

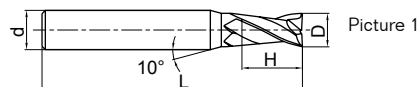
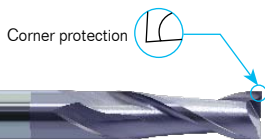
B MILLING Solid Carbide End Mills

GM series for general machining

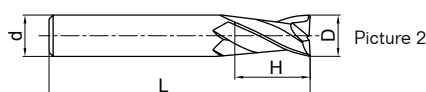
2-flute flattened end mills with straight shank



GM-2E

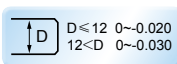
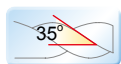


Picture 1



Picture 2

- Very suitable for slot milling.
- Wide application.



Ordering number	Basic dimension(mm)				Number of teeth Z	Geometry	Stock
	D	d	H	L			
GM-2E-D1.0S	1.0	4	3	50	2	Picture 1	●
GM-2E-D1.5S	1.5	4	4	50	2	Picture 1	●
GM-2E-D2.0S	2.0	4	6	50	2	Picture 1	●
GM-2E-D2.5S	2.5	4	8	50	2	Picture 1	●
GM-2E-D3.0S	3.0	4	8	50	2	Picture 1	●
GM-2E-D4.0S	4.0	4	11	50	2	Picture 2	●
GM-2E-D1.0	1.0	6	3	50	2	Picture 1	●
GM-2E-D1.5	1.5	6	4	50	2	Picture 1	●
GM-2E-D2.0	2.0	6	6	50	2	Picture 1	●
GM-2E-D2.5	2.5	6	8	50	2	Picture 1	●
GM-2E-D3.0	3.0	6	8	50	2	Picture 1	●
GM-2E-D3.5	3.5	6	10	50	2	Picture 1	●
GM-2E-D4.0	4.0	6	11	50	2	Picture 1	●
GM-2E-D4.5	4.5	6	11	50	2	Picture 1	●
GM-2E-D5.0	5.0	6	13	50	2	Picture 1	●
GM-2E-D5.5	5.5	6	16	50	2	Picture 1	●
GM-2E-D6.0	6.0	6	16	50	2	Picture 2	●
GM-2E-D7.0	7.0	8	20	60	2	Picture 1	●
GM-2E-D8.0	8.0	8	20	60	2	Picture 2	●
GM-2E-D9.0	9.0	10	22	75	2	Picture 1	●
GM-2E-D10.0	10.0	10	25	75	2	Picture 2	●
GM-2E-D11.0	11.0	12	26	75	2	Picture 1	●
GM-2E-D12.0	12.0	12	30	75	2	Picture 2	●
GM-2E-D14.0	14.0	14	32	75	2	Picture 2	●
GM-2E-D16.0	16.0	16	45	100	2	Picture 2	●
GM-2E-D18.0	18.0	18	45	100	2	Picture 2	●
GM-2E-D20.0	20.0	20	45	100	2	Picture 2	●

● Stock available ○ Make-to-order

Applicable workpiece material table ● Very suitable ○ Suitable

Workpiece material											
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						
○	○	○	○			○	○				

Code key

B213

Graphics category and identification

B214

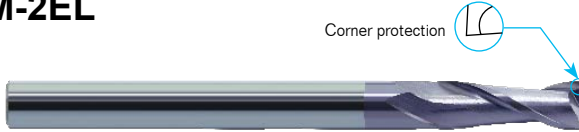
Cutting parameters

B392

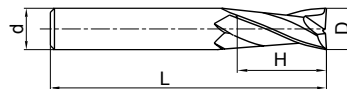
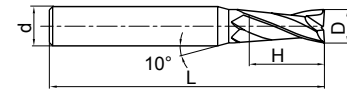
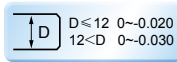
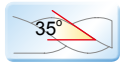
2-flute flattened end mills with straight shank and long cutting edge



GM-2EL



- GM-2E series with long cutting edge.



Ordering number	Basic dimension(mm)				Number of teeth Z	Geometry	Stock
	D	d	H	L			
GM-2EL-D3.0	3.0	6	12	75	2	Picture 1	●
GM-2EL-D4.0	4.0	6	15	75	2	Picture 1	●
GM-2EL-D5.0	5.0	6	20	75	2	Picture 1	●
GM-2EL-D6.0	6.0	6	20	75	2	Picture 2	●
GM-2EL-D8.0	8.0	8	25	100	2	Picture 2	●
GM-2EL-D10.0	10.0	10	30	100	2	Picture 2	●
GM-2EL-D12.0	12.0	12	35	100	2	Picture 2	●
GM-2EL-D14.0	14.0	14	40	100	2	Picture 2	●
GM-2EL-D16.0	16.0	16	50	150	2	Picture 2	●
GM-2EL-D20.0	20.0	20	55	150	2	Picture 2	●

● Stock available ○ Make-to-order

Indexable
milling tools

Solid carbide
end mills

GM series

Applicable workpiece material table

Very suitable Suitable

Workpiece material											
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						
○	○	○	○			○	○				

Code key

B213

Graphics category and identification

B214

Cutting parameters

B392

B MILLING Solid Carbide End Mills

GM series for general machining

3-flute flattened end mills with straight shank



Side face

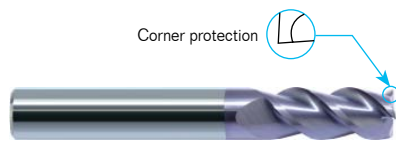


Step shoulder

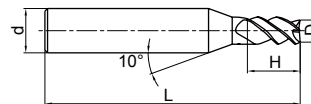


Straight slot

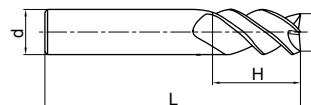
GM-3E



Corner protection

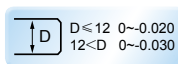


Picture 1



Picture 2

- Excellent vibration resistance, able to achieve various machining operations such as slot milling, side milling, drilling, etc.



Ordering number	Basic dimension(mm)				Number of teeth Z	Geometry	Stock
	D	d	H	L			
GM-3E-D1.0S	1.0	4	3	50	3	Picture 1	○
GM-3E-D1.5S	1.5	4	4	50	3	Picture 1	○
GM-3E-D2.0S	2.0	4	6	50	3	Picture 1	○
GM-3E-D2.5S	2.5	4	8	50	3	Picture 1	○
GM-3E-D3.0S	3.0	4	8	50	3	Picture 1	○
GM-3E-D4.0S	4.0	4	11	50	3	Picture 2	○
GM-3E-D1.0	1.0	6	3	50	3	Picture 1	○
GM-3E-D1.5	1.5	6	4	50	3	Picture 1	○
GM-3E-D2.0	2.0	6	6	50	3	Picture 1	○
GM-3E-D2.5	2.5	6	8	50	3	Picture 1	○
GM-3E-D3.0	3.0	6	8	50	3	Picture 1	○
GM-3E-D3.5	3.5	6	10	50	3	Picture 1	○
GM-3E-D4.0	4.0	6	11	50	3	Picture 1	○
GM-3E-D4.5	4.5	6	11	50	3	Picture 1	○
GM-3E-D5.0	5.0	6	13	50	3	Picture 1	○
GM-3E-D5.5	5.5	6	16	50	3	Picture 1	○
GM-3E-D6.0	6.0	6	16	50	3	Picture 2	○
GM-3E-D7.0	7.0	8	20	60	3	Picture 1	○
GM-3E-D8.0	8.0	8	20	60	3	Picture 2	○
GM-3E-D9.0	9.0	10	22	75	3	Picture 1	○
GM-3E-D10.0	10.0	10	25	75	3	Picture 2	○
GM-3E-D11.0	11.0	12	26	75	3	Picture 1	○
GM-3E-D12.0	12.0	12	30	75	3	Picture 2	○
GM-3E-D14.0	14.0	14	32	75	3	Picture 2	○
GM-3E-D16.0	16.0	16	45	100	3	Picture 2	○
GM-3E-D18.0	18.0	18	45	100	3	Picture 2	○
GM-3E-D20.0	20.0	20	45	100	3	Picture 2	○

● Stock available ○ Make-to-order

Applicable workpiece material table

Workpiece material											
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						
◎	◎	◎	○			○	◎				

Code key

B213

Graphics category and identification

B214

Cutting parameters

B393

3-flute flattened end mills with straight shank and long cutting edge



Side face

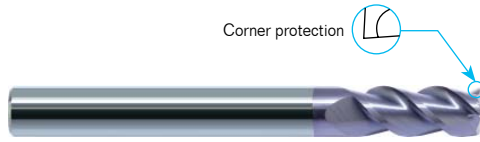


Step shoulder

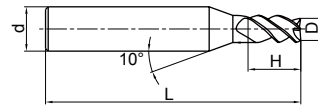


Straight slot

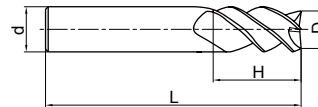
GM-3EL



Corner protection

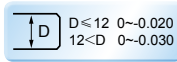
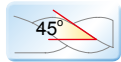


Picture 1



Picture 2

- GM-3E series with long cutting edge.



Ordering number	Basic dimension(mm)				Number of teeth Z	Geometry	Stock
	D	d	H	L			
GM-3EL-D3.0	3.0	6	12	75	3	Picture 1	○
GM-3EL-D4.0	4.0	6	15	75	3	Picture 1	○
GM-3EL-D5.0	5.0	6	20	75	3	Picture 1	○
GM-3EL-D6.0	6.0	6	20	75	3	Picture 2	○
GM-3EL-D8.0	8.0	8	25	100	3	Picture 2	○
GM-3EL-D10.0	10.0	10	30	100	3	Picture 2	○
GM-3EL-D12.0	12.0	12	35	100	3	Picture 2	○
GM-3EL-D14.0	14.0	14	40	100	3	Picture 2	○
GM-3EL-D16.0	16.0	16	50	150	3	Picture 2	○
GM-3EL-D20.0	20.0	20	55	150	3	Picture 2	○

● Stock available ○ Make-to-order

Indexable
milling tools

Solid carbide
end mills

GM series

Applicable workpiece material table

● Very suitable ○ Suitable

Workpiece material											
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						
⊙	⊙	⊙	○			○	⊙				

Code key

B213

Graphics category and identification

B214

Cutting parameters

B393

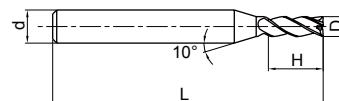
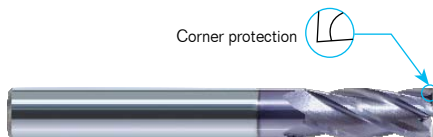
B MILLING Solid Carbide End Mills

GM series for general machining

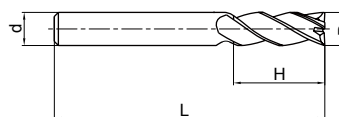
4-flute flattened end mills with straight shank



GM-4E-G

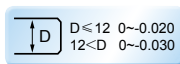
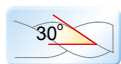


Picture 1



Picture 2

- Very suitable for side milling.
- Wide application.



Ordering number	Basic dimension(mm)				Number of teeth Z	Geometry	Stock
	D	d	H	L			
GM-4E-D1.0S-G	1.0	4	3	50	4	Picture 1	●
GM-4E-D1.5S-G	1.5	4	4	50	4	Picture 1	●
GM-4E-D2.0S-G	2.0	4	6	50	4	Picture 1	●
GM-4E-D2.5S-G	2.5	4	8	50	4	Picture 1	●
GM-4E-D3.0S-G	3.0	4	8	50	4	Picture 1	●
GM-4E-D4.0S-G	4.0	4	11	50	4	Picture 2	●
GM-4E-D1.0-G	1.0	6	3	50	4	Picture 1	●
GM-4E-D1.5-G	1.5	6	4	50	4	Picture 1	●
GM-4E-D2.0-G	2.0	6	6	50	4	Picture 1	●
GM-4E-D2.5-G	2.5	6	8	50	4	Picture 1	●
GM-4E-D3.0-G	3.0	6	8	50	4	Picture 1	●
GM-4E-D3.5-G	3.5	6	10	50	4	Picture 1	●
GM-4E-D4.0-G	4.0	6	11	50	4	Picture 1	●
GM-4E-D4.5-G	4.5	6	11	50	4	Picture 1	●
GM-4E-D5.0-G	5.0	6	13	50	4	Picture 1	●
GM-4E-D5.5-G	5.5	6	16	50	4	Picture 1	●
GM-4E-D6.0-G	6.0	6	16	50	4	Picture 2	●
GM-4E-D7.0-G	7.0	8	20	60	4	Picture 1	●
GM-4E-D8.0-G	8.0	8	20	60	4	Picture 2	●
GM-4E-D9.0-G	9.0	10	22	75	4	Picture 1	●
GM-4E-D10.0-G	10.0	10	25	75	4	Picture 2	●
GM-4E-D11.0-G	11.0	12	26	75	4	Picture 1	●
GM-4E-D12.0-G	12.0	12	30	75	4	Picture 2	●
GM-4E-D14.0-G	14.0	14	32	75	4	Picture 2	●
GM-4E-D16.0-G	16.0	16	45	100	4	Picture 2	●
GM-4E-D18.0-G	18.0	18	45	100	4	Picture 2	●
GM-4E-D20.0-G	20.0	20	45	100	4	Picture 2	●

● Stock available ○ Make-to-order

Applicable workpiece material table

Workpiece material											
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						
○	○	○	○			○	○				

Code key

B213

Graphics category and identification

B214

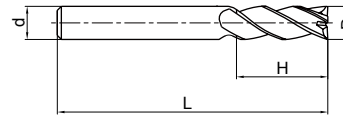
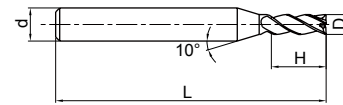
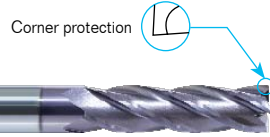
Cutting parameters

B394

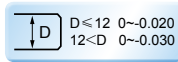
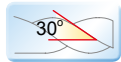
4-flute flattened end mills with straight shank and long cutting edge



GM-4EL-G



- GM-4E-G series with long cutting edge.



Ordering number	Basic dimension(mm)				Number of teeth Z	Geometry	Stock
	D	d	H	L			
GM-4EL-D3.0-G	3.0	6	12	75	4	Picture 1	○
GM-4EL-D4.0-G	4.0	6	15	75	4	Picture 1	○
GM-4EL-D5.0-G	5.0	6	20	75	4	Picture 1	○
GM-4EL-D6.0-G	6.0	6	20	75	4	Picture 2	○
GM-4EL-D8.0-G	8.0	8	25	100	4	Picture 2	○
GM-4EL-D10.0-G	10.0	10	30	100	4	Picture 2	○
GM-4EL-D12.0-G	12.0	12	35	100	4	Picture 2	○
GM-4EL-D14.0-G	14.0	14	40	100	4	Picture 2	○
GM-4EL-D16.0-G	16.0	16	50	150	4	Picture 2	○
GM-4EL-D20.0-G	20.0	20	55	150	4	Picture 2	○

● Stock available ○ Make-to-order

Indexable
milling tools

Solid carbide
end mills

GM series

➤ Applicable workpiece material table ○ Very suitable ○ Suitable

Workpiece material											
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						
⊙	⊙	⊙	○			○	⊙				

Code key

B213

Graphics category and identification

B214

Cutting parameters

B394

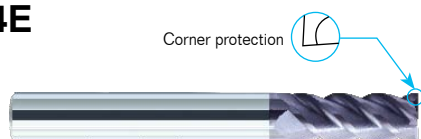
B MILLING Solid Carbide End Mills

GM series for general machining

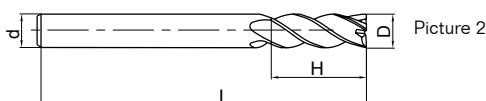
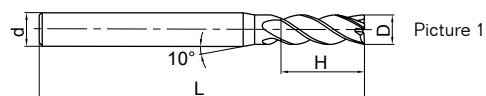
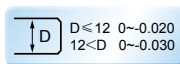
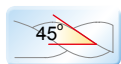
4-flute flattened end mills with straight shank



GM-4E



- Very suitable for side milling and shallow slot machining.
- Wide application.



Ordering number	Basic dimension(mm)				Number of teeth Z	Geometry	Stock
	D	d	H	L			
GM-4E-D1.0S	1.0	4	3	50	4	Picture 1	●
GM-4E-D1.5S	1.5	4	4	50	4	Picture 1	●
GM-4E-D2.0S	2.0	4	6	50	4	Picture 1	●
GM-4E-D2.5S	2.5	4	8	50	4	Picture 1	●
GM-4E-D3.0S	3.0	4	8	50	4	Picture 1	●
GM-4E-D4.0S	4.0	4	11	50	4	Picture 2	●
GM-4E-D1.0	1.0	6	3	50	4	Picture 1	●
GM-4E-D1.5	1.5	6	4	50	4	Picture 1	●
GM-4E-D2.0	2.0	6	6	50	4	Picture 1	●
GM-4E-D2.5	2.5	6	8	50	4	Picture 1	●
GM-4E-D3.0	3.0	6	8	50	4	Picture 1	●
GM-4E-D3.5	3.5	6	10	50	4	Picture 1	●
GM-4E-D4.0	4.0	6	11	50	4	Picture 1	●
GM-4E-D4.5	4.5	6	11	50	4	Picture 1	●
GM-4E-D5.0	5.0	6	13	50	4	Picture 1	●
GM-4E-D5.5	5.5	6	16	50	4	Picture 1	●
GM-4E-D6.0	6.0	6	16	50	4	Picture 2	●
GM-4E-D7.0	7.0	8	20	60	4	Picture 1	●
GM-4E-D8.0	8.0	8	20	60	4	Picture 2	●
GM-4E-D9.0	9.0	10	22	75	4	Picture 1	●
GM-4E-D10.0	10.0	10	25	75	4	Picture 2	●
GM-4E-D11.0	11.0	12	26	75	4	Picture 1	●
GM-4E-D12.0	12.0	12	30	75	4	Picture 2	●
GM-4E-D14.0	14.0	14	32	75	4	Picture 2	●
GM-4E-D16.0	16.0	16	45	100	4	Picture 2	●
GM-4E-D18.0	18.0	18	45	100	4	Picture 2	●
GM-4E-D20.0	20.0	20	45	100	4	Picture 2	●

● Stock available ○ Make-to-order

Applicable workpiece material table ● Very suitable ○ Suitable

Workpiece material											
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						
○	○	○	○			○	○				

Code key

B213

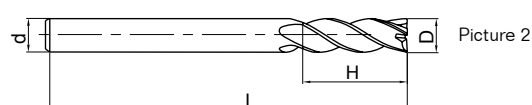
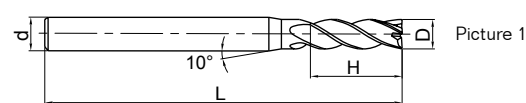
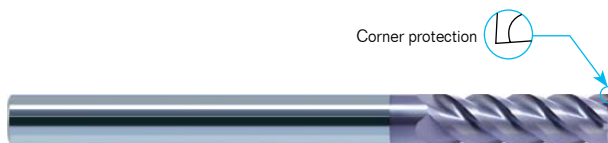
Graphics category and identification B214

Cutting parameters B395

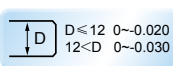
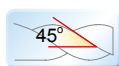
4-flute flattened end mills with straight shank and long cutting edge



GM-4EL



- GM-4E series with long cutting edge.



Ordering number	Basic dimension(mm)				Number of teeth Z	Geometry	Stock
	D	d	H	L			
GM-4EL-D3.0	3.0	6	12	75	4	Picture 1	●
GM-4EL-D4.0	4.0	6	15	75	4	Picture 1	●
GM-4EL-D5.0	5.0	6	20	75	4	Picture 1	●
GM-4EL-D6.0	6.0	6	20	75	4	Picture 2	●
GM-4EL-D8.0	8.0	8	25	100	4	Picture 2	●
GM-4EL-D10.0	10.0	10	30	100	4	Picture 2	●
GM-4EL-D12.0	12.0	12	35	100	4	Picture 2	●
GM-4EL-D14.0	14.0	14	40	100	4	Picture 2	●
GM-4EL-D16.0	16.0	16	50	150	4	Picture 2	●
GM-4EL-D20.0	20.0	20	55	150	4	Picture 2	●

● Stock available ○ Make-to-order

Indexable
milling tools

Solid carbide
end mills

GM series

➤ Applicable workpiece material table ○ Very suitable ○ Suitable

Workpiece material											
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						
⊙	⊙	⊙	○			○	⊙				

Code key

B213

Graphics category and identification

B214

Cutting parameters

B395

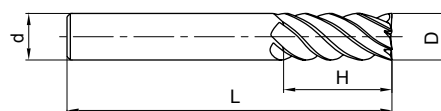
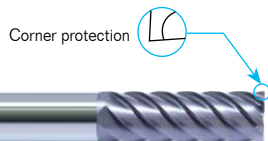
B MILLING Solid Carbide End Mills

GM series for general machining

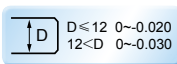
6-flute flattened end mills with straight shank



GM-6E



- Perfect rigidity, very suitable for side finish machining.
- High speed, high feed rate machining applicable.



Ordering number	Basic dimension(mm)				Number of teeth Z	Stock
	D	d	H	L		
GM-6E-D6.0	6.0	6	18	60	6	●
GM-6E-D8.0	8.0	8	20	60	6	●
GM-6E-D10.0	10.0	10	30	75	6	●
GM-6E-D12.0	12.0	12	32	75	6	●
GM-6E-D16.0	16.0	16	40	100	6	●
GM-6E-D20.0	20.0	20	45	100	6	●

● Stock available ○ Make-to-order

Indexable
milling tools

Solid carbide
end mills

GM series

Applicable workpiece material table ○ Very suitable ○ Suitable

Workpiece material										
Carbon steel	Alloy steel	Pre-hardened steel, Hardened steel				Stainless steel	Cast iron, Nodular cast iron	Copper alloy	Aluminum alloy	Titanium alloy
		~40HRC	~50HRC	~55HRC	~68HRC					
○	○	○	○			○	○			

Code key

B213

Graphics category and identification

B214

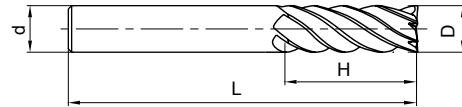
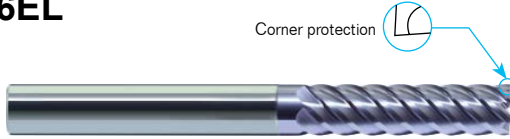
Cutting parameters

B396

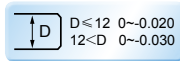
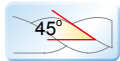
6-flute flattened end mills with straight shank and long cutting edge



GM-6EL



- GM-6E series with long cutting edge.



Ordering number	Basic dimension(mm)				Number of teeth Z	Stock
	D	d	H	L		
GM-6EL-D6.0	6.0	6	24	75	6	●
GM-6EL-D8.0	8.0	8	32	75	6	●
GM-6EL-D10.0	10.0	10	40	100	6	●
GM-6EL-D12.0	12.0	12	45	100	6	●
GM-6EL-D16.0	16.0	16	64	150	6	●
GM-6EL-D20.0	20.0	20	75	150	6	●

● Stock available ○ Make-to-order

Indexable
milling tools

Solid carbide
end mills

GM series

➤ Applicable workpiece material table ○ Very suitable ○ Suitable

Workpiece material											
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						
⊙	⊙	⊙	○			○	⊙				

Code key

B213

Graphics category and identification

B214

Cutting parameters

B397

B MILLING Solid Carbide End Mills

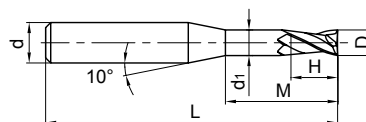
GM series for general machining

2-flute flattened end mills with straight shank, long neck and short cutting edge

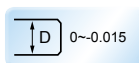
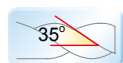


Deep flattened slot

GM-2EP



● Suitable for narrow slot milling or milling of fine parts that could generate interference.



Ordering number	Basic dimension(mm)						Number of teeth Z	Stock
	D	d	H	M	d1	L		
GM-2EP-D0.5-M04	0.5	4	0.7	4	0.45	50	2	●
GM-2EP-D0.5-M06	0.5	4	0.7	6	0.45	50	2	●
GM-2EP-D0.5-M08	0.5	4	0.7	8	0.45	50	2	●
GM-2EP-D0.8-M04	0.8	4	1.2	4	0.75	50	2	●
GM-2EP-D0.8-M06	0.8	4	1.2	6	0.75	50	2	●
GM-2EP-D0.8-M08	0.8	4	1.2	8	0.75	50	2	●
GM-2EP-D0.8-M10	0.8	4	1.2	10	0.75	50	2	●
GM-2EP-D1.0-M04	1.0	4	1.5	4	0.95	50	2	●
GM-2EP-D1.0-M06	1.0	4	1.5	6	0.95	50	2	●
GM-2EP-D1.0-M08	1.0	4	1.5	8	0.95	50	2	●
GM-2EP-D1.0-M10	1.0	4	1.5	10	0.95	50	2	●
GM-2EP-D1.0-M12	1.0	4	1.5	12	0.95	50	2	●
GM-2EP-D1.0-M14	1.0	4	1.5	14	0.95	50	2	●
GM-2EP-D1.2-M06	1.2	4	1.8	6	1.15	50	2	●
GM-2EP-D1.2-M08	1.2	4	1.8	8	1.15	50	2	●
GM-2EP-D1.2-M10	1.2	4	1.8	10	1.15	50	2	●
GM-2EP-D1.2-M12	1.2	4	1.8	12	1.15	50	2	●
GM-2EP-D1.5-M06	1.5	4	2.3	6	1.45	50	2	●
GM-2EP-D1.5-M08	1.5	4	2.3	8	1.45	50	2	●
GM-2EP-D1.5-M10	1.5	4	2.3	10	1.45	50	2	●
GM-2EP-D1.5-M12	1.5	4	2.3	12	1.45	50	2	●
GM-2EP-D1.5-M14	1.5	4	2.3	14	1.45	50	2	●
GM-2EP-D2.0-M06	2.0	4	3.0	6	1.95	50	2	●
GM-2EP-D2.0-M08	2.0	4	3.0	8	1.95	50	2	●
GM-2EP-D2.0-M10	2.0	4	3.0	10	1.95	50	2	●
GM-2EP-D2.0-M12	2.0	4	3.0	12	1.95	50	2	●

● Stock available ○ Make-to-order

➤ Applicable workpiece material ● Very suitable ○ Suitable

Workpiece material											
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						
○	○	○	○			○	○				

Code key

B213

Graphics category and identification

B214

Cutting parameters

B398-B399

2-flute flattened end mills with straight shank, long neck and short cutting edge

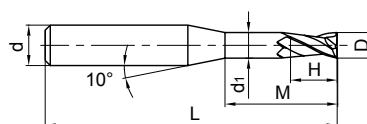
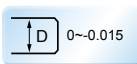
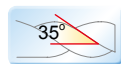


Deep flattened slot

GM-2EP



- Suitable for narrow slot milling or milling of fine parts that could generate interference.



Ordering number	Basic dimension(mm)						Number of teeth Z	Stock
	D	d	H	M	d1	L		
GM-2EP-D2.0-M14	2.0	4	3.0	14	1.95	50	2	●
GM-2EP-D2.0-M16	2.0	4	3.0	16	1.95	50	2	●
GM-2EP-D2.5-M08	2.5	4	3.7	8	2.4	50	2	●
GM-2EP-D2.5-M10	2.5	4	3.7	10	2.4	50	2	●
GM-2EP-D2.5-M12	2.5	4	3.7	12	2.4	50	2	●
GM-2EP-D2.5-M14	2.5	4	3.7	14	2.4	50	2	●
GM-2EP-D2.5-M16	2.5	4	3.7	16	2.4	60	2	●
GM-2EP-D2.5-M18	2.5	4	3.7	18	2.4	60	2	●
GM-2EP-D2.5-M20	2.5	4	3.7	20	2.4	60	2	●
GM-2EP-D3.0-M06	3.0	6	4.5	6	2.85	50	2	●
GM-2EP-D3.0-M08	3.0	6	4.5	8	2.85	50	2	●
GM-2EP-D3.0-M10	3.0	6	4.5	10	2.85	50	2	●
GM-2EP-D3.0-M12	3.0	6	4.5	12	2.85	50	2	●
GM-2EP-D3.0-M14	3.0	6	4.5	14	2.85	60	2	●
GM-2EP-D3.0-M16	3.0	6	4.5	16	2.85	60	2	●
GM-2EP-D3.0-M18	3.0	6	4.5	18	2.85	60	2	●
GM-2EP-D3.0-M20	3.0	6	4.5	20	2.85	60	2	●
GM-2EP-D4.0-M12	4.0	6	6.0	12	3.85	50	2	●
GM-2EP-D4.0-M16	4.0	6	6.0	16	3.85	60	2	●
GM-2EP-D4.0-M20	4.0	6	6.0	20	3.85	60	2	●
GM-2EP-D4.0-M25	4.0	6	6.0	25	3.85	60	2	●
GM-2EP-D5.0-M16	5.0	6	7.5	16	4.85	60	2	●
GM-2EP-D5.0-M25	5.0	6	7.5	25	4.85	70	2	●

● Stock available ○ Make-to-order

Indexable
milling tools

Solid carbide
end mills

GM series

Applicable workpiece material table

● Very suitable ○ Suitable

Workpiece material										
Carbon steel	Alloy steel	Pre-hardened steel, Hardened steel				Stainless steel	Cast iron, Nodular cast iron	Copper alloy	Aluminum alloy	Titanium alloy
		~40HRC	~50HRC	~55HRC	~68HRC					
○	○	○	○			○	○			

Code key

B213

Graphics category and identification

B214

Cutting parameters

B398-B399

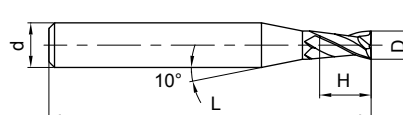
B MILLING Solid Carbide End Mills

GM series for general machining

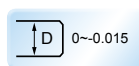
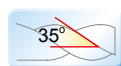
2-flute flattened end mills with straight shank and tiny diameter



GM-2ES



● Tiny diameter end mills can fully display high speed and high precision performances of machining center, often used for machining of precision components such as electronic part etc.



Ordering number	Basic dimension(mm)				Number of teeth Z	Stock
	D	d	H	L		
GM-2ES-D0.3	0.3	4	0.6	50	2	●
GM-2ES-D0.4	0.4	4	0.8	50	2	●
GM-2ES-D0.5	0.5	4	1.0	50	2	●
GM-2ES-D0.6	0.6	4	1.2	50	2	●
GM-2ES-D0.7	0.7	4	1.4	50	2	●
GM-2ES-D0.8	0.8	4	1.6	50	2	●
GM-2ES-D0.9	0.9	4	1.8	50	2	●
GM-2ES-D1.0	1.0	4	2.0	50	2	●
GM-2ES-D1.1	1.1	4	2.0	50	2	●
GM-2ES-D1.2	1.2	4	2.5	50	2	●
GM-2ES-D1.3	1.3	4	2.5	50	2	●
GM-2ES-D1.4	1.4	4	3.0	50	2	●
GM-2ES-D1.5	1.5	4	3.0	50	2	●
GM-2ES-D1.6	1.6	4	3.5	50	2	●
GM-2ES-D1.7	1.7	4	3.5	50	2	●
GM-2ES-D1.8	1.8	4	4.0	50	2	●
GM-2ES-D1.9	1.9	4	4.0	50	2	●
GM-2ES-D2.0	2.0	4	4.0	50	2	●
GM-2ES-D2.1	2.1	4	4.0	50	2	●
GM-2ES-D2.2	2.2	4	4.5	50	2	●
GM-2ES-D2.3	2.3	4	4.5	50	2	●
GM-2ES-D2.4	2.4	4	5.0	50	2	●
GM-2ES-D2.5	2.5	4	5.0	50	2	●
GM-2ES-D2.6	2.6	4	5.0	50	2	●
GM-2ES-D2.7	2.7	4	5.5	50	2	●
GM-2ES-D2.8	2.8	4	5.5	50	2	●
GM-2ES-D2.9	2.9	4	6.0	50	2	●
GM-2ES-D3.0	3.0	4	6.0	50	2	●

● Stock available ○ Make-to-order

Applicable workpiece material table

Workpiece material											
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						
○	○	○	○			○	○				

Code key

B213

Graphics category and identification

B214

Cutting parameters

B400

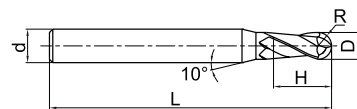
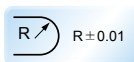
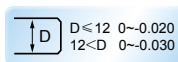
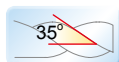
2-flute ball nose end mills with straight shank



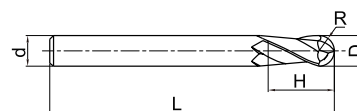
GM-2B



- For profile milling, high speed machining applicable.
- Wide application.



Picture 1



Picture 2

Ordering number	Basic dimension(mm)					Number of teeth Z	Geometry	Stock
	D	R	d	H	L			
GM-2B-R0.5S	1.0	0.5	4	2	50	2	Picture 1	●
GM-2B-R0.75S	1.5	0.75	4	3	50	2	Picture 1	●
GM-2B-R1.0S	2.0	1.0	4	4	50	2	Picture 1	●
GM-2B-R1.25S	2.5	1.25	4	5	50	2	Picture 1	●
GM-2B-R1.5S	3.0	1.5	4	6	50	2	Picture 1	●
GM-2B-R2.0S	4.0	2.0	4	8	50	2	Picture 2	●
GM-2B-R0.5	1.0	0.5	6	2	50	2	Picture 1	●
GM-2B-R0.75	1.5	0.75	6	3	50	2	Picture 1	●
GM-2B-R1.0	2.0	1.0	6	4	50	2	Picture 1	●
GM-2B-R1.25	2.5	1.25	6	5	50	2	Picture 1	●
GM-2B-R1.5	3.0	1.5	6	6	50	2	Picture 1	●
GM-2B-R1.75	3.5	1.75	6	8	50	2	Picture 1	●
GM-2B-R2.0	4.0	2.0	6	8	50	2	Picture 1	●
GM-2B-R2.5	5.0	2.5	6	10	50	2	Picture 1	●
GM-2B-R2.75	5.5	2.75	6	12	50	2	Picture 1	●
GM-2B-R3.0	6.0	3.0	6	12	50	2	Picture 2	●
GM-2B-R3.5	7.0	3.5	8	14	60	2	Picture 1	●
GM-2B-R4.0	8.0	4.0	8	16	60	2	Picture 2	●
GM-2B-R4.5	9.0	4.5	10	18	75	2	Picture 1	●
GM-2B-R5.0	10	5.0	10	20	75	2	Picture 2	●
GM-2B-R6.0	12	6.0	12	24	75	2	Picture 2	●
GM-2B-R7.0	14	7.0	14	28	75	2	Picture 2	●
GM-2B-R8.0	16	8.0	16	32	100	2	Picture 2	●
GM-2B-R10.0	20	10.0	20	40	100	2	Picture 2	●

● Stock available ○ Make-to-order

Indexable
milling toolsSolid carbide
end mills

GM series

➤ Applicable workpiece material table ● Very suitable ○ Suitable

Workpiece material											
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						
○	○	○	○			○	○				

Code key

B213

Graphics category and identification

B214

Cutting parameters

B401

B MILLING Solid Carbide End Mills

GM series for general machining

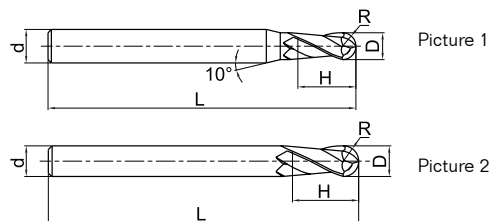
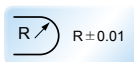
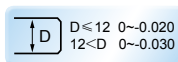
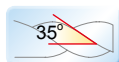
2-flute ball nose end mills with straight shank



GM-2BL



- GM-2B series with long shank.



Ordering number	Basic dimension(mm)					Number of teeth Z	Geometry	Stock
	D	R	d	H	L			
GM-2BL-R1.0	2.0	1.0	6	4	75	2	Picture 1	●
GM-2BL-R1.25	2.5	1.25	6	5	75	2	Picture 1	●
GM-2BL-R1.5	3.0	1.5	6	6	75	2	Picture 1	●
GM-2BL-R1.75	3.5	1.75	6	8	75	2	Picture 1	●
GM-2BL-R2.0	4.0	2.0	6	8	75	2	Picture 1	●
GM-2BL-R2.5	5.0	2.5	6	10	75	2	Picture 1	●
GM-2BL-R2.75	5.5	2.75	6	12	75	2	Picture 1	●
GM-2BL-R3.0	6.0	3.0	6	12	75	2	Picture 2	●
GM-2BL-R3.5	7.0	3.5	8	14	75	2	Picture 1	●
GM-2BL-R4.0	8.0	4.0	8	16	100	2	Picture 2	●
GM-2BL-R4.5	9.0	4.5	10	18	100	2	Picture 1	●
GM-2BL-R5.0	10.0	5.0	10	20	100	2	Picture 2	●
GM-2BL-R6.0	12.0	6.0	12	24	100	2	Picture 2	●
GM-2BL-R7.0	14.0	7.0	14	28	100	2	Picture 2	●
GM-2BL-R8.0	16.0	8.0	16	32	150	2	Picture 2	●
GM-2BL-R10.0	20.0	10.0	20	40	150	2	Picture 2	●

● Stock available ○ Make-to-order

Applicable workpiece material table

Very suitable Suitable

Workpiece material											
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						
○	○	○	○			○	○				

Code key

B213

Graphics category and identification

B214

Cutting parameters

B401

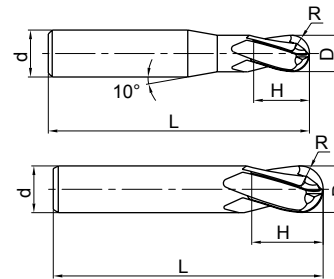
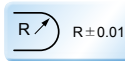
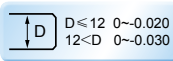
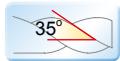
4-flute ball nose end mills with straight shank



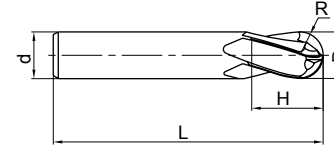
GM-4B



- 4-flute ball nose end mill can operate with higher feed speed and machining efficiency, extending too life in machining high-hardness workpiece.



Picture 1



Picture 2

Ordering number	Basic dimension(mm)					Number of teeth Z	Geometry	Stock
	D	R	d	H	L			
GM-4B-R1.5	3.0	1.5	6	6	50	4	Picture 1	●
GM-4B-R2.0	4.0	2.0	6	8	50	4	Picture 1	●
GM-4B-R2.5	5.0	2.5	6	10	50	4	Picture 1	●
GM-4B-R3.0	6.0	3.0	6	12	50	4	Picture 2	●
GM-4B-R4.0	8.0	4.0	8	16	60	4	Picture 2	●
GM-4B-R5.0	10.0	5.0	10	20	75	4	Picture 2	●
GM-4B-R6.0	12.0	6.0	12	24	75	4	Picture 2	●
GM-4B-R7.0	14.0	7.0	14	28	75	4	Picture 2	●
GM-4B-R8.0	16.0	8.0	16	32	100	4	Picture 2	●
GM-4B-R9.0	18.0	9.0	18	36	100	4	Picture 2	●
GM-4B-R10.0	20.0	10.0	20	40	100	4	Picture 2	●

● Stock available ○ Make-to-order

Indexable milling tools

Solid carbide end mills

GM series

Applicable workpiece material table

● Very suitable ○ Suitable

Workpiece material											
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						
⊙	⊙	⊙	○			○	⊙				

Code key

B213

Graphics category and identification

B214

Cutting parameters

B402

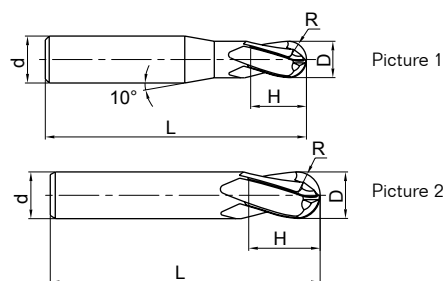
B MILLING Solid Carbide End Mills

GM series for general machining

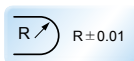
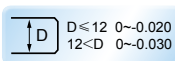
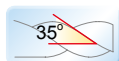
4-flute ball nose end mills with straight and long shank



GM-4BL



- GM-4B series with long shank.



Ordering number	Basic dimension(mm)					Number of teeth Z	Geometry	Stock
	D	R	d	H	L			
GM-4BL-R1.5	3.0	1.5	6	6	75	4	Picture 1	○
GM-4BL-R2.0	4.0	2.0	6	8	75	4	Picture 1	○
GM-4BL-R2.5	5.0	2.5	6	10	75	4	Picture 1	○
GM-4BL-R3.0	6.0	3.0	6	12	75	4	Picture 2	○
GM-4BL-R4.0	8.0	4.0	8	16	100	4	Picture 2	○
GM-4BL-R5.0	10.0	5.0	10	20	100	4	Picture 2	○
GM-4BL-R6.0	12.0	6.0	12	24	100	4	Picture 2	○
GM-4BL-R7.0	14.0	7.0	14	28	100	4	Picture 2	○
GM-4BL-R8.0	16.0	8.0	16	32	150	4	Picture 2	○
GM-4BL-R9.0	18.0	9.0	18	36	150	4	Picture 2	○
GM-4BL-R10.0	20.0	10.0	20	40	150	4	Picture 2	○

● Stock available ○ Make-to-order

Indexable
milling tools

Solid carbide
end mills

GM series

Applicable workpiece material table ● Very suitable ○ Suitable

Workpiece material											
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						
⊙	⊙	⊙	○			○	⊙				

Code key

B213

Graphics category and identification

B214

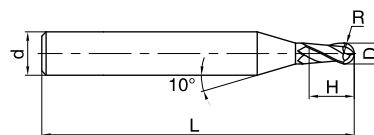
Cutting parameters

B402

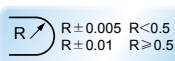
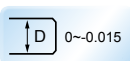
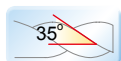
2-flute tiny ball nose end mills with straight shank



GM-2BS



● Tiny diameter end mills can fully display high speed and high precision performances of machining center, often used for machining of precision components such as electronic part etc.



Ordering number	Basic dimension(mm)					Number of teeth Z	Stock
	D	R	d	H	L		
GM-2BS-R0.15	0.30	0.15	4	0.5	50	2	●
GM-2BS-R0.20	0.40	0.20	4	0.6	50	2	●
GM-2BS-R0.25	0.50	0.25	4	0.8	50	2	●
GM-2BS-R0.30	0.60	0.30	4	0.9	50	2	●
GM-2BS-R0.35	0.70	0.35	4	1.0	50	2	●
GM-2BS-R0.40	0.80	0.40	4	1.2	50	2	●
GM-2BS-R0.45	0.90	0.45	4	1.3	50	2	●
GM-2BS-R0.50	1.00	0.50	4	1.5	50	2	●
GM-2BS-R0.60	1.20	0.60	4	1.8	50	2	●
GM-2BS-R0.70	1.40	0.70	4	2.0	50	2	●
GM-2BS-R0.75	1.50	0.75	4	2.3	50	2	●
GM-2BS-R0.80	1.60	0.80	4	2.5	50	2	●
GM-2BS-R0.90	1.80	0.90	4	2.7	50	2	●
GM-2BS-R1.00	2.00	1.00	4	3.0	50	2	●
GM-2BS-R1.25	2.50	1.25	4	3.7	50	2	●
GM-2BS-R1.50	3.00	1.50	4	4.5	50	2	●

● Stock available ○ Make-to-order

Indexable
milling tools

Solid carbide
end mills

GM series

➤ Applicable workpiece material table ● Very suitable ○ Suitable

Workpiece material											
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						
○	○	○	○			○	○				

Code key

B213

Graphics category and identification

B214

Cutting parameters

B403

B MILLING Solid Carbide End Mills

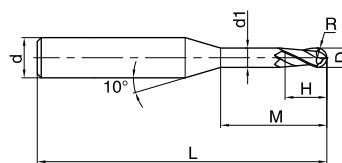
GM series for general machining

2-flute ball nose end mills with straight shank, long neck and short cutting edge

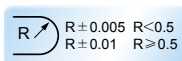
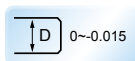
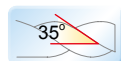


Deep ball nose slot

GM-2BP



- Suitable for machining narrow slot and free-form surface.



Ordering number	Basic dimension(mm)							Number of teeth Z	Stock
	D	R	H	d ₁	M	d	L		
GM-2BP-R0.25-M04	0.5	0.25	0.7	0.45	4	4	50	2	●
GM-2BP-R0.25-M06	0.5	0.25	0.7	0.45	6	4	50	2	●
GM-2BP-R0.3-M04	0.6	0.3	0.9	0.55	4	4	50	2	●
GM-2BP-R0.3-M06	0.6	0.3	0.9	0.55	6	4	50	2	●
GM-2BP-R0.3-M08	0.6	0.3	0.9	0.55	8	4	50	2	●
GM-2BP-R0.4-M04	0.8	0.4	1.2	0.75	4	4	50	2	●
GM-2BP-R0.4-M06	0.8	0.4	1.2	0.75	6	4	50	2	●
GM-2BP-R0.4-M08	0.8	0.4	1.2	0.75	8	4	50	2	●
GM-2BP-R0.4-M10	0.8	0.4	1.2	0.75	10	4	50	2	●
GM-2BP-R0.5-M04	1.0	0.5	1.5	0.95	4	4	50	2	●
GM-2BP-R0.5-M06	1.0	0.5	1.5	0.95	6	4	50	2	●
GM-2BP-R0.5-M08	1.0	0.5	1.5	0.95	8	4	50	2	●
GM-2BP-R0.5-M10	1.0	0.5	1.5	0.95	10	4	50	2	●
GM-2BP-R0.5-M12	1.0	0.5	1.5	0.95	12	4	50	2	●
GM-2BP-R0.6-M06	1.2	0.6	1.8	1.15	6	4	50	2	●
GM-2BP-R0.6-M08	1.2	0.6	1.8	1.15	8	4	50	2	●
GM-2BP-R0.6-M12	1.2	0.6	1.8	1.15	12	4	50	2	●
GM-2BP-R0.6-M16	1.2	0.6	1.8	1.15	16	4	50	2	●
GM-2BP-R0.75-M08	1.5	0.75	2.3	1.45	8	4	50	2	●
GM-2BP-R0.75-M12	1.5	0.75	2.3	1.45	12	4	50	2	●
GM-2BP-R0.75-M16	1.5	0.75	2.3	1.45	16	4	50	2	●
GM-2BP-R1.0-M06	2.0	1.0	3.0	1.95	6	4	50	2	●
GM-2BP-R1.0-M08	2.0	1.0	3.0	1.95	8	4	50	2	●
GM-2BP-R1.0-M10	2.0	1.0	3.0	1.95	10	4	50	2	●

● Stock available ○ Make-to-order

Applicable workpiece material table ○Very suitable ○Suitable

Workpiece material										
Carbon steel	Alloy steel	Pre-hardened steel, Hardened steel				Stainless steel	Cast iron, Nodular cast iron	Copper alloy	Aluminum alloy	Titanium alloy
		~40HRC	~50HRC	~55HRC	~68HRC					
○	○	○	○			○	○			

Code key

B213

Graphics category and identification

B214

Cutting parameters

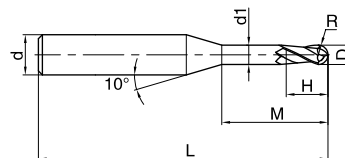
B404-B405

2-flute ball nose end mills with straight shank, long neck and short cutting edge

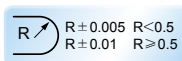
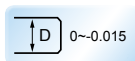
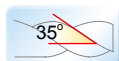


Deep ball nose slot

GM-2BP



- Suitable for machining narrow slot and free-form surface.



Ordering number	Basic dimension(mm)							Number of teeth Z	Stock
	D	R	H	d1	M	d	L		
GM-2BP-R1.0-M12	2.0	1.0	3.0	1.95	12	4	50	2	●
GM-2BP-R1.0-M16	2.0	1.0	3.0	1.95	16	4	50	2	●
GM-2BP-R1.0-M20	2.0	1.0	3.0	1.95	20	4	50	2	●
GM-2BP-R1.25-M08	2.5	1.25	3.7	2.4	8	4	50	2	●
GM-2BP-R1.25-M12	2.5	1.25	3.7	2.4	12	4	50	2	●
GM-2BP-R1.25-M16	2.5	1.25	3.7	2.4	16	4	60	2	●
GM-2BP-R1.25-M20	2.5	1.25	3.7	2.4	20	4	60	2	●
GM-2BP-R1.5-M08	3.0	1.5	4.5	2.85	8	6	50	2	●
GM-2BP-R1.5-M10	3.0	1.5	4.5	2.85	10	6	50	2	●
GM-2BP-R1.5-M12	3.0	1.5	4.5	2.85	12	6	50	2	●
GM-2BP-R1.5-M16	3.0	1.5	4.5	2.85	16	6	60	2	●
GM-2BP-R1.5-M20	3.0	1.5	4.5	2.85	20	6	60	2	●
GM-2BP-R2.0-M10	4.0	2.0	6.0	3.85	10	6	60	2	●
GM-2BP-R2.0-M16	4.0	2.0	6.0	3.85	16	6	60	2	●
GM-2BP-R2.0-M20	4.0	2.0	6.0	3.85	20	6	60	2	●
GM-2BP-R2.0-M25	4.0	2.0	6.0	3.85	25	6	60	2	●
GM-2BP-R2.5-M16	5.0	2.5	7.5	4.85	16	6	60	2	●
GM-2BP-R2.5-M25	5.0	2.5	7.5	4.85	25	6	70	2	●

● Stock available ○ Make-to-order

Indexable milling tools

Solid carbide end mills

GM series

Applicable workpiece material table

● Very suitable ○ Suitable

Workpiece material											
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						
○	○	○	○			○	○				

Code key

B213

Graphics category and identification

B214

Cutting parameters

B404-B405

B MILLING Solid Carbide End Mills

GM series for general machining

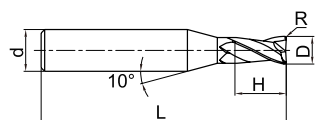
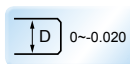
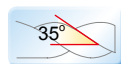
2-flute R end mills with straight shank



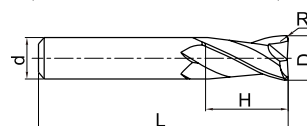
GM-2R



- Wide applications, applicable for several machining styles.



Picture 1



Picture 2

Ordering number	Basic dimension(mm)					Number of teeth Z	Geometry	Stock
	D	R	d	H	L			
GM-2R-D1.0R0.2	1.0	0.2	4	3	50	2	Picture 1	●
GM-2R-D1.5R0.2	1.5	0.2	4	4	50	2	Picture 1	●
GM-2R-D2.0R0.2	2.0	0.2	4	6	50	2	Picture 1	●
GM-2R-D2.0R0.5	2.0	0.5	4	6	50	2	Picture 1	●
GM-2R-D2.5R0.2	2.5	0.2	4	8	50	2	Picture 1	●
GM-2R-D2.5R0.5	2.5	0.5	4	8	50	2	Picture 1	●
GM-2R-D3.0R0.2	3.0	0.2	4	8	50	2	Picture 1	●
GM-2R-D3.0R0.3	3.0	0.3	4	8	50	2	Picture 1	●
GM-2R-D3.0R0.5	3.0	0.5	4	8	50	2	Picture 1	●
GM-2R-D4.0R0.2	4.0	0.2	4	11	50	2	Picture 2	●
GM-2R-D4.0R0.3	4.0	0.3	4	11	50	2	Picture 2	●
GM-2R-D4.0R0.5	4.0	0.5	4	11	50	2	Picture 2	●
GM-2R-D4.0R1.0	4.0	1.0	4	11	50	2	Picture 2	●
GM-2R-D5.0R0.3	5.0	0.3	6	13	50	2	Picture 1	●
GM-2R-D5.0R0.5	5.0	0.5	6	13	50	2	Picture 1	●
GM-2R-D5.0R1.0	5.0	1.0	6	13	50	2	Picture 1	●
GM-2R-D6.0R0.3	6.0	0.3	6	16	50	2	Picture 2	●
GM-2R-D6.0R0.5	6.0	0.5	6	16	50	2	Picture 2	●
GM-2R-D6.0R1.0	6.0	1.0	6	16	50	2	Picture 2	●
GM-2R-D8.0R0.3	8.0	0.3	8	20	60	2	Picture 2	●
GM-2R-D8.0R0.5	8.0	0.5	8	20	60	2	Picture 2	●
GM-2R-D8.0R1.0	8.0	1.0	8	20	60	2	Picture 2	●
GM-2R-D10.0R0.5	10.0	0.5	10	25	75	2	Picture 2	●
GM-2R-D10.0R1.0	10.0	1.0	10	25	75	2	Picture 2	●
GM-2R-D10.0R1.5	10.0	1.5	10	25	75	2	Picture 2	●
GM-2R-D10.0R2.0	10.0	2.0	10	25	75	2	Picture 2	●
GM-2R-D12.0R0.5	12.0	0.5	12	30	75	2	Picture 2	●
GM-2R-D12.0R1.0	12.0	1.0	12	30	75	2	Picture 2	●
GM-2R-D12.0R1.5	12.0	1.5	12	30	75	2	Picture 2	●
GM-2R-D12.0R2.0	12.0	2.0	12	30	75	2	Picture 2	●

● Stock available ○ Make-to-order

Applicable workpiece material table

Workpiece material											
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						
○	○	○	○			○	○				

Code key

B213

Graphics category and identification

B214

Cutting parameters

B406

GM series for general machining

4-flute R end mills with straight shank



Radius shoulder



Profile

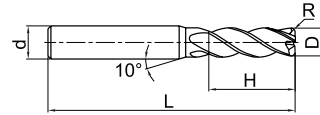
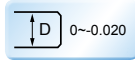
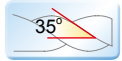


Radius corner slot

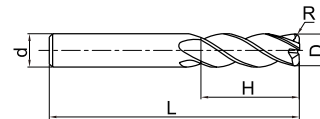
GM-4R



- Wide applications, applicable for several machining styles.



Picture 1



Picture 2

Ordering number	Basic dimension(mm)					Number of teeth Z	Geometry	Stock
	D	R	d	H	L			
GM-4R-D3.0R0.2	3.0	0.2	4	8	50	4	Picture 1	●
GM-4R-D4.0R0.3	4.0	0.3	4	10	50	4	Picture 2	●
GM-4R-D4.0R0.5	4.0	0.5	4	10	50	4	Picture 2	●
GM-4R-D5.0R0.5	5.0	0.5	6	13	50	4	Picture 1	●
GM-4R-D5.0R1.0	5.0	1.0	6	13	50	4	Picture 1	●
GM-4R-D6.0R0.5	6.0	0.5	6	16	50	4	Picture 2	●
GM-4R-D6.0R1.0	6.0	1.0	6	16	50	4	Picture 2	●
GM-4R-D8.0R0.5	8.0	0.5	8	20	60	4	Picture 2	●
GM-4R-D8.0R1.0	8.0	1.0	8	20	60	4	Picture 2	●
GM-4R-D10.0R0.5	10.0	0.5	10	25	75	4	Picture 2	●
GM-4R-D10.0R1.0	10.0	1.0	10	25	75	4	Picture 2	●
GM-4R-D10.0R2.0	10.0	2.0	10	25	75	4	Picture 2	●
GM-4R-D10.0R3.0	10.0	3.0	10	25	75	4	Picture 2	●
GM-4R-D12.0R0.5	12.0	0.5	12	30	75	4	Picture 2	●
GM-4R-D12.0R1.0	12.0	1.0	12	30	75	4	Picture 2	●
GM-4R-D12.0R2.0	12.0	2.0	12	30	75	4	Picture 2	●
GM-4R-D12.0R3.0	12.0	3.0	12	30	75	4	Picture 2	●

● Stock available ○ Make-to-order

Indexable milling tools

Solid carbide end mills

GM series

Applicable workpiece material table

● Very suitable ○ Suitable

Workpiece material											
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						
⊙	⊙	⊙	○			○	⊙				

Code key

B213

Graphics category and identification

B214

Cutting parameters

B407

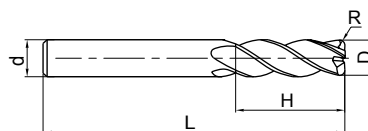
B MILLING Solid Carbide End Mills

GM series for general machining

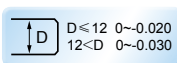
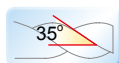
4-flute R end mills with straight and long shank



GM-4RL



- GM-4R series with long shank.



Ordering number	Basic dimension(mm)					Number of teeth Z	Stock
	D	R	d	H	L		
GM-4RL-D6.0R0.5	6.0	0.5	6	16	75	4	●
GM-4RL-D6.0R1.0	6.0	1.0	6	16	75	4	●
GM-4RL-D8.0R0.5	8.0	0.5	8	20	100	4	●
GM-4RL-D8.0R1.0	8.0	1.0	8	20	100	4	●
GM-4RL-D10.0R0.5	10.0	0.5	10	25	100	4	●
GM-4RL-D10.0R1.0	10.0	1.0	10	25	100	4	●
GM-4RL-D10.0R2.0	10.0	2.0	10	25	100	4	●
GM-4RL-D12.0R0.5	12.0	0.5	12	30	100	4	●
GM-4RL-D12.0R1.0	12.0	1.0	12	30	100	4	●
GM-4RL-D12.0R2.0	12.0	2.0	12	30	100	4	●
GM-4RL-D16.0R1.0	16.0	1.0	16	45	150	4	●
GM-4RL-D16.0R2.0	16.0	2.0	16	45	150	4	●

● Stock available ○ Make-to-order

Indexable
milling tools

Solid carbide
end mills

GM series

Applicable workpiece material table

Very suitable Suitable

Workpiece material											
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						
○	○	○	○			○	○				

Code key

B213

Graphics category and identification

B214

Cutting parameters

B407

4-flute flattened end mills with straight shank and corrugated edges



Side face



Step shoulder

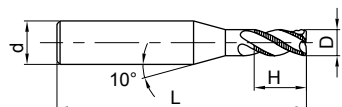


Straight slot

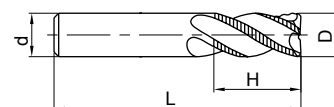
GM-4W



Corner protection

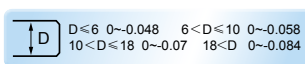
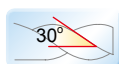


Picture 1



Picture 2

- Very suitable for high-efficiency rough machining.



Ordering number	Basic dimension(mm)				Number of teeth Z	Geometry	Stock
	D	d	H	L			
GM-4W-D6.0	6.0	6	16	50	4	Picture 2	●
GM-4W-D7.0	7.0	8	20	60	4	Picture 1	●
GM-4W-D8.0	8.0	8	20	60	4	Picture 2	●
GM-4W-D9.0	9.0	10	22	75	4	Picture 1	●
GM-4W-D10.0	10.0	10	25	75	4	Picture 2	●
GM-4W-D11.0	11.0	12	26	75	4	Picture 1	●
GM-4W-D12.0	12.0	12	30	75	4	Picture 2	●
GM-4W-D16.0	16.0	16	45	100	4	Picture 2	●
GM-4W-D20.0	20.0	20	45	100	4	Picture 2	●

● Stock available ○ Make-to-order

Indexable milling tools

Solid carbide end mills

GM series

Applicable workpiece material table

● Very suitable ○ Suitable

Workpiece material										
Carbon steel	Alloy steel	Pre-hardened steel, Hardened steel				Stainless steel	Cast iron, Nodular cast iron	Copper alloy	Aluminum alloy	Titanium alloy
		~40HRC	~50HRC	~55HRC	~68HRC					
○	○	○	○			○	○			

Code key

B213

Graphics category and identification

B214

Cutting parameters

B408-B409