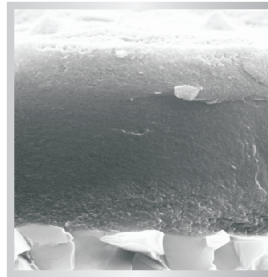


HMX series

end mills for high-hardness steel machining



Lattice heterogeneous coating

Lattice heterogeneous coating added with special elements, with high hardness and excellent high temperature oxidation resistance, more suitable for high hardness materials and high speed machining

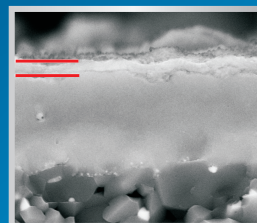
Excellent coating processing technology, more closely combined with substrate

**New technology
Breakthrough upgrading**

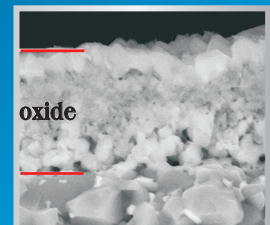
- unique edge structure, properly designed chipbreaker, for outstanding cutting performance.
- Orange red coating allows for better wear observation.
- Special after treatment greatly reduces friction, for smoother chip evacuation and superior surface quality.

Perfect high temperature oxidation resistance:

After oxidation at 1100 °C, the coating of HMX series only has a very thin oxide layer, while the similar products of Company A has completely oxidized.



HMX series



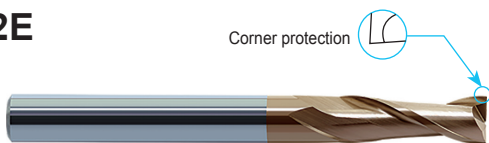
A company

HMX series for machining high hardness steel

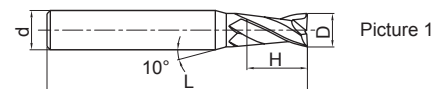
2-flute flattened end mills with straight shank



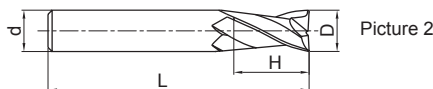
HMX-2E



Corner protection

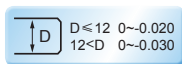
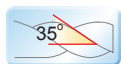


Picture 1



Picture 2

- For slot milling.
- Very suitable for high speed cutting and dry cutting.



Type	Basic dimension(mm)				Number of teeth Z	Geometry	Stock
	D	d	H	L			
HMX-2E-D1.0F	1.0	3	3	50	2	Picture 1	●
HMX-2E-D1.0S	1.0	4	3	50	2	Picture 1	●
HMX-2E-D1.0	1.0	6	3	50	2	Picture 1	●
HMX-2E-D1.5S	1.5	4	4	50	2	Picture 1	●
HMX-2E-D1.5	1.5	6	4	50	2	Picture 1	●
HMX-2E-D2.0F	2.0	3	6	50	2	Picture 1	●
HMX-2E-D2.0S	2.0	4	6	50	2	Picture 1	●
HMX-2E-D2.0	2.0	6	6	50	2	Picture 1	●
HMX-2E-D2.5S	2.5	4	8	50	2	Picture 1	●
HMX-2E-D2.5	2.5	6	8	50	2	Picture 1	●
HMX-2E-D3.0F	3.0	3	8	50	2	Picture 2	●
HMX-2E-D3.0S	3.0	4	8	50	2	Picture 1	●
HMX-2E-D3.0	3.0	6	8	50	2	Picture 1	●
HMX-2E-D3.5S	3.5	4	10	50	2	Picture 1	●
HMX-2E-D3.5	3.5	6	10	50	2	Picture 1	●
HMX-2E-D4.0S	4.0	4	11	50	2	Picture 2	●

● Stock available ○ Make-to-order

Indexable milling tools

Solid carbide end mills

HMX 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

B258

Graphics category and identification

B259

Cutting parameters

B524

Non-standard customization

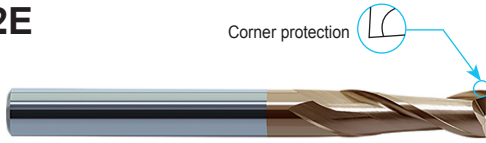
B570-B571

HMX series for machining high hardness steel

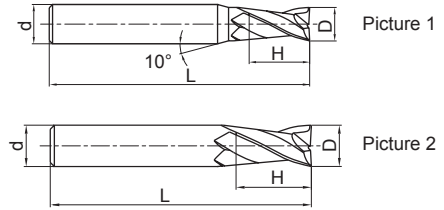
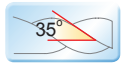
2-flute flattened end mills with straight shank



HMX-2E



- For slot milling.
- Very suitable for high speed cutting and dry cutting.



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

● Stock available ○ Make-to-order

Indexable milling tools
Solid carbide end mills
HMX 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						
			○	●	●		○				

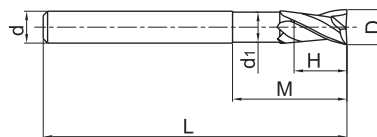
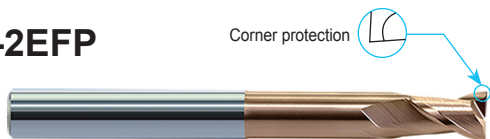


HMX series for machining high hardness steel

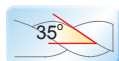
2-flute flattened end mills with long straight shank and short cutting edge



HMX-2EFP



● High-rigidity short cutting edge, suitable for heavy cutting and deep cavity milling.



Type	Basic dimension(mm)						Number of teeth Z	Stock
	D	d	H	M	d ₁	L		
HMX-2EFP-D6.0	6.0	6	9	30	5.8	75	2	●
HMX-2EFP-D8.0	8.0	8	12	40	7.8	100	2	●
HMX-2EFP-D10.0	10.0	10	15	50	9.6	100	2	●
HMX-2EFP-D12.0	12.0	12	18	50	11.5	100	2	●
HMX-2EFP-D16.0	16.0	16	24	50	15.5	150	2	●
HMX-2EFP-D20.0	20.0	20	30	60	19.5	150	2	●

● Stock available ○ Make-to-order

Indexable milling tools

Solid carbide end mills

HMX 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

B258

Graphics category and identification

B259

Cutting parameters

B525

Non-standard customization

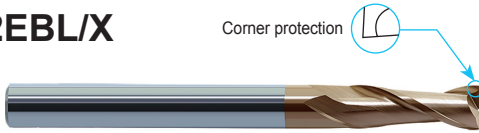
B570-B571

HMX series for machining high hardness steel

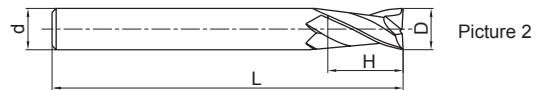
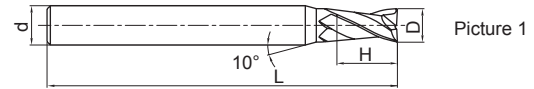
2-flute flattened end mills with straight shank



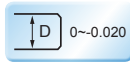
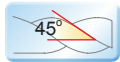
HMX-2EBL/X



Corner protection



● HMX-2E series with long shank.



Type	Basic dimension(mm)				Number of teeth Z	Geometry	Stock
	D	d	H	L			
HMX-2EBL-D3.0	3.0	6	8	75	2	Picture 1	○
HMX-2EBL-D4.0S	4.0	4	11	75	2	Picture 2	○
HMX-2EBL-D4.0	4.0	6	11	75	2	Picture 1	○
HMX-2EBL-D6.0	6.0	6	16	75	2	Picture 2	○
HMX-2EBX-D6.0	6.0	6	16	100	2	Picture 2	○
HMX-2EBL-D8.0	8.0	8	20	75	2	Picture 2	○
HMX-2EBX-D8.0	8.0	8	20	100	2	Picture 2	○
HMX-2EBL-D10.0	10.0	10	25	100	2	Picture 2	○
HMX-2EBX-D10.0	10.0	10	25	150	2	Picture 2	○
HMX-2EBL-D12.0	12.0	12	30	100	2	Picture 2	○
HMX-2EBX-D12.0	12.0	12	30	150	2	Picture 2	○

● Stock available ○ Make-to-order

Indexable milling tools

Solid carbide end mills

HMX 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						
			○	●	●		○				

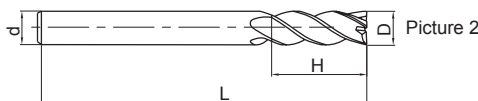
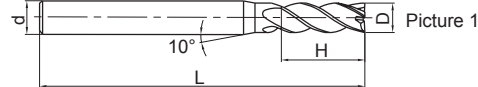
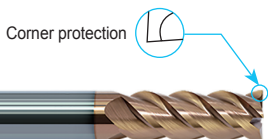


HMX series for machining high hardness steel

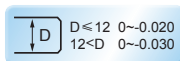
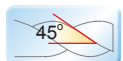
4-flute flattened end mills with straight shank



HMX-4E



- For side milling and shallow slot milling.
- Very suitable for high speed cutting and dry cutting.



Type	Basic dimension(mm)				Number of teeth Z	Geometry	Stock
	D	d	H	L			
HMX-4E-D1.0F	1.0	3	3	50	4	Picture 1	●
HMX-4E-D1.0S	1.0	4	3	50	4	Picture 1	●
HMX-4E-D1.0	1.0	6	3	50	4	Picture 1	●
HMX-4E-D1.5F	1.5	3	4	50	4	Picture 1	●
HMX-4E-D1.5S	1.5	4	4	50	4	Picture 1	●
HMX-4E-D1.5	1.5	6	4	50	4	Picture 1	●
HMX-4E-D2.0F	2.0	3	6	50	4	Picture 1	●
HMX-4E-D2.0S	2.0	4	6	50	4	Picture 1	●
HMX-4E-D2.0	2.0	6	6	50	4	Picture 1	●
HMX-4E-D2.5F	2.5	3	8	50	4	Picture 1	●
HMX-4E-D2.5S	2.5	4	8	50	4	Picture 1	●
HMX-4E-D2.5	2.5	6	8	50	4	Picture 1	●
HMX-4E-D3.0F	3.0	3	8	50	4	Picture 2	●
HMX-4E-D3.0S	3.0	4	8	50	4	Picture 1	●
HMX-4E-D3.0	3.0	6	8	50	4	Picture 1	●
HMX-4E-D3.5S	3.5	4	10	50	4	Picture 1	●
HMX-4E-D4.0S	4.0	4	11	50	4	Picture 2	●

● Stock available ○ Make-to-order

Indexable milling tools

Solid carbide end mills

HMX series

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

B258

Graphics category and identification

B259

Cutting parameters

B526

Non-standard customization

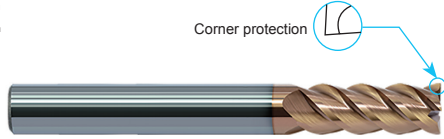
B570-B571

HMX series for machining high hardness steel

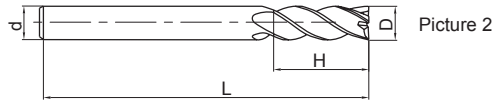
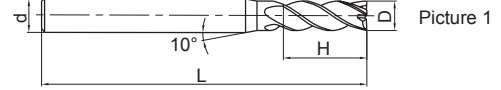
4-flute flattened end mills with straight shank



HMX-4E



- For side milling and shallow slot milling.
- Very suitable for high speed cutting and dry cutting.



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

● Stock available ○ Make-to-order

Indexable milling tools
Solid carbide end mills
HMX 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						
			○	●	●		○				

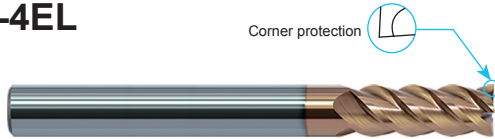


HMX series for machining high hardness steel

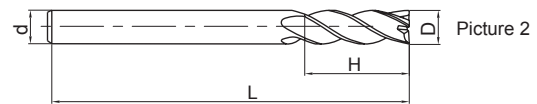
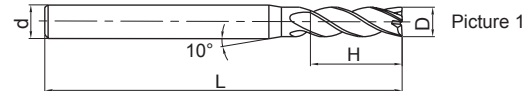
4-flute flattened end mills with straight shank and long cutting edge



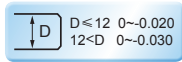
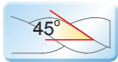
HMX-4EL



Corner protection



● HM-4E series with long cutting edge.

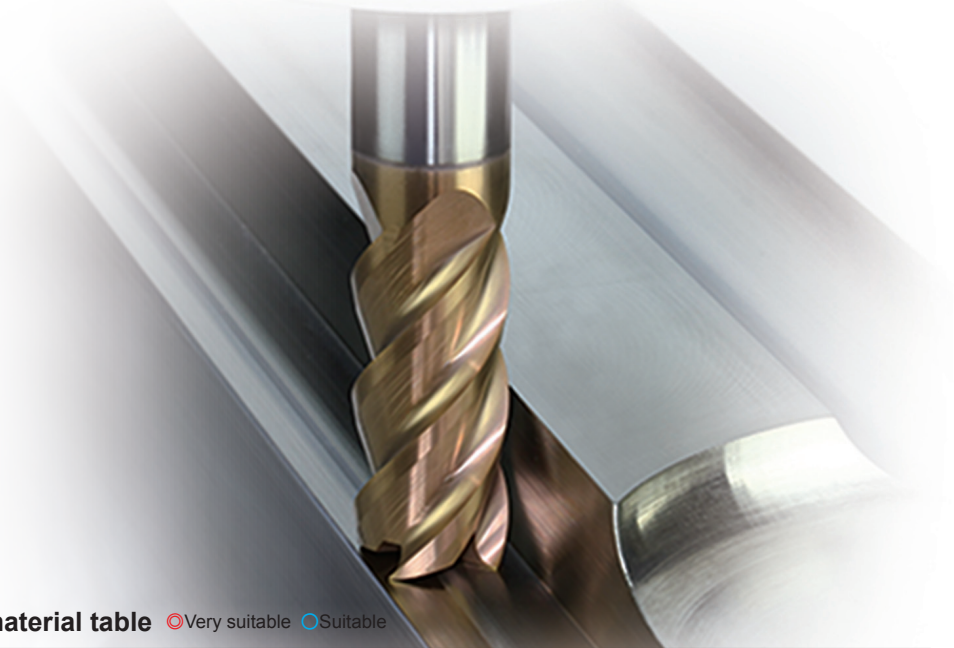


Type	Basic dimension(mm)				Number of teeth Z	Geometry	Stock
	D	d	H	L			
HMX-4EL-D3.0	3.0	6	12	75	4	Picture 1	●
HMX-4EL-D4.0	4.0	6	15	75	4	Picture 1	●
HMX-4EL-D5.0	5.0	6	20	75	4	Picture 1	●
HMX-4EL-D6.0	6.0	6	20	75	4	Picture 2	●
HMX-4EL-D8.0	8.0	8	25	100	4	Picture 2	●
HMX-4EL-D10.0	10.0	10	30	100	4	Picture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

Indexable milling tools

Solid carbide end mills

HMX series



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

B258

Graphics category and identification

B259

Cutting parameters

B526

Non-standard customization

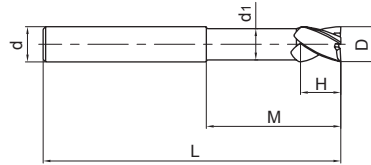
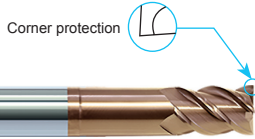
B570-B571

HMX series for machining high hardness steel

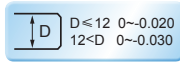
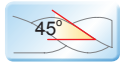
4-flute flattened end mills with straight shank, long neck and short cutting edge



HMX-4EFP



● High-rigidity short cutting edge, suitable for heavy cutting and deep cavity milling.



Type	Basic dimension(mm)						Number of teeth Z	Stock
	D	d	H	M	d ₁	L		
HMX-4EFP-D6.0	6.0	6	9	30	5.8	75	4	●
HMX-4EFP-D8.0	8.0	8	12	40	7.8	100	4	●
HMX-4EFP-D10.0	10.0	10	15	50	9.6	100	4	●
HMX-4EFP-D12.0	12.0	12	18	50	11.5	100	4	●
HMX-4EFP-D16.0	16.0	16	24	50	15.5	150	4	●
HMX-4EFP-D20.0	20.0	20	30	60	19.5	150	4	●

● Stock available ○ Make-to-order

Indexable milling tools

Solid carbide end mills

HMX 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
B258

Graphics category and identification
B259

Cutting parameters
B527

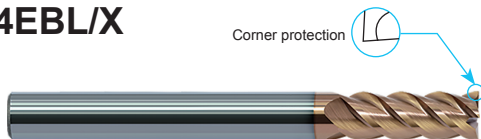
Non-standard customization
B570-B571

HMX series for machining high hardness steel

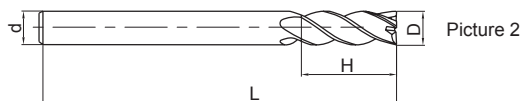
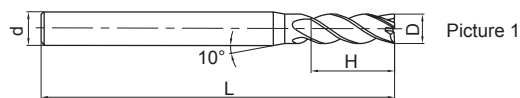
4-flute flattened end mills with long shank



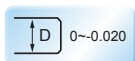
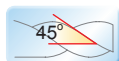
HMX-4EBL/X



Corner protection



● HMX-4E series with long shank.



Type	Basic dimension(mm)				Number of teeth Z	Geometry	Stock
	D	d	H	L			
HMX-4EBL-D3.0S	3.0	4	8	75	4	Picture 1	●
HMX-4EBL-D3.0	3.0	6	8	75	4	Picture 1	●
HMX-4EBL-D4.0S	4.0	4	11	75	4	Picture 2	●
HMX-4EBL-D4.0	4.0	6	11	75	4	Picture 1	●
HMX-4EBL-D6.0	6.0	6	16	75	4	Picture 2	●
HMX-4EBX-D6.0	6.0	6	16	100	4	Picture 2	●
HMX-4EBL-D8.0	8.0	8	20	75	4	Picture 2	●
HMX-4EBX-D8.0	8.0	8	20	100	4	Picture 2	●
HMX-4EBL-D10.0	10.0	10	25	100	4	Picture 2	●
HMX-4EBX-D10.0	10.0	10	25	150	4	Picture 2	●
HMX-4EBL-D12.0	12.0	12	30	100	4	Picture 2	●
HMX-4EBX-D12.0	12.0	12	30	150	4	Picture 2	●

● Stock available ○ Make-to-order

Indexable milling tools

Solid carbide end mills

HMX series

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

B258

Graphics category and identification

B259

Cutting parameters

B526

Non-standard customization

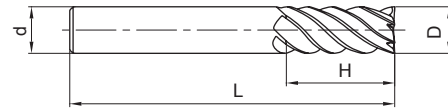
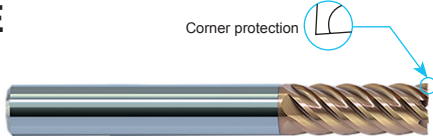
B570-B571

HMX series for machining high hardness steel

6-flute flattened end mills with straight shank



HMX-6E



- High tool rigidity reduce tool deflection in side milling.
- Very suitable for high speed cutting and dry cutting.



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

● Stock available ○ Make-to-order

Indexable milling tools
Solid carbide end mills
HMX 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						
			○	○	○		○				

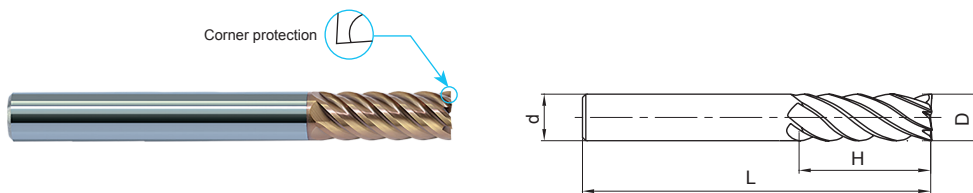


HMX series for machining high hardness steel

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



HMX-6EL



● HM-6E series with long cutting edge.



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

● Stock available ○ Make-to-order

Indexable milling tools

Solid carbide end mills

HMX 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 B258 Graphics category and identification B259 Cutting parameters B529 Non-standard customization B570-B571

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

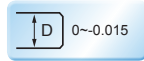
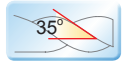
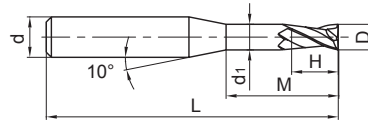


Deep flattened slot

HMX-2EP



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



Type	Basic dimension(mm)						Number of teeth Z	Stock
	D	d	H	M	d1	L		
HMX-2EP-D0.3-M02	0.3	4	0.4	2	0.25	50	2	●
HMX-2EP-D0.3-M04	0.3	4	0.4	4	0.25	50	2	●
HMX-2EP-D0.4-M02	0.4	4	0.6	2	0.35	50	2	●
HMX-2EP-D0.4-M04	0.4	4	0.6	4	0.35	50	2	●
HMX-2EP-D0.5-M04	0.5	4	0.7	4	0.45	50	2	●
HMX-2EP-D0.5-M06	0.5	4	0.7	6	0.45	50	2	●
HMX-2EP-D0.5-M08	0.5	4	0.7	8	0.45	50	2	●
HMX-2EP-D0.6-M04	0.6	4	0.9	4	0.55	50	2	●
HMX-2EP-D0.6-M06	0.6	4	0.9	6	0.55	50	2	●
HMX-2EP-D0.7-M04	0.7	4	1.0	4	0.65	50	2	●
HMX-2EP-D0.7-M06	0.7	4	1.0	6	0.65	50	2	●
HMX-2EP-D0.7-M08	0.7	4	1.0	8	0.65	50	2	●
HMX-2EP-D0.8-M04	0.8	4	1.2	4	0.75	50	2	●
HMX-2EP-D0.8-M06	0.8	4	1.2	6	0.75	50	2	●
HMX-2EP-D0.8-M08	0.8	4	1.2	8	0.75	50	2	●
HMX-2EP-D0.8-M10	0.8	4	1.2	10	0.75	50	2	●
HMX-2EP-D1.0-M04	1.0	4	1.5	4	0.95	50	2	●
HMX-2EP-D1.0-M06	1.0	4	1.5	6	0.95	50	2	●
HMX-2EP-D1.0-M08	1.0	4	1.5	8	0.95	50	2	●
HMX-2EP-D1.0-M10	1.0	4	1.5	10	0.95	50	2	●
HMX-2EP-D1.0-M12	1.0	4	1.5	12	0.95	50	2	●
HMX-2EP-D1.0-M14	1.0	4	1.5	14	0.95	50	2	●
HMX-2EP-D1.2-M06	1.2	4	1.8	6	1.15	50	2	●
HMX-2EP-D1.2-M08	1.2	4	1.8	8	1.15	50	2	●
HMX-2EP-D1.2-M10	1.2	4	1.8	10	1.15	50	2	●
HMX-2EP-D1.2-M12	1.2	4	1.8	12	1.15	50	2	●
HMX-2EP-D1.5-M06	1.5	4	2.3	6	1.45	50	2	●
HMX-2EP-D1.5-M08	1.5	4	2.3	8	1.45	50	2	●
HMX-2EP-D1.5-M10	1.5	4	2.3	10	1.45	50	2	●

Applicable workpiece material table ● Very suitable ○ Suitable

● Stock available ○ Make-to-order

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

B258

Graphics category and identification

B259

Cutting parameters

B530-B531

Non-standard customization

B570-B571

Indexable milling tools
Solid carbide end mills
HMX series

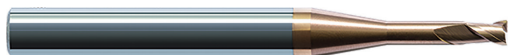
HMX series for machining high hardness steel

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

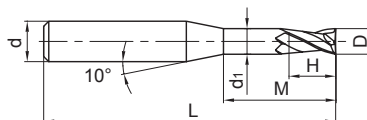
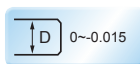
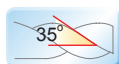


Deep flattened slot

HMX-2EP



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



Indexable milling tools

Solid carbide end mills

HMX series

Type	Basic dimension(mm)						Number of teeth Z	Stock
	D	d	H	M	d ₁	L		
HMX-2EP-D1.5-M12	1.5	4	2.3	12	1.45	50	2	●
HMX-2EP-D1.5-M14	1.5	4	2.3	14	1.45	50	2	●
HMX-2EP-D2.0-M06	2.0	4	3.0	6	1.95	50	2	●
HMX-2EP-D2.0-M08	2.0	4	3.0	8	1.95	50	2	●
HMX-2EP-D2.0-M10	2.0	4	3.0	10	1.95	50	2	●
HMX-2EP-D2.0-M12	2.0	4	3.0	12	1.95	50	2	●
HMX-2EP-D2.0-M14	2.0	4	3.0	14	1.95	50	2	●
HMX-2EP-D2.0-M16	2.0	4	3.0	16	1.95	50	2	●
HMX-2EP-D2.5-M08	2.5	4	3.7	8	2.4	50	2	●
HMX-2EP-D2.5-M10	2.5	4	3.7	10	2.4	50	2	●
HMX-2EP-D2.5-M12	2.5	4	3.7	12	2.4	50	2	●
HMX-2EP-D2.5-M14	2.5	4	3.7	14	2.4	50	2	●
HMX-2EP-D2.5-M16	2.5	4	3.7	16	2.4	60	2	●
HMX-2EP-D2.5-M18	2.5	4	3.7	18	2.4	60	2	●
HMX-2EP-D2.5-M20	2.5	4	3.7	20	2.4	60	2	●
HMX-2EP-D3.0-M06	3.0	6	4.5	6	2.85	50	2	●
HMX-2EP-D3.0-M08	3.0	6	4.5	8	2.85	50	2	●
HMX-2EP-D3.0-M10	3.0	6	4.5	10	2.85	50	2	●
HMX-2EP-D3.0-M12	3.0	6	4.5	12	2.85	50	2	●
HMX-2EP-D3.0-M14	3.0	6	4.5	14	2.85	60	2	●
HMX-2EP-D3.0-M16	3.0	6	4.5	16	2.85	60	2	●
HMX-2EP-D3.0-M18	3.0	6	4.5	18	2.85	60	2	●
HMX-2EP-D3.0-M20	3.0	6	4.5	20	2.85	60	2	●
HMX-2EP-D4.0-M12	4.0	6	6.0	12	3.85	60	2	●
HMX-2EP-D4.0-M16	4.0	6	6.0	16	3.85	60	2	●
HMX-2EP-D4.0-M20	4.0	6	6.0	20	3.85	60	2	●
HMX-2EP-D4.0-M25	4.0	6	6.0	25	3.85	60	2	●
HMX-2EP-D5.0-M16	5.0	6	7.5	16	4.85	60	2	●
HMX-2EP-D5.0-M25	5.0	6	7.5	25	4.85	70	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

B258

Graphics category and identification

B259

Cutting parameters

B530-B531

Non-standard customization

B570-B571

HMX series for machining high hardness steel

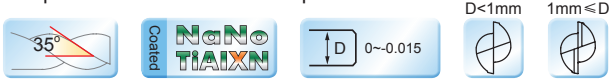
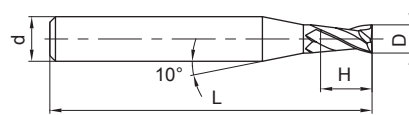
2-flute flattened end mills with straight shank and tiny diameter



HMX-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.



Type	Basic dimension(mm)				Number of teeth Z	Stock
	D	d	H	L		
HMX-2ES-D0.3	0.3	4	0.6	50	2	●
HMX-2ES-D0.4	0.4	4	0.8	50	2	●
HMX-2ES-D0.5	0.5	4	1.0	50	2	●
HMX-2ES-D0.6	0.6	4	1.2	50	2	●
HMX-2ES-D0.7	0.7	4	1.4	50	2	●
HMX-2ES-D0.8	0.8	4	1.6	50	2	●
HMX-2ES-D0.9	0.9	4	1.8	50	2	●
HMX-2ES-D1.0	1.0	4	2.0	50	2	●
HMX-2ES-D1.1	1.1	4	2.0	50	2	●
HMX-2ES-D1.2	1.2	4	2.5	50	2	●
HMX-2ES-D1.3	1.3	4	2.5	50	2	●
HMX-2ES-D1.4	1.4	4	3.0	50	2	●
HMX-2ES-D1.5	1.5	4	3.0	50	2	●
HMX-2ES-D1.6	1.6	4	3.5	50	2	●
HMX-2ES-D1.7	1.7	4	3.5	50	2	●
HMX-2ES-D1.8	1.8	4	4.0	50	2	●
HMX-2ES-D1.9	1.9	4	4.0	50	2	●
HMX-2ES-D2.0	2.0	4	4.0	50	2	●
HMX-2ES-D2.1	2.1	4	4.0	50	2	●
HMX-2ES-D2.2	2.2	4	4.5	50	2	●
HMX-2ES-D2.3	2.3	4	4.5	50	2	●
HMX-2ES-D2.4	2.4	4	5.0	50	2	●
HMX-2ES-D2.5	2.5	4	5.0	50	2	●
HMX-2ES-D2.6	2.6	4	5.0	50	2	●
HMX-2ES-D2.7	2.7	4	5.5	50	2	●
HMX-2ES-D2.8	2.8	4	5.5	50	2	●
HMX-2ES-D2.9	2.9	4	6.0	50	2	●
HMX-2ES-D3.0	3.0	4	6.0	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	Heat resistant alloy
		~40HRC	~50HRC	~55HRC	~68HRC						
			○	○	○		○				

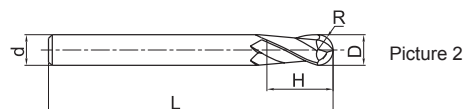
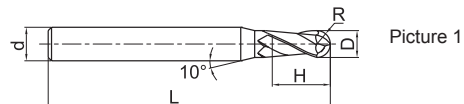


Indexable milling tools
Solid carbide end mills
HMX series

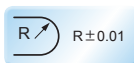
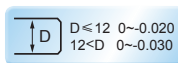
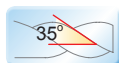
2-flute ball nose end mills with straight shank



HMX-2B



- For profile milling.
- Very suitable for high speed cutting and dry cutting.



Type	Basic dimension(mm)					Number of teeth Z	Geometry	Stock
	D	R	d	H	L			
HMX-2B-R0.5S	1.0	0.5	4	2	50	2	Picture 1	●
HMX-2B-R0.5	1.0	0.5	6	2	50	2	Picture 1	●
HMX-2B-R0.75S	1.5	0.75	4	3	50	2	Picture 1	●
HMX-2B-R0.75	1.5	0.75	6	3	50	2	Picture 1	●
HMX-2B-R1.0S	2.0	1.0	4	4	50	2	Picture 1	●
HMX-2B-R1.0	2.0	1.0	6	4	50	2	Picture 1	●
HMX-2B-R1.25S	2.5	1.25	4	5	50	2	Picture 1	●
HMX-2B-R1.25	2.5	1.25	6	5	50	2	Picture 1	●
HMX-2B-R1.5S	3.0	1.5	4	6	50	2	Picture 1	●
HMX-2B-R1.5	3.0	1.5	6	6	50	2	Picture 1	●
HMX-2B-R1.75	3.5	1.75	6	8	50	2	Picture 1	●
HMX-2B-R2.0S	4.0	2.0	4	8	50	2	Picture 2	●
HMX-2B-R2.0	4.0	2.0	6	8	50	2	Picture 1	●
HMX-2B-R2.5	5.0	2.5	6	10	50	2	Picture 1	●
HMX-2B-R2.75	5.5	2.75	6	12	50	2	Picture 1	●
HMX-2B-R3.0	6.0	3.0	6	12	50	2	Picture 2	●
HMX-2B-R3.5	7.0	3.5	8	14	60	2	Picture 1	●
HMX-2B-R4.0	8.0	4.0	8	16	60	2	Picture 2	●
HMX-2B-R4.5	9.0	4.5	10	18	75	2	Picture 1	●
HMX-2B-R5.0	10.0	5.0	10	20	75	2	Picture 2	●
HMX-2B-R6.0	12.0	6.0	12	24	75	2	Picture 2	●
HMX-2B-R7.0	14.0	7.0	14	28	75	2	Picture 2	●
HMX-2B-R8.0	16.0	8.0	16	32	100	2	Picture 2	●
HMX-2B-R10.0	20.0	10.0	20	40	100	2	Picture 2	●

● Stock available ○ Make-to-order

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						
			○	◎	◎		○				

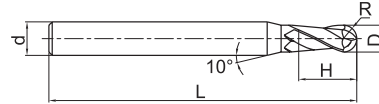
Code key [B258](#) Graphics category and identification [B259](#) Cutting parameters [B533](#) Non-standard customization [B570-B571](#)

Indexable milling tools
Solid carbide end mills
HMX series

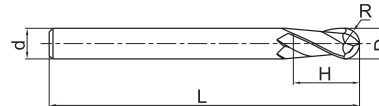
2-flute ball nose end mills with straight shank



HMX-2BL/M/X

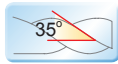


Picture 1



Picture 2

●HM-2B series with long shank.



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

B258

Graphics category and identification

B259

Cutting parameters

B533

Non-standard customization

B570-B571

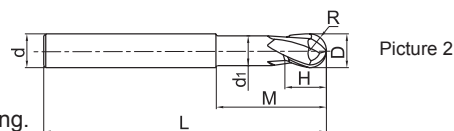
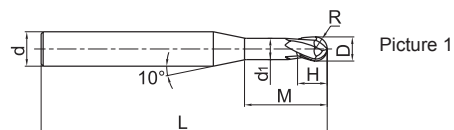
Indexable milling tools
Solid carbide end mills
HMX series

HMX series for machining high hardness steel

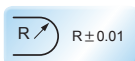
2-flute ball nose end mills with straight shank, long neck and short cutting edge



HMX-2BFP



- Short cutting edge and high rigidity designed, applicable for heavy cutting.



Type	Basic dimension(mm)							Number of teeth Z	Geometry	Stock
	D	R	H	d ₁	M	d	L			
HMX-2BFP-R0.5	1.0	0.5	1	0.95	2.5	6	75	2	Picture 1	●
HMX-2BFP-R0.75	1.5	0.75	1.5	1.45	3.0	6	75	2	Picture 1	●
HMX-2BFP-R1.0	2.0	1.0	2	1.95	4.0	6	75	2	Picture 1	●
HMX-2BFP-R1.5	3.0	1.5	3	2.85	6.0	6	75	2	Picture 1	●
HMX-2BFP-R2.0	4.0	2.0	4	3.85	8.0	6	75	2	Picture 1	●
HMX-2BFP-R2.5	5.0	2.5	5	4.85	10.0	6	75	2	Picture 1	●
HMX-2BFP-R3.0	6.0	3.0	6	5.8	12.0	6	75	2	Picture 2	●
HMX-2BFP-R4.0	8.0	4.0	8	7.8	16.0	8	100	2	Picture 2	●
HMX-2BFP-R5.0	10.0	5.0	10	9.6	20.0	10	100	2	Picture 2	●
HMX-2BFP-R6.0	12.0	6.0	12	11.5	24.0	12	100	2	Picture 2	●
HMX-2BFP-R8.0	16.0	8.0	16	15.5	32.0	16	150	2	Picture 2	●
HMX-2BFP-R10.0	20.0	10.0	20	19.5	40.0	20	150	2	Picture 2	●

● Stock available ○ Make-to-order

Indexable milling tools

Solid carbide end mills

HMX 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

B258

Graphics category and identification

B259

Cutting parameters

B533

Non-standard customization

B570-B571

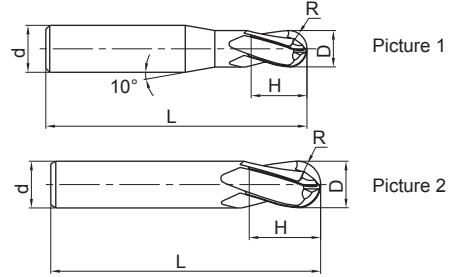
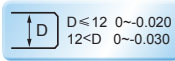
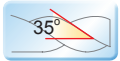
4-flute ball nose end mills with straight shank



HMX-4B



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



Type	Basic dimension(mm)					Number of teeth Z	Geometry	Stock
	D	R	d	H	L			
HMX-4B-R1.5	3.0	1.5	6	6	50	4	Picture 1	●
HMX-4B-R2.0	4.0	2.0	6	8	50	4	Picture 1	●
HMX-4B-R2.5	5.0	2.5	6	10	50	4	Picture 1	●
HMX-4B-R3.0	6.0	3.0	6	12	50	4	Picture 2	●
HMX-4B-R4.0	8.0	4.0	8	16	60	4	Picture 2	●
HMX-4B-R5.0	10.0	5.0	10	20	75	4	Picture 2	●
HMX-4B-R6.0	12.0	6.0	12	24	75	4	Picture 2	●
HMX-4B-R7.0	14.0	7.0	14	28	75	4	Picture 2	●
HMX-4B-R8.0	16.0	8.0	16	32	100	4	Picture 2	●
HMX-4B-R9.0	18.0	9.0	18	36	100	4	Picture 2	●
HMX-4B-R10.0	20.0	10.0	20	40	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 **B258** Graphics category and identification **B259** Cutting parameters **B534** Non-standard customization **B570-B571**

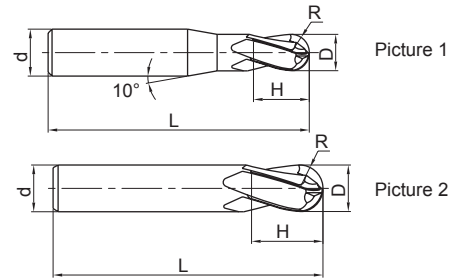
Indexable milling tools
Solid carbide end mills
HMX series

HMX series for machining high hardness steel

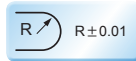
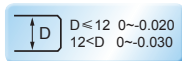
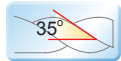
4-flute ball nose end mills with straight and long shank



HMX-4BL



● HMX-4B series with long shank.



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

HMX 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

B258

Graphics category and identification

B259

Cutting parameters

B534

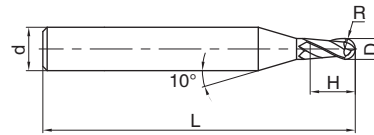
Non-standard customization

B570-B571

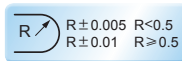
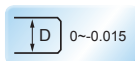
2-flute tiny ball nose end mills with straight shank



HMX-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..



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

● Stock available ○ Make-to-order

Indexable milling tools
Solid carbide end mills
HMX 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						
			○	○	○		○				





MILLING Solid Carbide End Mills

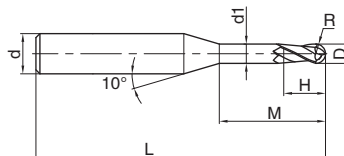
HMX series for machining high hardness steel

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

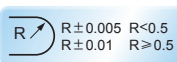
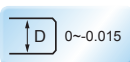
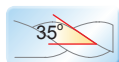


Deep ball nose slot

HMX-2BP



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



Type	Basic dimension(mm)							Number of teeth Z	Stock
	D	R	H	d1	M	d	L		
HMX-2BP-R0.15-M02	0.3	0.15	0.4	0.25	2	4	50	2	●
HMX-2BP-R0.15-M04	0.3	0.15	0.4	0.25	4	4	50	2	●
HMX-2BP-R0.2-M02	0.4	0.2	0.6	0.35	2	4	50	2	●
HMX-2BP-R0.2-M04	0.4	0.2	0.6	0.35	4	4	50	2	●
HMX-2BP-R0.25-M04	0.5	0.25	0.7	0.45	4	4	50	2	●
HMX-2BP-R0.25-M06	0.5	0.25	0.7	0.45	6	4	50	2	●
HMX-2BP-R0.3-M04	0.6	0.3	0.9	0.55	4	4	50	2	●
HMX-2BP-R0.3-M06	0.6	0.3	0.9	0.55	6	4	50	2	●
HMX-2BP-R0.3-M08	0.6	0.3	0.9	0.55	8	4	50	2	●
HMX-2BP-R0.4-M04	0.8	0.4	1.2	0.75	4	4	50	2	●
HMX-2BP-R0.4-M06	0.8	0.4	1.2	0.75	6	4	50	2	●
HMX-2BP-R0.4-M08	0.8	0.4	1.2	0.75	8	4	50	2	●
HMX-2BP-R0.4-M10	0.8	0.4	1.2	0.75	10	4	50	2	●
HMX-2BP-R0.5-M04	1.0	0.5	1.5	0.95	4	4	50	2	●
HMX-2BP-R0.5-M06	1.0	0.5	1.5	0.95	6	4	50	2	●
HMX-2BP-R0.5-M08	1.0	0.5	1.5	0.95	8	4	50	2	●
HMX-2BP-R0.5-M10	1.0	0.5	1.5	0.95	10	4	50	2	●
HMX-2BP-R0.5-M12	1.0	0.5	1.5	0.95	12	4	50	2	●
HMX-2BP-R0.6-M06	1.2	0.6	1.8	1.15	6	4	50	2	●
HMX-2BP-R0.6-M08	1.2	0.6	1.8	1.15	8	4	50	2	●
HMX-2BP-R0.6-M12	1.2	0.6	1.8	1.15	12	4	50	2	●
HMX-2BP-R0.6-M16	1.2	0.6	1.8	1.15	16	4	50	2	●
HMX-2BP-R0.75-M08	1.5	0.75	2.3	1.45	8	4	50	2	●
HMX-2BP-R0.75-M12	1.5	0.75	2.3	1.45	12	4	50	2	●
HMX-2BP-R0.75-M16	1.5	0.75	2.3	1.45	16	4	50	2	●
HMX-2BP-R1.0-M06	2.0	1.0	3.0	1.95	6	4	50	2	●
HMX-2BP-R1.0-M08	2.0	1.0	3.0	1.95	8	4	50	2	●
HMX-2BP-R1.0-M10	2.0	1.0	3.0	1.95	10	4	50	2	●
HMX-2BP-R1.0-M12	2.0	1.0	3.0	1.95	12	4	50	2	●
HMX-2BP-R1.0-M16	2.0	1.0	3.0	1.95	16	4	50	2	●
HMX-2BP-R1.0-M20	2.0	1.0	3.0	1.95	20	4	50	2	●

Applicable workpiece material table ● Very suitable ○ Suitable

● Stock available ○ Make-to-order

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

B258

Graphics category and identification

B259

Cutting parameters

B536-B537

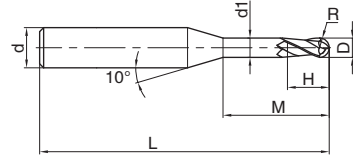
Non-standard customization

B570-B571

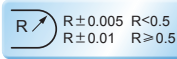
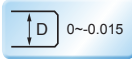
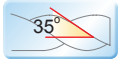
2-flute ball nose end mills with straight shank, long neck and short cutting edge



HMX-2BP



● Applicable for machining narrow slot and free-form surface



Type	Basic dimension(mm)							Number of teeth Z	Stock
	D	R	H	d ₁	M	d	L		
HMX-2BP-R1.25-M08	2.5	1.25	3.7	2.4	8	4	50	2	●
HMX-2BP-R1.25-M12	2.5	1.25	3.7	2.4	12	4	50	2	●
HMX-2BP-R1.25-M16	2.5	1.25	3.7	2.4	16	4	60	2	●
HMX-2BP-R1.25-M20	2.5	1.25	3.7	2.4	20	4	60	2	●
HMX-2BP-R1.5-M08	3.0	1.5	4.5	2.85	8	6	50	2	●
HMX-2BP-R1.5-M10	3.0	1.5	4.5	2.85	10	6	50	2	●
HMX-2BP-R1.5-M12	3.0	1.5	4.5	2.85	12	6	50	2	●
HMX-2BP-R1.5-M16	3.0	1.5	4.5	2.85	16	6	60	2	●
HMX-2BP-R1.5-M20	3.0	1.5	4.5	2.85	20	6	60	2	●
HMX-2BP-R2.0-M10	4.0	2.0	6.0	3.85	10	6	60	2	●
HMX-2BP-R2.0-M16	4.0	2.0	6.0	3.85	16	6	60	2	●
HMX-2BP-R2.0-M20	4.0	2.0	6.0	3.85	20	6	60	2	●
HMX-2BP-R2.0-M25	4.0	2.0	6.0	3.85	25	6	60	2	●
HMX-2BP-R2.5-M16	5.0	2.5	7.5	4.85	16	6	60	2	●
HMX-2BP-R2.5-M25	5.0	2.5	7.5	4.85	25	6	70	2	●

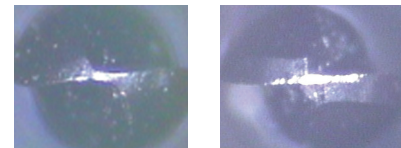
● Stock available ○ Make-to-order

Tool type: HM-2BP-R0.3-M08
 Dimensions: R0.3mm
 Workpiece material: S136(52HRC)
 Rotating speed: 30000r/min
 Feed speed: 200mm/min
 Axial cutting depth: $a_p=0.02\text{mm}$
 Radial cutting depth: $a_e=0.04\text{mm}$
 Cutting style: contour machining (mould of car light)
 Cooling system: air blow
 Machine tool: MIKRON HSM 800



End mill	HM-2BP-R0.3-M08	Similar product of company A
Cutting time	300min	180min
Abrasion value	0.025mm	0.048mm

Abrasion condition



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

B258

Graphics category and identification

B259

Cutting parameters

B536-B537

Non-standard customization

B570-B571

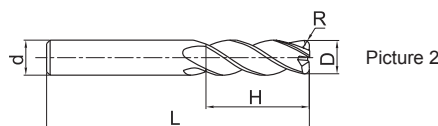
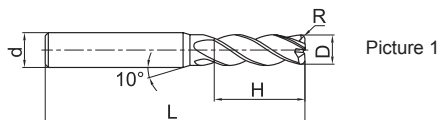
Indexable milling tools
Solid carbide end mills
HMX series

HMX series for machining high hardness steel

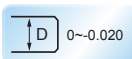
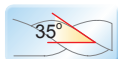
4-flute R end mills with straight shank



HMX-4R



● Wide applications, applicable for several machining conditions.



Type	Basic dimension(mm)					Number of teeth Z	Geometry	Stock
	D	R	d	H	L			
HMX-4R-D1.0R0.2	1.0	0.2	4	3	50	4	Picture 1	●
HMX-4R-D1.5R0.2	1.5	0.2	4	4	50	4	Picture 1	●
HMX-4R-D2.0R0.2	2.0	0.2	4	6	50	4	Picture 1	●
HMX-4R-D2.0R0.5	2.0	0.5	4	6	50	4	Picture 1	●
HMX-4R-D2.5R0.2	2.5	0.2	4	8	50	4	Picture 1	●
HMX-4R-D2.5R0.5	2.5	0.5	4	8	50	4	Picture 1	●
HMX-4R-D3.0R0.2	3.0	0.2	4	8	50	4	Picture 1	●
HMX-4R-D3.0R0.5	3.0	0.5	4	8	50	4	Picture 1	●
HMX-4R-D4.0R0.2	4.0	0.2	4	10	50	4	Picture 2	●
HMX-4R-D4.0R0.3	4.0	0.3	4	10	50	4	Picture 2	●
HMX-4R-D4.0R0.5	4.0	0.5	4	10	50	4	Picture 2	●
HMX-4R-D5.0R0.2	5.0	0.2	6	13	50	4	Picture 2	●
HMX-4R-D5.0R0.5	5.0	0.5	6	13	50	4	Picture 1	●
HMX-4R-D5.0R1.0	5.0	1.0	6	13	50	4	Picture 1	●
HMX-4R-D6.0R0.2	6.0	0.2	6	16	50	4	Picture 2	●
HMX-4R-D6.0R0.5	6.0	0.5	6	16	50	4	Picture 2	●
HMX-4R-D6.0R1.0	6.0	1.0	6	16	50	4	Picture 2	●

● Stock available ○ Make-to-order

Indexable milling tools

Solid carbide end mills

HMX 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

B258

Graphics category and identification

B259

Cutting parameters

B538

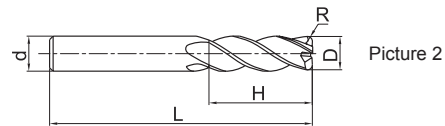
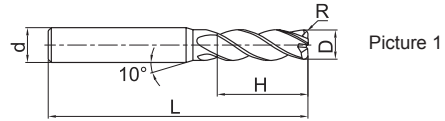
Non-standard customization

B570-B571

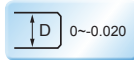
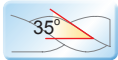
4-flute R end mills with straight shank



HMX-4R



● Wide applications, applicable for several machining conditions.



Type	Basic dimension(mm)					Number of teeth Z	Geometry	Stock
	D	R	d	H	L			
HMX-4R-D8.0R0.2	8.0	0.2	8	20	60	4	Picture 2	●
HMX-4R-D8.0R0.5	8.0	0.5	8	20	60	4	Picture 2	●
HMX-4R-D8.0R1.0	8.0	1.0	8	20	60	4	Picture 2	●
HMX-4R-D10.0R0.2	10.0	0.2	10	25	75	4	Picture 2	●
HMX-4R-D10.0R0.5	10.0	0.5	10	25	75	4	Picture 2	●
HMX-4R-D10.0R1.0	10.0	1.0	10	25	75	4	Picture 2	●
HMX-4R-D10.0R2.0	10.0	2.0	10	25	75	4	Picture 2	●
HMX-4R-D10.0R3.0	10.0	3.0	10	25	75	4	Picture 2	●
HMX-4R-D12.0R0.2	12.0	0.2	12	30	75	4	Picture 2	●
HMX-4R-D12.0R0.5	12.0	0.5	12	30	75	4	Picture 2	●
HMX-4R-D12.0R1.0	12.0	1.0	12	30	75	4	Picture 2	●
HMX-4R-D12.0R2.0	12.0	2.0	12	30	75	4	Picture 2	●
HMX-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

HMX 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						
			○	○	○		○				





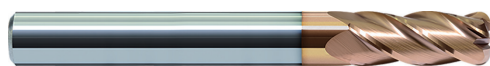
MILLING Solid Carbide End Mills

HMX series for machining high hardness steel

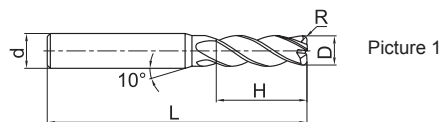
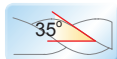
4-flute R end mills with long shank



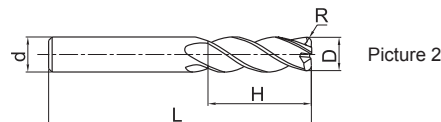
HMX-4RBL/M/X



● HMX-4R series with long shank.



Picture 1



Picture 2

Type	Basic dimension(mm)					Number of teeth Z	Geometry	Stock
	D	R	d	H	L			
HMX-4RBL-D4.0R0.2S	4.0	0.2	4	10	75	4	Picture 2	●
HMX-4RBL-D4.0R0.2	4.0	0.2	6	10	75	4	Picture 1	●
HMX-4RBL-D4.0R0.5S	4.0	0.5	4	10	75	4	Picture 2	●
HMX-4RBL-D4.0R0.5	4.0	0.5	6	10	75	4	Picture 1	●
HMX-4RBL-D6.0R0.2	6.0	0.2	6	16	75	4	Picture 2	●
HMX-4RBX-D6.0R0.2	6.0	0.2	6	16	100	4	Picture 2	●
HMX-4RBL-D6.0R0.5	6.0	0.5	6	16	75	4	Picture 2	●
HMX-4RBX-D6.0R0.5	6.0	0.5	6	16	100	4	Picture 2	●
HMX-4RBL-D6.0R1.0	6.0	1.0	6	16	75	4	Picture 2	●
HMX-4RBX-D6.0R1.0	6.0	1.0	6	16	100	4	Picture 2	●
HMX-4RBM-D8.0R0.2	8.0	0.2	8	20	75	4	Picture 2	●
HMX-4RBL-D8.0R0.2	8.0	0.2	8	20	100	4	Picture 2	●
HMX-4RBM-D8.0R0.5	8.0	0.5	8	20	75	4	Picture 2	●
HMX-4RBL-D8.0R0.5	8.0	0.5	8	20	100	4	Picture 2	●
HMX-4RBM-D8.0R1.0	8.0	1.0	8	20	75	4	Picture 2	●
HMX-4RBL-D8.0R1.0	8.0	1.0	8	20	100	4	Picture 2	●
HMX-4RBL-D10.0R0.2	10.0	0.2	10	25	100	4	Picture 2	●
HMX-4RBX-D10.0R0.2	10.0	0.2	10	25	150	4	Picture 2	●
HMX-4RBL-D10.0R0.5	10.0	0.5	10	25	100	4	Picture 2	●
HMX-4RBX-D10.0R0.5	10.0	0.5	10	25	150	4	Picture 2	●
HMX-4RBL-D10.0R1.0	10.0	1.0	10	25	100	4	Picture 2	●
HMX-4RBX-D10.0R1.0	10.0	1.0	10	25	150	4	Picture 2	●
HMX-4RBL-D10.0R2.0	10.0	2.0	10	25	100	4	Picture 2	●
HMX-4RBX-D10.0R2.0	10.0	2.0	10	25	150	4	Picture 2	●
HMX-4RBL-D12.0R0.2	12.0	0.2	12	30	100	4	Picture 2	●
HMX-4RBX-D12.0R0.2	12.0	0.2	12	30	150	4	Picture 2	●
HMX-4RBL-D12.0R0.5	12.0	0.5	12	30	100	4	Picture 2	●
HMX-4RBX-D12.0R0.5	12.0	0.5	12	30	150	4	Picture 2	●
HMX-4RBL-D12.0R1.0	12.0	1.0	12	30	100	4	Picture 2	●
HMX-4RBX-D12.0R1.0	12.0	1.0	12	30	150	4	Picture 2	●
HMX-4RBL-D12.0R2.0	12.0	2.0	12	30	100	4	Picture 2	●
HMX-4RBX-D12.0R2.0	12.0	2.0	12	30	150	4	Picture 2	●

Applicable workpiece material table ● Very suitable ○ Suitable

● Stock available ○ Make-to-order

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

B258

Graphics category and identification

B259

Cutting parameters

B538

Non-standard customization

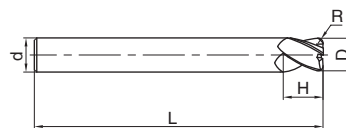
B570-B571

HMX series for machining high hardness steel

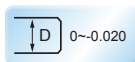
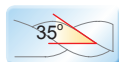
4-flute R end mills with straight shank and short cutting edge



HMX-4RF



High-rigidity short edge design, for cutting with high feed rate at high speed.



Type	Basic dimension(mm)					Number of teeth Z	Stock
	D	R	d	H	L		
HMX-4RF-D6.0R0.5	6.0	0.5	6	6	50	4	●
HMX-4RF-D6.0R1.0	6.0	1.0	6	6	50	4	●
HMX-4RF-D8.0R0.5	8.0	0.5	8	8	60	4	●
HMX-4RF-D8.0R1.0	8.0	1.0	8	8	60	4	●
HMX-4RF-10.0R0.5	10.0	0.5	10	10	75	4	●
HMX-4RF-D10.0R1.0	10.0	1.0	10	10	75	4	●
HMX-4RF-D10.0R2.0	10.0	2.0	10	10	75	4	●
HMX-4RF-D12.0R0.5	12.0	0.5	12	12	75	4	●
HMX-4RF-D12.0R1.0	12.0	1.0	12	12	75	4	●
HMX-4RF-D12.0R2.0	12.0	2.0	12	12	75	4	●

● Stock available ○ Make-to-order

Indexable milling tools
Solid carbide end mills
HMX 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						
			○	●	●		○				

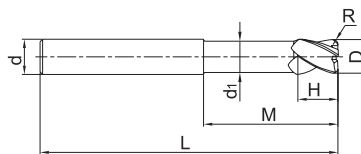
Code key **B258** Graphics category and identification **B259** Cutting parameters **B538** Non-standard customization **B570-B571**

HMX series for machining high hardness steel

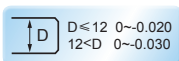
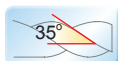
4-flute R end mills with straight shank, long neck and short cutting edge



HMX-4RP



● Long shank and short cutting edge designed for deep cavity milling.



Type	Basic dimension(mm)							Number of teeth Z	Stock
	D	R	d	d ₁	H	M	L		
HMX-4RP-D6.0R0.5	6.0	0.5	6	5.8	6	18	75	4	●
HMX-4RP-D6.0R1.0	6.0	1.0	6	5.8	6	18	75	4	●
HMX-4RP-D8.0R0.5	8.0	0.5	8	7.8	8	24	100	4	●
HMX-4RP-D8.0R1.0	8.0	1.0	8	7.8	8	24	100	4	●
HMX-4RP-D10.0R0.5	10.0	0.5	10	9.6	10	30	100	4	●
HMX-4RP-D10.0R1.0	10.0	1.0	10	9.6	10	30	100	4	●
HMX-4RP-D10.0R2.0	10.0	2.0	10	9.6	10	30	100	4	●
HMX-4RP-D12.0R0.5	12.0	0.5	12	11.5	12	36	100	4	●
HMX-4RP-D12.0R1.0	12.0	1.0	12	11.5	12	36	100	4	●
HMX-4RP-D12.0R2.0	12.0	2.0	12	11.5	12	36	100	4	●
HMX-4RP-D16.0R1.0	16.0	1.0	16	15.5	16	40	150	4	●
HMX-4RP-D16.0R2.0	16.0	2.0	16	15.5	16	40	150	4	●

● Stock available ○ Make-to-order

Indexable
milling tools

Solid carbide
end mills

HMX 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

B258

Graphics category and identification

B259

Cutting parameters

B538

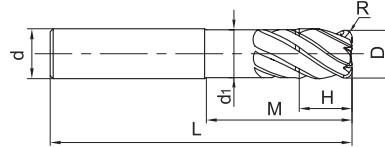
Non-standard customization

B570-B571

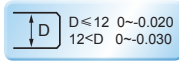
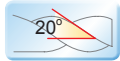
6-flute R end mills with straight shank, long neck, short cutting edge and high rigidity



HMX-6R-MAX



● High rigidity short cutting edge designed for high cutting speed, high feed, high efficient machining



Type	Basic dimension(mm)							Number of teeth Z	Stock
	D	R	d	H	d ₁	M	L		
HMX-6R-D6R0.5-MAX	6.0	0.5	6	6	5.8	16	50	6	○
HMX-6R-D8R1.0-MAX	8.0	1.0	8	8	7.8	24	60	6	○
HMX-6R-D10R1.0-MAX	10.0	1.0	10	10	9.8	30	75	6	○
HMX-6R-D12R1.0-MAX	12.0	1.0	12	12	11.5	36	75	6	○
HMX-6R-D16R1.0-MAX	16.0	1.0	16	16	15.5	48	100	6	○
HMX-6R-D20R1.0-MAX	20.0	1.0	20	20	19.5	50	100	6	○

● Stock available ○ Make-to-order

Indexable milling tools

Solid carbide end mills

HMX 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						
			○	○	○		○				

