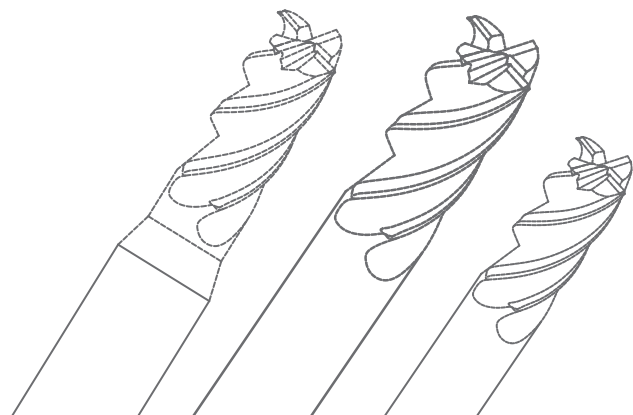


High Quality & Performance

DURIT CARBIDE
CUTTING TOOLS SOLUTIONS

Solid End Mill Content



Durit Carbide Comércio e Representação

Boulevard Mall Jacareí, Sala 408

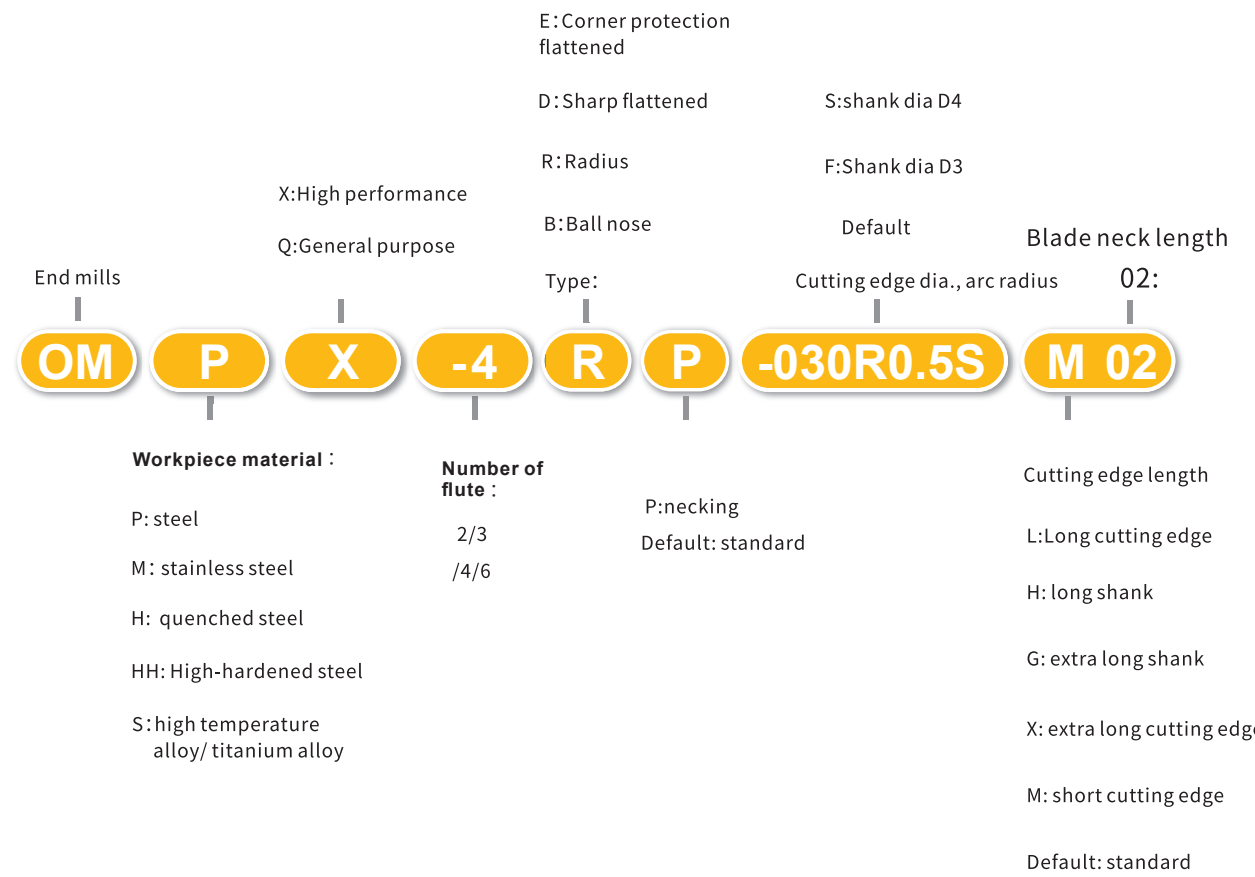
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Standard End Mills Naming Rules



OMP General purpose series

OMPQ-4E 4 flutes straight shank flat end mill	02
OMPQ- 4EL 4 flutes long cutting edge flat end mill	03
OMPQ- 4EX 4 flutes extra long cutting edge flat end mill	04
OMPQ- 4D Sharp flattened 4 flutes straight shank flat end mill	05
OMPQ- 4EH/G 4 flute long shank / extra long shank flat end mill	07
OMPQ- 2B 2 flutes long shank / extra long shank flat end mill	09
OMPQ- 2BH/G 2 flutes long shank / extra long shank ball head end mill	10
OMPQ- 4R 2 flutes straight shank corner radius end mill	12
OMPQ- 4RHG 4 flutes long shank / extra long shank corner radius end mill	13

OMPX series, High

OMPX- 4E 4 flutes straight shank flat end mill	16
OMPX- 4EL 4 flutes cutting edge flat end mill	17
OMPX- 4EH/G 4 flutes long shank / extra long shank flat end mill	18
OMPX- 4R 4 flutes straight shank corner radius end mill	21
OMPX- 4RH/G 4 flutes long shank / extra long shank corner radius end mill	23
OMPX- 2B 2 flutes straight shank ball head end mill	25
OMPX- 2BH/G 2 flutes long shank / extra long shank ball head end mill	26

OMPQ General purpose series

Product features and application range

This series of products are suitable for rough machining to semi-finishing of workpiece materials with hardness <HRC45.

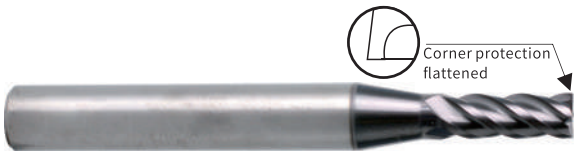
①Adopt the latest high temperature resistance, wear resistance coating with the new formula of carbide substrate, able to adapt to more working condition;

②The edge is designed to take into account the cutting edge strength and wear resistance of the curved flank surface structure, improve the tool life;

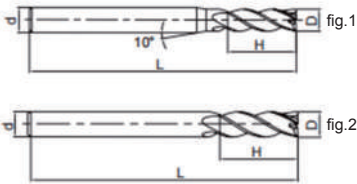
③The new upgraded spiral flute not only ensures enough chip space, but also improves the strength and rigidity of the edge. It is suitable for machining from finishing to rough machining, and the tool performance is more comprehensive.



OMPQ-4E 4 flute straight shank flat end mill



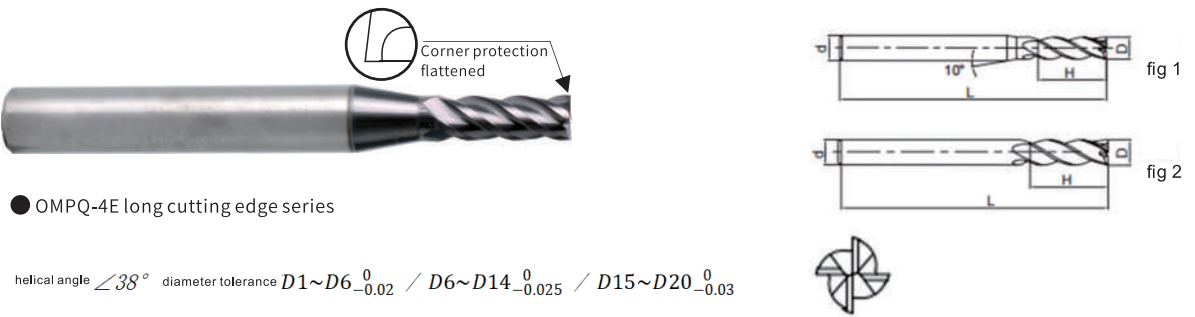
Suitable for machining side and shallow slot
wide application.



helical angle $\angle 38^\circ$ diameter tolerance $D1\sim D6_{-0.02}^0$ / $D6\sim D14_{-0.025}^0$ / $D15\sim D20_{-0.03}^0$

part number	dimension (mm)				Number of flutes	Geometry	stock
	D	d	H	L			
OMPQ-4E-010F	1.0	3	3	50	4	fig 1	▲
OMPQ-4E-010S	1.0	4	3	50	4	fig 1	●
OMPQ-4E-010	1.0	6	3	50	4	fig 1	●
OMPQ-4E-015F	1.5	3	4	50	4	fig 1	▲
OMPQ-4E-015S	1.5	4	4	50	4	fig 1	●
OMPQ-4E-015	1.5	6	4	50	4	fig 1	●
OMPQ-4E-020F	2.0	3	6	50	4	fig 1	▲
OMPQ-4E-020S	2.0	4	6	50	4	fig 1	●
OMPQ-4E-020	2.0	6	6	50	4	fig 1	●
OMPQ-4E-025F	2.5	3	8	50	4	fig 1	▲
OMPQ-4E-025S	2.5	4	8	50	4	fig 1	●
OMPQ-4E-025	2.5	6	8	50	4	fig 1	●
OMPQ-4E-030F	3.0	3	8	50	4	fig 2	▲
OMPQ-4E-030S	3.0	4	8	50	4	fig 1	●
OMPQ-4E-030	3.0	6	8	50	4	fig 1	●
OMPQ-4E-035S	3.5	4	10	50	4	fig 1	●
OMPQ-4E-035	3.5	6	10	50	4	fig 1	●
OMPQ-4E-040S	4.0	4	11	50	4	fig 2	●
OMPQ-4E-040	4.0	6	11	50	4	fig 1	●
OMPQ-4E-045	4.5	6	11	50	4	fig 1	●
OMPQ-4E-050	5.0	6	13	50	4	fig 1	●
OMPQ-4E-055	5.5	6	16	50	4	fig 1	●
OMPQ-4E-060	6.0	6	16	50	4	fig 2	●
OMPQ-4E-070	7.0	8	20	60	4	fig 1	●
OMPQ-4E-080	8.0	8	20	60	4	fig 2	●
OMPQ-4E-090	9.0	10	22	75	4	fig 1	●
OMPQ-4E-100	10.0	10	25	75	4	fig 2	●
OMPQ-4E-110	11.0	12	26	75	4	fig 1	●
OMPQ-4E-120	12.0	12	30	75	4	fig 2	●
OMPQ-4E-140	14.0	14	32	75	4	fig 2	●
OMPQ-4E-160	16.0	16	45	100	4	fig 2	●
OMPQ-4E-180	18.0	18	45	100	4	fig 2	●
OMPQ-4E-200	20.0	20	45	100	4	fig 2	●

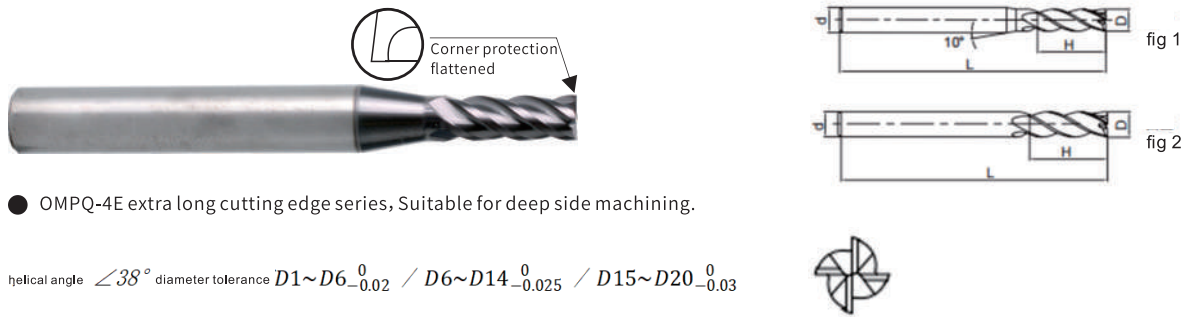
OMPQ- 4EL 4 flute long cutting edge flat end mill



part number	dimension (mm)				Number of flutes	Geometry	stock
	D	d	H	L			
OMPQ-4E-030L	3.0	6	12	75	4	fig 1	●
OMPQ-4E-040L	4.0	6	15	75	4	fig 1	●
OMPQ-4E-050L	5.0	6	20	75	4	fig 1	●
OMPQ-4E-060L	6.0	6	20	75	4	fig 2	●
OMPQ-4E-080L	8.0	8	25	100	4	fig 2	●
OMPQ-4E-100L	10.0	10	30	100	4	fig 2	●
OMPQ-4E-120L	12.0	12	35	100	4	fig 2	●
OMPQ-4E-140L	14.0	14	40	100	4	fig 2	●
OMPQ-4E-160L	16.0	16	50	150	4	fig 2	●
OMPQ-4E-200L	20.0	20	55	150	4	fig 2	●

● Stock available ▲ Make-to-order

OMPQ- 4EX 4 flute extra long cutting edge flat end mill



part number	dimension (mm)				Number of flutes	Geometry	stock
	D	d	H	L			
OMPQ-4E-030X	3.0	6	20	75	4	fig 1	▲
OMPQ-4E-040X	4.0	6	25	75	4	fig 1	▲
OMPQ-4E-050X	5.0	6	30	75	4	fig 1	▲
OMPQ-4E-060X	6.0	6	30	75	4	fig 2	▲
OMPQ-4E-080X	8.0	8	40	100	4	fig 2	▲
OMPQ-4E-100X	10.0	10	50	110	4	fig 2	▲
OMPQ-4E-120X	12.0	12	50	110	4	fig 2	▲
OMPQ-4E-160X	16.0	16	70	150	4	fig 2	▲
OMPQ-4E-200X	20.0	20	75	150	4	fig 2	▲

Workpiece material (○ suitable ◎ very suitable)

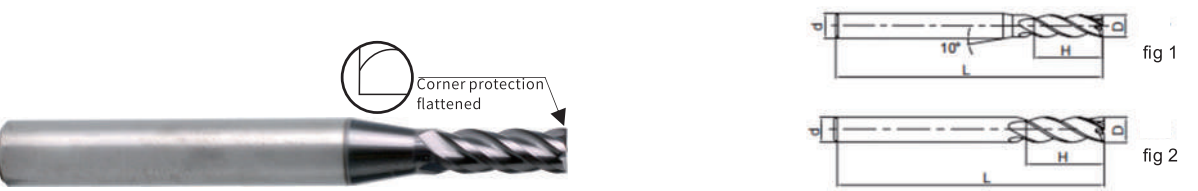
Carbon steel	Alloy steel	Pre-hardened steel, Hardened steel				Stainless steel	Cast iron, nodular cast iron	copper alloy	Aluminum alloy	titanium alloy	Heat resistant alloy
		~40HRC	~50HRC	~55HRC	~68HRC						
◎	◎	◎	○			○	◎				

OMPQ-4EX
recommend cutting parameters

Workpiece material	Cast ironnodular cast		Carbon steel, Alloy steel ~750N/mm2		Carbon steel, Alloy steel ~30HRC		Pre-hardened steel,hardened and tempered steel ~40HRC		Stainless steel		Pre-hardened steel,hardened and tempered steel ~50HRC	
	Rotating speed (min ⁻¹)	Feedspeed (mm/min)	Rotating speed (min ⁻¹)	Feedspeed (mm/min)	Rotating speed (min ⁻¹)	Feedspeed (mm/min)	Rotating speed (min ⁻¹)	Feedspeed (mm/min)	Rotating speed (min ⁻¹)	Feedspeed (mm/min)	Rotating speed (min ⁻¹)	Feedspeed (mm/min)
6	5800	475	5800	475	5300	430	4250	340	2650	70	3600	290
8	4400	475	4400	475	4000	430	3180	340	2000	70	2700	290
10	3500	460	3500	460	3200	420	2550	330	1600	70	2150	280
12	2900	460	2900	460	2650	420	2120	330	1350	70	1800	280
16	2200	430	2200	430	2000	390	1590	315	1000	65	1350	260
20	1750	430	1750	430	1600	385	1270	310	800	60	1050	255



OMPQ-4D Sharp flattened 4 flute straight shank flat end mill



● Suitable for side milling and shallow slot machining.

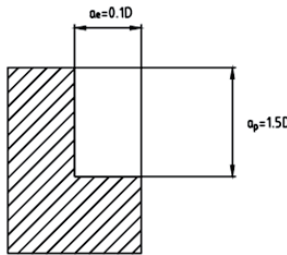
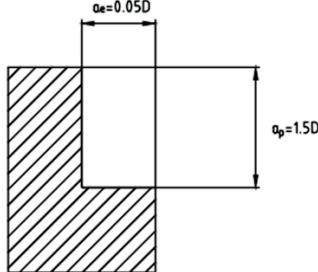
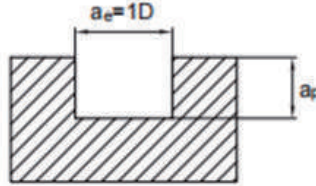
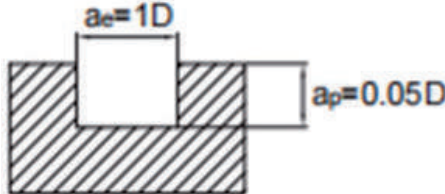
helical angle $\angle 38^\circ$ diameter tolerance $D1\sim D6_{-0.02}^0$ / $D6\sim D14_{-0.025}^0$ / $D15\sim D20_{-0.03}^0$

part number	dimension (mm)				Number of flutes	Geometry	stock
	D	d	H	L			
OMPQ-4D-010S	1.0	4	3	50	4	fig 1	▲
OMPQ-4D-010	1.0	6	3	50	4	fig 1	▲
OMPQ-4D-015S	1.5	4	4	50	4	fig 1	▲
OMPQ-4D-015	1.5	6	4	50	4	fig 1	▲
OMPQ-4D-020S	2.0	4	6	50	4	fig 1	▲
OMPQ-4D-020	2.0	6	6	50	4	fig 1	▲
OMPQ-4D-025S	2.5	4	8	50	4	fig 1	▲
OMPQ-4D-025	2.5	6	8	50	4	fig 1	▲
OMPQ-4D-030S	3.0	4	8	50	4	fig 1	▲
OMPQ-4D-030	3.0	6	8	50	4	fig 1	▲
OMPQ-4D-035	3.5	6	10	50	4	fig 1	▲
OMPQ-4D-040S	4.0	4	11	50	4	fig 2	●
OMPQ-4D-040	4.0	6	11	50	4	fig 1	▲
OMPQ-4D-045	4.5	6	11	50	4	fig 1	▲
OMPQ-4D-050	5.0	6	13	50	4	fig 1	▲
OMPQ-4D-055	5.5	6	16	50	4	fig 1	▲
OMPQ-4D-060	6.0	6	16	50	4	fig 2	●
OMPQ-4D-070	7.0	8	20	60	4	fig 1	▲
OMPQ-4D-080	8.0	8	20	60	4	fig 2	●
OMPQ-4D-090	9.0	10	22	75	4	fig 1	▲
OMPQ-4D-100	10.0	10	25	75	4	fig 2	●
OMPQ-4D-110	11.0	12	26	75	4	fig 1	▲
OMPQ-4D-120	12.0	12	30	75	4	fig 2	●
OMPQ-4D-140	14.0	14	32	75	4	fig 2	▲
OMPQ-4D-160	16.0	16	45	100	4	fig 2	●
OMPQ-4D-180	18.0	18	45	100	4	fig 2	▲
OMPQ-4D-200	20.0	20	45	100	4	fig 2	▲

● Stock available ▲ Make-to-order

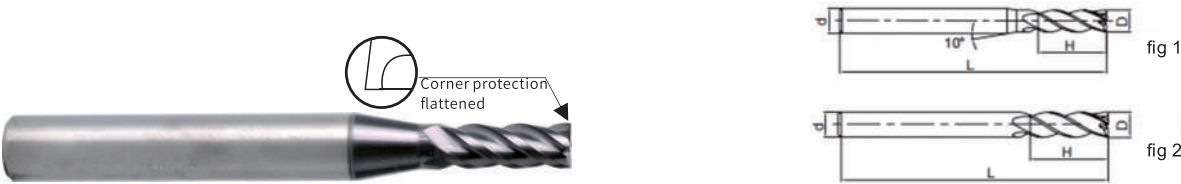
Workpiece material (○ suitable、● very suitable)											
Carbon steel	Alloy steel	Pre-hardened steel、Hardened steel				Stainless steel	Cast iron, nodular cast iron	copper alloy	Aluminum alloy	titanium alloy	Heat resistant alloy
		~40HRC	~50HRC	~55HRC	~68HRC						
●	●	●	○			○	●				

OMPQ-4D
recommend cutting parameters

Workpiece material	Cast iron/nodular cast		Carbon steel, Alloy steel ~750N/mm2		Carbon steel, Alloy steel ~30HRC		Pre-hardened steel, hardened and tempered steel ~40HRC		Stainless steel		Pre-hardened steel, hardened and tempered steel ~50HRC		
Diameter (mm)	Rotating speed (min ⁻¹)	Feedspeed (mm/min)	Rotating speed (min ⁻¹)	Feedspeed (mm/min)	Rotating speed (min ⁻¹)	Feedspeed (mm/min)	Rotating speed (min ⁻¹)	Feedspeed (mm/min)	Rotating speed (min ⁻¹)	Feedspeed (mm/min)	Rotating speed (min ⁻¹)	Feedspeed (mm/min)	
1	20000	160	20000	160	20000	125	20000	125	20000	55	20000	95	
2	15000	250	15000	250	15000	230	15000	230	11150	65	13000	140	
3	14000	430	14000	430	13000	400	10600	400	7500	80	8500	260	
4	10800	440	10800	440	10000	400	8000	400	5500	80	6500	265	
5	8200	460	8200	460	7600	420	6400	420	4500	80	5000	280	
6	7000	470	7000	470	6400	435	5300	435	3700	85	4200	285	
8	5200	465	5200	465	4800	430	4000	430	2800	85	3200	290	
10	4200	460	4200	460	3800	420	3200	420	2200	85	2500	275	
12	3500	460	3500	460	3200	420	2650	420	1850	80	2100	275	
14	3000	430	3000	430	2700	400	2300	400	1600	80	1800	260	
16	2600	430	2600	430	2400	400	2000	400	1400	80	1600	260	
18	2300	420	2300	420	2100	390	1800	390	1250	70	1400	255	
20	2050	420	2050	420	1900	390	1600	390	1100	70	1250	255	
max. cutting depth													
													
		tool diameter		Ap									
		Φ 1 ≤ D ≤ Φ 3		0.15D									
		Φ 3 ≤ D		0.3D									

1. 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.
2. Please select high-precision machine and tool holder.
3. Please use air blow or cutting liquid with high mist retardant property.
4. Down milling is recommended in the case of side milling.
5. 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.
6. Make overhang of tool as short as possible in conditions of non-interference.

OMPQ-4EH/G 4 flute long shank/ extra long shank flat end mill



● OMPQ-4E long and extra long shank series for deep cavity milling.

helical angle $\angle 38^{\circ}$ diameter tolerance $D1\sim D6_{-0.02}^0$ / $D6\sim D14_{-0.025}^0$ / $D15\sim D20_{-0.03}^0$

part number	dimension (mm)				Number of flutes	Geometry	stock
	D	d	H	L			
OMPQ-4E-030SH	3.0	4	8	75	4	fig 1	▲
OMPQ--4E-030H	3.0	6	8	75	4	fig 1	▲
OMPQ-4E-040SH	4.0	4	11	75	4	fig 2	▲
OMPQ-4E-040H	4.0	6	11	75	4	fig 1	▲
OMPQ-4E-060H	6.0	6	16	75	4	fig 2	▲
OMPQ-4E-060G	6.0	6	16	100	4	fig 2	▲
OMPQ-4E-080H	8.0	8	20	75	4	fig 2	▲
OMPQ-4E-080G	8.0	8	20	100	4	fig 2	▲
OMPQ-4E-100H	10.0	10	25	100	4	fig 2	▲
OMPQ-4E-100G	10.0	10	25	150	4	fig 2	▲
OMPQ-4E-120H	12.0	12	30	100	4	fig 2	▲
OMPQ-4E-120G	12.0	12	30	150	4	fig 2	▲

● Stock available ▲ Make-to-order

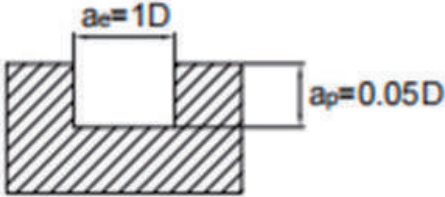
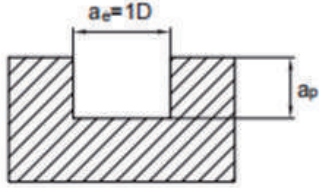
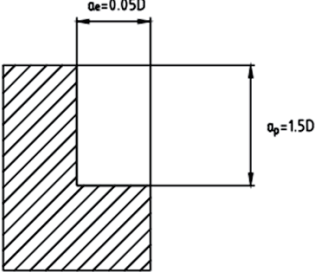
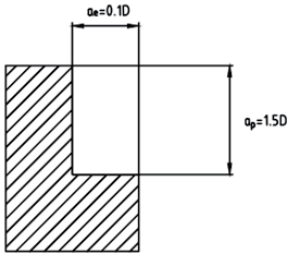
Workpiece material (○ suitable, ◎ very suitable)

Carbon steel	Alloy steel	Pre-hardened steel, Hardened steel				Stainless steel	Cast iron, nodular cast iron	copper alloy	Aluminum alloy	titanium alloy	Heat resistant alloy
		~40HRC	~50HRC	~55HRC	~68HRC						
◎	◎	◎	○			○	◎				

OMPQ-4E/4EL、G
recommend cutting parameters

Workpiece material	Cast iron/nodular cast		Carbon steel, Alloy steel ~750N/mm2		Carbon steel, Alloy steel ~30HRC		Pre-hardened steel, hardened and tempered steel ~40HRC		Stainless steel		Pre-hardened steel, hardened and tempered steel ~50HRC	
Diameter (mm)	Rotating speed (min ⁻¹)	Feedspeed (mm/min)	Rotating speed (min ⁻¹)	Feedspeed (mm/min)	Rotating speed (min ⁻¹)	Feedspeed (mm/min)	Rotating speed (min ⁻¹)	Feedspeed (mm/min)	Rotating speed (min ⁻¹)	Feedspeed (mm/min)	Rotating speed (min ⁻¹)	Feedspeed (mm/min)
1	20000	250	20000	250	20000	200	20000	200	20000	90	20000	150
2	15000	400	15000	400	15000	360	15000	350	11150	100	13000	225
3	14000	680	14000	680	13000	630	10600	525	7500	120	8500	410
4	10800	700	10800	700	10000	640	8000	535	5500	125	6500	420
5	8200	730	8200	730	7600	670	6400	560	4500	125	5000	440
6	7000	750	7000	750	6400	690	5300	575	3700	135	4200	450
8	5200	740	5200	740	4800	680	4000	565	2800	135	3200	460
10	4200	730	4200	730	3800	670	3200	560	2200	135	2500	435
12	3500	730	3500	730	3200	670	2650	560	1850	135	2100	435
14	3000	680	3000	680	2700	630	2300	525	1600	125	1800	410
16	2600	680	2600	680	2400	630	2000	525	1400	120	1600	410
18	2300	670	2300	670	2100	620	1800	515	1250	105	1400	405
20	2050	670	2050	670	1900	620	1600	515	1100	105	1250	405

max. cutting depth



tool diameter	Ap
Φ 1 ≤ D ≤ Φ 3	0.15D
Φ 3 ≤ D	0.3D

1. 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.

2. Please select high-precision machine and tool holder.

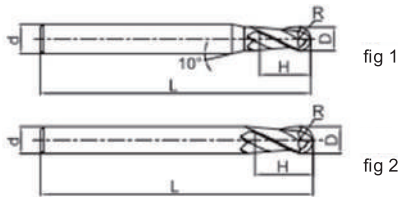
3. Please use air blow or cutting liquid with high mist retardant property.

4. Down milling is recommended in the case of side milling.

5. 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.

6. Make overhang of tool as short as possible in conditions of non-interference.

OMPQ-2B 2 flutes straight shank ball head end mill



● Suitable for profile milling, and high speed machining, with wide range of applications.

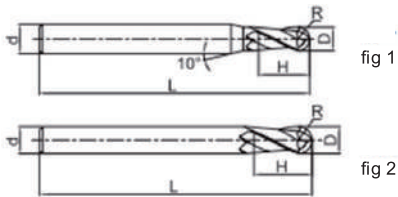
helical angle $\angle 30^\circ$ diameter tolerance D 公差 $\begin{smallmatrix} 0 \\ -0.02 \end{smallmatrix}$ $R \pm 0.005$



part number	dimension (mm)					Number of flutes	Geometry	stock
	D	R	d	H	L			
OMPQ-2B-010R0.5S	1	0.5	4	2	50	2	fig 1	▲
OMPQ-2B-010R0.5	1	0.5	6	2	50	2	fig 1	▲
OMPQ-2B-015R0.75S	1.5	0.75	4	3	50	2	fig 1	▲
OMPQ-2B-015R0.75	1.5	0.75	6	3	50	2	fig 1	▲
OMPQ-2B-020R1.0F	2	1	3	4	50	2	fig 1	▲
OMPQ-2B-020R1.0S	2	1	4	4	50	2	fig 1	▲
OMPQ-2B-020R1.0	2	1	6	4	50	2	fig 1	▲
OMPQ-2B-025R1.25F	2.5	1.25	3	5	50	2	fig 1	▲
OMPQ-2B-025R1.25S	2.5	1.25	4	5	50	2	fig 1	▲
OMPQ-2B-025R1.25	2.5	1.25	6	5	50	2	fig 1	▲
OMPQ-2B-030R1.5F	3	1.5	3	6	50	2	fig 2	▲
OMPQ-2B-030R1.5S	3	1.5	4	6	50	2	fig 1	●
OMPQ-2B-030R1.5	3	1.5	6	6	50	2	fig1	●
OMPQ-2B-035R1.75S	3.5	1.75	4	8	50	2	fig 1	●
OMPQ-2B-035R1.75	3.5	1.75	6	8	50	2	fig 1	●
OMPQ-2B-040R2.0S	4	2	4	8	50	2	fig 2	●
OMPQ-2B-040R2.0	4	2	6	8	50	2	fig 1	●
OMPQ-2B-050R2.5	5	2.5	6	10	50	2	fig 1	●
OMPQ-2B-055R2.75	5.5	2.75	6	12	50	2	fig 1	●
OMPQ-2B-060R3.0	6	3	6	12	50	2	fig 2	●
OMPQ-2B-070R3.5	7	3.5	8	14	60	2	fig 1	●
OMPQ-2B-080R4.0	8	4	8	16	60	2	fig 2	●
OMPQ-2B-090R4.5	9	4.5	10	18	75	2	fig 1	●
OMPQ-2B-100R5.0	10	5	10	20	75	2	fig 2	●
OMPQ-2B-120R6.0	12	6	12	24	75	2	fig 2	●
OMPQ-2B-140R7.0	14	7	14	28	75	2	fig 2	●
OMPQ-2B-160R8.0	16	8	16	32	100	2	fig 2	●
OMPQ-2B-200R10.0	20	10	20	40	100	2	fig 2	●

● Stock available ▲ Make-to-order

OMPQ-2BH/G 2 flutes long shank/extra long shank ball head end mill



● OMPQ-2B long shank and extra long shank series

helical angle $\angle 30^\circ$ diameter tolerance D 公差 $\begin{smallmatrix} 0 \\ -0.02 \end{smallmatrix}$ $R \pm 0.005$

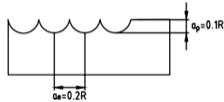


part number	dimension (mm)					Number of flutes	Geometry	stock
	D	R	d	H	L			
OMPQ-2B-020R1.0SH	2	1	4	4	75	2	fig 1	●
OMPQ-2B-020R1.0H	2	1	6	4	75	2	fig 1	●
OMPQ-2B-025R1.25SH	2.5	1.25	4	5	75	2	fig 1	●
OMPQ-2B-025R1.25H	2.5	1.25	6	5	75	2	fig 1	●
OMPQ-2B-030R1.5SH	3	1.5	4	6	75	2	fig 1	●
OMPQ-2B-030R1.5H	3	1.5	6	6	75	2	fig 1	●
OMPQ-2B-035R1.75SH	3.5	1.75	4	8	75	2	fig 1	●
OMPQ-2B-035R1.75H	3.5	1.75	6	8	75	2	fig 1	●
OMPQ-2B-040R2.0SH	4	2	4	8	75	2	fig 2	●
OMPQ-2B-040R2.0H	4	2	6	8	75	2	fig 1	●
OMPQ-2B-050R2.5H	5	2.5	6	10	75	2	fig 1	●
OMPQ-2B-055R2.75H	5.5	2.75	6	12	75	2	fig 1	●
OMPQ-2B-060R3.0H	6	3	6	12	75	2	fig2	●
OMPQ-2B-060R3.0G	6	3	6	12	100	2	fig 2	●
OMPQ-2B-070R3.5H	7	3.5	8	14	75	2	fig 1	●
OMPQ-2B-080R4.0H	8	4	8	16	75	2	fig 2	●
OMPQ-2B-080R4.0G	8	4	8	16	100	2	fig 2	●
OMPQ-2B-090R4.5H	9	4.5	10	18	100	2	fig 1	●
OMPQ-2B-100R5.0H	10	5	10	20	100	2	fig 2	●
OMPQ-2B-100R5.0G	10	5	10	20	150	2	fig 2	●
OMPQ-2B-120R6.0H	12	6	12	24	100	2	fig 2	●
OMPQ-2B-120R6.0G	12	6	12	24	150	2	fig 2	●
OMPQ-2B-140R7.0H	14	7	14	28	100	2	fig 2	●
OMPQ-2B-160R8.0H	16	8	16	32	150	2	fig 2	●
OMPQ-2B-200R10.0H	20	10	20	40	150	2	fig 2	●

Workpiece material (○ suitable、◎ very suitable)

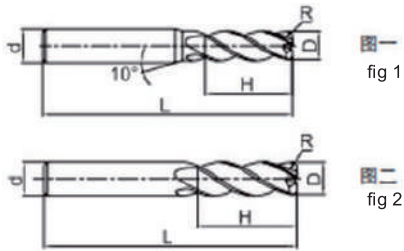
Carbon steel	Alloy steel	Pre-hardened steel、Hardened steel				Stainless steel	Cast iron, nodular cast iron	copper alloy	Aluminum alloy	titanium alloy	Heat resistant alloy
		~40HRC	~50HRC	~55HRC	~68HRC						
◎	◎	◎	○			○	◎				

OMPQ-2BH/G 2 flutes long shank/extra long shank ball head end mill

OMPQ-2BH recommend cutting parameters												
Workpiece material	Cast iron/nodular cast		Carbon steel, Alloy steel ~750N/mm2		Carbon steel, Alloy steel ~30HRC		Pre-hardened steel, hardened and tempered steel ~40HRC		Stainless steel		Pre-hardened steel, hardened and tempered steel ~50HRC	
Diameter (mm)	Rotating speed (min ⁻¹)	Feedspeed (mm/min)	Rotating speed (min ⁻¹)	Feedspeed (mm/min)	Rotating speed (min ⁻¹)	Feedspeed (mm/min)	Rotating speed (min ⁻¹)	Feedspeed (mm/min)	Rotating speed (min ⁻¹)	Feedspeed (mm/min)	Rotating speed (min ⁻¹)	Feedspeed (mm/min)
R0.5	40000	800	40000	800	38000	700	32000	320	22300	200	25000	275
R1.0	24000	900	24000	900	19000	760	16000	400	11150	230	13000	275
R1.5	15500	950	15500	950	12750	760	10600	450	7400	290	8500	280
R2.0	11500	950	11500	950	9550	760	8000	550	5550	370	6500	370
R2.5	9500	1050	9500	1050	7650	800	6400	550	4450	370	5000	375
R3.0	8000	1050	8000	1050	6400	800	5300	580	3700	390	4200	390
R4.0	6000	1300	6000	1300	4800	950	4000	700	2750	455	3200	440
R5.0	4800	1200	4800	1200	3800	900	3200	650	2200	430	2500	440
R6.0	4000	1100	4000	1100	3200	840	2650	610	1850	430	2100	420
R8.0	3000	1050	3000	1050	2400	800	2000	600	1350	380	1600	375
R10.0	2400	950	2400	950	1900	680	1600	560	1100	370	1250	330
max. cutting depth	 											

- 1.Please select high-precision machine and tool holder.
- 2.Please use air cooling or liquid cooing (Smoke-resistant cutting fluid).
- 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 rate stated above correspondingly.
- 4.Make overhang of tool as short as possible in conditions of non-interference.

OMPQ-4R 4 flutes straight shank corner radius end mill



- Wide range of applications,able to achieve a variety of forms of processing

helical angle $\angle 38^{\circ}$ diameter tolerance $D1\sim D6_{-0.02}^0$ / $D7\sim D12_{-0.025}^0$ radius R tolerance ± 0.02



part number	dimension (mm)					Number of flutes	Geometry	stock
	D	R	d	H	L			
OMPQ-4R-010R0.2S	1.0	0.2	4	3	50	4	fig 1	▲
OMPQ-4R-015R0.2S	1.5	0.2	4	4	50	4	fig 1	▲
OMPQ-4R-020R0.2S	2.0	0.2	4	6	50	4	fig 1	▲
OMPQ-4R-020R0.5S	2.0	0.5	4	6	50	4	fig 1	▲
OMPQ-4R-025R0.2S	2.5	0.2	4	8	50	4	fig 1	▲
OMPQ-4R-025R0.5S	2.5	0.5	4	8	50	4	fig 1	▲
OMPQ-4R-030R0.2S	3.0	0.2	4	8	50	4	fig 1	●
OMPQ-4R-030R0.5S	3.0	0.5	4	8	50	4	fig 1	●
OMPQ-4R-040R0.2S	4.0	0.2	4	11	50	4	fig 2	●
OMPQ-4R-040R0.3S	4.0	0.3	4	11	50	4	fig 2	●
OMPQ-4R-040R0.5	4.0	0.5	6	11	50	4	fig 2	●
OMPQ-4R-040R0.5S	4.0	0.5	4	11	50	4	fig 2	●
OMPQ-4R-050R0.2	5.0	0.2	6	13	50	4	fig2	●
OMPQ-4R-050R0.5	5.0	0.5	6	13	50	4	fig 1	●
OMPQ-4R-050R1.0	5.0	1.0	6	13	50	4	fig 1	●
OMPQ-4R-060R0.2	6.0	0.2	6	16	50	4	fig 1	●
OMPQ-4R-060R0.3	6.0	0.3	6	16	50	4	fig 2	●
OMPQ-4R-060R0.5	6.0	0.5	6	16	50	4	fig 2	●
OMPQ-4R-060R1.0	6.0	1.0	6	16	50	4	fig 2	●
OMPQ-4R-080R0.3	8.0	0.3	8	20	60	4	fig 2	●
OMPQ-4R-080R0.5	8.0	0.5	8	20	60	4	fig 2	●
OMPQ-4R-080R1.0	8.0	1.0	8	20	60	4	fig 2	●
OMPQ-4R-100R0.3	10.0	0.3	10	25	75	4	fig 2	●
OMPQ-4R-100R0.5	10.0	0.5	10	25	75	4	fig 2	●
OMPQ-4R-100R1.0	10.0	1.0	10	25	75	4	fig 2	●
OMPQ-4R-100R2.0	10.0	2.0	10	25	75	4	fig 2	●
OMPQ-4R-100R3.0	10.0	3.0	10	25	75	4	fig 2	●
OMPQ-4R-120R0.3	12.0	0.3	12	30	75	4	fig 2	●
OMPQ-4R-120R0.5	12.0	0.5	12	30	75	4	fig 2	●
OMPQ-4R-120R1.0	12.0	1.0	12	30	75	4	fig 2	●
OMPQ-4R-120R2.0	12.0	2.0	12	30	75	4	fig 2	●
OMPQ-4R-120R3.0	12.0	3.0	12	30	75	4	fig 2	●

● Stock available ▲ Make-to-order

OMPQ-4RH/G 4 flutes long shank /extra long shank corner radius end mill



helical angle $\angle 38^{\circ}$ diameter tolerance $D1\sim D6\begin{smallmatrix} 0 \\ -0.02 \end{smallmatrix} / D7\sim D12\begin{smallmatrix} 0 \\ -0.025 \end{smallmatrix}$ radius $R\pm 0.02$

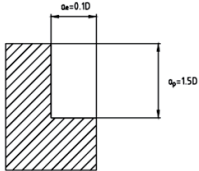
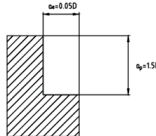
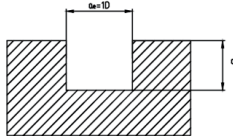
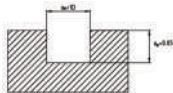
part number	dimension (mm)					Number of flutes	Geometry	stock
	D	R	d	H	L			
OMPQ-4R-040R0.2SH	4.0	0.2	4	10	75	4	fig 2	●
OMPQ-4R-040R0.2H	4.0	0.2	6	10	75	4	fig 2	●
OMPQ-4R-040R0.5SH	4.0	0.5	4	10	75	4	fig 2	●
OMPQ-4R-040R0.5H	4.0	0.5	6	10	75	4	fig 2	●
OMPQ-4R-060R0.2H	6.0	0.2	6	16	75	4	fig2	●
OMPQ-4R-060R0.2G	6.0	0.2	6	16	100	4	fig 2	●
OMPQ-4R-060R0.5H	6.0	0.5	6	16	75	4	fig 2	●
OMPQ-4R-060R0.5G	6.0	0.5	6	16	100	4	fig 2	●
OMPQ-4R-060R1.0H	6.0	1.0	6	16	75	4	fig 2	●
OMPQ-4R-060R1.0G	6.0	1.0	6	16	100	4	fig 2	●
OMPQ-4R-080R0.2H	8.0	0.2	8	20	75	4	fig 2	●
OMPQ-4R-080R0.2G	8.0	0.2	8	20	100	4	fig 2	●
OMPQ-4R-080R0.5H	8.0	0.5	8	20	75	4	fig 2	●
OMPQ-4R-080R0.5G	8.0	0.5	8	20	100	4	fig 2	●
OMPQ-4R-080R1.0H	8.0	1.0	8	20	75	4	fig 2	●
OMPQ-4R-080R1.0G	8.0	1.0	8	20	100	4	fig 2	●
OMPQ-4R-100R0.2H	10.0	0.2	10	25	100	4	fig 2	●
OMPQ-4R-100R0.2G	10.0	0.2	10	25	150	4	fig 2	●
OMPQ-4R-100R0.5H	10.0	0.5	10	25	100	4	fig 2	●
OMPQ-4R-100R0.5G	10.0	0.5	10	25	150	4	fig 2	●
OMPQ-4R-100R1.0H	10.0	1.0	10	25	100	4	fig 2	●
OMPQ-4R-100R1.0G	10.0	1.0	10	25	150	4	fig 2	●
OMPQ-4R-100R2.0H	10.0	2.0	10	25	100	4	fig 2	●
OMPQ-4R-100R2.0G	10.0	2.0	10	25	150	4	fig 2	●
OMPQ-4R-120R0.2H	12.0	0.2	12	30	100	4	fig 2	●
OMPQ-4R-120R0.2G	12.0	0.2	12	30	150	4	fig 2	●
OMPQ-4R-120R0.5H	12.0	0.5	12	30	100	4	fig 2	●
OMPQ-4R-120R0.5G	12.0	0.5	12	30	150	4	fig 2	●
OMPQ-4R-120R1.0H	12.0	1.0	12	30	100	4	fig 2	●
OMPQ-4R-120R1.0G	12.0	1.0	12	30	150	4	fig 2	●
OMPQ-4R-120R2.0H	12.0	2.0	12	30	100	4	fig 2	●
OMPQ-4R-120R2.0G	12.0	2.0	12	30	150	4	fig 2	●

● Stock available ▲ Make-to-order

Workpiece material (○ suitable、◎ very suitable)

Carbon steel	Alloy steel	Pre-hardened steel、Hardened steel				Stainless steel	Cast iron、nodular cast iron	copper alloy	Aluminum alloy	titanium alloy	Heat resistant alloy
		~40HRC	~50HRC	~55HRC	~68HRC						
◎	◎	◎	○			○	◎				

OMPQ-4R切削参数表
recommend cutting parameters

Workpiece material	Cast ironnodular cast		Carbon steel, Alloy steel ~750N/mm2		Carbon steel, Alloy steel ~30HRC		Pre-hardened steel,hardened and tempered steel ~40HRC		不锈钢 Stainless steel		Pre-hardened steel,hardened and tempered steel ~50HRC						
Diameter (mm)	Rotating speed (min ⁻¹)	Feedspeed (mm/min)	Rotating speed (min ⁻¹)	Feedspeed (mm/min)	Rotating speed (min ⁻¹)	Feedspeed (mm/min)	Rotating speed (min ⁻¹)	Feedspeed (mm/min)	Rotating speed (min ⁻¹)	Feedspeed (mm/min)	Rotating speed (min ⁻¹)	Feedspeed (mm/min)					
3	14000	820	14000	820	13000	755	10600	630	7500	145	8500	490					
4	10800	840	10800	840	10000	770	8000	640	5500	145	6500	500					
5	8200	880	8200	880	7600	810	6400	670	4500	145	5000	530					
6	7000	900	7000	900	6400	830	5300	690	3700	160	4200	540					
8	5200	890	5200	890	4800	815	4000	680	2800	160	3200	550					
10	4200	880	4200	880	3800	810	3200	670	2200	160	2500	520					
12	3500	880	3500	880	3200	810	2650	670	1850	160	2100	520					
16	2600	680	2600	680	2400	630	2000	525	1400	120	1600	490					
max. cutting depth																	
																	
	<table><tr><td>tool diameter</td><td>Ap</td></tr><tr><td>Φ1≤D≤Φ3</td><td>0.15D</td></tr><tr><td>Φ3≤D</td><td>0.3D</td></tr></table>											tool diameter	Ap	Φ1≤D≤Φ3	0.15D	Φ3≤D	0.3D
tool diameter	Ap																
Φ1≤D≤Φ3	0.15D																
Φ3≤D	0.3D																

1. 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.
2. Please select high-precision machine and tool holder.
3. Please use air cooling or liquid cooling (Smoke-resistant cutting fluid).
4. Climb cutting is recommended in the case of side milling.
5. When the machine rigidity and workpiece fixture stability is low, vibration and abnormal noise may be generated. Please reduce the rotating speed and feed rate correspondingly.
6. Make overhang of tool as short as possible in conditions of non-interference.

OMPX high performance and wide application range

Product features and application range

OMPX is suitable for efficient cutting of workpiece hardness <HRC50

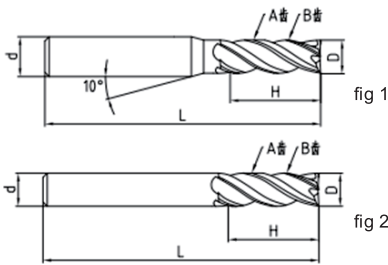
OMPX-4E
1 Fine grain size hard substrate with high resistance to bending and excellent heat impact resistance.
Wear-resistant and heat-resistant coating improves tool life in difference processed materials.
Unequal spiral Angle design plays a good effect of vibration control. It is widely used in difficult cutting material such as cast iron, die steel, stainless steel, Kovar-alloy, titanium alloy etc, to achieve high speed, high feed, and large cutting depth processing.

OMPX-4R
The design of curved rake face ensures the accuracy of R corner, in addition, continuously changed design of rake face angle improves the strength of the cutting edge and provides better tool life.

OMPX-2B
The combination of new coating and ultra fine super-hard substrate improves the heat and wear resistance
Curvilinear cutting edge enhances cutting edge strength, reduces cutting resistance, and improves wear resistance and chipping resistance.
The special design of the tooth space angle improves the chip discharge performance.



OMPX-4E 4 flutes straight shank flat end mill



● Most suitable for side milling and shallow groove processing. Wide applicability

A helical angle $\angle 41^{\circ}$, B helical angle $\angle 38^{\circ}$ diameter tolerance $D1\sim D6_{-0.02}^0 / D7\sim D20_{-0.025}^0$



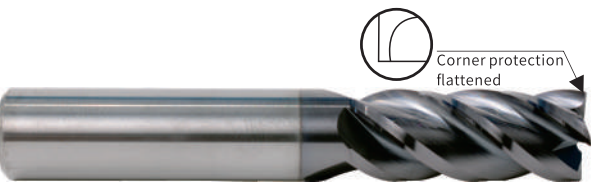
part number	dimension (mm)				Number of flutes	Geometry	stock
	D	d	H	L			
OMPX-4E-010S	1	4	3	50	4	fig 1	●
OMPX-4E-015S	1.5	4	4	50	4	fig 1	●
OMPX-4E-020S	2	4	6	50	4	fig 1	●
OMPX-4E-025S	2.5	4	8	50	4	fig 1	●
OMPX-4E-030S	3.0	4	8	50	4	fig 1	●
OMPX-4E-025	2.5	6	8	50	4	fig 1	●
OMPX-4E-030	3.0	6	8	50	4	fig 1	●
OMPX-4E-035S	3.5	4	10	50	4	fig 1	●
OMPX-4E-040S	4.0	4	11	50	4	fig 2	●
OMPX-4E-035	3.5	6	10	50	4	fig 1	●
OMPX-4E-040	4.0	6	11	50	4	fig 1	●
OMPX-4E-045	4.5	6	11	50	4	fig 1	●
OMPX-4E-050	5.0	6	13	50	4	fig 1	●
OMPX-4E-055	5.5	6	16	50	4	fig 1	●
OMPX-4E-060	6.0	6	16	50	4	fig 2	●
OMPX-4E-070	7.0	8	20	60	4	fig 1	●
OMPX-4E-080	8.0	8	20	60	4	fig 2	●
OMPX-4E-090	9.0	10	22	75	4	fig 1	●
OMPX-4E-100	10.0	10	25	75	4	fig 2	●
OMPX-4E-110	11.0	12	26	75	4	fig 1	●
OMPX-4E-120	12.0	12	30	75	4	fig 2	●
OMPX-4E-140	14.0	14	32	75	4	fig 2	●
OMPX-4E-160	16.0	16	45	100	4	fig 2	●
OMPX-4E-180	18.0	18	45	100	4	ig 2	●
OMPX-4E-200	20.0	20	45	100	4	fig 2	●

● Stock available ▲ Make-to-order

Workpiece material (○ suitable、◎ very suitable)

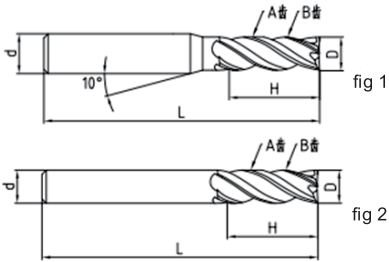
Carbon steel	Alloy steel	Pre-hardened steel、Hardened steel				Stainless steel	Cast iron, nodular cast iron	copper alloy	Aluminum alloy	titanium alloy	Heat resistant alloy
		~40HRC	~50HRC	~55HRC	~68HRC						
◎	◎	◎	◎			◎	◎			◎	○

OMPX-4EL 4 flutes long cutting edge flat end mill



● OMPX-4E Long cutting edge series

A helical angle $\angle 41^{\circ} / 40^{\circ} / 39^{\circ}$, B helical angle $\angle 38^{\circ}$ diameter tolerance $D1\sim D6_{-0.02}^0 / D7\sim D20_{-0.025}^0$



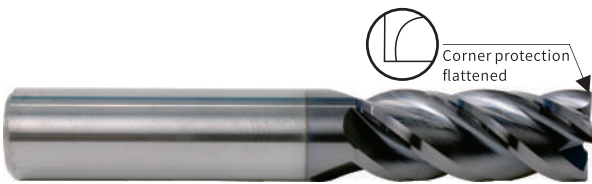
part number	dimension (mm)				Number of flutes	Geometry	stock
	D	d	H	L			
OMPX-4E-030L	3.0	6	12	75	4	fig 1	●
OMPX-4E-040L	4.0	6	15	75	4	fig 1	●
OMPX-4E-050L	5.0	6	20	75	4	fig 1	●
OMPX-4E-060L	6.0	6	20	75	4	fig 2	●
OMPX-4E-080L	8.0	8	25	100	4	fig 2	●
OMPX-4E-100L	10.0	10	30	100	4	fig 2	●
OMPX-4E-120L	12.0	12	35	100	4	fig 2	●
OMPX-4E-140L	14.0	14	40	100	4	fig 2	●
OMPX-4E-160L	16.0	16	50	150	4	fig 2	●
OMPX-4E-200L	20.0	20	55	150	4	fig 2	●

● Stock available ▲ Make-to-order

Workpiece material (○ suitable、◎ very suitable)

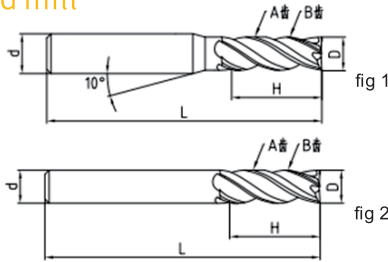
Carbon steel	Alloy steel	Pre-hardened steel, Hardened steel				Stainless steel	Cast iron, nodular cast iron	copper alloy	Aluminum alloy	titanium alloy	Heat resistant alloy
		~40HRC	~50HRC	~55HRC	~68HRC						
◎	◎	◎	◎			◎	◎			◎	○

OMPX-4EH/G 4 flutes long shank /extra long shank flat end mill



● OMPX-4E long shank/extra shank series

A helical angle $\angle 41^{\circ}$, B helical angle $\angle 38^{\circ}$ diameter tolerance $D1\sim D6_{-0.02}^0 / D7\sim D12_{-0.025}^0$



part number	dimension (mm)				Number of flutes	Geometry	stock
	D	d	H	L			
OMPX-4E-030SH	3.0	4	8	75	4	fig 1	●
OMPX-4E-030H	3.0	6	8	75	4	fig 1	●
OMPX-4E-040SH	4.0	4	11	75	4	fig 2	●
OMPX-4E-040H	4.0	6	11	75	4	fig 1	●
OMPX-4E-050H	5.0	6	13	75	4	fig 1	●
OMPX-4E-060H	6.0	6	16	75	4	fig 2	●
OMPX-4E-060G	6.0	6	16	100	4	fig 2	●
OMPX-4E-080H	8.0	8	20	75	4	fig 2	●
OMPX-4E-080G	8.0	8	20	100	4	fig 2	●
OMPX-4E-100H	10.0	10	25	100	4	fig 2	●
OMPX-4E-100G	10.0	10	25	150	4	fig 2	●
OMPX-4E-120H	12.0	12	30	100	4	fig 2	●
OMPX-4E-120G	12.0	12	30	150	4	fig 2	●

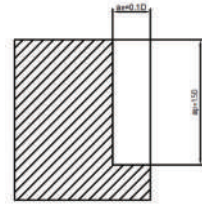
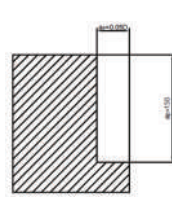
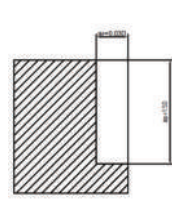
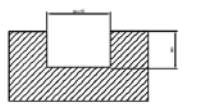
● Stock available ▲ Make-to-order

Workpiece material (○ suitable、◎ very suitable)

Carbon steel	Alloy steel	Pre-hardened steel, Hardened steel				Stainless steel	Cast iron, nodular cast iron	copper alloy	Aluminum alloy	titanium alloy	Heat resistant alloy
		~40HRC	~50HRC	~55HRC	~68HRC						
◎	◎	◎	◎			◎	◎			◎	○

OMPX-4EH/G 4 flutes long shank /extra long shank flat end mill

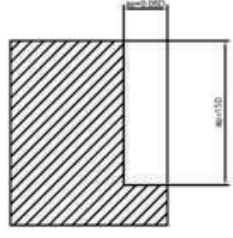
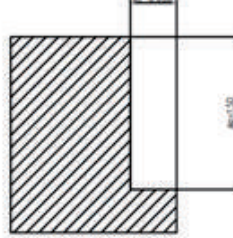
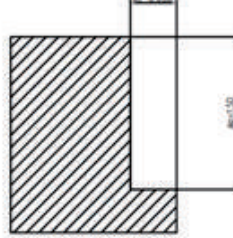
OMPX-4E/4EL/4EH/4EG recommend cutting parameters(Normal cutting)

Workpiece material	Cast iron, carbon steel, Alloy Steel ~30HRC		Stainless steel		Pre-hardened steel,hardened and tempered steel ~40HRC		Pre-hardened steel,hardened and tempered steel ~50HRC		Quenched steel 55HRC														
(mm)	(min ⁻¹)	(mm/min)	(min ⁻¹)	(mm/min)	(min ⁻¹)	(mm/min)	(min ⁻¹)	(mm/min)	(min ⁻¹)	(mm/min)													
1	20000	300	20000	108	20000	240	20000	180	20000	135													
2	15000	480	11500	120	15000	420	13000	270	11140	195													
3	14000	815	7500	145	10600	630	8500	495	7430	360													
4	10800	840	5500	150	8000	645	6500	505	5570	370													
5	8200	875	4500	150	6400	675	5000	530	4460	390													
6	7000	900	3700	165	5300	690	4200	540	3710	390													
8	5200	890	2800	165	4000	680	3200	555	2785	405													
10	4200	875	2200	165	3200	675	2500	525	2230	375													
12	3500	875	1850	165	2650	675	2100	525	1855	375													
14	3000	815	1600	150	2300	630	1800	495	1590	360													
16	2600	815	1400	145	2000	630	1600	495	1390	360													
18	2300	805	1250	125	1800	620	1400	485	1240	350													
20	2050	805	1100	125	1600	620	1250	485	1115	350													
max. cutting depth																							
					<table><tr><th>tool diameter</th><th>Ap</th></tr><tr><td>□1≤D≤□3</td><td>0.15D</td></tr><tr><td>□3≤D≤□6</td><td>0.3D</td></tr><tr><td>□6≤D≤□20</td><td>0.5D</td></tr></table>				tool diameter	Ap	□1≤D≤□3	0.15D	□3≤D≤□6	0.3D	□6≤D≤□20	0.5D	<table><tr><th>tool diameter</th><th>Ap</th></tr><tr><td>∅1≤D≤∅3</td><td>0.1D</td></tr><tr><td>∅3≤D</td><td>0.3D</td></tr></table>		tool diameter	Ap	∅1≤D≤∅3	0.1D	∅3≤D
tool diameter	Ap																						
□1≤D≤□3	0.15D																						
□3≤D≤□6	0.3D																						
□6≤D≤□20	0.5D																						
tool diameter	Ap																						
∅1≤D≤∅3	0.1D																						
∅3≤D	0.3D																						

1. 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.
2. Please select high-precision machine and tool holder.
3. Please use air cooling or liquid cooing (Smoke-resistant cutting fluid).
4. Climb cutting is recommended in the case of side milling.
5. When the machine rigidity and workpiece fixture stability is low, vibration and abnormal noise may be generated. Please reduce the rotating speed and feed rate stated above correspondingly.
6. Make overhang of tool as short as possible in conditions of non-interference.

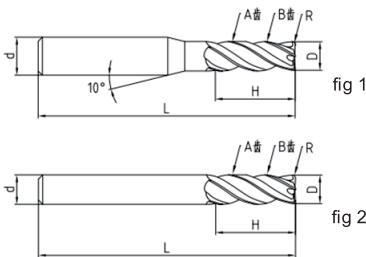
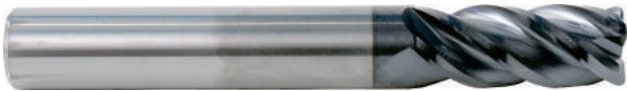
OMPX-4EH/G 4 flutes long shank /extra long shank flat end mill

OMPX-4E/4EL/4EH/4EG recommend cutting parameters(high speed cutting)

Workpiece material	Cast iron, carbon steel, Alloy Steel 30HRC		Stainless steel		Pre-hardened steel,hardened and tempered steel 40HRC		Pre-hardened steel,hardened and tempered steel 50HRC		Quenched steel 55HRC	
	(mm)	(min ⁻¹)	(mm/min)	(min ⁻¹)	(mm/min)	(min ⁻¹)	(mm/min)	(min ⁻¹)	(mm/min)	(min ⁻¹)
6	15915	1705	13260	1420	10600	1135	7960	850	5300	570
8	11935	1700	9950	1400	7960	1130	5970	850	3980	570
10	9550	1660	7960	1380	6370	1110	4775	830	3180	550
12	7960	1660	6630	1380	5300	1110	3980	830	2650	550
14	6820	1545	5685	1290	4550	1030	3410	900	2275	515
16	5970	1545	4975	1290	3980	1030	2985	900	1990	515
18	5305	1545	4420	1290	3540	1030	2650	900	1770	515
20	4775	1545	3980	1290	3180	1030	2390	900	1590	515
max.cutting depth										
	MAX ae=1.0mm				MAX ap=0.5mm					

- 1.Please select high-precision machine and tool holder.
- 2.Please use air cooling or MQL (minimum oil mist cooling)
- 3.climb 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 rate stated above correspondingly.
- 5.Make overhang of tool as short as possible in conditions of non-interference.

OMPX-4R 4 flutes straight shank corner radius end mill



● wide range of applications, able to achieve various forms of processing

A helical angle $\angle 41^{\circ}$, B helical angle $\angle 38^{\circ}$ diameter tolerance $D1\sim D6_{-0.02}^0$ / $D7\sim D12_{-0.025}^0$ $R\pm 0.01$



part number	dimension (mm)					Number of flutes	Geometry	stock
	D	R	H	L	d			
OMPX-4R-010R0.2S	1.0	0.2	3	50	4	4	fig 1	▲
OMPX-4R-015R0.2S	1.5	0.2	4	50	4	4	fig 1	▲
OMPX-4R-020R0.2S	2.0	0.2	6	50	4	4	fig 1	▲
OMPX-4R-020R0.2	2.0	0.2	6	50	6	4	fig 1	▲
OMPX-4R-020R0.5S	2.0	0.5	6	50	4	4	fig 1	▲
OMPX-4R-020R0.5	2.0	0.5	6	50	6	4	fig 1	▲
OMPX-4R-025R0.2S	2.5	0.2	8	50	4	4	fig 1	▲
OMPX-4R-025R0.2	2.5	0.5	8	50	6	4	fig 1	▲
OMPX-4R-025R0.5S	2.5	0.5	8	50	4	4	fig 1	▲
OMPX-4R-025R0.5	2.5	0.5	8	50	6	4	fig 1	▲
OMPX-4R-030R0.2S	3.0	0.2	8	50	4	4	fig 1	●
OMPX-4R-030R0.2	3.0	0.2	8	50	6	4	fig 1	●
OMPX-4R-030R0.5S	3.0	0.5	8	50	4	4	fig 1	●
OMPX-4R-030R0.5	3.0	0.5	8	50	6	4	fig 1	●
OMPX-4R-040R0.2S	4.0	0.2	11	50	4	4	fig 2	●
OMPX-4R-040R0.2	4.0	0.2	11	50	6	4	fig 1	●
OMPX-4R-040R0.3S	4.0	0.3	11	50	4	4	fig 2	●
OMPX-4R-040R0.3	4.0	0.3	11	50	6	4	fig 1	●
OMPX-4R-040R0.5S	4.0	0.5	11	50	4	4	fig 2	●
OMPX-4R-040R0.5	4.0	0.5	11	50	6	4	fig 1	●
OMPX-4R-050R0.2	5.0	0.2	13	50	6	4	fig 1	●
OMPX-4R-050R0.3	5.0	0.3	13	50	6	4	fig 1	●
OMPX-4R-050R0.5	5.0	0.5	13	50	6	4	fig 1	●
OMPX-4R-050R1.0	5.0	1.0	13	50	6	4	fig 1	●
OMPX-4R-060R0.2	6.0	0.2	16	50	6	4	fig 2	●
OMPX-4R-060R0.3	6.0	0.3	16	50	6	4	fig 2	●
OMPX-4R-060R0.5	6.0	0.5	16	50	6	4	fig 2	●
OMPX-4R-060R1.0	6.0	1.0	16	50	6	4	fig 2	●
OMPX-4R-080R0.2	8.0	0.2	20	60	8	4	fig 2	●
OMPX-4R-080R0.3	8.0	0.3	20	60	8	4	fig 2	●
OMPX-4R-080R0.5	8.0	0.5	20	60	8	4	fig 2	●
OMPX-4R-080R1.0	8.0	1.0	20	60	8	4	fig 2	●
OMPX-4R-100R0.2	10.0	0.2	25	75	10	4	fig 2	●
OMPX-4R-100R0.3	10.0	0.3	25	75	10	4	fig 2	●

● Stock available ▲ Make-to-order

part number	dimension (mm)					Number of flutes	Geometry	stock
	D	R	H	L	d			
OMPX-4R-100R0.5	10.0	0.5	25	75	10	4	fig 2	●
OMPX-4R-100R1.0	10.0	1.0	25	75	10	4	fig 2	●
OMPX-4R-100R2.0	10.0	2.0	25	75	10	4	fig 2	●
OMPX-4R-100R3.0	10.0	3.0	25	75	10	4	fig 2	●
OMPX-4R-120R0.2	12.0	0.2	30	75	12	4	fig 2	●
OMPX-4R-120R0.3	12.0	0.3	30	75	12	4	fig 2	●
OMPX-4R-120R0.5	12.0	0.5	30	75	12	4	fig 2	●
OMPX-4R-120R1.0	12.0	1.0	30	75	12	4	fig 2	●
OMPX-4R-120R2.0	12.0	2.0	30	75	12	4	fig 2	●
OMPX-4R-120R3.0	12.0	3.0	30	75	12	4	fig 2	●

● Stock available ▲ Make-to-order

被加工材料Workpiece material (○适合suitable、◎非常适合very suitable)

碳素钢 Carbon steel	合金钢 Alloy steel	预硬钢、淬硬钢 Pre-hardened steel, Hardened steel				不锈钢 Stainless steel	铸铁球 墨铸铁 Cast iron nodular cast iron	铜合金 copper alloy	铝合金 Aluminum alloy	钛合金 titanium alloy	耐热合金 Heat resistant alloy
		~40HRC	~50HRC	~55HRC	~68HRC						
◎	◎	◎	◎			◎	◎			◎	○

OMPX-4RH/G 4 flutes long shank/extra long corner radius end mill



● long shank /Extra long shank series

A helical angle $\angle 41^{\circ}$, B helical angle $\angle 38^{\circ}$ diameter tolerance $D1\sim D6_{-0.02}^0$ / $D7\sim D12_{-0.025}^0$ $R\pm 0.01$

part number	dimension (mm)					Number of flutes	Geometry	stock
	D	R	H	L	d			
OMPX-4R-040R0.2SH	4.0	0.2	10	75	4	4	fig 2	▲
OMPX-4R-040R0.2H	4.0	0.2	10	75	6	4	fig 1	▲
OMPX-4R-040R0.5SH	4.0	0.5	10	75	4	4	fig 2	▲
OMPX-4R-040R0.5H	4.0	0.5	10	75	6	4	fig 1	▲
OMPX-4R-060R0.2H	6.0	0.2	16	75	6	4	fig 2	▲
OMPX-4R-060R0.2G	6.0	0.2	16	100	6	4	fig 2	▲
OMPX-4R-060R0.5H	6.0	0.5	16	75	6	4	fig 2	▲
OMPX-4R-060R0.5G	6.0	0.5	16	100	6	4	fig 2	▲
OMPX-4R-060R1.0H	6.0	1.0	16	75	6	4	fig 2	▲
OMPX-4R-060R1.0G	6.0	1.0	16	100	6	4	fig 2	▲
OMPX-4R-080R0.2H	8.0	0.2	20	75	8	4	fig 2	▲
OMPX-4R-080R0.2G	8.0	0.2	20	100	8	4	fig 2	▲
OMPX-4R-080R0.5H	8.0	0.5	20	75	8	4	fig 2	▲
OMPX-4R-080R0.5G	8.0	0.5	20	100	8	4	fig 2	▲
OMPX-4R-080R1.0H	8.0	1.0	20	75	8	4	fig 2	▲
OMPX-4R-080R1.0G	8.0	1.0	20	100	8	4	fig 2	▲
OMPX-4R-100R0.2H	10.0	0.2	25	100	10	4	fig 2	▲
OMPX-4R-100R0.2G	10.0	0.2	25	150	10	4	fig 2	▲
OMPX-4R-100R0.5H	10.0	0.5	25	100	10	4	fig 2	▲
OMPX-4R-100R0.5G	10.0	0.5	25	150	10	4	fig 2	▲
OMPX-4R-100R1.0H	10.0	1.0	25	100	10	4	fig 2	▲
OMPX-4R-100R1.0G	10.0	1.0	25	150	10	4	fig 2	▲
OMPX-4R-100R2.0H	10.0	2.0	25	100	10	4	fig 2	▲
OMPX-4R-100R2.0G	10.0	2.0	25	150	10	4	fig 2	▲
OMPX-4R-120R0.2H	12.0	0.2	30	100	12	4	fig 2	▲
OMPX-4R-120R0.2G	12.0	0.2	30	150	12	4	fig 2	▲
OMPX-4R-120R0.5H	12.0	0.5	30	100	12	4	fig 2	▲
OMPX-4R-120R0.5G	12.0	0.5	30	150	12	4	fig 2	▲
OMPX-4R-120R1.0H	12.0	1.0	30	100	12	4	fig 2	▲
OMPX-4R-120R1.0G	12.0	1.0	30	150	12	4	fig 2	▲
OMPX-4R-120R2.0H	12.0	2.0	30	100	12	4	fig 2	▲
OMPX-4R-120R2.0G	12.0	2.0	30	150	12	4	fig 2	▲

● Stock available ▲ Make-to-order

Workpiece material (○ suitable、◎ very suitable)

Carbon steel	Alloy steel	Pre-hardened steel, Hardened steel				Stainless steel	Cast iron, nodular cast iron	copper alloy	Aluminum alloy	titanium alloy	Heat resistant alloy
		~40HRC	~50HRC	~55HRC	~68HRC						
◎	◎	◎	◎			◎	◎			◎	○

OMPX-4RH/G 4 flutes long shank/extra long corner radius end mill

OMPX-4R/4RH/4RG recommend cutting parameters (normal cutting)

Workpiece material	Cast iron, carbon steel, Alloy Steel 30HRC		Stainless steel		Pre-hardened steel, hardened and tempered steel 40HRC		Pre-hardened steel, hardened and tempered steel ~50HRC		Quenched steel 55HRC								
Diameter (mm)	Rotating speed (min ⁻¹)	Feedspeed (mm/min)	Rotating speed (min ⁻¹)	Feedspeed (mm/min)	Rotating speed (min ⁻¹)	Feedspeed (mm/min)	Rotating speed (min ⁻¹)	Feedspeed (mm/min)	Rotating speed (min ⁻¹)	Feedspeed (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																	
						<table><tr><th>tool diameter</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>					tool diameter	Ap	Ø1 ≤ D ≤ Ø3	0.15D	Ø3 ≤ D ≤ Ø6	0.3D	Ø6 ≤ D ≤ Ø20
tool diameter	Ap																
Ø1 ≤ D ≤ Ø3	0.15D																
Ø3 ≤ D ≤ Ø6	0.3D																
Ø6 ≤ D ≤ Ø20	0.5D																
					<table><tr><th>tool diameter</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>					tool diameter	Ap	Ø1 ≤ D ≤ Ø3	0.1D	Ø3 ≤ D	0.2D		
tool diameter	Ap																
Ø1 ≤ D ≤ Ø3	0.1D																
Ø3 ≤ D	0.2D																

- 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.
- 3.3. Please use air cooling or liquid cooling (Smoke-resistant cutting fluid).
- Climb 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 rate stated above correspondingly.
- Make overhang of tool as short as possible in conditions of non-interference.

OMPX-2B 2 flutes straight shank ball head end mill



● wide range of applications, able to achieve various forms of processing

helical angle $\angle 30^\circ$ diameter tolerance $D1 \sim D20 \begin{smallmatrix} 0 \\ -0.02 \end{smallmatrix}$ $R \pm 0.005$

part number	dimension (mm)					Number of flutes	Geometry	stock
	D	R	H	L	d			
OMPX-2B-010R0.5S	1.0	0.5	2	50	4	2	fig 1	▲
OMPX-2B-010R0.5	1.0	0.5	2	50	6	2	fig 1	▲
OMPX-2B-015R0.75S	1.5	0.75	3	50	4	2	fig 1	▲
OMPX-2B-015R0.75	1.5	0.75	3	50	6	2	fig 1	▲
OMPX-2B-020R1.0F	2.0	1.0	4	50	3	2	fig 1	●
OMPX-2B-020R1.0S	2.0	1.0	4	50	4	2	fig 1	●
OMPX-2B-020R1.0	2.0	1.0	4	50	6	2	fig 1	●
OMPX-2B-025R1.25F	2.5	1.25	5	50	3	2	fig 1	●
OMPX-2B-025R1.25S	2.5	1.25	5	50	4	2	fig 1	●
OMPX-2B-025R1.25	2.5	1.25	5	50	6	2	fig1	●
OMPX-2B-030R1.5F	3.0	1.5	6	50	3	2	fig 2	●
OMPX-2B-030R1.5S	3.0	1.5	6	50	4	2	fig 1	●
OMPX-2B-030R1.5	3.0	1.5	6	50	6	2	fig 1	●
OMPX-2B-035R1.75S	3.5	1.75	8	50	4	2	fig 1	●
OMPX-2B-035R1.75	3.5	1.75	8	50	6	2	fig 1	●
OMPX-2B-040R2.0S	4.0	2.0	8	50	4	2	fig 2	●
OMPX-2B-040R2.0	4.0	2.0	8	50	6	2	fig 1	●
OMPX-2B-050R2.5	5.0	2.5	10	50	6	2	fig 1	●
OMPX-2B-055R2.75	5.5	2.75	12	50	6	2	fig1	●
OMPX-2B-060R3.0	6.0	3.0	12	50	6	2	fig 2	●
OMPX-2B-070R3.5	7.0	3.5	14	60	8	2	fig 1	●
OMPX-2B-080R4.0	8.0	4.0	16	60	8	2	fig 2	●
OMPX-2B-090R4.5	9.0	4.5	18	75	10	2	fig 1	●
OMPX-2B-100R5.0	10.0	5.0	20	75	10	2	fig 2	●
OMPX-2B-120R6.0	12.0	6.0	24	75	12	2	fig 2	●
OMPX-2B-140R7.0	14.0	7.0	28	75	14	2	fig 2	●
OMPX-2B-160R8.0	16.0	8.0	32	100	16	2	fig 2	●
OMPX-2B-200R10.0	20.0	10.0	40	100	20	2	fig 2	●

● Stock available ▲ Make-to-order

Workpiece material (○suitable、◎ very suitable)											
Carbon steel	Alloy steel	Pre-hardened steel, Hardened steel				Stainless steel	Cast iron, nodular cast iron	copper alloy	Aluminum alloy	titanium alloy	Heat resistant alloy
		~40HRC	~50HRC	~55HRC	~68HRC						
◎	◎	◎	◎			○	◎			○	○

OMPX-2BH/G 2 flutes long shank/extra long shank ball head end mill



● OMPX-2B Long shank/Extra long shank series

helical angle $\angle 30^\circ$ diameter tolerance $D1 \sim D20 \begin{smallmatrix} 0 \\ -0.02 \end{smallmatrix}$ $R \pm 0.005$

part number	dimension (mm)					Number of flutes	Geometry	stock
	D	R	H	L	d			
OMPX-2B-020R1.0SH	2.0	1.0	4	75	4	2	fig 1	▲
OMPX-2B-020R1.0H	2.0	1.0	4	75	6	2	fig 1	▲
OMPX-2B-025R1.25SH	2.5	1.25	5	75	4	2	fig 1	▲
OMPX-2B-025R1.25H	2.5	1.25	5	75	6	2	fig 1	▲
OMPX-2B-030R1.5SH	3.0	1.5	6	75	4	2	fig 1	▲
OMPX-2B-030R1.5H	3.0	1.5	6	75	6	2	fig 1	▲
OMPX-2B-035R1.75SH	3.5	1.75	8	75	4	2	fig 1	▲
OMPX-2B-035R1.75H	3.5	1.75	8	75	6	2	fig 1	▲
OMPX-2B-040R2.0SH	4.0	2.0	8	75	4	2	fig 2	▲
OMPX-2B-040R2.0H	4.0	2.0	8	75	6	2	fig1	▲
OMPX-2B-050R2.5H	5.0	2.5	10	75	6	2	fig 1	▲
OMPX-2B-055R2.75H	5.5	2.75	12	75	6	2	fig 1	▲
OMPX-2B-060R3.0H	6.0	3.0	12	75	6	2	fig 2	▲
OMPX-2B-060R3.0G	6.0	3.0	12	100	6	2	fig 2	▲
OMPX-2B-070R3.5H	7.0	3.5	14	75	8	2	fig 1	▲
OMPX-2B-080R4.0H	8.0	4.0	16	75	8	2	fig 2	▲
OMPX-2B-080R4.0G	8.0	4.0	16	100	8	2	fig 2	▲
OMPX-2B-090R4.5H	9.0	4.5	18	100	10	2	fig 1	▲
OMPX-2B-100R5.0H	10.0	5.0	20	100	10	2	fig2	▲
OMPX-2B-100R5.0G	10.0	5.0	20	150	10	2	fig 2	▲
OMPX-2B-120R6.0H	12.0	6.0	24	100	12	2	fig 2	▲
OMPX-2B-120R6.0G	12.0	6.0	24	150	12	2	fig 2	▲
OMPX-2B-140R7.0H	14.0	7.0	28	100	14	2	fig 2	▲
OMPX-2B-160R8.0H	16.0	8.0	32	150	16	2	fig 2	▲
OMPX-2B-200R10.0H	20.0	10.0	32	150	20	2	fig 2	▲

● Stock available ▲ Make-to-order

Workpiece material (○suitable、◎very suitable)											
Carbon steel	Alloy steel	Pre-hardened steel, Hardened steel				Stainless steel	Cast iron, nodular cast iron	copper alloy	Aluminum alloy	titanium alloy	Heat resistant alloy
		~40HRC	~50HRC	~55HRC	~68HRC						
◎	◎	◎	◎			○	◎			○	○

OMH series for quenched steel

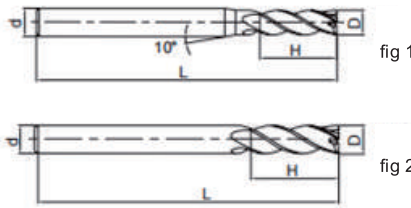
Product features and application range

The series are suitable for semi-finishing and finishing of steel <HRC55 and quenched steel ;

1. High rigidity tool structure design, effectively reduces the vibration in the process of tool machining;
2. High strength, high toughness substrate with new high hard special coating, effectively prolongs the tool life, also gives better workpiece surface quality.



OMH-4E 4 flutes straight flat head end mill



- Suitable for side milling and shallow slot milling
- Most suitable for high speed milling and dry milling

helical angle $\angle 45^\circ$ diameter tolerance $D1\sim D6_{-0.02}^0 / D6\sim D14_{-0.025}^0 / D15\sim D20_{-0.03}^0$



part number	dimension (mm)				Number of flutes	Geometry	stock
	D	d	H	L			
OMH-4E-010F	1.0	3	3	50	4	fig 1	●
OMH-4E-010S	1.0	4	3	50	4	fig 1	●
OMH-4E-010	1.0	6	3	50	4	fig 1	●
OMH-4E-015F	1.5	3	4	50	4	fig 1	●
OMH-4E-015S	1.5	4	4	50	4	fig 1	●
OMH-4E-015	1.5	6	4	50	4	fig 1	●
OMH-4E-020F	2.0	3	6	50	4	fig 1	●
OMH-4E-020S	2.0	4	6	50	4	fig 1	●
OMH-4E-020	2.0	6	6	50	4	fig 1	●
OMH-4E-025F	2.5	3	8	50	4	fig1	●
OMH-4E-025S	2.5	4	8	50	4	fig 1	●
OMH-4E-025	2.5	6	8	50	4	fig 1	●
OMH-4E-030F	3.0	3	8	50	4	fig 2	●
OMH-4E-030S	3.0	4	8	50	4	fig 1	●
OMH-4E-030	3.0	6	8	50	4	fig 1	●
OMH-4E-035S	3.5	4	10	50	4	fig 1	●
OMH-4E-040S	4.0	4	11	50	4	fig 2	●
OMH-4E-035	3.5	6	10	50	4	fig 1	●
OMH-4E-040	4.0	6	11	50	4	fig1	●
OMH-4E-045	4.5	6	11	50	4	fig 1	●

● Stock available ▲ Make-to-order

OMH-4E 4 flutes straight flat head end mill

part number	dimension (mm)				Number of flutes	Geometry	stock
	D	d	H	L			
OMH-4E-050	5.0	6	13	50	4	fig 1	●
OMH-4E-055	5.5	6	16	50	4	fig 1	●
OMH-4E-060	6.0	6	16	50	4	fig 2	●
OMH-4E-070	7.0	8	20	60	4	fig 1	●
OMH-4E-080	8.0	8	20	60	4	fig 2	●
OMH-4E-090	9.0	10	22	75	4	fig 1	●
OMH-4E-100	10.0	10	25	75	4	fig 2	●
OMH-4E-110	11.0	12	26	75	4	fig 1	●
OMH-4E-120	12.0	12	30	75	4	fig 2	●
OMH-4E-140	14.0	14	32	75	4	fig2	●
OMH-4E-160	16.0	16	45	100	4	fig 2	●
OMH-4E-180	18.0	18	45	100	4	fig2	●
OMH-4E-200	20.0	20	45	100	4	fig 2	●

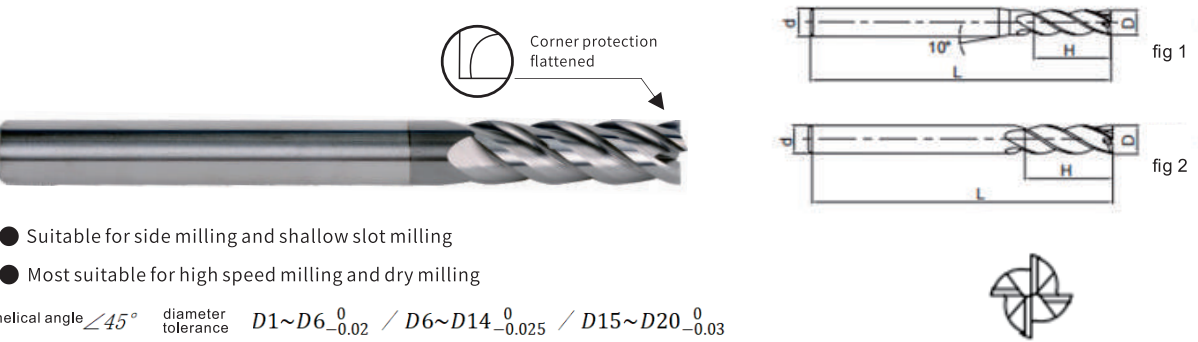
● Stock available

▲ Make-to-order

Workpiece material (○suitable, ◎very suitable)

Carbon steel	Alloy steel	Pre-hardened steel, Hardened steel				Stainless steel	Cast iron, nodular cast iron	copper alloy	Aluminum alloy	titanium alloy	Heat resistant alloy
		~40HRC	~50HRC	~55HRC	~68HRC						
○	○	◎	◎	◎		○	○				

OMH-4EL 4 flute long shank flat end mill



part number	dimension (mm)				Number of flutes	Geometry	stock
	D	d	H	L			
OMH-4E-030L	3.0	6	12	75	4	fig 1	▲
OMH-4E-040L	4.0	6	15	75	4	fig 1	▲
OMH-4E-050L	5.0	6	20	75	4	fig 1	▲
OMH-4E-060L	6.0	6	20	75	4	fig 2	▲
OMH-4E-080L	8.0	8	25	100	4	fig 2	▲
OMH-4E-100L	10.0	10	30	100	4	fig 2	▲
OMH-4E-120L	12.0	12	35	100	4	fig 2	▲
OMH-4E-140L	14.0	14	40	100	4	fig 2	▲
OMH-4E-160L	16.0	16	50	150	4	fig 2	▲
OMH-4E-200L	20.0	20	55	150	4	fig2	▲

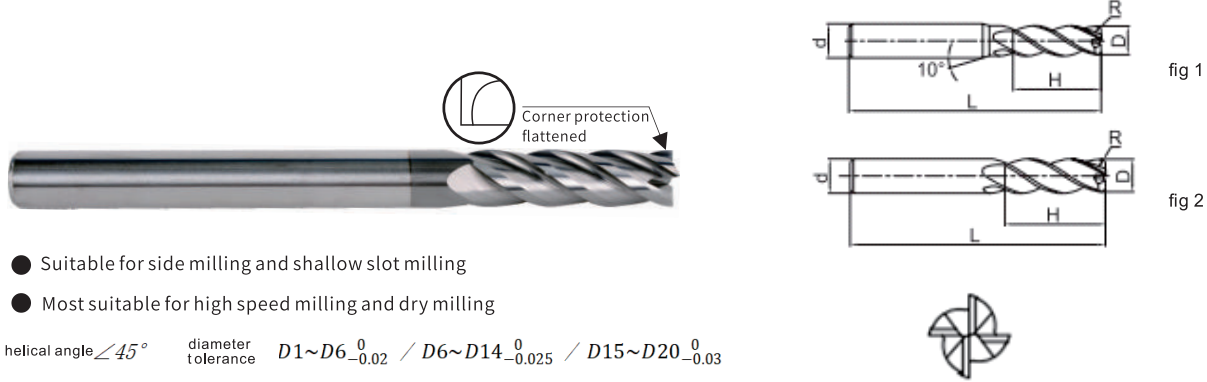
● Stock available

▲ Make-to-order

Workpiece material (○suitable, ◎very suitable)

Carbon steel	Alloy steel	Pre-hardened steel, Hardened steel				Stainless steel	Cast iron, nodular cast iron	copper alloy	Aluminum alloy	titanium alloy	Heat resistant alloy
		~40HRC	~50HRC	~55HRC	~68HRC						
○	○	◎	◎	◎		○	○				

OMH-4EH/G 4 flute long shank/ extra long shank flat end mill



- Suitable for side milling and shallow slot milling
- Most suitable for high speed milling and dry milling

part number	dimension (mm)				Number of flutes	Geometry	stock
	D	d	H	L			
OMH-4E-030SH	3.0	4	8	75	4	fig 1	●
OMH--4E-030H	3.0	6	8	75	4	fig 1	●
OMH-4E-040SH	4.0	4	11	75	4	fig 2	●
OMH-4E-040H	4.0	6	11	75	4	fig 1	●
OMH-4E-060H	6.0	6	16	75	4	fig 2	●
OMH-4E-060G	6.0	6	16	100	4	fig 2	●
OMH-4E-080H	8.0	8	20	75	4	fig 2	●
OMH-4E-080G	8.0	8	20	100	4	fig 2	●
OMH-4E-100H	10.0	10	25	100	4	fig 2	●
OMH-4E-100G	10.0	10	25	150	4	fig2	●
OMH-4E-120H	12.0	12	30	100	4	fig 2	●
OMH-4E-120G	12.0	12	30	150	4	fig2	●

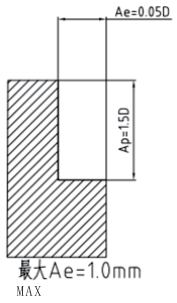
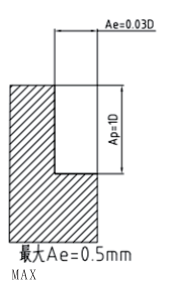
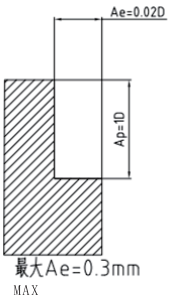
● Stock available ▲ Make-to-order

Workpiece material (○ suitable、◎ very suitable)

Carbon steel	Alloy steel	Pre-hardened steel、Hardened steel				Stainless steel	Cast iron, nodular cast iron	copper alloy	Aluminum alloy	titanium alloy	Heat resistant alloy
		~40HRC	~50HRC	~55HRC	~68HRC						
○	○	◎	◎	◎		○	○				

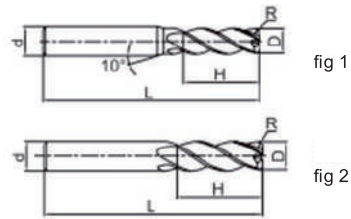
OMH-4EH/G 4 flute long shank/ extra long shank flat end mill

OMH-4E/4EL/4EG/4EH recommend cutting parameters

Workpiece material	Pre-hardened steel, hardened steel 40-50HRC		Hardened steel 50-60HRC		Hardened steel 60-68HRC	
	Diameter (mm)	Rotating speed (min-1)	Feedspeed (mm/min)	Rotating speed (min-1)	Feedspeed (mm/min)	Rotating speed (min-1)
	1	40000	320	40000	320	32000
	2	40000	800	24000	480	16000
	3	32000	1020	16000	510	11000
	4	24000	1250	12000	620	8000
	5	19000	1360	9500	680	6400
	6	16000	1540	8000	770	5300
	8	12000	1540	6000	770	4000
	10	9600	1540	4800	770	3200
	12	8000	1600	4000	800	2700
	14	6800	1340	3400	680	2300
	16	6000	1200	3000	600	2000
	18	5300	1060	2700	530	1800
	20	4800	960	2400	480	1600
max. cutting depth						

- 1 Please select high-precision machine and tool holder.
2 Please use air cooling or MQL (minimum oil mist cooling)
3 climb 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.
5 Please reduce the rotating speed and feed rate stated above correspondingly.
6 Make overhang of tool as short as possible in conditions of non-interference.

OMH-4R 4 flutes straight shank corner radius end mill



● wide range of applications, able to achieve various forms of processing

helical angle $\angle 35^{\circ}$ diameter tolerance $D1\sim D6_{-0.02}^0$ / $D7\sim D12_{-0.025}^0$

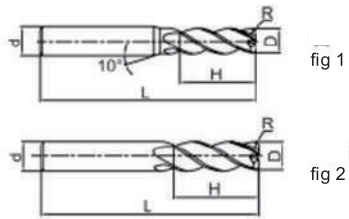


part number	dimension (mm)					Number of flutes	Geometry	stock
	D	d	H	L	R			
OMH-4R-010R0.2S	1.0	4	3	50	0.2	4	fig 1	●
OMH-4R-015R0.2S	1.5	4	4	50	0.2	4	fig 1	●
OMH-4R-020R0.2S	2.0	4	6	50	0.2	4	fig 1	●
OMH-4R-020R0.5S	2.0	4	6	50	0.5	4	fig 1	●
OMH-4R-025R0.2S	2.5	4	8	50	0.2	4	fig 1	●
OMH-4R-025R0.5S	2.5	4	8	50	0.5	4	fig 1	●
OMH-4R-030R0.2S	3.0	4	8	50	0.2	4	fig 1	●
OMH-4R-030R0.5S	3.0	4	8	50	0.5	4	fig 1	●
OMH-4R-040R0.2S	4.0	4	10	50	0.2	4	fig 2	●
OMH-4R-040R0.3S	4.0	4	10	50	0.3	4	fig2	●
OMH-4R-040R0.5S	4.0	4	10	50	0.5	4	fig 2	●
OMH-4R-050R0.2	5.0	6	13	50	0.2	4	fig1	●
OMH-4R-050R0.5	5.0	6	13	50	0.5	4	fig 1	●
OMH-4R-050R1.0	5.0	6	13	50	1.0	4	fig 1	●
OMH-4R-060R0.2	6.0	6	16	50	0.2	4	fig 2	●
OMH-4R-060R0.5	6.0	6	16	50	0.5	4	fig2	●
OMH-4R-060R1.0	6.0	6	16	50	1.0	4	fig 2	●
OMH-4R-080R0.2	8.0	8	20	60	0.2	4	fig2	●
OMH-4R-080R0.5	8.0	8	20	60	0.5	4	fig 2	●
OMH-4R-080R1.0	8.0	8	20	60	1.0	4	fig 2	●
OMH-4R-100R0.2	10.0	10	25	75	0.2	4	fig 2	●
OMH-4R-100R0.5	10.0	10	25	75	0.5	4	fig2	●
OMH-4R-100R1.0	10.0	10	25	75	1.0	4	fig 2	●
OMH-4R-100R2.0	10.0	10	25	75	2.0	4	fig2	●
OMH-4R-100R3.0	10.0	10	25	75	3.0	4	fig 2	●
OMH-4R-120R0.2	12.0	12	30	75	0.2	4	fig 2	●
OMH-4R-120R0.5	12.0	12	30	75	0.5	4	fig 2	●
OMH-4R-120R1.0	12.0	12	30	75	1.0	4	fig2	●
OMH-4R-120R2.0	12.0	12	30	75	2.0	4	fig 2	●
OMH-4R-120R3.0	12.0	12	30	75	3.0	4	fig2	●

Workpiece material (○ suitable、◎ very suitable)

Carbon steel	Alloy steel	Pre-hardened steel、Hardened steel				Stainless steel	Cast iron、nodular cast iron	copper alloy	Aluminum alloy	titanium alloy	Heat resistant alloy
		~40HRC	~50HRC	~55HRC	~68HRC						
○	○	◎	◎	◎		○	○				

OMH-4RH/G 4 flutes long shank /extra long shank corner radius end mill



● wide range of applications, able to achieve various forms of processing

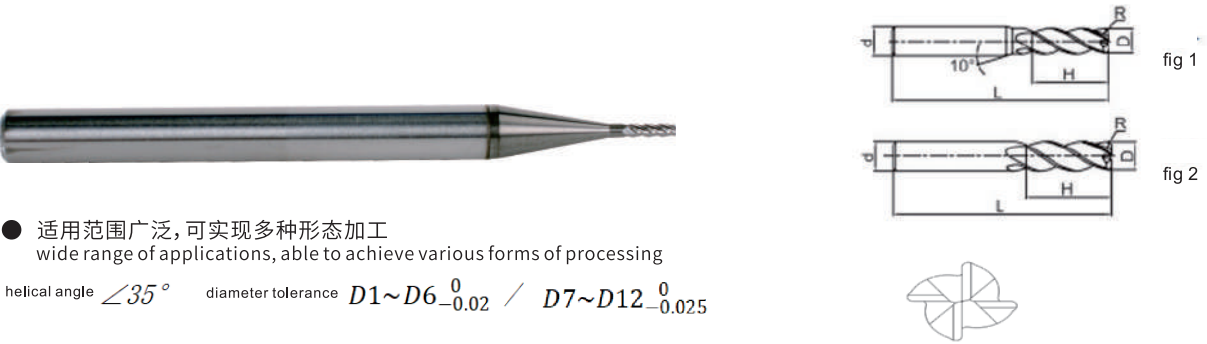
helical angle $\angle 35^{\circ}$ diameter tolerance $D1\sim D6_{-0.02}^0$ / $D7\sim D12_{-0.025}^0$



part number	dimension (mm)					Number of flutes	Geometry	stock
	D	R	d	H	L			
OMH-4R-040R0.2SH	4.0	0.2	4	10	75	4	fig 2	●
OMH-4R-040R0.2H	4.0	0.2	6	10	75	4	fig 1	●
OMH-4R-040R0.5SH	4.0	0.5	4	10	75	4	fig 2	●
OMH-4R-040R0.5H	4.0	0.5	6	10	75	4	fig 1	●
OMH-4R-060R0.2H	6.0	0.2	6	16	75	4	fig 2	●
OMH-4R-060R0.2G	6.0	0.2	6	16	100	4	fig 2	●
OMH-4R-060R0.5H	6.0	0.5	6	16	75	4	fig 2	●
OMH-4R-060R0.5G	6.0	0.5	6	16	100	4	fig 2	●
OMH-4R-060R1.0H	6.0	1.0	6	16	75	4	fig 2	●
OMH-4R-060R1.0G	6.0	1.0	6	16	100	4	fig2	●
OMH-4R-080R0.2H	8.0	0.2	8	20	75	4	fig 2	●
OMH-4R-080R0.2G	8.0	0.2	8	20	100	4	fig2	●
OMH-4R-080R0.5H	8.0	0.5	8	20	75	4	fig 2	●
OMH-4R-080R0.5G	8.0	0.5	8	20	100	4	fig 2	●
OMH-4R-080R1.0H	8.0	1.0	8	20	75	4	fig 2	●
OMH-4R-080R1.0G	8.0	1.0	8	20	100	4	fig2	●

● Stock available ▲ Make-to-order

OMH-4RH/G 4 flutes long shank /extra long shank corner radius end mill



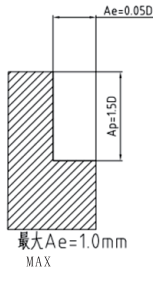
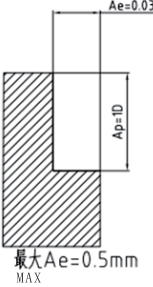
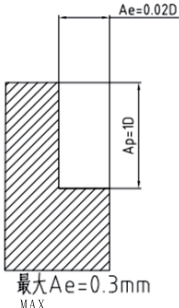
part number	dimension (mm)					Number of flutes	Geometry	stock
	D	R	d	H	L			
OMH-4R-100R0.2H	10.0	0.2	10	25	100	4	fig 2	●
OMH-4R-100R0.2G	10.0	0.2	10	25	150	4	fig 2	●
OMH-4R-100R0.5H	10.0	0.5	10	25	100	4	fig 2	●
OMH-4R-100R0.5G	10.0	0.5	10	25	150	4	fig 2	●
OMH-4R-100R1.0H	10.0	1.0	10	25	100	4	fig 2	●
OMH-4R-100R1.0G	10.0	1.0	10	25	150	4	fig 2	●
OMH-4R-100R2.0H	10.0	2.0	10	25	100	4	fig 2	●
OMH-4R-100R2.0G	10.0	2.0	10	25	150	4	fig 2	●
OMH-4R-120R0.2H	12.0	0.2	12	30	100	4	fig 2	●
OMH-4R-120R0.2G	12.0	0.2	12	30	150	4	fig2	●
OMH-4R-120R0.5H	12.0	0.5	12	30	100	4	fig 2	●
OMH-4R-120R0.5G	12.0	0.5	12	30	150	4	fig2	●
OMH-4R-120R1.0H	12.0	1.0	12	30	100	4	fig 2	●
OMH-4R-120R1.0G	12.0	1.0	12	30	150	4	fig 2	●
OMH-4R-120R2.0H	12.0	2.0	12	30	100	4	fig 2	●
OMH-4R-120R2.0G	12.0	2.0	12	30	150	4	fig2	●

● Stock available ▲ Make-to-order

Workpiece material (○suitable、◎very suitable)

Carbon steel	Alloy steel	Pre-hardened steel, Hardened steel				Stainless steel	Cast iron, nodular cast iron	copper alloy	Aluminum alloy	titanium alloy	Heat resistant alloy
		~40HRC	~50HRC	~55HRC	~68HRC						
○	○	◎	◎	◎		○	○				

OMH-4R、4RH、4RG recommend cutting parameters

被加工材料 Workpiece material	预硬钢、淬硬钢 Pre-hardened steel, hardened steel 40-50HRC		淬硬钢 Hardened steel 50-60HRC		淬硬钢 Hardened steel 60-68HRC	
	Diameter (mm)	Rotating speed (min ⁻¹)	Feedspeed (mm/min)	Rotating speed (min ⁻¹)	Feedspeed (mm/min)	Rotating speed (min ⁻¹)
	3	32000	1225	16000	610	11000
	4	24000	1500	12000	745	8000
	5	19000	1630	9500	815	6400
	6	16000	1850	8000	925	5300
	8	12000	1850	6000	925	4000
	10	9600	1850	4800	925	3200
	12	8000	1920	4000	960	2700
	16	6000	1440	3000	720	2000
max. cutting depth						

- 1.Please select high-precision machine and tool holder.
- 2.Please use air cooling or MQL (minimum oil mist cooling)
- 3.climb 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 rate stated above correspondingly.
- 5.Make overhang of tool as short as possible in conditions of non-interference.

OMH-2B 2 flutes straight shank ball head end mill



● Suitable for profile milling, and high speed machining, with wide range of applications.

helical angle $\angle 30^{\circ}$ diameter tolerance $D1 \sim D20 \begin{smallmatrix} 0 \\ -0.02 \end{smallmatrix}$ $R \pm 0.005$



part number	dimension (mm)					Number of flutes	Geometry	stock
	D	R	d	H	L			
OMH-2B-010R0.5S	1.0	0.5	4	2	50	2	fig 1	●
OMH-2B-010R0.5	1.0	0.5	6	2	50	2	fig 1	●
OMH-2B-015R0.75S	1.5	0.75	4	3	50	2	fig 1	●
OMH-2B-015R0.75	1.5	0.75	6	3	50	2	fig 1	●
OMH-2B-020R1.0S	2.0	1.0	4	4	50	2	fig 1	●
OMH-2B-020R1.0	2.0	1.0	6	4	50	2	fig 1	●
OMH-2B-025R1.25S	2.5	1.25	4	5	50	2	fig 1	●
OMH-2B-025R1.25	2.5	1.25	6	5	50	2	fig 1	●
OMH-2B-030R1.5S	3.0	1.5	4	6	50	2	fig 1	●
OMH-2B-030R1.5	3.0	1.5	6	6	50	2	fig1	●
OMH-2B-035R1.75	3.5	1.75	6	8	50	2	fig 1	●
OMH-2B-040R2.0S	4.0	2.0	4	8	50	2	fig2	●
OMH-2B-040R2.0	4.0	2.0	6	8	50	2	fig 1	●
OMH-2B-050R2.5	5.0	2.5	6	10	50	2	fig 1	●
OMH-2B-055R2.75	5.5	2.75	6	12	50	2	fig 1	●
OMH-2B-060R3.0	6.0	3.0	6	12	50	2	fig2	●
OMH-2B-070R3.5	7.0	3.5	8	14	60	2	ig 1	●
OMH-2B-080R4.0	8.0	4.0	8	16	60	2	fig 2	●
OMH-2B-090R4.5	9.0	4.5	10	18	75	2	fig 1	●
OMH-2B-100R5.0	10.0	5.0	10	20	75	2	fig2	●
OMH-2B-120R6.0	12.0	6.0	12	24	75	2	ig 2	●
OMH-2B-140R7.0	14.0	7.0	14	28	75	2	fig 2	●
OMH-2B-160R8.0	16.0	8.0	16	32	100	2	fig 2	●
OMH-2B-200R10.0	20.0	10.0	20	40	100	2	fig2	●

● Stock available ▲ Make-to-order

Workpiece material (○suitable、◎very suitable)

Carbon steel	Alloy steel	Pre-hardened steel, Hardened steel				Stainless steel	Cast iron, nodular cast iron	copper alloy	Aluminum alloy	titanium alloy	Heat resistant alloy
		~40HRC	~50HRC	~55HRC	~68HRC						
○	○	◎	◎	◎		○	○				

OMH-2BH/G 2 flutes long shank/extra long shank ball head end mill



● Suitable for profile milling, and high speed machining, with wide range of applications.

helical angle $\angle 30^{\circ}$ diameter tolerance $D1 \sim D12 \begin{smallmatrix} 0 \\ -0.02 \end{smallmatrix}$ $R \pm 0.005$



part number	dimension (mm)					Number of flutes	Geometry	stock
	D	R	d	H	L			
OMH-2B-020R1.0SH	2.0	1.0	4	4	75	2	fig 1	●
OMH-2B-020R1.0H	2.0	1.0	6	4	75	2	fig 1	●
OMH-2B-025R1.25SH	2.5	1.25	4	5	75	2	fig 1	●
OMH-2B-025R1.25H	2.5	1.25	6	5	75	2	fig 1	●
OMH-2B-030R1.5SH	3.0	1.5	4	6	75	2	fig 1	●
OMH-2B-030R1.5H	3.0	1.5	6	6	75	2	fig 1	●
OMH-2B-035R1.75SH	3.5	1.75	4	8	75	2	fig 1	●
OMH-2B-035R1.75H	3.5	1.75	6	8	75	2	fig 1	●
OMH-2B-040R2.0SH	4.0	2.0	4	8	75	2	fig 2	●
OMH-2B-040R2.0H	4.0	2.0	6	8	75	2	fig1	●
OMH-2B-050R2.5H	5.0	2.5	6	10	75	2	fig 1	●
OMH-2B-055R2.75H	5.5	2.75	6	12	75	2	fig2	●
OMH-2B-060R3.0H	6.0	3.0	6	12	75	2	fig 2	●
OMH-2B-070R3.5H	7.0	3.5	8	14	75	2	fig 1	●
OMH-2B-080R4.0H	8.0	4.0	8	16	75	2	fig 2	●
OMH-2B-090R4.5H	9.0	4.5	10	18	100	2	fig2	●
OMH-2B-100R5.0H	10.0	5.0	10	20	100	2	fig 2	●
OMH-2B-120R6.0H	12.0	6.0	12	24	100	2	fig 2	●
OMH-2B-140R7.0H	14.0	7.0	14	28	150	2	fig 2	●
OMH-2B-160R8.0H	16.0	8.0	16	32	150	2	fig2	●
OMH-2B-200R10.0H	20.0	10.0	20	40	150	2	fig 2	●
OMH-2B-060R3.0G	6.0	3.0	6	12	100	2	fig 2	●
OMH-2B-080R4.0G	8.0	4.0	8	16	100	2	fig 2	●
OMH-2B-100R5.0G	10.0	5.0	10	20	150	2	fig2	●
OMH-2B-120R6.0G	12.0	6.0	12	24	150	2	fig2	●

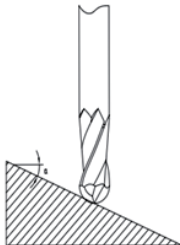
● Stock available ▲ Make-to-order

Workpiece material (○ suitable、◎ very suitable)

Carbon steel	Alloy steel	Pre-hardened steel, Hardened steel				Stainless steel	Cast iron, nodular cast iron	copper alloy	Aluminum alloy	titanium alloy	Heat resistant alloy
		~40HRC	~50HRC	~55HRC	~68HRC						
○	○	◎	◎	◎		○	○				

OMH-2BH/G 2 flutes long shank/extra long shank ball head end mill

OMH-2B/2BH/G recommend cutting parameters

Workpiece material	Pre-hardened steel, hardened steel 40-50HRC				Hardened steel 50-60HRC				Hardened steel 60-68HRC				
	Diameter (mm)	Rotating speed (min ⁻¹)	Feedspeed (mm/min)	Ap (mm)	Ae (mm)	Rotating speed (min ⁻¹)	Feedspeed (mm/min)	Ap (mm)	Ae (mm)	Rotating speed (min ⁻¹)	Feedspeed (mm/min)	Ap (mm)	Ae (mm)
	R0.5	40000	1900	0.01	0.05	36000	1500	0.01	0.05	32000	1400	0.01	0.05
	R1.0	33000	3100	0.02	0.075	26000	2100	0.02	0.075	24000	2000	0.02	0.075
	R1.5	29000	4100	0.03	0.1	23000	2900	0.03	0.1	21000	2600	0.03	0.1
	R2.0	22000	3900	0.04	0.15	17000	2500	0.04	0.15	15500	2100	0.04	0.15
	R2.5	17500	3500	0.05	0.15	13500	2200	0.05	0.15	13000	2000	0.05	0.15
	R3.0	15000	3100	0.06	0.2	11500	1700	0.06	0.2	10500	1500	0.06	0.2
	R4.0	11000	2500	0.08	0.25	8600	1600	0.08	0.25	8000	1400	0.08	0.25
	R5.0	9000	2000	0.1	0.3	7000	1400	0.1	0.3	6000	1200	0.1	0.3
	R6.0	7500	1800	0.1	0.35	5700	1300	0.1	0.35	5300	1200	0.1	0.35
	R8.0	5500	1800	0.1	0.4	4300	1300	0.1	0.4	4000	1200	0.1	0.4
	R10.0	4500	1800	0.1	0.5	3500	1300	0.1	0.5	3200	1200	0.1	0.5
max. cutting depth													
													

1. Please select high-precision machine and tool holder.
2. When the machine rigidity and workpiece fixture stability is low, vibration and abnormal noise may be generated. Please reduce the rotating speed and feed rate stated above correspondingly.
3. Please use air cooling or MQL (minimum oil mist cooling)
4. If inclination angle α over 15°, please reduce the speed to 50%-80% of above table.
5. Make overhang of tool as short as possible in conditions of non-interference.

OMHH series for High-hardened steel

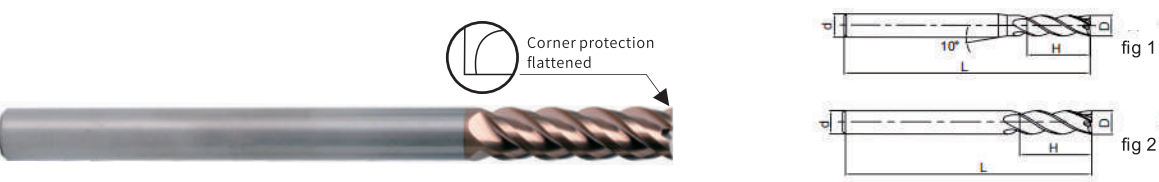
Product features and application range

OMHH is suitable for finishing and semi-finishing machining of 55~65HRC quenched steel and High-hardened steel

1. New ultra fine cemented carbide substrate
- ① New ultra fine cemented carbide substrate, Wc grain size is 0.2μm
- ② Ultra-high hardness substrate material, micro-hardness > 2050HV;
- ③ Super high strength and toughness, tensile strength > 4200N/MM
2. Fine cutting edge surface treatment
- ① Smooth rake face surface, smooth chip removal, less cutting resistance;
- ② The stress between coating and substrate is improved
- ③ Reduce cutting viscosity.
3. High-rigidity and high-strength cutting edge structure design
- ① Ensuring sufficient chip space, meanwhile adopt large core body to improve the tool rigidity ;
- ② negative rake angle, which makes the cutting edge strength and cutting force match reasonably, and gives a wider range of applications;
- ③ Strict and scientific chip breaker geometric design, gives more stable cutting.



OMHH-4E 4 flutes straight flat head end mill



● Suitable for side milling and shallow slot milling. Most suitable for high speed milling and dry milling.

helical angle $\angle 45^{\circ}$ diameter tolerance $D1\sim D6_{-0.02}^0$ / $D6\sim D14_{-0.025}^0$ / $D15\sim D20_{-0.03}^0$

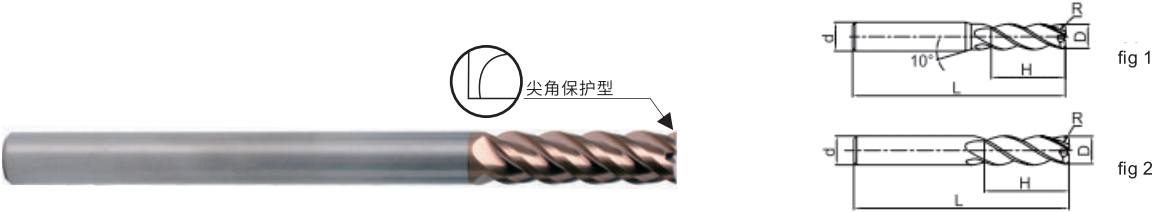
part number	dimension (mm)				Number of flutes	Geometry	stock
	D	d	H	L			
OMHH-4E-010F	1.0	3	3	50	4	fig 1	●
OMHH-4E-010S	1.0	4	3	50	4	fig 1	●
OMHH-4E-010	1.0	6	3	50	4	fig 1	●
OMHH-4E-015F	1.5	3	4	50	4	fig 1	●
OMHH-4E-015S	1.5	4	4	50	4	fig 1	●
OMHH-4E-015	1.5	6	4	50	4	fig 1	●
OMHH-4E-020F	2.0	3	6	50	4	fig 1	●
OMHH-4E-020S	2.0	4	6	50	4	fig 1	●
OMHH-4E-020	2.0	6	6	50	4	fig 1	●
OMHH-4E-025F	2.5	3	8	50	4	fig1	●
OMHH-4E-025S	2.5	4	8	50	4	fig 1	●
OMHH-4E-025	2.5	6	8	50	4	fig1	●
OMHH-4E-030F	3.0	3	8	50	4	fig2	●
OMHH-4E-030S	3.0	4	8	50	4	fig1	●
OMHH-4E-030	3.0	6	8	50	4	fig1	●
OMHH-4E-035S	3.5	4	10	50	4	fig1	●
OMHH-4E-040S	4.0	4	11	50	4	fig2	●
OMHH-4E-035	3.5	6	10	50	4	fig1	●
OMHH-4E-040	4.0	6	11	50	4	fig1	●
OMHH-4E-045	4.5	6	11	50	4	fig1	●
OMHH-4E-050	5.0	6	13	50	4	fig1	●
OMHH-4E-055	5.5	6	16	50	4	fig1	●
OMHH-4E-060	6.0	6	16	50	4	fig2	●
OMHH-4E-070	7.0	8	20	60	4	fig1	●
OMHH-4E-080	8.0	8	20	60	4	fig2	●
OMHH-4E-090	9.0	10	22	75	4	fig1	●
OMHH-4E-100	10.0	10	25	75	4	fig2	●
OMHH-4E-110	11.0	12	26	75	4	fig1	●
OMHH-4E-120	12.0	12	30	75	4	fig2	●
OMHH-4E-140	14.0	14	32	75	4	fig2	●
OMHH-4E-160	16.0	16	45	100	4	fig2	●
OMHH-4E-180	18.0	18	45	100	4	fig2	●
OMHH-4E-200	20.0	20	45	100	4	fig2	●

● Stock available ▲ Make-to-order

Workpiece material (○ suitable、◎ very suitable)

Carbon steel	Alloy steel	Pre-hardened steel, Hardened steel				Stainless steel	Cast iron, nodular cast iron	copper alloy	Aluminum alloy	titanium alloy	Heat resistant alloy
		~40HRC	~50HRC	~55HRC	~68HRC						
○	○	◎	◎	◎	◎	○	○				

OMHH-4EL 4 flutes long cutting edge flat end mill



● 适用于侧面铣削、浅槽加工。● 最适于高速铣削、干试铣削。
Suitable for side milling and shallow slot milling. Most suitable for high speed milling and dry milling.

helical angle $\angle 45^{\circ}$ diameter tolerance $D1\sim D6_{-0.02}^0$ / $D6\sim D14_{-0.025}^0$ / $D15\sim D20_{-0.03}^0$

part number	dimension (mm)				Number of flutes	Geometry	stock
	D	d	H	L			
OMHH-4E-030L	3.0	6	12	75	4	fig 1	▲
OMHH-4E-040L	4.0	6	15	75	4	fig 1	▲
OMHH-4E-050L	5.0	6	20	75	4	fig 1	▲
OMHH-4E-060L	6.0	6	20	75	4	fig 2	▲
OMHH-4E-080L	8.0	8	25	100	4	fig 2	▲
OMHH-4E-100L	10.0	10	30	100	4	fig 2	▲
OMHH-4E-120L	12.0	12	35	100	4	fig2	▲
OMHH-4E-140L	14.0	14	40	100	4	fig 2	▲
OMHH-4E-160L	16.0	16	50	150	4	fig 2	▲
OMHH-4E-200L	20.0	20	55	150	4	fig2	▲

● Stock available ▲ Make-to-order

Workpiece material (○ suitable、◎ very suitable)

Carbon steel	Alloy steel	Pre-hardened steel, Hardened steel				Stainless steel	Cast iron, nodular cast iron	copper alloy	Aluminum alloy	titanium alloy	Heat resistant alloy
		~40HRC	~50HRC	~55HRC	~68HRC						
○	○	◎	◎	◎	◎	○	○				

OMHH 4EH/G 4 flutes long shank /extra long shank flat end mill

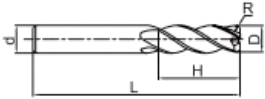
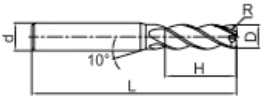


fig 1

fig 2

● Suitable for side milling and shallow slot machining. Most suitable for high speed milling and dry milling.

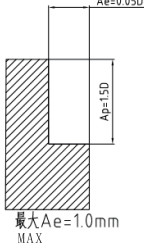
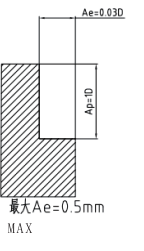
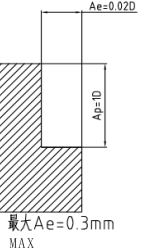
helical angle $\angle 45^\circ$ diameter tolerance $D1\sim D6_{-0.02}^0$ / $D7\sim D12_{-0.025}^0$



part number	dimension (mm)				Number of flutes	Geometry	stock
	D	d	H	L			
OMHH-4E-030SH	3.0	4	8	75	4	fig 1	●
OMHH--4E-030H	3.0	6	8	75	4	fig 1	●
OMHH-4E-040SH	4.0	4	11	75	4	fig 2	●
OMHH-4E-040H	4.0	6	11	75	4	fig 1	●
OMHH-4E-060H	6.0	6	16	75	4	fig 2	●
OMHH-4E-060G	6.0	6	16	100	4	fig 2	●
OMHH-4E-080H	8.0	8	20	75	4	fig 2	●
OMHH-4E-080G	8.0	8	20	100	4	fig 2	●
OMHH-4E-100H	10.0	10	25	100	4	fig2	●
OMHH-4E-100G	10.0	10	25	150	4	fig2	●
OMHH-4E-120H	12.0	12	30	100	4	fig 2	●
OMHH-4E-120G	12.0	12	30	150	4	fig2	●

● Stock available ▲ Make-to-order

OMHH-4E/4EL/4EG/4EH

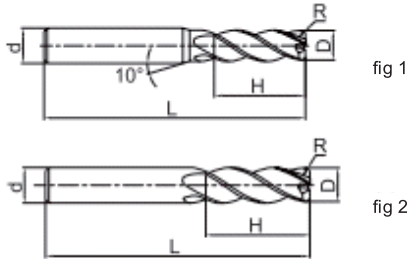
Workpiece material	Pre-hardened steel, hardened steel 40-50HRC		Hardened steel 50-60HRC		Hardened steel 60-68HRC	
	Diameter (mm)	Rotating speed (min ⁻¹)	Feedspeed (mm/min)	Rotating speed (min ⁻¹)	Feedspeed (mm/min)	Rotating speed (min ⁻¹)
	1	40000	320	40000	320	32000
	2	40000	800	24000	480	16000
	3	32000	1020	16000	510	11000
	4	24000	1250	12000	620	8000
	5	19000	1360	9500	680	6400
	6	16000	1540	8000	770	5300
	8	12000	1540	6000	770	4000
	10	9600	1540	4800	770	3200
	12	8000	1600	4000	800	2700
	14	6800	1340	3400	680	2300
	16	6000	1200	3000	600	2000
	18	5300	1060	2700	530	1800
	20	4800	960	2400	480	1600
max. cutting depth						

- 1Please select high-precision machine and tool holder.
- 2Please use air cooling or MQL (minimum oil mist cooling)
- 3climb milling is recommended in the case of side milling.
- 4When the machine rigidity and workpiece fixture stability is low, vibration and abnormal noise may be generated. Please reduce the rotating speed and feed rate stated above correspondingly.
- 5Make overhang of tool as short as possible in conditions of non-interference.

Workpiece material (○ suitable, ◎ very suitable)

Carbon steel	Alloy steel	Pre-hardened steel, Hardened steel				Stainless steel	Cast iron, nodular cast iron	copper alloy	Aluminum alloy	titanium alloy	Heat resistant alloy
		~40HRC	~50HRC	~55HRC	~68HRC						
○	○	◎	◎	◎	◎		○				

OMHH-4R 4 flutes straight shank corner radius end mill



- 适用范围广泛, 可实现多种形态加工
wide range of applications, able to achieve various forms of processing
- helical angle $\angle 35^{\circ}$ diameter tolerance $D1\sim D6_{-0.02}^0$ / $D7\sim D12_{-0.025}^0$



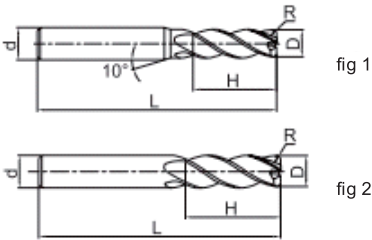
part number	dimension (mm)					Number of flutes	Geometry	stock
	D	R	H	L	d			
OMHH-4R-010R0.2S	1.0	0.2	3	50	4	4	fig 1	●
OMHH-4R-015R0.2S	1.5	0.2	4	50	4	4	fig 1	●
OMHH-4R-020R0.2S	2.0	0.2	6	50	4	4	fig 1	●
OMHH-4R-020R0.5S	2.0	0.5	6	50	4	4	fig 1	●
OMHH-4R-025R0.2S	2.5	0.2	8	50	4	4	fig 1	●
OMHH-4R-025R0.5S	2.5	0.5	8	50	4	4	fig 1	●
OMHH-4R-030R0.2S	3.0	0.2	8	50	4	4	fig 1	●
OMHH-4R-030R0.5S	3.0	0.5	8	50	4	4	fig 1	●
OMHH-4R-040R0.2S	4.0	0.2	10	50	4	4	fig 2	●
OMHH-4R-040R0.3S	4.0	0.3	10	50	4	4	fig2	●
OMHH-4R-040R0.5S	4.0	0.5	10	50	4	4	fig 2	●
OMHH-4R-050R0.2	5.0	0.2	13	50	6	4	fig1	●
OMHH-4R-050R0.5	5.0	0.5	13	50	6	4	fig 1	●
OMHH-4R-050R1.0	5.0	1.0	13	50	6	4	fig 1	●
OMHH-4R-060R0.2	6.0	0.2	16	50	6	4	fig 2	●
OMHH-4R-060R0.5	6.0	0.5	16	50	6	4	fig 2	●
OMHH-4R-060R1.0	6.0	1.0	16	50	6	4	fig 2	●
OMHH-4R-080R0.2	8.0	0.2	20	60	8	4	fig 2	●
OMHH-4R-080R0.5	8.0	0.5	20	60	8	4	fig 2	●
OMHH-4R-080R1.0	8.0	1.0	20	60	8	4	fig 2	●
OMHH-4R-100R0.2	10.0	0.2	25	75	10	4	fig 2	●
OMHH-4R-100R0.5	10.0	0.5	25	75	10	4	fig2	●
OMHH-4R-100R1.0	10.0	1.0	25	75	10	4	fig 2	●
OMHH-4R-100R2.0	10.0	2.0	25	75	10	4	fig2	●
OMHH-4R-100R3.0	10.0	3.0	25	75	10	4	fig 2	●
OMHH-4R-120R0.2	12.0	0.2	30	75	12	4	fig 2	●
OMHH-4R-120R0.5	12.0	0.5	30	75	12	4	fig 2	●
OMHH-4R-120R1.0	12.0	1.0	30	75	12	4	fig 2	●
OMHH-4R-120R2.0	12.0	2.0	30	75	12	4	fig 2	●
OMHH-4R-120R3.0	12.0	3.0	30	75	12	4	fig 2	●

● Stock available ▲ Make-to-order

Workpiece material (○ suitable、◎ very suitable)

Carbon steel	Alloy steel	Pre-hardened steel, Hardened steel				Stainless steel	Cast iron, nodular cast iron	copper alloy	Aluminum alloy	titanium alloy	Heat resistant alloy
		~40HRC	~50HRC	~55HRC	~68HRC						
○	○	◎	◎	◎	◎		○				

OMHH-4RH/G 4 flutes long shank /extra long shank corner radius end mill



● wide range of applications, able to achieve various forms of processing

helical angle $\angle 35^{\circ}$ diameter tolerance $D1\sim D6_{-0.02}^0 / D7\sim D12_{-0.025}^0$



part number	dimension (mm)					Number of flutes	Geometry	stock
	D	R	d	H	L			
OMHH-4R-040R0.2SH	4.0	0.2	4	10	75	4	fig 2	●
OMHH-4R-040R0.2H	4.0	0.2	6	10	75	4	fig 1	●
OMHH-4R-040R0.5SH	4.0	0.5	4	10	75	4	fig 2	●
OMHH-4R-040R0.5H	4.0	0.5	6	10	75	4	fig 1	●
OMHH-4R-060R0.2H	6.0	0.2	6	16	75	4	fig 2	●
OMHH-4R-060R0.2G	6.0	0.2	6	16	100	4	fig 2	●
OMHH-4R-060R0.5H	6.0	0.5	6	16	75	4	fig 2	●
OMHH-4R-060R0.5G	6.0	0.5	6	16	100	4	fig 2	●
OMHH-4R-060R1.0H	6.0	1.0	6	16	75	4	fig 2	●
OMHH-4R-060R1.0G	6.0	1.0	6	16	100	4	fig2	●
OMHH-4R-080R0.2H	8.0	0.2	8	20	75	4	fig 2	●
OMHH-4R-080R0.2G	8.0	0.2	8	20	100	4	fig 2	●
OMHH-4R-080R0.5H	8.0	0.5	8	20	75	4	fig 2	●
OMHH-4R-080R0.5G	8.0	0.5	8	20	100	4	fig 2	●
OMHH-4R-080R1.0H	8.0	1.0	8	20	75	4	fig 2	●
OMHH-4R-080R1.0G	8.0	1.0	8	20	100	4	fig2	●
OMHH-4R-100R0.2H	10.0	0.2	10	25	100	4	fig 2	●
OMHH-4R-100R0.2G	10.0	0.2	10	25	150	4	fig 2	●
OMHH-4R-100R0.5H	10.0	0.5	10	25	100	4	fig 2	●
OMHH-4R-100R0.5G	10.0	0.5	10	25	150	4	fig 2	●
OMHH-4R-100R1.0H	10.0	1.0	10	25	100	4	fig 2	●
OMHH-4R-100R1.0G	10.0	1.0	10	25	150	4	fig2	●
OMHH-4R-100R2.0H	10.0	2.0	10	25	100	4	fig 2	●
OMHH-4R-100R2.0G	10.0	2.0	10	25	150	4	fig 2	●
OMHH-4R-120R0.2H	12.0	0.2	12	30	100	4	fig 2	●
OMHH-4R-120R0.2G	12.0	0.2	12	30	150	4	fig 2	●
OMHH-4R-120R0.5H	12.0	0.5	12	30	100	4	fig 2	●
OMHH-4R-120R0.5G	12.0	0.5	12	30	150	4	fig2	●
OMHH-4R-120R1.0H	12.0	1.0	12	30	100	4	fig 2	●
OMHH-4R-120R1.0G	12.0	1.0	12	30	150	4	fig 2	●
OMHH-4R-120R2.0H	12.0	2.0	12	30	100	4	fig 2	●
OMHH-4R-120R2.0G	12.0	2.0	12	30	150	4	fig 2	●

● Stock available ▲ Make-to-order

Workpiece material (○ suitable、◎ very suitable)

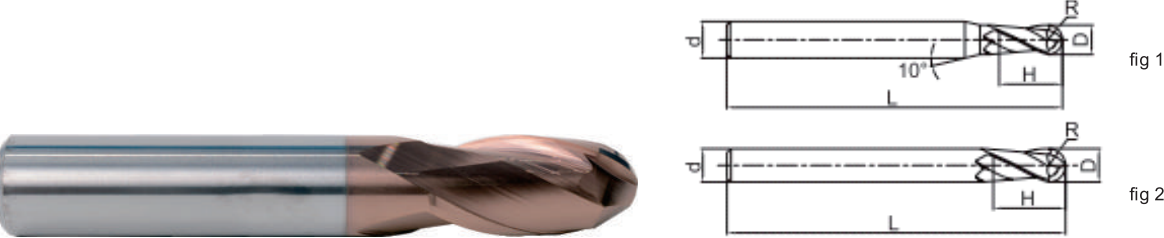
Carbon steel	Alloy steel	Pre-hardened steel、Hardened steel				Stainless steel	Cast iron, nodular cast iron	copper alloy	Aluminum alloy	titanium alloy	Heat resistant alloy
		~40HRC	~50HRC	~55HRC	~68HRC						
○	○	◎	◎	◎	◎	○	○				

OMHH-4R、4RH、4RG recommend cutting parameters

Workpiece material	Pre-hardened steel, hardened steel 40-50HRC		Hardened steel 50-60HRC		Hardened steel 60-68HRC	
	Diameter (mm)	Rotating speed (min-1)	Feedspeed (mm/min)	Rotating speed (min-1)	Feedspeed (mm/min)	Rotating speed (min-1)
	3	32000	1225	16000	610	11000
	4	24000	1500	12000	745	8000
	5	19000	1630	9500	815	6400
	6	16000	1850	8000	925	5300
	8	12000	1850	6000	925	4000
	10	9600	1850	4800	925	3200
	12	8000	1920	4000	960	2700
	16	6000	1440	3000	720	2000
max. cutting depth						

- 1Please select high-precision machine and tool holder.
- 2Please use air cooling or MQL (minimum oil mist cooling)
- 3climb milling is recommended in the case of side milling.
- 4When the machine rigidity and workpiece fixture stability is low, vibration and abnormal noise may be generated. Please reduce the rotating speed and feed rate stated above correspondingly.
- 5Make overhang of tool as short as possible in conditions of non-interference.

OMHH-2B 2 flutes straight shank ball head end mill



● Suitable for profile milling. Most suitable for high speed milling and dry milling.

helical angle $\angle 35^\circ$ diameter tolerance $D1 \sim D20 \begin{smallmatrix} 0 \\ -0.02 \end{smallmatrix}$ $R \pm 0.005$



part number	dimension (mm)					Number of flutes	Geometry	stock
	D	R	d	H	L			
OMHH-2B-010R0.5S	1.0	0.5	4	2	50	2	fig 1	●
OMHH-2B-010R0.5	1.0	0.5	6	2	50	2	fig 1	●
OMHH-2B-015R0.75S	1.5	0.75	4	3	50	2	fig 1	●
OMHH-2B-015R0.75	1.5	0.75	6	3	50	2	fig 1	●
OMHH-2B-020R1.0S	2.0	1.0	4	4	50	2	fig 1	●
OMHH-2B-020R1.0	2.0	1.0	6	4	50	2	fig 1	●
OMHH-2B-025R1.25S	2.5	1.25	4	5	50	2	fig 1	●
OMHH-2B-025R1.25	2.5	1.25	6	5	50	2	fig 1	●
OMHH-2B-030R1.5S	3.0	1.5	4	6	50	2	fig 1	●
OMHH-2B-030R1.5	3.0	1.5	6	6	50	2	fig1	●
OMHH-2B-035R1.75	3.5	1.75	6	8	50	2	fig 1	●
OMHH-2B-040R2.0S	4.0	2.0	4	8	50	2	fig 2	●
OMHH-2B-040R2.0	4.0	2.0	6	8	50	2	fig 1	●
OMHH-2B-050R2.5	5.0	2.5	6	10	50	2	fig 1	●
OMHH-2B-055R2.75	5.5	2.75	6	12	50	2	fig 1	●
OMHH-2B-060R3.0	6.0	3.0	6	12	50	2	fig2	●
OMHH-2B-070R3.5	7.0	3.5	8	14	60	2	fig1	●
OMHH-2B-080R4.0	8.0	4.0	8	16	60	2	fig 2	●
OMHH-2B-090R4.5	9.0	4.5	10	18	75	2	fig 1	●
OMHH-2B-100R5.0	10.0	5.0	10	20	75	2	fig 2	●
OMHH-2B-120R6.0	12.0	6.0	12	24	75	2	fig 2	●
OMHH-2B-140R7.0	14.0	7.0	14	28	75	2	fig 2	●
OMHH-2B-160R8.0	16.0	8.0	16	32	100	2	fig2	●
OMHH-2B-200R10.0	20.0	10.0	20	40	100	2	fig2	●

● Stock available ▲ Make-to-order

Workpiece material (○ suitable、◎ very suitable)

Carbon steel	Alloy steel	Pre-hardened steel, Hardened steel				Stainless steel	Cast iron, nodular cast iron	copper alloy	Aluminum alloy	titanium alloy	Heat resistant alloy
		~40HRC	~50HRC	~55HRC	~68HRC						
○	○	◎	◎	◎	◎	○	○				

OMHH-2BH/G 2 flutes long shank/extra long shank ball head end mill



● Suitable for profile milling. Most suitable for high speed milling and dry milling.

helical angle $\angle 35^\circ$ diameter tolerance $D1 \sim D20 \begin{smallmatrix} 0 \\ -0.02 \end{smallmatrix}$ $R \pm 0.005$



part number	dimension (mm)					Number of flutes	Geometry	stock
	D	R	d	H	L			
OMHH-2B-020R1.0SH	2.0	1.0	4	4	75	2	fig 1	●
OMHH-2B-020R1.0H	2.0	1.0	6	4	75	2	fig 1	●
OMHH-2B-025R1.25SH	2.5	1.25	4	5	75	2	fig 1	●
OMHH-2B-025R1.25H	2.5	1.25	6	6	75	2	fig 1	●
OMHH-2B-030R1.5SH	3.0	1.5	4	6	75	2	fig 1	●
OMHH-2B-030R1.5H	3.0	1.5	6	6	75	2	fig 1	●
OMHH-2B-035R1.75SH	3.5	1.75	4	8	75	2	fig 1	●
OMHH-2B-035R1.75H	3.5	1.75	6	8	75	2	fig 1	●
OMHH-2B-040R2.0SH	4.0	2.0	4	8	75	2	fig 2	●
OMHH-2B-040R2.0H	4.0	2.0	6	8	75	2	fig1	●
OMHH-2B-050R2.5H	5.0	2.5	6	10	75	2	fig 1	●
OMHH-2B-055R2.75H	5.5	2.75	6	12	75	2	fig 1	●
OMHH-2B-060R3.0H	6.0	3.0	6	12	75	2	fig 2	●
OMHH-2B-070R3.5H	7.0	3.5	8	14	75	2	fig 1	●
OMHH-2B-080R4.0H	8.0	4.0	8	16	75	2	fig 2	●
OMHH-2B-090R4.5H	9.0	4.5	10	18	100	2	fig1	●
OMHH-2B-100R5.0H	10.0	5.0	10	20	100	2	fig2	●
OMHH-2B-120R6.0H	12.0	6.0	12	24	100	2	fig 2	●
OMHH-2B-140R7.0H	14.0	7.0	14	28	150	2	fig 2	●
OMHH-2B-160R8.0H	16.0	8.0	16	32	150	2	fig 2	●
OMHH-2B-200R10.0H	20.0	10.0	20	40	150	2	fig 2	●
OMHH-2B-060R3.0G	6.0	3.0	6	12	100	2	fig 2	●
OMHH-2B-080R4.0G	8.0	4.0	8	16	100	2	fig2	●
OMHH-2B-100R5.0G	10.0	5.0	10	20	150	2	fig2	●
OMHH-2B-120R6.0G	12.0	6.0	12	24	150	2	fig2	●

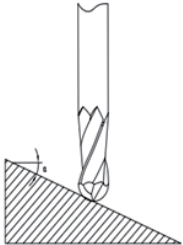
● Stock available ▲ Make-to-order

Workpiece material (○ suitable、◎ very suitable)

Carbon steel	Alloy steel	Pre-hardened steel, Hardened steel				Stainless steel	Cast iron, nodular cast iron	copper alloy	Aluminum alloy	titanium alloy	Heat resistant alloy
		~40HRC	~50HRC	~55HRC	~68HRC						
○	○	◎	◎	◎	◎	○	○				

OMHH-2BH/G 2 flutes long shank/extra long shank ball head end mill

OMHH-2B/2BH/G recommend cutting parameters

Workpiece material	Pre-hardened steel, hardened steel 40-50HRC				Hardened steel 50-60HRC				Hardened steel 60-68HRC			
	Rotating speed (min ⁻¹)	Feedspeed (mm/min)	Ap (mm)	Ae (mm)	Rotating speed (min ⁻¹)	Feedspeed (mm/min)	Ap (mm)	Ae (mm)	Rotating speed (min ⁻¹)	Feedspeed (mm/min)	Ap (mm)	Ae (mm)
R0.5	40000	1900	0.01	0.05	36000	1500	0.01	0.05	32000	1400	0.01	0.05
R1.0	33000	3100	0.02	0.075	26000	2100	0.02	0.075	24000	2000	0.02	0.075
R1.5	29000	4100	0.03	0.1	23000	2900	0.03	0.1	21000	2600	0.03	0.1
R2.0	22000	3900	0.04	0.15	17000	2500	0.04	0.15	15500	2100	0.04	0.15
R2.5	17500	3500	0.05	0.15	13500	2200	0.05	0.15	13000	2000	0.05	0.15
R3.0	15000	3100	0.06	0.2	11500	1700	0.06	0.2	10500	1500	0.06	0.2
R4.0	11000	2500	0.08	0.25	8600	1600	0.08	0.25	8000	1400	0.08	0.25
R5.0	9000	2000	0.1	0.3	7000	1400	0.1	0.3	6000	1200	0.1	0.3
R6.0	7500	1800	0.1	0.35	5700	1300	0.1	0.35	5300	1200	0.1	0.35
R8.0	5500	1800	0.1	0.4	4300	1300	0.1	0.4	4000	1200	0.1	0.4
R10.0	4500	1800	0.1	0.5	3500	1300	0.1	0.5	3200	1200	0.1	0.5
max.cutting depth												

- 1.Please select high-precision machine and tool holder.
2. When the machine rigidity and workpiece fixture stability is low, vibration and abnormal noise may be generated. Please reduce the rotating speed and feed rate stated above correspondingly.
- 3.Please use air cooling or MQL (minimum oil mist cooling)
- 4 If inclination angle α over 15 °, please reduce the speed to 50%-80% of above table.
- 5 Make overhang of tool as short as possible in conditions of non-interference.