

GM-4B★GM-4BL/M/X

Workpiece material	Cast iron, Nodular cast iron		Carbon steel, Alloy steel ~750N/mm ²		Carbon steel, Alloy steel ~30HRC		Pre-hardened steel, quenched and tempered steel ~40HRC		Stainless steel		Pre-hardened steel, quenched and tempered steel ~50HRC	
Cutting speed	150 m/min		150m/min		120m/min		100m/min		70m/min		80m/min	
Diameter (mm)	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)	Rotating speed (min ⁻¹)	Feed speed (mm/min)
R1.5	15500	1710	15500	1710	12750	1340	10600	810	7400	520	8500	500
R2.0	11500	1710	11500	1710	9550	1340	8000	990	5550	660	6500	665
R2.5	9500	1890	9500	1890	7650	1440	6400	990	4450	660	5000	675
R3.0	8000	1890	8000	1890	6400	1440	5300	1040	3700	700	4200	700
R4.0	6000	2340	6000	2340	4800	1710	4000	1260	2750	820	3200	790
R5.0	4800	2160	4800	2160	3800	1620	3200	1170	2200	770	2500	790
R6.0	4000	1980	4000	1980	3200	1510	2650	1100	1850	770	2100	755
R8.0	3000	1890	3000	1890	2400	1440	2000	1080	1350	680	1600	675
R10.0	2400	1710	2400	1710	1900	1220	1600	1000	1100	660	1250	595
Maximum cutting depth												

1. Please select high-precision machine and tool holder.
2. Please use air blow or cutting liquid with high mist retardant property.
3. 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.
4. Make overhang of tool as short as possible in conditions of non-interference.

GM-2BS

Workpiece material	Cast iron, Nodular cast iron		Carbon steel, Alloy steel ~750N/mm ²		Carbon steel, Alloy steel ~30HRC		Pre-hardened steel, quenched and tempered steel ~40HRC		Stainless steel	
	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)
R0.15	32000	300	32000	300	32000	270	32000	250	32000	150
R0.2	32000	380	32000	380	32000	320	32000	300	32000	175
R0.25	32000	460	32000	460	32000	410	32000	330	32000	205
R0.3	32000	535	32000	535	32000	500	32000	420	32000	265
R0.35	32000	550	32000	550	32000	520	32000	440	32000	270
R0.4	32000	610	32000	610	32000	560	32000	460	27500	285
R0.45	32000	700	32000	700	32000	600	25000	400	27500	285
R0.5	32000	765	32000	765	32000	640	25000	400	22000	285
R1.0	24000	900	24000	900	19000	760	16000	400	11150	230
R1.5	15500	950	15500	950	12750	760	10600	450	7400	290

Maximum cutting depth			
	Diameter range	Cutting depth a_p	Cutting width a_e
	$D < \varnothing 1$	0.05R	0.2R
$\varnothing 1 \leq D \leq \varnothing 3$	0.1R	0.2R	

1. Please select high-precision machine and tool holder.
2. Please use air blow or cutting liquid with high mist retardant property.
3. Make overhang of tool as short as possible in conditions of non-interference.
4. Reduce feed speed correspondingly when rotating speed is low.

Indexable milling tools

Solid carbide end mills

Cutting parameters for GM series end mills