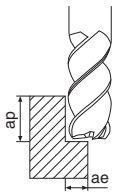
Recommended Cutting Conditions

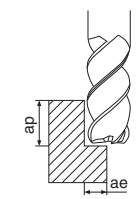
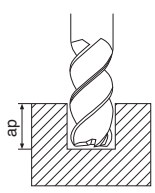
3RDSL, 4RDSL, 5RDSL (Shouldering)

Application	Workpiece Material		Depth of Cut (ap×ae) (mm)	Outside Dia. Dc (mm)	ø6	ø8	ø10	ø12	ø16	ø20	ø25
 Shouldering	Steel	< 22HRC	2.5Dc×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×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		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		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×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 SUS		1.5Dc×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×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

* Cutting with coolant is recommended for stainless steel.

Slotting is not recommended.

4RFSM, 6RFSM

Application	Workpiece Material		Application	Depth of Cut (ap×ae) (mm)	Outside Dia. Dc (mm)	ø6	ø8	ø10	ø12	ø16		ø20		ø25
										4 Flute	6 Flute	4 Flute	6 Flute	
 Shouldering	Steel	35~45HRC	Shouldering	1.5Dc×0.4Dc	Spindle Revolution (min^{-1})	8,000	6,000	4,800	4,000	3,000	3,000	2,400	2,400	1,900
					Feed Rate (mm/min)	630	630	630	640	640	900	640	930	800
			Slotting	0.5Dc	Spindle Revolution (min^{-1})	6,400	4,800	3,800	3,200	2,400	2,400	1,900	1,900	1,500
					Feed Rate (mm/min)	480	480	490	500	500	720	500	750	640
		45~55HRC	Shouldering	1.5Dc×0.33Dc	Spindle Revolution (min^{-1})	5,800	4,400	3,500	2,900	2,200	2,200	1,800	1,800	1,400
					Feed Rate (mm/min)	350	350	350	350	350	530	350	530	460
			Slotting	0.5Dc	Spindle Revolution (min^{-1})	4,700	3,500	2,800	2,300	1,800	1,800	1,400	1,400	1,100
					Feed Rate (mm/min)	280	280	280	280	280	420	280	420	370
		55~60HRC	Shouldering	1.5Dc×0.25Dc	Spindle Revolution (min^{-1})	4,800	3,600	2,900	2,400	1,800	1,800	1,400	1,400	1,100
					Feed Rate (mm/min)	190	220	230	240	220	320	230	340	310
			Slotting	0.3Dc	Spindle Revolution (min^{-1})	3,800	2,900	2,300	1,900	1,400	1,400	1,100	1,100	900
					Feed Rate (mm/min)	150	170	180	180	180	260	180	280	250
	Stainless Steel SUS		Shouldering	1.5Dc×0.4Dc	Spindle Revolution (min^{-1})	3,700	2,800	2,200	1,900	1,400	1,400	1,100	1,100	900
					Feed Rate (mm/min)	300	280	260	300	280	420	290	430	380
			Slotting	0.5Dc	Spindle Revolution (min^{-1})	3,200	2,400	1,900	1,600	1,200	1,200	1,000	1,000	800
					Feed Rate (mm/min)	200	190	180	200	190	290	210	310	270
 Slotting	Titanium Alloys	< 40HRC	Shouldering	2Dc×0.4Dc	Spindle Revolution (min^{-1})	3,700	2,800	2,200	1,900	1,400	1,400	1,100	1,100	900
					Feed Rate (mm/min)	390	390	390	390	390	590	390	540	450
			Slotting	0.5Dc	Spindle Revolution (min^{-1})	3,000	2,200	1,800	1,500	1,100	1,100	900	900	700
					Feed Rate (mm/min)	310	310	310	310	310	470	310	430	360
		> 40HRC	Shouldering	1.5Dc×0.25Dc	Spindle Revolution (min^{-1})	3,200	2,400	1,900	1,600	1,200	1,200	1,000	1,000	800
					Feed Rate (mm/min)	300	300	300	300	300	430	300	430	370
			Slotting	0.3Dc	Spindle Revolution (min^{-1})	2,500	1,900	1,500	1,300	1,000	1,000	800	800	600
					Feed Rate (mm/min)	230	230	230	230	230	340	230	340	290
	Inconel		Shouldering	1Dc×0.2Dc	Spindle Revolution (min^{-1})	1,600	1,200	1,000	800	600	600	500	500	400
					Feed Rate (mm/min)	100	100	100	100	100	140	100	140	130
			Slotting	0.25Dc	Spindle Revolution (min^{-1})	1,300	1,000	800	600	500	500	400	400	300
					Feed Rate (mm/min)	80	80	80	80	80	120	80	120	100

* Cutting with coolant is recommended for stainless steel, titanium alloys and heat-resistant alloys.