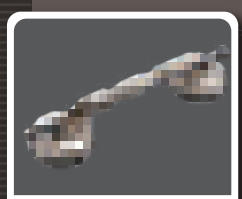

376p

377p

378p

378p

378p


378p

# ZERUST FILM FOR STEEL (RUST INHIBITING VCI FILM)

Just place in ZERUST FILM to protect form rust. For storing any steel products.

SKZF-60135

SKZF-90130

SKZF-130200

SKZF-200300

USE

- Plastic film with volatile corrosion inhibitors for storage of ferrous metal
- Gauge blocks, tools, steel parts, molds, etc. For storing any steel products.

FEATURES

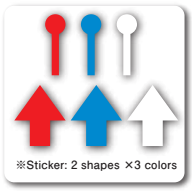
- Only degrease item before replacing in ZERUST FILM
- Bag slowly releases rust preventive compound
- Zerust coating dissolves in moisture and still be effective in humidity

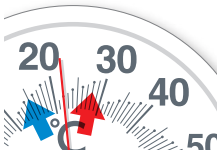
| Order No. | Model No. | Bag Size (mm) | Quantity |
|---|---|---|---|
| 159991 | SKZF-60135 | W60×L135 | 20 |
| 159992 | SKZF-90130 | W90×L130 | 10 |
| 159993 | SKZF-130200 | W130×L200 | 10 |
| 159994 | SKZF-200300 | W200×L300 | 10 |

## THERMO-HYGROMETER KAIDAN

Large and ligible numbers, and stepped length of linear graduation by 1℃ / 1% for easy- to-read

### Stickers included for rule indication




Example: Turn on heater under 15℃

SK-1711KD

SK-1712KD

USE
- To manage temperature and humidity

MATERIAL
- Body: PS resin
- Cover: Acrylic resin

FEATURES
- High precision censor built-in
- Stickers included for rule indication
- For indoor use: both for wall-hanging and desktop

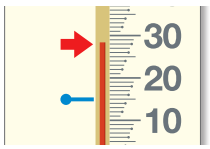
SPECIFICATIONS
- Thermometer: Bimetallic EX thermal censor: Tolerance ±1℃ (−20~+40℃)
- Bi-material EX humidity censor: Tolerance ±3%RH (35~75%RH in room temperature)

| Order No. | Model No. | Body color | Width×Thickness (mm) | Weight |
|---|---|---|---|---|
| 111355 | SK-1711KD | White | ϕ120×30 | 91g |
| 111356 | SK-1712KD | Black | | |

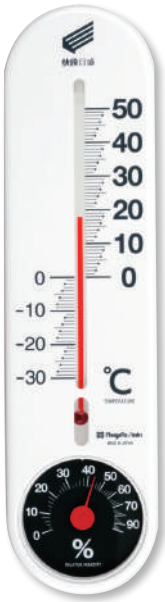
## THERMO-HYGROMETER KAIDAN

Large and ligible numbers, and stepped length of linear graduation by 1℃ / 1% for easy- to-read

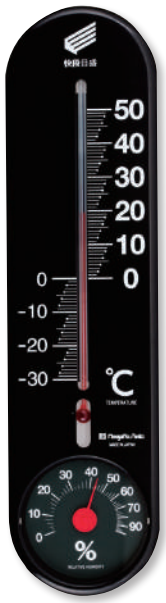
### Stickers included for rule indication




Example: Turn on AC when over 28℃




SK-1721KD




SK-1722KD

USE
- To manage temperature and humidity

MATERIAL
- Body: PS resin
- Cover: Acrylic resin

FEATURES
- High precision censor built-in
- Stickers included for rule indication
- For indoor use and wall-hanging

SPECIFICATIONS
- Thermometer: Glass tube thermometer: Tolerance ±1℃ (−10~+40℃)
- Bi-material EX humidity censor: Tolerance ±3%RH (35~75%RH in room temperature)

| Order No. | Model No. | Body color | Length×Width×Thickness (mm) | Weight |
|---|---|---|---|---|
| 111357 | SK-1721KD | White | 295×75×20 | 90g |
| 111358 | SK-1722KD | Black | | |

# STYLUS CENTER

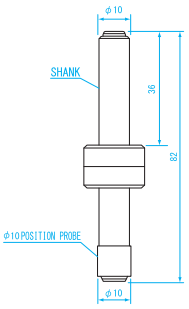
## High precision by lapped finish working face

Rust prevention▶ Zerust Film for Steel P370
For setting reference position of Z direction▶ Tool Point Gauge P373

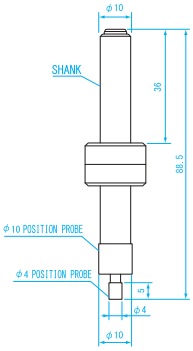
SR-10

SR-104

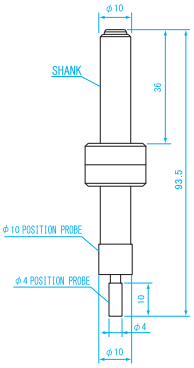
● DIMENSIONS Units: mm



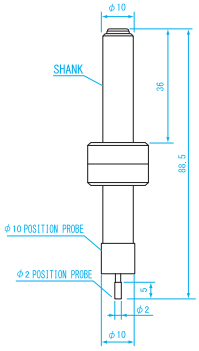
SR-10



SR-104



SR-104L
(Long probe type)



SR-102
(Thin probe type)

USE
- ●High precision centering X and Y axis

MATERIAL
- ●High carbon chromium steel

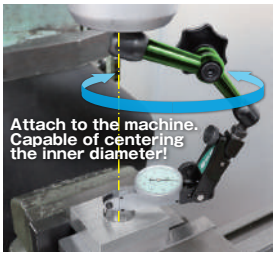
FEATURES

Mechanical edge finder
- ●Position detection within ±2μm
- ●Working face is lapped finish
- ●General, NC milling machine, MC origin positioning, high accuracy positioning
- ●Position probe on workpiece edge

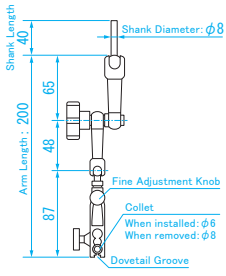
| Order No. | Model No. | Probe (mm) | Shank Diameter (mm) | X·Z Repeatability | Operating Speed (rpm) | Weight |
|---|---|---|---|---|---|---|
| 013310 | SR-10 | ϕ 10 | 10 | ±2μm | 450～600 | 55g |
| 013314 | SR-104 | ϕ 4×5・ϕ 10 | | | | 56g |
| 013320 | SR-104L | ϕ 4×10・ϕ 10 | | | | 57g |
| 013325 | SR-102 | ϕ 2×5・ϕ 10 | | | | 56g |

# FLEXIBLE ARM FOR CENTERING NEW!

## For milling machines and drilling machines, etc Attach to the drill chuck of the machine. Ideal for parallel and vertical alignment, as well as centering inner and outer diameters!



● DIMENSIONS Unit: mm




USE
- ●Machine centering tool
- ●Used as a holder for dial gauges and lever-type dial indicators.

MATERIAL
- ●Body: Aluminum

FEATURES
- ●A centering chuck arm designed to be attached to the drill chuck of milling machines and drilling machines and used in a hanging.
- ●By attaching optional measuring instruments such as dial gauges or lever-type dial indicators, it can perform parallel and vertical alignment, as well as inner and outer diameter centering.
- ●The tip features a dovetail groove and ϕ6, ϕ8 stem mounting holes.
- ●Equipped with a fine adjustment knob that allows for precise angle adjustments.

| Order No. | Model No. | Shank Diameter (mm) | Shank Length (mm) | Clamp Section Fine Feed Angle | Weight |
|---|---|---|---|---|---|
| NEW! 012696 | CCA-200 | ϕ 8 | 40 | Approx. 0 to 10° | 200g |

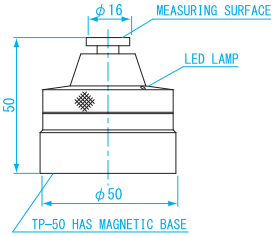
# TOOL POINT GAUGE

For setting reference position of X・Y direction▶
Stylus Center
P372

## Position detection for Z-axis

TP-50

● DIMENSIONS Units: mm




USE
- ●High accuracy position detection

MATERIAL
- ●Alloy tool steel

FEATURES

Preset gauge
- ●Zero point with light sensor (electrical conductivity)
- ●Zero point setting (NC lathe, machining center)
- ●Magnetic base (TP-50M)

POWER
- ●One LR44 (alkali coin battery) included for testing

| Order No. | Model No. | Nominal Size (mm) | Accuracy (mm) | Repeatability | Measuring Force |
|---|---|---|---|---|---|
| 013205 | TP-50 | 50 | $50^{+0.005}_{0}$ | ± 1μm | 2.5N |
| 013206 | TP-50M | | | | |

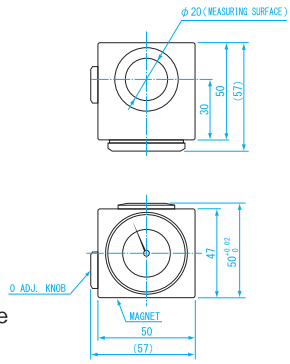
| Stroke | Magnetic Force | Weight |
|---|---|---|
| 3mm | – | 300g |
| | 29N | |

# TOOL POINT GAUGE WITH DIAL GAUGE O

## Position detection with dial gauge for O-standard of Z-axis

For setting reference position of X・Y direction▶
Stylus Center
P372

● DIMENSIONS Units: mm




USE
- ●Position detection with dial gauge

MATERIAL
- ●Measuring surface: SKD11
- ●Body: Carbon steel for machine structural use

FEATURES
- ●Preset gauge with dial indicator
- ●Easy zero setting with dial gauge
- ●With magnet at the bottom surface

| Order No. | Model No. | Nominal Size (mm) | Accuracy (mm) | Repeatability (μ) | Measuring Force less than | Dial gauge Graduation (mm) |
|---|---|---|---|---|---|---|
| 013207 | DTP-50M | 50 | $50^{+0.02}_{0}$ | ± 10μm | less than 5N | 0.01 |

| Stroke | Magnetic Force | Weight |
|---|---|---|
| 2mm | 100N | 840g |

# POINT MASTER WITH CARBIDE TIP

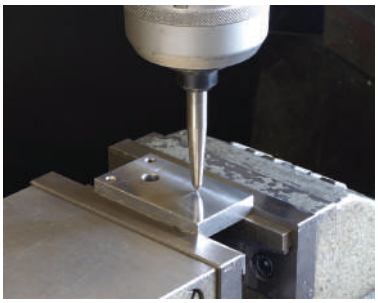
For hand marking▶
Scribes
P324 ~325

Rust prevention▶
Zerust Film for Steel
P370

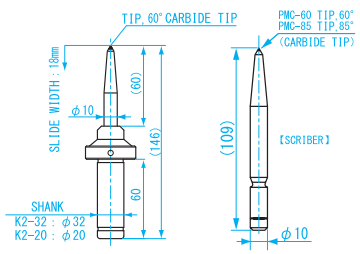
## Suitable for scribing by milling operation. Replaceable scriber is also available.

K2-32

K2-20



● DIMENSIONS Units: mm




USE
- ●Scribing for milling operation

MATERIAL
- ●Body・Scriber: Carbon tool steel
- ●Tip: Carbide tip

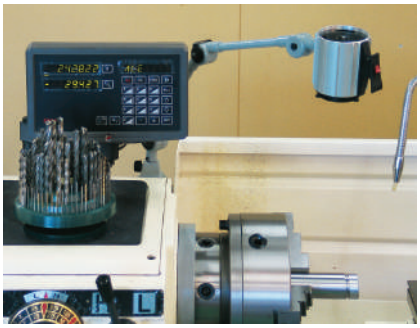
FEATURES
- ●Spring loaded engraving tool
- ●High accuracy scribing can be performed
- ●Not necessary to rotate
- ●Tip angle of scriber (included): 60°

SPECIFICATIONS
- ●Slide width: 18mm
- ●Spring strength: 3.5-4N (for 10mm spring compression)
- ●Concentricity: 0.02mm
  Steel ball diameter: 5mm
- ●Suitable feed speed: 145~150mm/min (steel)

| Order No. | Model No. | Tip Angle | Length (mm) | Scriber Diameter (mm) | Weight |
|---|---|---|---|---|---|
| 013420 | K2-32 | 60° | 146 | 10 | 510g |
| 013425 | K2-20 | | | | 280g |
| 013421 | PMC-60 (scriber) | 60° | 109 | 10 | 54g |
| 013422 | PMC-85 (scriber) | 85° | | | 53g |

## ROTATING DRILL BIT STORAGE CASE

Easy to organize drill bits by size marking



USE
- Arranging drill bits

MATERIAL
- Plastic

FEATURES
- Easy to organize by size marking
- Rotary type

Storage size(mm)

| | | | | |
|---|---|---|---|---|
| R-113 | 1.0～10.0 (0.1 step) | 1.0 1.1 1.2 1.3 ～9.8 9.9 10.0 | 91 pcs | TOTAL 100pcs |
| | Other size | 10.5 10.9 11.0 11.5 11.9 12.0 12.5 12.9 13.0 | 9 pcs | |

| Order No. | Model No. | Type | Dimension (mm) | Weight |
|---|---|---|---|---|
| 013010 | R-113 | Rotary | Diameter×Height 180×82 | 240g |

## TALLY COUNTER

There is no doubt for the correct count

C-4B

C-4H

C-4PC

DC-4WS

USE
- For checking product quantity, traffic volume, headcount or other counting tasks

FEATURES
- 1 count per push. Various type available for every application.
- 4 digit counter
- With backlight (DC-4WS)

POWER
- DC-4WS: LR44 (alkali coin battery) included for testing ×2pcs

| Order No. | Model No. | TYPE | MATERIAL | Weight |
|---|---|---|---|---|
| 151740 | C-4B | Stand type | Steel | 77g |
| 151741 | C-4H | Hand-held | | 53g |
| 151742 | C-4PC | Plastic | Plastic | 33g |
| 151744 | DC-4WS | Digital | | 30g |

## ROAD MEASURING WHEEL

Measure distance by simply rolling. Equipped with a stand to let it leave upright.

Short distance/ accurate measurement▶
Tape Measure
P313 ～316

**■ Maximum measurement distance: 9999.9m / Minimum display: 10cm**

With carrying bag

USE
- For distance measurement at building and road construction sites, land measurement, or ground maintenance

FEATURES
- Distance measurement by simply rolling
- Equipped with a stand to let it leave upright
- With carrying bag

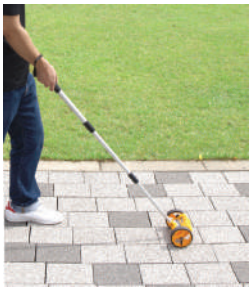
| Order No. | Model No. | Minimum Display | Maximum Measurement Distance | Counter Display | Measurement Error | Length | Weight |
|---|---|---|---|---|---|---|---|
| 111377 | RM-8 | 10cm | 9999.9m | First digit on the right: "10cm" display<br>4 digits on the left: "m" display | ± 1.0% | 58～110cm | 750g |

## ROAD MEASURING WHEEL

Measure distance by simply rolling. Double wheel for a stable measurement.

Short distance/ accurate measurement▶
Tape Measure
P313 ～316

**■ Maximum measurement distance: 999.99m / Minimum display: 1cm**



With carrying bag

USE
- For distance measurement at building and road construction sites, land measurement, or ground maintenance

FEATURES
- Distance measurement by simply rolling
- Double wheel for a stable measurement
- With carrying bag

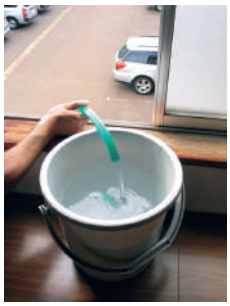
| Order No. | Model No. | Minimum Display | Maximum Measurement Distance | Counter Display | Measurement Error | Length | Weight |
|---|---|---|---|---|---|---|---|
| 111378 | RM-4W | 1cm | 999.99m | Two digits on the right: "cm" display<br>Three digits on the left; "m" display | ± 1.0% | 51.5～103.5cm | 550g |

# MINI PUMP

Long-seller product. Hand drill becomes a mini pump with easy installation onto drill chuck.
Now with hex shank for use on standard drill or on driver.

Attached to hand drill

Easily lifts water to 2nd floor



USE
- Water supply and drainage of waste water

MATERIAL
- Main body: Plastic
- Rotor: Oil-resistant rubber

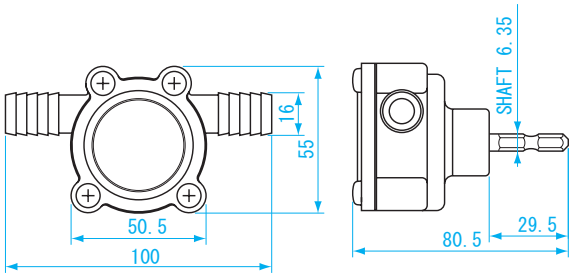
FEATURES
- Self-contained pump with corrosion resistance to be attached with electric drill

SPECIFICATIONS
- Hose diameter: 15mm
- Max water rise: 12m
- Pumping capacity: 10～12L/min
  Operating speed: 1600min$^{-1}$
- Suitable water temperature: 5～50℃
  Shaft diameter: 6.35mm

ACCESSORIES
- Hose band 2pcs included

## ● DIMENSIONS

Units: mm




| Order No. | Model No. | Shaft Diameter | Weight |
|---|---|---|---|
| 011771 | RDP-01 | 1/4" hex shaft (6.35mm) | 160g |

■ ROTER FOR MINI PUMP (RDP-01)

| Order No. | Model No. |
|---|---|
| 011772 | RDP-01R |

■ OIL SEAL FOR MINI PUMP

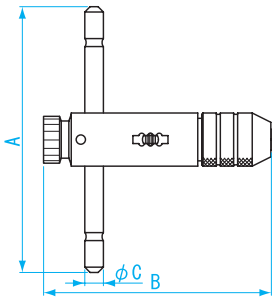
| Order No. | Model No. |
|---|---|
| 011773 | RDP-02 |

# T-HANDLE RATCHET TAP WRENCH

Ratchet type for easy tap setting

RTH-M

● DIMENSIONS




Units: mm

| Model No. | A | B | C |
|---|---|---|---|
| RTH-M | 100 | 85 | 6 |
| RTH-L | 120 | 110 | 8 |

USE
- ●Wrench for tap stand

MATERIAL
- ●Body: Carbon steel for machine structual use
- ●Chuck: Sintered metal

FEATURES
- ●Sliding T-shaped handle
- ●Can work with one hand
- ●Tapping easily in narrow space by sliding handle
- ●Switchable in three different positions (left, right and fixed)

| Order No. | Model No. | Size | Tap Range | Weight |
|---|---|---|---|---|
| 013002 | RTH-M | M | M3～M8 | 160g |
| 013003 | RTH-L | L | M8～M12 | 305g |

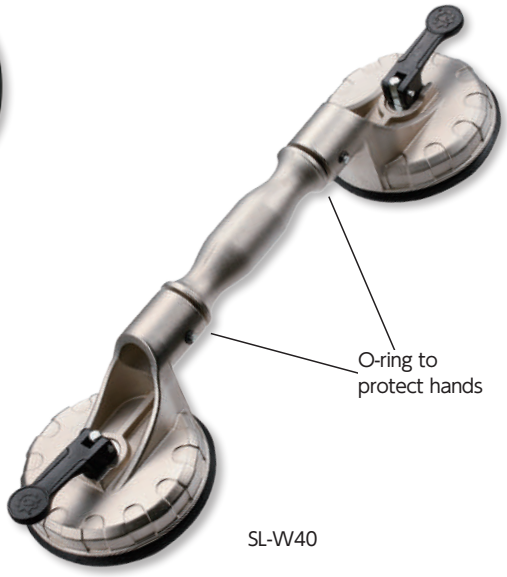
# SUCTION LIFTER

Suitable for carrying glass by suction structure

SL-A20

SL-B25

SL-A30




SL-W40

USE

●For lifting and transporting material with no handle, such as metal sheet and glass

FEATURES

●Strong suction with one lever operation

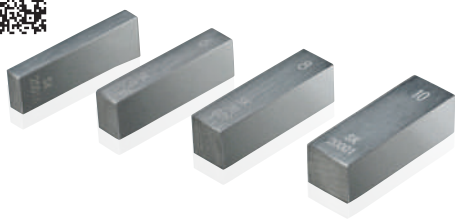
●Suction structure to be a temporary handle on heavy object with no handle

●Spring pin to prevent object from falling off

| Order No. | Model No. | Suction Face (mm) | Maximum load capacity | Weight |
|---|---|---|---|---|
| 160200 | SL-A20 | $\phi$ 123 | 20kg | 340g |
| 160201 | SL-A30 | $\phi$ 123 | 30kg | 480g |
| 160202 | SL-B25 | $\phi$ 115 | 25kg | 820g |
| 160203 | SL-W40 | $\phi$ 123 × 2 | Horizontal direction 40kg / Vertical direction 80kg | 1230g |

## GENERAL CATALOG available online

http://www.niigataseiki.net/sokutei/english/index.html

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