

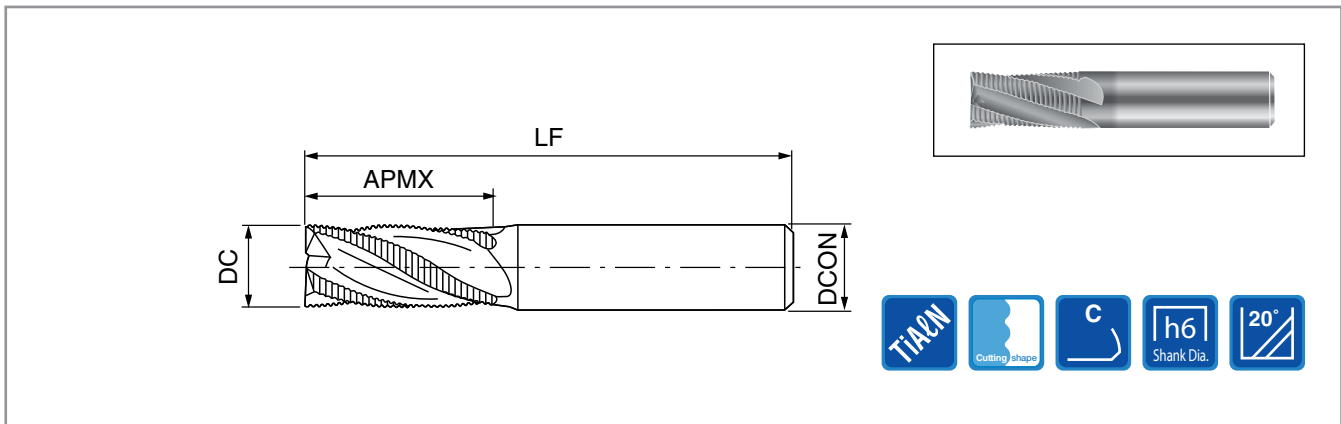
Roughing serrated edge

3/ 4/ 5RDS

RDS type is for general use with a large flat surface edge and a 20° helix angle. High efficiency chip evacuation and low cutting force due to serrated edge.



No. of Flutes : 3, 4, 5



3RDSTM, 4RDSTM, 5RDSTM (Medium)

Shouldering Slotting

(Unit : mm)

Description	Availability	DC	Mill Dia. tolerance	APMX	DCON	LF	CHW	ZEFP
3RDSTM040-110-06	●	4	-0.030 -0.105	11	6	55	0.3	3
3RDSTM050-130-06	●	5	-0.030 -0.105	13	6	57	0.3	3
3RDSTM060-130-06	●	6	-0.030 -0.105	13	6	57	0.3	3
3RDSTM080-160-08	●	8	-0.040 -0.130	16	8	63	0.3	3
4RDSTM100-220-10	●	10	-0.040 -0.130	22	10	72	0.5	4
4RDSTM120-260-12	●	12	-0.050 -0.160	26	12	83	0.5	4
4RDSTM160-320-16	●	16	-0.050 -0.160	32	16	92	0.5	4
4RDSTM200-380-20	●	20	-0.065 -0.195	38	20	104	0.5	4
5RDSTM250-450-25	●	25	-0.065 -0.195	45	25	121	0.5	5

3RDSSL, 4RDSSL, 5RDSSL (Long)

Shouldering Slotting

(Unit : mm)

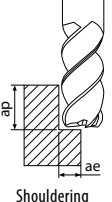
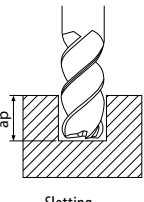
Description	Availability	DC	Mill Dia. tolerance	APMX	DCON	LF	CHW	ZEFP
3RDSSL060-240-06	●	6	-0.030 -0.105	24	6	76	0.3	3
3RDSSL080-280-08	●	8	-0.040 -0.130	28	8	76	0.3	3
4RDSSL100-340-10	●	10	-0.040 -0.130	34	10	89	0.5	4
4RDSSL120-450-12	●	12	-0.050 -0.160	45	12	100	0.5	4
4RDSSL160-560-16	●	16	-0.050 -0.160	56	16	125	0.5	4
4RDSSL200-600-20	●	20	-0.065 -0.195	60	20	125	0.5	4
5RDSSL250-800-25	●	25	-0.065 -0.195	80	25	150	0.5	5

● : Available

Three, four and five flutes types are available for roughing. Their edge design with sine-curve pattern reduce cutting force.

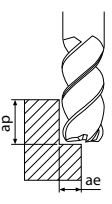
3/ 4/ 5RDSM | 3/ 4/ 5RDSL Cutting conditions

3RDSM, 4RDSM, 5RDSM

Applications	Workpiece Material	Application	Depth of Cut (ap x ae) (mm)	Outside Dia. DC (mm)	ø6	ø8	ø10	ø12	ø16	ø20	ø25
 Shouldering  Slotting	Steel	< 22HRC	1.5DC x 0.5DC	Spindle Revolution (min ⁻¹)	11,100	8,400	6,700	5,600	4,200	3,300	2,700
				Feed Rate (mm/min)	1,000	1,000	1,320	1,340	1,340	1,340	1,380
		22 ~ 32HRC	1DC	Spindle Revolution (min ⁻¹)	9,300	6,900	5,600	4,600	3,500	2,800	2,200
				Feed Rate (mm/min)	800	800	1,000	1,030	1,040	1,050	1,110
		32 ~ 40HRC	1.5DC x 0.4DC	Spindle Revolution (min ⁻¹)	9,600	7,200	5,700	4,800	3,600	2,900	2,300
				Feed Rate (mm/min)	720	720	860	860	860	920	1,030
		40 ~ 45HRC	0.75DC	Spindle Revolution (min ⁻¹)	7,900	5,900	4,800	4,000	3,000	2,400	1,900
				Feed Rate (mm/min)	550	550	740	740	740	760	860
		32 ~ 40HRC	1.5DC x 0.4DC	Spindle Revolution (min ⁻¹)	6,400	4,800	3,800	3,200	2,400	1,900	1,500
				Feed Rate (mm/min)	320	320	410	410	400	400	400
		40 ~ 45HRC	0.6DC	Spindle Revolution (min ⁻¹)	5,300	4,000	3,200	2,600	2,000	1,600	1,300
				Feed Rate (mm/min)	260	260	340	340	330	330	330
		45 ~ 50HRC	1DC x 0.4DC	Spindle Revolution (min ⁻¹)	4,800	3,600	2,900	2,400	1,800	1,400	1,100
				Feed Rate (mm/min)	220	220	260	260	250	250	250
		45 ~ 50HRC	0.5DC	Spindle Revolution (min ⁻¹)	4,300	3,200	2,600	2,200	1,600	1,300	1,000
				Feed Rate (mm/min)	180	180	240	230	230	220	220
		45 ~ 50HRC	1DC x 0.3DC	Spindle Revolution (min ⁻¹)	4,200	3,200	2,500	2,100	1,600	1,300	1,000
				Feed Rate (mm/min)	150	150	180	180	170	170	170
		45 ~ 50HRC	0.4DC	Spindle Revolution (min ⁻¹)	3,800	2,900	2,300	1,900	1,400	1,100	900
				Feed Rate (mm/min)	140	140	170	160	160	150	150
		Stainless Steel	1.5DC x 0.4DC	Spindle Revolution (min ⁻¹)	3,700	2,800	2,200	1,900	1,400	1,100	900
				Feed Rate (mm/min)	190	230	310	300	340	310	360
		Stainless Steel	0.5DC	Spindle Revolution (min ⁻¹)	2,700	2,000	1,600	1,300	1,000	800	600
				Feed Rate (mm/min)	110	130	180	170	190	180	190
Cast Iron	1.5DC x 0.5DC	Spindle Revolution (min ⁻¹)	9,600	7,200	5,700	4,800	3,600	2,900	2,300		
		Feed Rate (mm/min)	850	850	1,030	1,030	1,030	1,100	1,380		
Cast Iron	1DC	Spindle Revolution (min ⁻¹)	7,900	5,900	4,800	4,000	3,000	2,400	1,900		
		Feed Rate (mm/min)	700	700	900	900	900	910	1,140		

* Machining with water soluble coolant is recommended for stainless steel.

3RDSL, 4RDSL, 5RDSL (Shouldering)

Applications	Workpiece Material	Depth of Cut (ap x ae) (mm)	Outside Dia. DC (mm)	ø6	ø8	ø10	ø12	ø16	ø20	ø25	
 Shouldering	Steel	< 22HRC	2.5DC x 0.5DC	Spindle Revolution (min ⁻¹)	7,800	5,900	4,700	3,900	2,900	2,300	1,900
				Feed Rate (mm/min)	700	700	770	780	840	840	940
		22 ~ 32HRC	2.5DC x 0.4DC	Spindle Revolution (min ⁻¹)	6,700	5,000	4,000	3,400	2,500	2,000	1,600
				Feed Rate (mm/min)	500	500	600	600	600	640	720
		32 ~ 40HRC	2.5DC x 0.4DC	Spindle Revolution (min ⁻¹)	4,500	3,400	2,700	2,200	1,700	1,300	1,100
				Feed Rate (mm/min)	220	220	290	290	280	280	280
		40 ~ 45HRC	2.5DC x 0.4DC	Spindle Revolution (min ⁻¹)	3,400	2,500	2,000	1,700	1,300	1,000	800
				Feed Rate (mm/min)	150	150	180	180	180	180	180
		45 ~ 50HRC	2.5DC x 0.3DC	Spindle Revolution (min ⁻¹)	2,900	2,200	1,800	1,500	1,100	900	700
				Feed Rate (mm/min)	110	110	130	130	120	120	120
		Stainless Steel	1.5DC x 0.1DC	Spindle Revolution (min ⁻¹)	3,700	2,800	2,200	1,900	1,400	1,100	900
				Feed Rate (mm/min)	120	150	200	200	220	200	230
		Cast Iron	2.5DC x 0.5DC	Spindle Revolution (min ⁻¹)	6,700	5,000	4,000	3,400	2,500	2,000	1,600
				Feed Rate (mm/min)	600	600	720	720	720	770	970

* Machining with water soluble coolant is recommended for stainless steel.

Slotting is not recommended.