

Technical Information

Recommended Cutting Conditions for Slotting (1)

Workpiece Materials	Depth of Cut (ap) (mm)	Outside Dia. (mm)	ø0.5	ø1	ø2	ø4	ø6	ø8	ø12	ø16
2FESS 2FESM (L12~L14)										
Carbon Steel	0.1Dc (Dc < ø1) 0.3Dc (ø1 ≤ Dc < ø3) 0.5Dc (Dc ≥ ø3)	Spindle Revolution (min ⁻¹)	19,000	15,300	8,000	4,000	2,700	2,000	1,300	1,000
		Feed Rate (mm/min)	130	135	140	225	250	250	245	245
Alloy Steel	0.1Dc (Dc < ø1) 0.3Dc (ø1 ≤ Dc < ø3) 0.5Dc (Dc ≥ ø3)	Spindle Revolution (min ⁻¹)	16,000	13,000	6,600	3,400	2,200	1,700	1,200	900
		Feed Rate (mm/min)	105	115	130	170	190	185	185	185
Pre-hardened Steel 30~45HRC	0.1Dc (Dc < ø1) 0.3Dc (ø1 ≤ Dc < ø3) 0.5Dc (Dc ≥ ø3)	Spindle Revolution (min ⁻¹)	13,500	7,600	4,300	2,500	1,800	1,300	900	700
		Feed Rate (mm/min)	30	35	50	60	63	63	65	65
Stainless Steel	0.1Dc (Dc < ø1) 0.3Dc (ø1 ≤ Dc < ø3) 0.5Dc (Dc ≥ ø3)	Spindle Revolution (min ⁻¹)	16,000	13,000	6,600	3,400	2,200	1,700	1,200	900
		Feed Rate (mm/min)	35	60	60	65	70	70	70	70

Workpiece Materials	Depth of Cut (ap) (mm)	Outside Dia. (mm)	ø2	ø3	ø4	ø5	ø6	ø8	ø10	ø12	ø14	ø16	ø20	ø25
2FEKS 2FEKM (L17~L18)														
Carbon Steel	0.5Dc	Spindle Revolution (min ⁻¹)	7,500	6,000	5,000	4,400	3,300	2,700	2,300	2,100	1,900			
		Feed Rate (mm/min)	240	260	310	340	340	340	340	330	320			
Alloy Steel	0.5Dc	Spindle Revolution (min ⁻¹)	7,200	5,400	4,300	3,600	2,700	2,200	1,800	1,600	1,500			
		Feed Rate (mm/min)	270	270	270	270	270	270	270	270	270			
Pre-hardened Steel 30~45HRC	0.5Dc	Spindle Revolution (min ⁻¹)	5,300	4,000	3,200	2,600	2,000	1,600	1,300	1,100	1,000			
		Feed Rate (mm/min)	120	120	120	120	120	120	120	120	120			
Stainless Steel	0.5Dc	Spindle Revolution (min ⁻¹)	5,300	4,000	3,200	2,600	2,000	1,600	1,300	1,100	1,000			
		Feed Rate (mm/min)	80	90	90	100	100	100	90	90	90			

2FESW (L10~L11)														
Carbon Steel	0.2Dc	Spindle Revolution (min ⁻¹)	11,000	8,000	6,400	5,300	4,000	3,200	2,700	2,300				
		Feed Rate (mm/min)	660	640	640	640	520	450	410	350				
Alloy Steel	0.2Dc	Spindle Revolution (min ⁻¹)	7,400	5,600	4,500	3,700	2,800	2,200	1,900	1,600				
		Feed Rate (mm/min)	420	430	430	430	350	300	270	230				
Pre-hardened Steel 30~45HRC	0.2Dc	Spindle Revolution (min ⁻¹)	7,400	5,600	4,500	3,700	2,800	2,200	1,900	1,600				
		Feed Rate (mm/min)	420	430	430	430	350	300	270	230				
Stainless Steel	0.2Dc	Spindle Revolution (min ⁻¹)	6,400	4,800	3,800	3,200	2,400	1,900	1,600	1,400				
		Feed Rate (mm/min)	320	320	320	320	260	230	210	180				

3FESW (L10~L11)														
Carbon Steel	0.2Dc	Spindle Revolution (min ⁻¹)	11,000	8,000	6,400	5,300	4,000	3,200	2,700	2,300				
		Feed Rate (mm/min)	810	800	800	800	650	560	510	450				
Alloy Steel	0.2Dc	Spindle Revolution (min ⁻¹)	7,400	5,600	4,500	3,700	2,800	2,200	1,900	1,600				
		Feed Rate (mm/min)	530	530	530	530	430	370	340	290				
Pre-hardened Steel 30~45HRC	0.2Dc	Spindle Revolution (min ⁻¹)	7,400	5,600	4,500	3,700	2,800	2,200	1,900	1,600				
		Feed Rate (mm/min)	530	530	530	530	430	370	340	290				
Stainless Steel	0.2Dc	Spindle Revolution (min ⁻¹)	6,400	4,800	3,800	3,200	2,400	1,900	1,600	1,400				
		Feed Rate (mm/min)	400	400	400	400	320	280	260	230				

4FESW (L10~L11)														
Carbon Steel	0.2Dc	Spindle Revolution (min ⁻¹)	11,000	8,000	6,400	5,300	4,000	3,200	2,700	2,300				
		Feed Rate (mm/min)	960	960	960	960	780	680	620	550				
Alloy Steel	0.2Dc	Spindle Revolution (min ⁻¹)	7,400	5,600	4,500	3,700	2,800	2,200	1,900	1,600				
		Feed Rate (mm/min)	640	640	640	640	520	450	410	350				
Pre-hardened Steel 30~45HRC	0.2Dc	Spindle Revolution (min ⁻¹)	7,400	5,600	4,500	3,700	2,800	2,200	1,900	1,600				
		Feed Rate (mm/min)	640	640	640	640	520	450	410	350				
Stainless Steel	0.2Dc	Spindle Revolution (min ⁻¹)	6,400	4,800	3,800	3,200	2,400	1,900	1,600	1,400				
		Feed Rate (mm/min)	480	480	480	480	390	340	310	280				

Workpiece Materials	Depth of Cut (ap) (mm)	Outside Dia. (mm)	ø2	ø3	ø4	ø5	ø6	ø8	ø10	ø12	ø14	ø16	ø20	ø25
3UFMS (L20)														
Steel	< 42HRC	0.25Dc	Spindle Revolution (min ⁻¹)	19,000	12,700	9,500	7,600	6,400	4,800	3,800	3,200		2,400	1,900
			Feed Rate (mm/min)	570	495	513	456	480	461	456	432		360	285
	42~48HRC	0.25Dc	Spindle Revolution (min ⁻¹)	16,000	10,600	8,000	6,400	5,300	4,000	3,200	2,700		2,000	1,600
			Feed Rate (mm/min)	384	331	346	307	318	307	307	292		240	240
	48~52HRC	0.25Dc	Spindle Revolution (min ⁻¹)	12,700	8,500	6,400	5,100	4,300	3,200	2,500	2,100		1,600	1,300
			Feed Rate (mm/min)	274	239	249	220	232	221	216	204		173	176
Cast Iron	< 180HB	0.5Dc	Spindle Revolution (min ⁻¹)	25,500	17,000	13,000	10,200	8,500	6,400	5,100	4,200		3,200	2,500
			Feed Rate (mm/min)	765	663	702	612	638	614	612	567		480	375
	> 180HB	0.5Dc	Spindle Revolution (min ⁻¹)	22,300	15,000	11,000	8,900	7,400	5,600	4,500	3,700		2,800	2,200
			Feed Rate (mm/min)	669	585	594	534	555	538	540	500		420	330
Stainless Steel	0.25Dc	Spindle Revolution (min ⁻¹)	16,000	10,600	8,000	6,400	5,300	4,000	3,200	2,700			2,000	1,600
		Feed Rate (mm/min)	389	389	389	432	464	464	443	400			300	250
Titanium Alloy	0.25Dc	Spindle Revolution (min ⁻¹)	16,000	10,600	8,000	6,400	5,300	4,000	3,200	2,700			2,000	1,600
		Feed Rate (mm/min)	382	382	382	424	456	456	435	392			300	250

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Solid End Mill