

GM-2EX

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	
	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)
6	5800	375	5800	375	5300	345	4250	275	2650	60	3600	230
8	4400	375	4400	375	4000	345	3180	275	2000	60	2700	235
10	3500	365	3500	365	3200	330	2550	265	1600	60	2150	220
12	2900	365	2900	365	2650	330	2120	265	1350	60	1800	220
16	2200	345	2200	345	2000	315	1590	250	1000	50	1350	210
20	1750	340	1750	340	1600	310	1270	245	800	45	1050	205
Maximum cutting depth	<p>The diagram illustrates the maximum cutting depth parameters for the end mill. It shows a cross-section of the tool cutting into a workpiece. The axial cutting depth is labeled as $a_e = 0.02D$, where D is the diameter of the end mill. The radial cutting depth is labeled as $a_p = 3D$.</p>											

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 in the case of side milling.
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.

GM-2EFP

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	
	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)
6	7000	650	7000	650	6400	600	5300	500	3700	150	4200	390
8	5200	645	5200	645	4800	590	4000	495	2800	150	3200	395
10	4200	630	4200	630	3800	585	3200	480	2200	150	2500	380
12	3500	630	3500	630	3200	585	2650	480	1850	150	2100	380
16	2600	590	2600	590	2400	545	2000	455	1400	130	1600	355
20	2050	580	2050	580	1900	530	1600	450	1100	130	1250	350

Maximum cutting depth																
	Diagram	Table	Diagram	Table												
		<table border="1"> <thead> <tr> <th>Diameter range</th> <th>Cutting depth a_p</th> </tr> </thead> <tbody> <tr> <td>$\varnothing 1 \leq D < \varnothing 3$</td> <td>0.15D</td> </tr> <tr> <td>$\varnothing 3 \leq D$</td> <td>0.3D</td> </tr> </tbody> </table>	Diameter range	Cutting depth a_p	$\varnothing 1 \leq D < \varnothing 3$	0.15D	$\varnothing 3 \leq D$	0.3D		<table border="1"> <thead> <tr> <th>Diameter range</th> <th>Cutting depth a_p</th> </tr> </thead> <tbody> <tr> <td>$\varnothing 1 \leq D < \varnothing 3$</td> <td>0.15D</td> </tr> <tr> <td>$\varnothing 3 \leq D$</td> <td>0.3D</td> </tr> </tbody> </table>	Diameter range	Cutting depth a_p	$\varnothing 1 \leq D < \varnothing 3$	0.15D	$\varnothing 3 \leq D$	0.3D
Diameter range	Cutting depth a_p															
$\varnothing 1 \leq D < \varnothing 3$	0.15D															
$\varnothing 3 \leq D$	0.3D															
Diameter range	Cutting depth a_p															
$\varnothing 1 \leq D < \varnothing 3$	0.15D															
$\varnothing 3 \leq D$	0.3D															

- The above table shows the standard value of side milling. When milling slot, 50%~70% of rotating speed and 40%~60% of feed speed stated above are recommended as standard.
- Please select high-precision machine and tool holder.
- Please use air blow or cutting liquid with high mist retardant property.
- Down milling is recommended in the case of side milling.
- 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.
- Make overhang of tool as short as possible in conditions of non-interference.

Indexable milling tools

Solid carbide end mills

Cutting parameters for GM series end mills