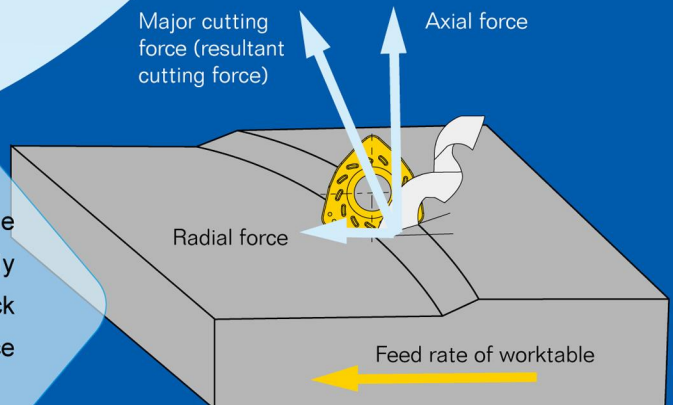
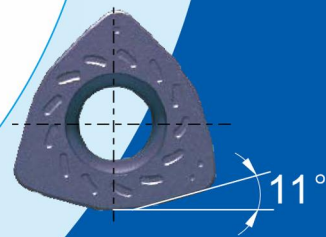




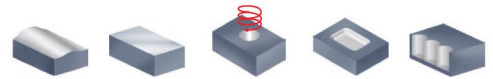
XMRO 1

series milling tools



The main feature of high feed tools is to resolve the major cutting force to the axial direction, greatly reducing the radial cutting force, thus improve tool's shock resistance. In addition, this structure can effectively reduce vibration in long-overhang milling operation.

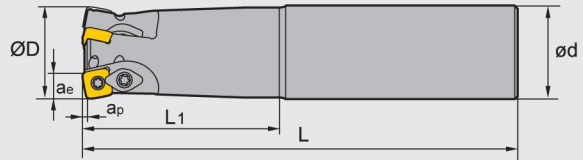
High feed milling cutters



XMR01 P M K



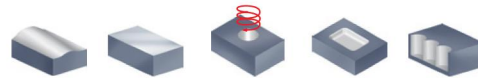
S-type insert, straight shank



Specification of tools

Type		Dimensions(inch)						
		ØD	ød	L ₁	L	a _p max	a _e max	Z
XMR01	-0.75"-G0.75"-SD06-02	0.75	0.75	2.5	6	0.031	0.196	2
	-1.00"-G1.00"-SD06-03	1.00	1.00	3.5	7	0.031	0.196	3
	-1.00"-G1.00"-SD09-02	1.00	1.00	3.5	7	0.055	0.297	2
	-1.25"-G1.25"-SD09-03	1.25	1.25	3.5	8	0.055	0.297	3
	-1.25"-G1.25"-SD12-02	1.25	1.25	3.5	8	0.071	0.380	2
	-1.50"-G1.50"-SD12-03	1.50	1.50	3.5	8	0.071	0.380	3
	-1.75"-G1.50"-SD15-02	1.75	1.50	4.5	10	0.087	0.508	2

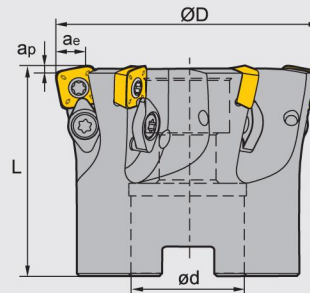
High feed milling cutters



XMR01 P M K








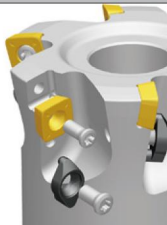
S-type insert, arbor mounting



Specification of tools

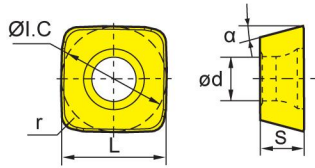
Type		Dimensions (inch)					
		ØD	ød	L	apmax	aemax	Z
XMR01	-2.00"-A0.75"-SD06-07	2.0	0.75	1.75	0.031	0.196	7
	-2.50"-A0.75"-SD06-10	2.5	0.75	1.75	0.031	0.196	10
	-2.50"-A1.00"-SD06-10	2.5	1.00	2.00	0.031	0.196	10
	-2.00"-A0.75"-SD09-05	2.0	0.75	1.75	0.055	0.297	5
	-2.50"-A0.75"-SD09-07	2.5	0.75	1.75	0.055	0.297	7
	-2.50"-A1.00"-SD09-07	2.5	1.00	2.00	0.055	0.297	7
	-2.50"-A0.75"-SD12-05	2.5	0.75	1.75	0.071	0.380	5
	-2.50"-A1.00"-SD12-05	2.5	1.00	2.00	0.071	0.380	5
	-3.00"-A1.00"-SD12-06	3.0	1.00	2.00	0.071	0.380	6
	-3.00"-A1.25"-SD12-06	3.0	1.25	2.00	0.071	0.380	6
	-4.00"-B1.50"-SD12-08	4.0	1.50	2.50	0.071	0.380	8
	-3.00"-A1.00"-SD15-05	3.0	1.00	2.00	0.087	0.508	5
	-3.00"-A1.25"-SD15-05	3.0	1.25	2.00	0.087	0.508	5
	-4.00"-B1.50"-SD15-07	4.0	1.50	2.50	0.087	0.508	7
	-5.00"-B1.50"-SD15-09	5.0	1.50	2.50	0.087	0.508	9
	-6.00"-B2.00"-SD15-12	6.0	2.00	2.50	0.087	0.508	12

Spare parts

Tool type	Insert screw	Wedge screw	Clamp	Insert wrench	Wedge wrench	Sketch of installation
						
XMR01□□-SD06□□	I60M2.2×5.5	--	--	WT07IP	---	
XMR01□□-SD09□□	I60M3.5×08TT	I60M4×8.4	WD-204	WT10IP	WT15IP	
XMR01□□-SD12□□	I60M4×8.4	I60M4×8.4	WD-204	WT15IP	WT15IP	
XMR01□□-SD15□□	I60M5×13	I60M5×13	WD-208	WT20IP	WT20IP	

Milling

Selection of inserts



😊 Good working conditions 😊 General working conditions 😞 Adverse working conditions

Workpiece material	Steel	Stainless steel	Cast iron	Ferrite materials	Heat-resistant steel
P	😊	😊	😊	😊	😊
M	😊	😊	😊	😊	😊
K	😊	😊	😊	😊	😊
N	😊	😊	😊	😊	😊
S	😊	😊	😊	😊	😊

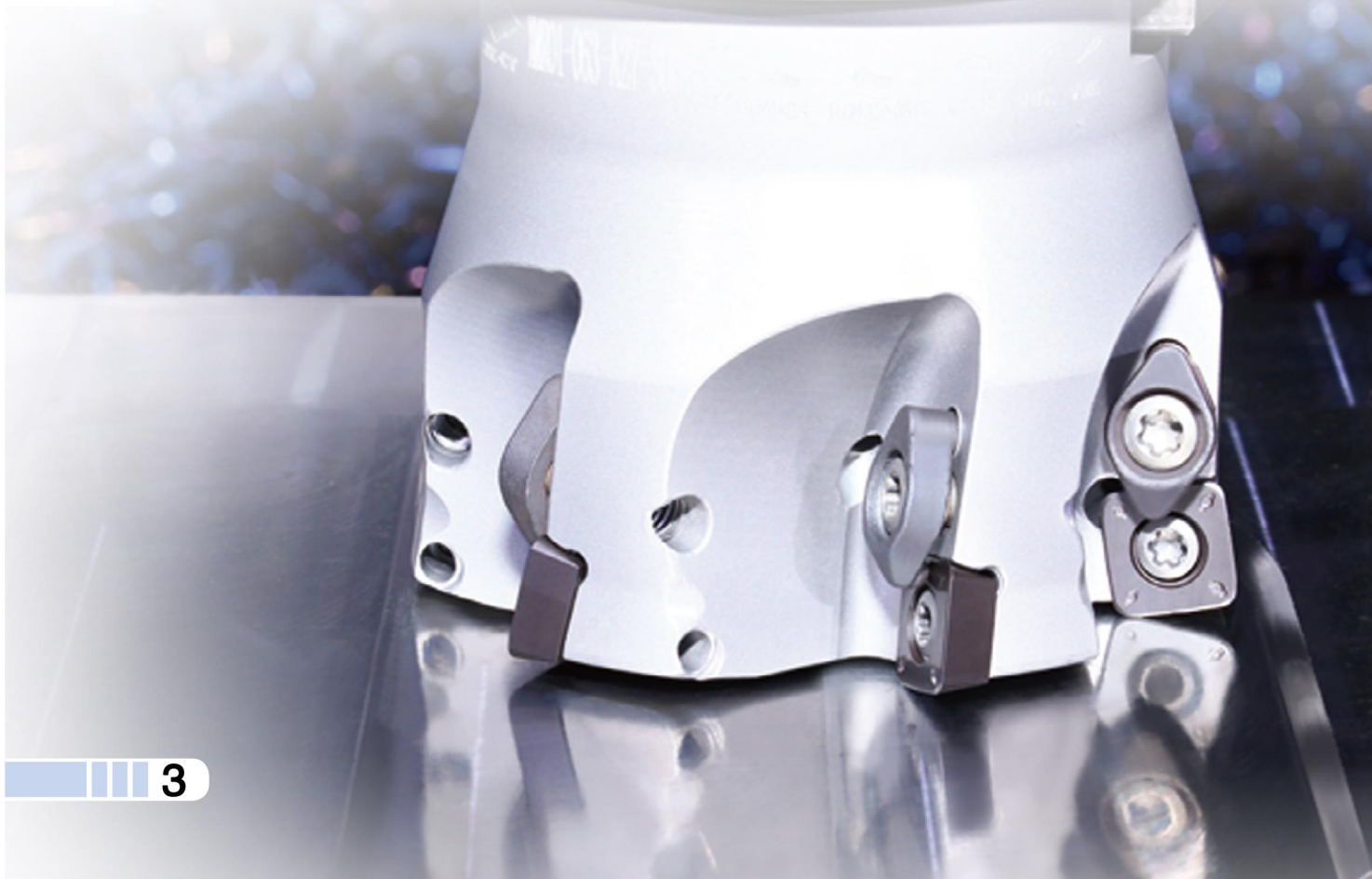
Insert shape	Type	Dimensions(inch)						Coated grade						Uncoated grade			
		α	L	r	S	ød	ØI.C	YBC302	YBM251	YBM253	YBM351	YBG102	YBG202	YBG205	YBG302	YD101	YD201
	SDMT06T208-DM	15°	0.250	0.031	0.101	0.102	0.250	●							○		
	SDMT09T312-DM	15°	0.375	0.047	0.156	0.157	0.375	●							○		
	SDMT120412-DM	15°	0.500	0.047	0.187	0.173	0.500	●							○		
	SDMT150520-DM	15°	0.625	0.079	0.219	0.220	0.625	●							○		
	SDMT06T208-PM	15°	0.250	0.031	0.101	0.102	0.250	●		○				●			
	SDMT09T312-PM	15°	0.375	0.047	0.156	0.157	0.375	●		●				●			
	SDMT120412-PM	15°	0.500	0.047	0.187	0.173	0.500	●		●				●			
	SDMT150520-PM	15°	0.625	0.079	0.219	0.220	0.625	●		●				●			

● Always stock available ○ Produce according to order

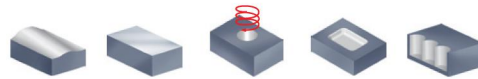
Chipbreaker introduction:

-PM chipbreaker has sharp cutting edge. It is more suitable for machining with power shortage and for relatively adhesive materials, such as stainless steel and Ti alloy. etc.

General chipbreaker has blunt cutting edge and is relatively suitable for machining of hard materials such as hardened steel and cast iron. etc.



High feed milling cutters



XMR01 **P** **M** **K**






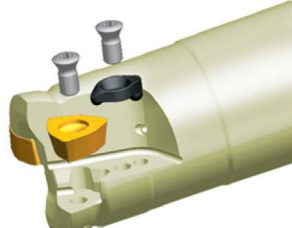
W-type insert, straight shank



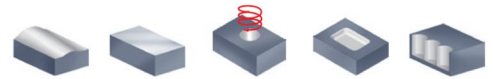
Specification of tools

Type		Dimensions(inch)						
		ØD	ap	ae	L1	L	ød	Z
XMR01	-0.75" -G0.75" -WP05-02-M	0.75	0.059	0.150	3.25	5.00	0.75	2
	-0.75" -G0.75" -WP05-02-L	0.75	0.059	0.150	3.25	7.00	0.75	2
	-0.75" -G0.75" -WP05-02-XL	0.75	0.059	0.150	4.75	10.00	0.75	2
	-1.00" -G1.00" -WP06-02-M	1.00	0.059	0.171	3.25	5.50	1.00	2
	-1.00" -G1.00" -WP06-02-L	1.00	0.059	0.171	3.25	8.00	1.00	2
	-1.00" -G1.00" -WP06-02-XL	1.00	0.059	0.171	4.75	12.00	1.00	2
	-1.25" -G1.25" -WP06-02-M	1.25	0.059	0.171	3.25	6.00	1.25	2
	-1.25" -G1.25" -WP06-02-L	1.25	0.059	0.171	3.25	8.00	1.25	2
	-1.25" -G1.25" -WP06-02-XL	1.25	0.059	0.171	4.75	12.00	1.25	2
	-1.50" -G1.25" -WP06-03-M	1.50	0.059	0.171	4.00	6.00	1.25	3
	-1.50" -G1.50" -WP06-03-L	1.50	0.059	0.171	4.00	10.00	1.50	3
	-1.50" -G1.25" -WP06-03-XL	1.50	0.059	0.171	10.00	12.00	1.25	3
	-1.50" -G1.25" -WP08-02-M	1.50	0.059	0.223	4.00	6.00	1.25	2
	-1.50" -G1.25" -WP08-02-L	1.50	0.059	0.223	8.00	10.00	1.25	2
	-1.50" -G1.25" -WP08-02-XL	1.50	0.059	0.223	10.00	12.00	1.25	2
	-2.00" -G1.50" -WP09-02-M	2.00	0.118	0.268	4.00	6.00	1.50	2
-2.00" -G1.50" -WP09-02-L	2.00	0.118	0.268	8.00	10.00	1.50	2	

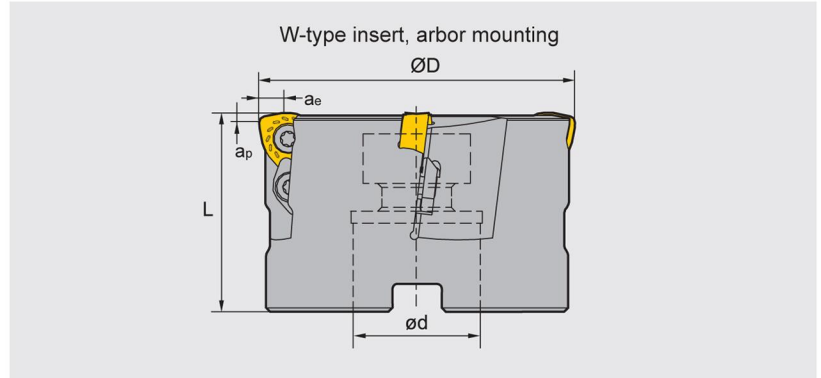
Spare parts

Adaptable tool holders	Insert screw	Clamp	Wrench	Sketch of installation
				
XMR01□□-WP05□□	I60M3.5×08TT	--	WT10P	
XMR01□□-WP06□□	I60M4×8.4	--	WT15P	
XMR01□□-WP08□□	I60M5×13	WD-208	WT20IT	
XMR01□□-WP09□□				

High feed milling cutters



XMR01 **P** **M** **K**



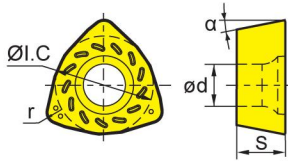
Specification of tools

Type		Dimensions(inch)					
		ØD	ap	ae	L	ød	Z
XMR01	-2.00"-A0.75"-WP06-05	2.00	0.75	2.00	0.059	0.171	5
	-2.00"-A0.75"-WP08-04	2.00	0.75	2.00	0.059	0.223	4
	-2.00"-A0.75"-WP06-04	2.00	0.059	0.171	2.00	0.75	4
	-2.50"-A0.75"-WP08-04	2.50	0.059	0.223	2.00	0.75	4
	-2.50"-A1.00"-WP08-04	2.50	0.059	0.223	2.00	1.00	4
	-2.50"-A0.75"-WP09-03	2.50	0.118	0.268	2.00	0.75	3
	-3.00"-A1.25"-WP08-04	3.00	0.059	0.223	2.50	1.25	4
	-3.00"-A1.25"-WP09-04	3.00	0.118	0.268	2.50	1.25	4
	-4.00"-B1.25"-WP08-05	4.00	0.059	0.223	2.50	1.25	5
	-4.00"-B1.25"-WP09-05	4.00	0.118	0.268	2.50	1.25	5

Spare parts

Tool type	Insert screw	Clamp	Wrench	Sketch of installation
XMR01□□-WP06□□	I60M4×8.4	--	WT15S	
XMR01□□-WP08□□	I60M5×13	WD-208	WT20IT	
XMR01□□-WP09□□	I60M5×13	WD-208	WT20IT	

Selection of inserts



😊 Good working conditions 😐 General working conditions 😞 Adverse working conditions

Workpiece material	Steel	Stainless steel	Cast iron	Ferrite materials	Heat-resistant steel
P	😊	😊	😊	😊	😊
M	😊	😊	😊	😊	😊
K	😊	😊	😊	😊	😊
N	😊	😊	😊	😊	😊
S	😊	😊	😊	😊	😊

Insert shape	Type	Dimensions(inch)					Coated grade								Uncoated grade	
		α	r	ϕd	S	$\phi I.C$	YBC302	YBM251	YBM253	YBM351	YBG102	YBG202	YBG205	YBG302	YD101	YD201
	WPGT050315ZSR	11°	0.059	0.157	0.138	0.313	●			●						
	WPGT060415ZSR	11°	0.059	0.173	0.165	0.375	●			●						
	WPGT080615ZSR	11°	0.059	0.217	0.250	0.506	●			●						
	WPGT090725ZSR	11°	0.098	0.217	0.276	0.591	●			●						
	WPGT050315ZSR-PM	11°	0.059	0.157	0.138	0.313	●			●		●				
	WPGT060415ZSR-PM	11°	0.059	0.173	0.165	0.375	●			●		●				
	WPGT080615ZSR-PM	11°	0.059	0.217	0.250	0.506	●			●		●				
	WPGT090725ZSR-PM	11°	0.098	0.217	0.276	0.591	●			●		●				

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-PM chipbreaker has sharp cutting edge. It is more suitable for machining with power shortage and for relatively adhesive materials, such as stainless steel and Ti alloy. etc.

General chipbreaker has blunt cutting edge and is relatively suitable for machining of hard materials such as hardened steel and cast iron. etc.



Recommended cutting parameters

Workpiece material	Hardness HB	Insert grade	Cutting speed (SFPM)	Ø0.75/Ø1.00		Ø1.25/1.50/2.00		
				Axial cutting depth	Feed rate per tooth	Axial cutting depth	Feed rate per tooth	
P	Soft steel Carbon Steel	YBG202	550(400-700)	0.024~0.04	0.032~0.048	0.032~0.048	0.04~0.056	
		YBM253	500(300-650)					
		YBM351						
		YBC302						
	Alloy steel Alloy tool steel	HB280-350 ≤HB350	YBG202	450(300-650)	0.016~0.032	0.032~0.048	0.024~0.04	0.04~0.056
			YBM253	400(260-600)				
			YBM351 YBC302					
	pre-hardened steel	≤HRC35	YBG202	450(300-600)	0.016~0.032	0.024~0.04	0.024~0.04	0.032~0.048
			YBM253	400(260-500)				
YBM351 YBC302								
M	Stainless steel	≤HB270	YBM253	400(260-500)	0.024~0.04	0.024~0.04	0.032~0.048	0.032~0.048
			YBM351					
		YBG202 YBG205	400(260-600)					
K	Common cast Iron	Tensile strength ≤350MPa	YBG202	500(350-700)	0.024~0.04	0.04~0.056	0.032~0.048	0.048~0.064
			YBG302	500(300-650)				
	Nodular cast iron	Tensile strength ≤800MPa	YBG202	400(300-600)	0.016~0.032	0.032~0.048	0.024~0.04	0.04~0.056
			YBG302	400(260-500)				

Recommended cutting parameters

Workpiece material	Hardness HB	Insert grade	Cutting speed (SFPM)	Ø1.50		Ø2.00/2.50		Ø3.00/4.00/5.00/6.00		
				Axial cutting depth	Feed rate per tooth	Axial cutting depth	Feed rate per tooth	Axial cutting depth	Feed rate per tooth	
P	Soft steel Carbon steel	≤HB180 HB180-280	YBG202	550(400-700)	0.032~0.048	0.04~0.056	0.043~0.06	0.043~0.06	0.04~0.06	0.04~0.06
			YBM253	500(300-650)						
			YBM351							
			YBC302							
	Alloy steel Alloy tool steel	HB280-350 ≤HB350	YBG202	450(300-650)	0.024~0.04	0.04~0.056	0.035~0.051	0.43~0.06	0.032~0.051	0.04~0.06
			YBM253	400(260-600)						
			YBM351 YBC302							
	Pre-hardened steel	≤HRC35	YBG202	450(300-600)	0.024~0.04	0.032~0.048	0.035~0.051	0.035~0.051	0.032~0.051	0.032~0.051
			YBM253	400(260-500)						
YBM351 YBC302										
M	Stainless steel	≤HB270	YBM253	400(260-500)	0.032~0.048	0.032~0.048	0.043~0.06	0.035~0.051	0.04~0.06	0.032~0.051
			YBM351							
		YBG202 YBG205	400(260-600)							
K	Common cast iron	Tensile strength ≤350MPa	YBG202	500(350-700)	0.032~0.048	0.048~0.064	0.043~0.06	0.051~0.067	0.04~0.06	0.048~0.067
			YBG302	500(300-650)						
	Nodular cast iron	Tensile strength ≤800MPa	YBG202	400(300-600)	0.024~0.04	0.04~0.056	0.035~0.051	0.043~0.06	0.032~0.051	0.04~0.06
			YBG302	400(260-500)						