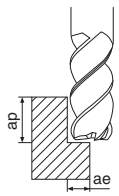
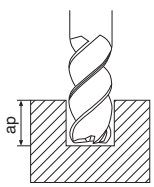
Recommended Cutting Conditions

3ZFKS (Short), 3ZFKM (Medium)

Application	Workpiece Material	Depth of Cut (ap×ae) (mm)	Outside Dia. Dc (mm)		ø3	ø4	ø5	ø6	ø7	ø8	ø10	ø12
 Shouldering	Carbon Steel SxxC	Shouldering Short 1.2Dc×0.3Dc Medium 1.5Dc×0.3Dc Plunge milling / Slotting 1Dc	Spindle Revolution (min^{-1})		13,800	10,700	8,800	7,500	6,600	6,000	4,800	4,000
			Feed Rate (mm/min)	Shouldering	850	950	1,100	1,200	1,100	1,000	910	850
				Plunge milling	180	170	170	170	160	150	120	100
				Slotting	570	650	700	730	750	780	800	750
	Alloy Steel SCM, SNCM	Shouldering Short 1.2Dc×0.3Dc Medium 1.5Dc×0.3Dc Plunge milling / Slotting 0.5Dc	Spindle Revolution (min^{-1})		10,600	9,300	8,300	7,400	6,500	6,000	4,700	3,500
			Feed Rate (mm/min)	Shouldering	700	780	900	980	900	850	750	700
				Plunge milling	120	120	130	140	130	130	120	100
				Slotting	500	540	570	590	610	600	580	500
	Pre-hardened steel NAK, 30~45HRC		Spindle Revolution (min^{-1})		5,200	4,000	3,200	2,600	2,300	2,000	1,600	1,400
			Feed Rate (mm/min)	Shouldering	440	440	490	490	490	440	400	370
				Plunge milling	90	110	110	130	110	100	80	70
				Slotting	220	270	270	320	330	330	230	200
 Plunge milling Slotting	Stainless Steel SUS	Shouldering Short 1.2Dc×0.2Dc Medium 1.5Dc×0.2Dc Plunge milling / Slotting 0.5Dc	Spindle Revolution (min^{-1})		3,300	2,500	2,000	1,700	1,400	1,300	1,100	900
			Feed Rate (mm/min)	Shouldering	280	270	330	340	330	330	350	320
				Plunge milling	20	30	40	40	40	30	20	20
				Slotting	110	110	130	140	130	130	120	120
	Titanium Alloys		Spindle Revolution (min^{-1})		3,300	2,500	2,000	1,700	1,400	1,300	1,100	900
			Feed Rate (mm/min)	Shouldering	280	270	330	340	330	330	350	320
				Plunge milling	20	30	40	40	40	30	20	20
				Slotting	110	110	130	140	130	130	120	120

- Compressed air is recommended for cutting steel.
- Water soluble coolant is recommended for machining stainless steel and titanium alloys.
- Adjust depth of cut (ap) to suit machine rigidity