

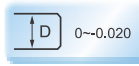
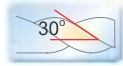
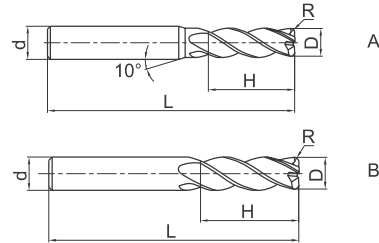
Milling · Fräsen

Solid Carbide end mills · Vollhartmetallschaftfräser

4-flute radius end mills with straight shank
4-Schneiden Radius Schaftfräser und Zylinderschaft



PM-4R



Type Typ	Dimension(mm) Abmessungen					Teeth Zähne Z	Geometry Ausführung	Grade Sorte KMG 405
	D	R	d	H	L			
PM-4R-D3.0R0.2	3.0	0.2	6	8	50	4	A	●
PM-4R-D4.0R0.3	4.0	0.3	6	10	50	4	A	●
PM-4R-D4.0R0.5	4.0	0.5	6	10	50	4	A	●
PM-4R-D5.0R0.5	5.0	0.5	6	13	50	4	A	●
PM-4R-D5.0R1.0	5.0	1.0	6	13	50	4	A	●
PM-4R-D6.0R0.5	6.0	0.5	6	16	50	4	B	●
PM-4R-D6.0R1.0	6.0	1.0	6	16	50	4	B	●
PM-4R-D8.0R0.5	8.0	0.5	8	20	60	4	B	●
PM-4R-D8.0R1.0	8.0	1.0	8	20	60	4	B	●
PM-4R-D10.0R0.5	10.0	0.5	10	25	75	4	B	●
PM-4R-D10.0R1.0	10.0	1.0	10	25	75	4	B	●
PM-4R-D10.0R2.0	10.0	2.0	10	25	75	4	B	●
PM-4R-D10.0R3.0	10.0	3.0	10	25	75	4	B	●
PM-4R-D12.0R0.5	12.0	0.5	12	30	75	4	B	●
PM-4R-D12.0R1.0	12.0	1.0	12	30	75	4	B	●
PM-4R-D12.0R2.0	12.0	2.0	12	30	75	4	B	●
PM-4R-D12.0R3.0	12.0	3.0	12	30	75	4	B	●

Material Overview · Material Übersicht

✓ = Very suitable · Sehr empfohlen
✓ = Suitable · Empfohlen

KMG405

Workpiece material Werkstückstoff											
Carbon steel Kohlenstoff Stahl	Alloy steel Legierter Stahl	Quenched and tempered steel · Vergüteter Stahl		Hardened steel · Gehärteter Stahl		Stainless steel · Rostfreier Stahl	Cast iron, Nodular cast iron Grauguss GGG	Copper alloy Kupfer Leg	Aluminum alloy Alu Leg	Titanium alloy Titan Leg	Heat resist alloy warmfeste Leg
		~40HRC	~50HRC	~55HRC	~68HRC						
✓	✓	✓	✓	✓		✓	✓			✓	✓

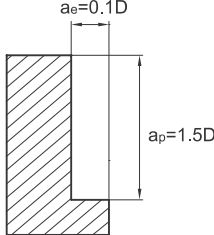
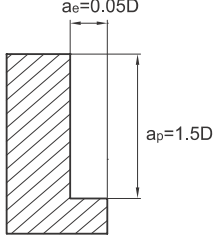
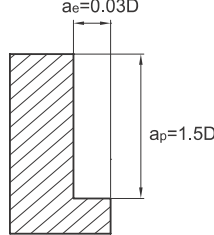
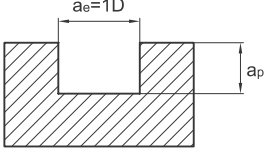
● Ex Stock / ab Lager ○ On demand / auf Anfrage

Milling · Fräsen

Solid Carbide end mills · Vollhartmetallschaftfräser

Recommended cutting data · Empfohlene Schnittdaten

PM-4R

Workpiece material Werkstückmaterial	Cast iron, Carbon steel, Alloy steel Kohlenstoffstahl Leg. Stahl ~30HRC		Stainless steel Rostfreier Stahl		Pre-hardened steel, Quenched and tempered steel Vergüteter Stahl ~40HRC		Pre-hardened steel, Quenched and tempered steel Vergüteter Stahl ~50HRC		Hardened steel Gehärteter Stahl ~55HRC																		
Diameter Ø Durchmesser (mm)	Rotating Drehzahl (min ⁻¹)	Feed Vorschub (mm/min)	Rotating Drehzahl (min ⁻¹)	Feed Vorschub (mm/min)	Rotating Drehzahl (min ⁻¹)	Feed Vorschub (mm/min)	Rotating Drehzahl (min ⁻¹)	Feed Vorschub (mm/min)	Rotating Drehzahl (min ⁻¹)	Feed Vorschub (mm/min)																	
3	14000	985	7500	175	10600	755	8500	590	7430	435																	
4	10800	1010	5500	175	8000	770	6500	600	5570	445																	
5	8200	1055	4500	175	6400	805	5000	640	4460	470																	
6	7000	1080	3700	195	5300	830	4200	650	3710	470																	
8	5200	1070	2800	195	4000	815	3200	660	2785	485																	
10	4200	1055	2200	195	3200	805	2500	625	2230	450																	
12	3500	1055	1850	195	2650	805	2100	625	1855	450																	
16	2600	985	1400	175	2000	755	1600	590	1390	435																	
Max. cutting depth max Schnitttiefe																											
	 <table><tr><th>Milling slot</th><th>Nutenfräsen</th></tr><tr><th>Ø</th><th>Ap</th></tr><tr><td>Ø1≤D<Ø3</td><td>0.15D</td></tr><tr><td>Ø3≤D<Ø6</td><td>0.3D</td></tr><tr><td>Ø6≤D<Ø20</td><td>0.5D</td></tr></table>					Milling slot	Nutenfräsen	Ø	Ap	Ø1≤D<Ø3	0.15D	Ø3≤D<Ø6	0.3D	Ø6≤D<Ø20	0.5D	<table><tr><th>Milling slot</th><th>Nutenfräsen</th></tr><tr><th>Ø</th><th>Ap</th></tr><tr><td>Ø1≤D<Ø3</td><td>0.1D</td></tr><tr><td>Ø3≤D</td><td>0.2D</td></tr></table>					Milling slot	Nutenfräsen	Ø	Ap	Ø1≤D<Ø3	0.1D	Ø3≤D
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- The above table shows the standard value of side milling. When slot milling, of rotating speed 50%~70% and feed rate like mentioned above 40%~60%.
- Please select high precise machine and tool holder.
- Please use air blow or cutting liquid with high mist retardant property.
- Down milling is recommended in side milling.
- Vibration and unusual noise may be generated if the machine rigidity and workpiece fixture stability is low, please reduce the rotating speed and feed rate like mentioned above.
- Make overhang as short as possible if no interference.

- Die obige Tabelle zeigt Standard Werte für das Eckfräsen. Bei Nutenfräsen, Schnittgeschwindigkeit auf 50-70% und den Vorschub auf 40-60% reduzieren.
- Bitte präzise Maschinen und Werkzeughalter verwenden.
- Bitte Luftkühlung oder Schneidflüssigkeit benutzen.
- Empfohlene Fräsmethode: Gleichlaufräsen.
- Bei Vibrationen oder ungewöhnlichen Geräuschen reduzieren Sie die Schnittdaten (wie oben empfohlen) entsprechend.
- Werkzeugauskragung so kurz wie möglich wählen.