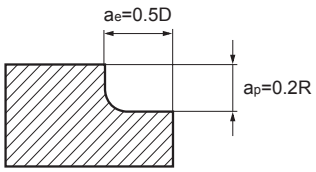
PM-4H★PM-4HL

Standard：

Workpiece material	Cast iron, Carbon steel, Alloy steel ~30HRC		Quenched and tempered steel ~40HRC		Quenched and tempered steel ~45HRC		Quenched and tempered steel ~50HRC		Quenched and tempered steel ~55HRC	
Diameter× Corner radius	Rotating speed (min^{-1})	Feed speed (mm/min)	Rotating speed (min^{-1})	Feed speed (mm/min)	Rotating speed (min^{-1})	Feed speed (mm/min)	Rotating speed (min^{-1})	Feed speed (mm/min)	Rotating speed (min^{-1})	Feed speed (mm/min)
3.0×R0.8	10500	6250	8500	4500	7450	3900	5300	2600	3200	995
4.0×R1.0	7950	6600	6350	4800	5550	4200	4000	2750	2400	1050
5.0×R1.2	6350	7000	5100	5100	4450	4450	3200	2850	1900	1150
6.0×R1.0 6.0×R1.5	5300	7000	4250	5100	3700	4450	2650	2850	1600	1150
8.0×R1.0 8.0×R2.0	4550	7000	3200	5100	2800	4450	2000	2850	1200	1150
10.0×R1.0 10.0×R2.0	3200	7000	2550	5100	2250	4450	1600	2850	955	1150
12.0×R2.0 12.0×R3.0	2650	7000	2100	5100	1850	4450	1350	2850	795	1150
Maximum cutting depth	Maximum a_p=0.5mm						Maximum a_p=0.4mm		Maximum a_p=0.2mm	
										

1.Please select high-precision machine and tool holder.
2.Please use air blow or cutting liquid with high mist retardant property.
3.Down milling is recommended.
4.When the machine rigidity and workpiece fixture stability is low, vibration and abnormal noise may be generated. Please reduce the rotating speed and feed speed stated above correspondingly.
5.Make overhang of tool as short as possible in conditions of non-interference.
6.The above cutting parameters are based on contour machining when overhang L/D≤4. Please make adjustments according to the table below when overhang is different.

Different cutting parameters under different overhang of tool:

Overhang	Cutting speed(m/min)	Axial cutting depth (mm)	Feed speed (mm/min)
L/D≤4	100%	100%	100%
L/D=5	80%~90%	70%~90%	80%~90%
L/D=6	60%~80%	50%~70%	60%~80%

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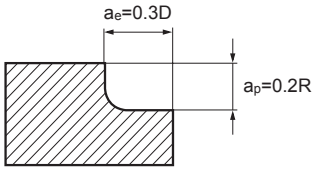
High speed：

Workpiece material	Cast iron, Carbon steel, Alloy steel ~30HRC		Quenched and tempered steel ~40HRC		Quenched and tempered steel ~45HRC		Quenched and tempered steel ~50HRC		Quenched and tempered steel ~55HRC	
Diameter× Corner radius	Rotating speed (min^{-1})	Feed speed (mm/min)	Rotating speed (min^{-1})	Feed speed (mm/min)	Rotating speed (min^{-1})	Feed speed (mm/min)	Rotating speed (min^{-1})	Feed speed (mm/min)	Rotating speed (min^{-1})	Feed speed (mm/min)
3.0×R0.8	21000	12500	21000	12000	16000	8400	16000	7850	10500	3300
4.0×R1.0	16000	13000	16000	12000	12000	9000	12000	8200	7950	3550
5.0×R1.2	12500	14000	12500	12500	9550	9550	9550	8600	6350	3800
6.0×R1.0 6.0×R1.5	10600	14000	10600	12700	7950	9550	7950	8600	5300	3800
8.0×R1.0 8.0×R2.0	7950	14000	7950	12700	5950	9550	5950	8600	4000	3800
10.0×R1.0 10.0×R2.0	6350	14000	6350	12700	4750	9550	4750	8600	3200	3800
12.0×R2.0 12.0×R3.0	5300	14000	5300	12700	4000	9550	4000	8600	2650	3800
Maximum cutting depth	Maximum a_p=0.4mm						Maximum a_p=0.2mm		Maximum a_p=0.1mm	
										

1.Please select high-precision machine and tool holder.
2.Please use air blow or cutting liquid with high mist retardant property.
3.Down milling is recommended.
4.When the machine rigidity and workpiece fixture stability is low, vibration and abnormal noise may be generated. Please reduce the rotating speed and feed speed stated above correspondingly.
5.Make overhang of tool as short as possible in conditions of non-interference.
6.The above cutting parameters are based on contour machining when overhang L/D≤4. Please make adjustments according to the table below when overhang is different.

Different cutting parameters under different overhang of tool:

Ratio of neck length to diameter	Cutting speed(m/min)	Axial cutting depth(mm)	Feed speed (mm/min)
L/D≤4	100%	100%	100%
L/D=5	60%~80%	60%~80%	60%~80%
L/D=6	40%~60%	40%~60%	40%~60%