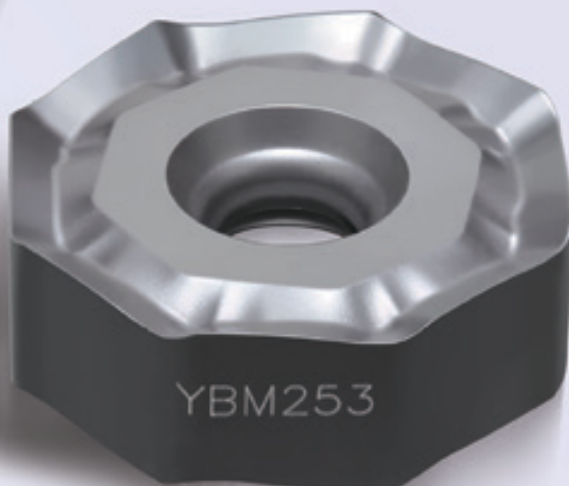
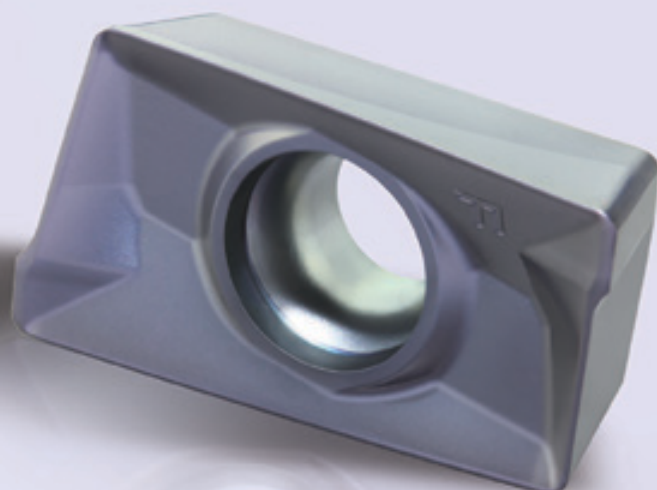
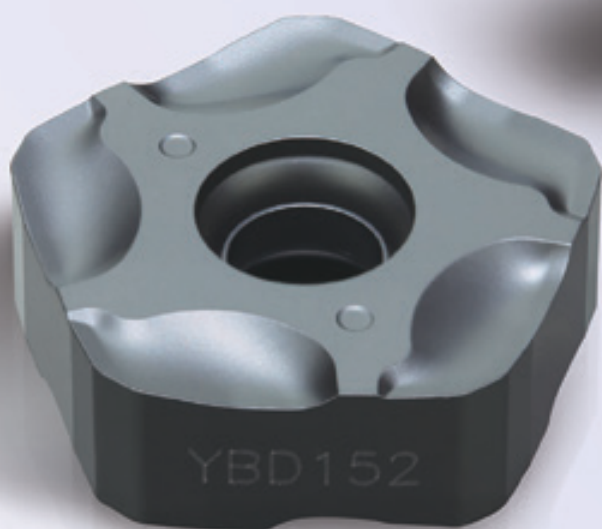
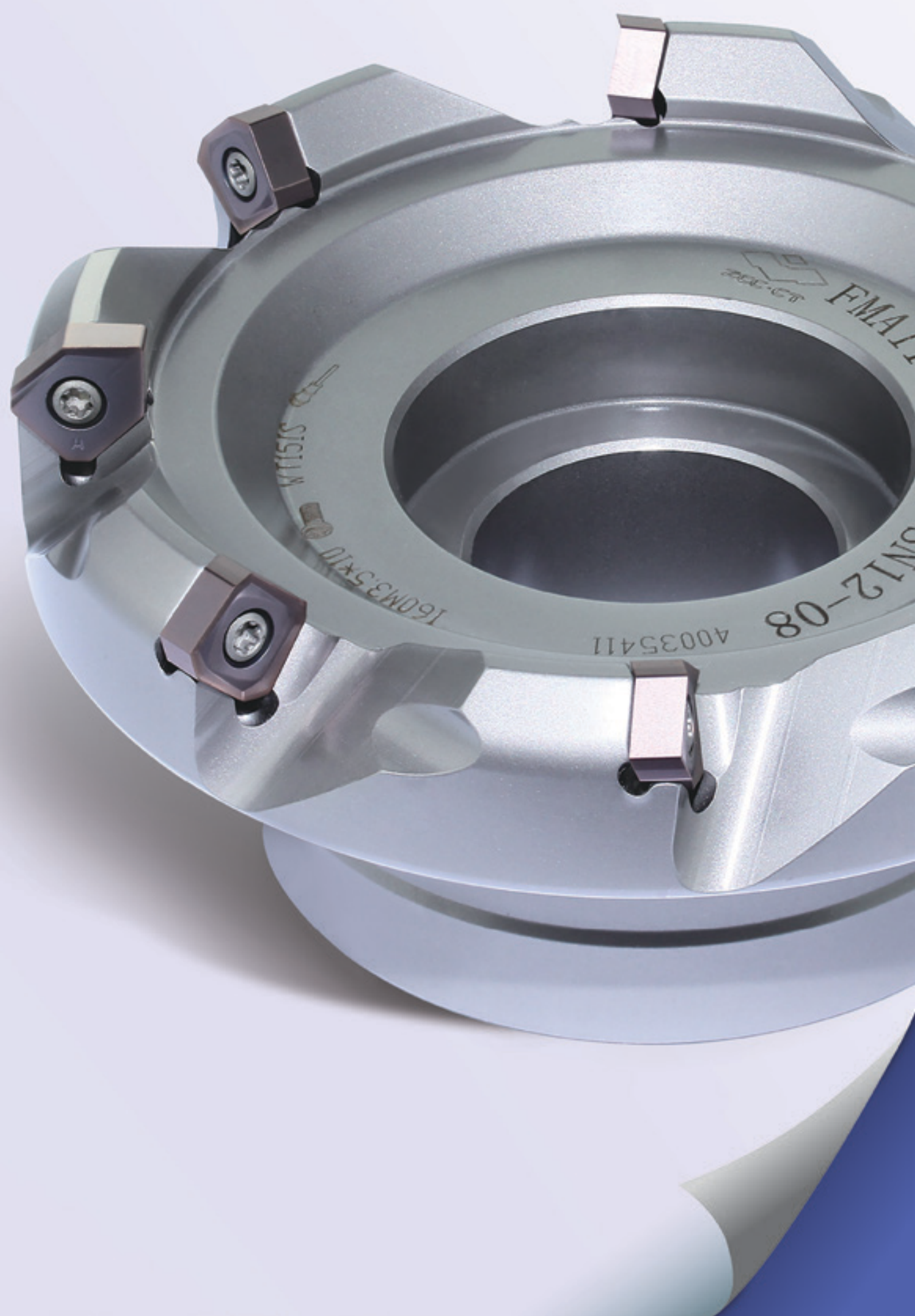


Milling Tools







EMP09 Series

*Next Generation Multi Functional Heavy
Duty Shoulder Milling Tool*



MILLING TOOLS

Overview

Recommended grades for milling inserts

Milling tools code key

Face milling tools

Square shoulder milling tools

Profile milling tools

High feed milling cutters

Side and face milling tools

Chamfer milling tools

Common problems and solutions for milling

D204-D212

D215-D217

D218-D219

D220-D299

D300-D342

D343-D348

D349-D366

D367-D376

D377-D379

D380

Milling

● Face milling tools

Operating pattern	Series/Shape	Approach angle / Max. cutting depth. (inch)	Applicable insert	Application overview	Features
Face milling	FMA01  D220-D221	Kr=45° $a_{pmax}=0.236$	SEET12T3-DF/DM/DR SEET12T3-CF/CM/CR SEET12T3-EF/EM SEET12T3-LH/W	General face milling the following material: Steel, alloy steel, stainless steel, cast iron, aluminium alloy, high temperature alloy	- Diameter range Ø2.00"~Ø12.00" - Large rake angle designed makes cutting more light and fast - Wide applications can achieve using available inserts with different chipbreaker - Adopting wiper inserts improve surface quality
		Kr=45° $a_{pmax}=0.384$	SEET18T6-DM/EM/W		
	FMA02  D222	Kr=45° $a_{pmax}=0.236$	SEET12T3-DF/DM/DR SEET12T3-CF/CM/CR SEET12T3-EF/EM SEET12T3-LH/W	General face milling the following material: Steel, alloy steel, stainless steel, cast iron, aluminum alloy, high temperature alloy	- Diameter range Ø2.00"~Ø5.00" - Large rake angle designed makes cutting more light and fast - Wide applications can achieve using available inserts with different chipbreaker - Coarse and differential pitch, reduce vibration
	FMA03  D225	Kr=45° $a_{pmax}=0.217$	SEON1203AF□□ SEOR1203AF□□	General face milling steel, stainless steel, cast iron	- Diameter range Ø3.00"~Ø12.00" - Large rake angle makes cutting more light and fast - Top clamping achieves better reduces vibrations resistance
		Kr=45° $a_{pmax}=0.295$	SEON1504AF□□ SEOR1504AF□□		
	FMA04   D228	Kr=45° $a_{pmax}=0.138$	OFKT05T3-DF/DM OFKT05T3-LH	Face milling steel, alloy steel, cast iron, aluminum alloy	- Diameter range Ø2.00"~Ø6.00" - High economy milling tool with 8 cutting edges - Screw clamping, high precision
	 D232	Kr=45° $a_{pmax}=0.157$	ODHT060508-GL/GM/ GH/LH ODMT060512-GM	Face milling of steel, alloy steel, stainless steel, cast iron, aluminum alloy and superalloy.	- Diameter range Ø2.00"~Ø6.00" - High economic insert with 8 cutting edges - Screw clamping, high precision
	FMA11  D236-D237	Kr=45° $a_{pmax}=0.216$	SNEG1205ANR-GM/HGR/W	General face milling steel, stainless steel, high-temperature alloy, cast iron	- Diameter range Ø2.00"~Ø12.00" - Double-sided chipbreaker milling insert has eight cutting edges and high economy - Large rake angle design and unique chip breaker structure of insert lead to low power consumption - Double negative rake angle structure and super thick insert has higher safety and outstanding toughness, which can realize great depth cutting - Insert has excellent machining performance with wiper edge
		Kr=45° $a_{pmax}=0.275$	SNEG1506ANR-GM/HGR/W		
		Kr=45° $a_{pmax}=0.354$	SNEG1907ANR-HGR		
	FMA12  D240-D241	Kr=45° $a_{pmax}=0.157$	ONHU060404ANN-GL ONHU060408ANN-GM/GH ONMU060412-GH/GM	General face milling steel, stainless steel, cast iron	- Diameter range Ø2.50"~Ø12.00" - High Performance Face Mill with 16 edges for outstanding economy - Double negative rake angle, in combination with helical insert structure, achieves double positive axial angle, which will help reduce cutting resistance and improve chip evacuation - Unique 3-dimensional edge
		Kr=45° $a_{pmax}=0.197$	ONHU09T508ANN-GL/GM/GH ONMU09T512-GM/GH		
	FMA14  D244	Kr=45° $a_{pmax}=0.217$	PNEG110512-GL PNEG110530-GM PNEG110530-GH	General face milling for steel, stainless steel and cast iron	- Diameter range Ø2.00"~Ø12.00" 10 cutting edges high economy milling cutter 45° approach angle balanced design - Great capability of anti-vibration ensures higher surface quality



● Face milling tools

Operating pattern	Series/Shape	Approach angle / Max. cutting depth. (inch)	Applicable insert	Application overview	Features
Face milling	FMA17 <i>New</i>  D246	Kr=45° a _{pmax} =0.256	SNGX1205ANN-GL/GM/GH/LH/W SNMX1205ANN-GM SNMX120512-GL/GM/GH	Face milling of steel, alloy steel, stainless steel, cast iron, aluminum alloy and superalloy	- Diameter range Ø2.00"~Ø12.00" - Double sided insert, 8 cutting edges - Neutral inserts, normal and fine pitch cutters Wiper geometry for good surface quality - A variety of chipbreakers and grades for wide application range
	FMD02  D249-D250	Kr=67° a _{pmax} =0.197	PNEG110512R/L-CF/CM/CR	Face milling of cast iron and steel	- Diameter range Ø2.00"~Ø12.00" - High-economy milling tool with 10 cutting edges
		Kr=67° a _{pmax} =0.276	PNEG110512R/L-PF/PM/PR		
		Kr=67° a _{pmax} =0.256	PNEG110512-KH/KM/KL		
	FMD03  D253	Kr=60° a _{pmax} =0.472	LNKT2007DN-ZR	Heavy-duty face milling of steel, alloy steel, stainless steel and cast iron	- Diameter range Ø5.00"~Ø12.00" - Double positive rake angles can reduce cutting forces - Inserts are mounted upright, suitable for heavy machining with high cutting depth - Easy to assemble and clamp inserts
		Kr=60° a _{pmax} =0.669	LNKT2510-ZR		
	FMD04  D255	Kr=67° a _{pmax} =0.472	PNGU170712R-GR PNGU170712-HDR	Rough milling of steel and cast iron	- Diameter range Ø5.00"~Ø12.00" - High-economy milling tool with 10 cutting edges - Double negative rake angle, in combination with helical insert structure, achieves double positive axial angle, which will help reduce cutting resistance and improve chip evacuation
	FME04  D257	Kr=75° a _{pmax} =0.472	LNKT1506EN-ZR	Heavy-duty face milling of steel, alloy steel, stainless steel and cast iron	- Diameter range Ø5.00"~Ø12.00" - Double positive rake angles can reduce the cutting force - Inserts are mounted upright, suitable for heavy machining at high cutting depth - Easy to assemble and clamp inserts
	FME17 <i>New</i>  D259	Kr=75° a _{pmax} =0.315	SNGX1205ENN-GL/GM/GH/W SNMX120512-GL/GM/GH	Face milling of steel, alloy steel, stainless steel, cast iron, aluminum alloy and superalloy	- Diameter range Ø2.00"~Ø8.00" - Double sided insert, 8 cutting edges - Neutral inserts, normal and fine pitch cutters Wiper geometry for good surface quality - A variety of chipbreakers and grades for wide application range
	FMP01  D261	Kr=90° a _{pmax} =0.709	TP□N2204PD□ TPKN2204PDF□ TPKN2204PDT□	Face milling steel, alloy steel and cast iron	- Diameter range Ø3.00"~Ø12.00" - Kr 90°, square shoulder milling - Top clamping is easy to assemble and disassemble
	FMP02  D263	Kr=90° a _{pmax} =0.285	SEET09T308PER-APF/APM/APR	Face milling steel, alloy steel, stainless steel, cast iron and AL alloy	- Diameter range Ø2.00"~Ø10.00" - Kr 90°, for square shoulder milling - Different pitch design: coarse pitch, close pitch and extra close pitch - High precision insert, high work-piece surface quality - Optimized chipbreaker and grade, for finish machining, semi-finish machining and rough machining
		Kr=90° a _{pmax} =0.425	SEET120308PER-APF/APM/APR SEET120308-LH		

● Face milling tools

Operating pattern	Series/Shape	Approach angle / Max. cutting depth. (inch)	Applicable insert	Application overview	Features
Face milling	FMP03  D266	Kr=90° a _p max=0.512	LNKT1506EN-ZR	Heavy-duty face milling of steel and alloy steel	- Diameter range Ø5.00"~Ø12.00" - Double positive rake angles can reduce the cutting force - Inserts are mounted upright, suitable for heavy machining at high cutting depth - Easy to assemble and clamp inserts
		Kr=90° a _p max=0.669	LNKT2007DN-ZR		
		Kr=90° a _p max=0.866	LNKT2510-ZR		
	FMP08 <i>New</i>  D269	Kr=90° a _p max=0.0394	LNEX120408PN-GM LNEX150416PN-GM	Finish face milling for cast iron	- Tool Diameter: Ø3.00"~Ø12.00" - Designed for finish face milling on cast iron materials. Adopts adjustable wiper edge structure with excellent operability. - Fully ground inserts deliver high precision and superior machining finish quality.
	FMP12  B272	Kr=90° a _p max=0.224	WNHU060404PNR-GM WNHU060408PNR-GM	Steel, alloy steel, cast iron and AL alloy	- Diameter range Ø2.00"~ Ø6.00" 90° approach angle can be used for shoulder milling, face milling, groove milling, etc - Six cutting edges - Double negative angle of the tool body combined with unique insert structure to achieve double positive tool angle, reducing cutting forces
		Kr=90° a _p max=0.303	WNHU080608PNR-GM WNHU080612PNR-GM WNHU080616PNR-GM WNHU080608PNR-LH		
	 B273	Kr=90° a _p max=0.224	WNHU060404PNR-GM WNHU060408PNR-GM		
	FMP17 <i>New</i>  D275-D276	Kr=88° a _p max=0.398	SNGX1205PNN-GL/GM/GH/W SNMX120512-GL/GM/GH SNCU120420-W4	Face milling of steel, alloy steel, stainless steel, cast iron and superalloy	- Diameter range Ø2.00"~Ø12.00" - Double sided insert, 8 cutting edges - Neutral inserts, normal and fine pitch cutters - Wide application range
	FMR01  D279	a _p max=0.197	RCKT10T3MO-DM	Cavity profile milling steel, alloy steel, stainless steel, high-temperature alloy and cast iron	- Diameter range Ø1.00"~Ø2.00" - R-type inserts possess stronger cutting edges - Suitable for machining curved surface of mould - Economical milling cutters with screw clamping
		a _p max=0.236	RCKT1204MO-DM/DR/ER/NM		
	FMR02  D282	a _p max=0.236	RCKT1204MO-DM/DR/ER/NM	Face milling and cavity profile milling steel, alloy steel, stainless steel, high-temperature alloy and cast iron	- Diameter range Ø2.50"~Ø6.00" - R-type inserts possess stronger cutting edges - Suitable for machining curved surface of mould - Economical milling tools with screw clamping
		a _p max=0.315	RCKT1606MO-DM/DR/ER/NM		
		a _p max=0.394	RCKT2006MO-DR/ER/NM		
	FMR03  D286	a _p max=0.157	RDKW0803MO	Cavity profile milling steel, alloy steel, stainless steel, high-temperature alloy and cast iron	- Diameter range Ø1.00"~Ø2.00" - R-type inserts possess stronger cutting edges - Suitable for machining curved surface of mould - Economical milling tools with screw clamping
		a _p max=0.197	RDKW10T3MO RDKT10T3MO-NM		
		a _p max=0.236	RDKW1204MO		



• Face milling tools

Operating pattern	Series/Shape	Approach angle / Max. cutting depth. (inch)	Applicable insert	Application overview	Features
Face milling	FMR04  D289	$a_{pmax}=0.236$	RDKW1204MO	Face milling and cavity profile milling steel, alloy steel, stainless steel and cast iron	- Diameter range $\varnothing 2.00'' \sim \varnothing 6.00''$ - R-type inserts possess stronger cutting edges - Suitable for machining curved surface of mould
		$a_{pmax}=0.315$	RDKW1605MO		
		$a_{pmax}=0.394$	RDKW2006MO		
	FMR05  D292	$a_{pmax}=0.125$	RPMW2T200	Cavity profile milling steel, alloy steel, stainless steel and cast iron	- Diameter range $\varnothing 0.625'' \sim \varnothing 1.75''$ - R-type inserts possess stronger cutting edges - Suitable for machining curved surface of mould - Economical milling cutters with screw clamping
		$a_{pmax}=0.180$	RPMW3(2.5)		
		$a_{pmax}=0.250$	RPMW43		
	 D293	$a_{pmax}=0.250$	RPMW43	Face milling and cavity profile milling steel, alloy steel, stainless steel and cast iron	- Diameter range $\varnothing 2.00'' \sim \varnothing 8.00''$ - R-type inserts possess stronger cutting edges - Suitable for machining curved surface of mould - Economical milling tools with screw clamping
		$a_{pmax}=0.315$	RPMW50500		
		$a_{pmax}=0.375$	RPMW64		
	FMR11 <i>New</i>  D297  D298	$a_{pmax}=0.197$	RQMW10T3MO-H RQMT10T3MO-M RQMT10T3MO-MM	Face milling and profile milling of steel, alloy steel, stainless steel, cast iron, hardening steel and superalloy	- Diameter range $\varnothing 1.00'' \sim \varnothing 1.50''$ - Anti-indexation structure design - Wide application range - Insert can be indexed 8 times
		$a_{pmax}=0.236$	RQMW1204MO-H RQMT1204MO-M RQMT1204MO-MM		
		$a_{pmax}=0.197$	RQMW10T3MO-H RQMT10T3MO-M RQMT10T3MO-MM		- Diameter range $\varnothing 2.00'' \sim \varnothing 3.00''$ - Anti-indexation structure design - Wide application range - Insert can be indexed 8 times
		$a_{pmax}=0.236$	RQMW1204MO-H RQMT1204MO-M RQMT1204MO-MM		

• Square shoulder milling tools

Operating pattern	Series/Shape	Approach angle / Max. cutting depth.(inch)	Applicable insert	Application overview	Features
Square shoulder milling	EMP01  D300-D301	Kr=90° apmax=0.433	APKT11T3□□-APF/APM APKT11T3□□-ALH	Multi-function milling steel, alloy steel, stainless steel, cast iron and Al alloy	• Two mounting modes: straight shank and weldon shank, diameter range Ø0.50"~Ø2.50" • Kr 90°, for square shoulder milling, slot milling, ramp milling etc • Wiper inserts also suitable for face milling • Inserts with 3D helical cutting edge, less cutting force
		Kr=90° apmax=0.630	APKT160408-APF/APM APKT160408-ALH		
	EMP02  D306	Kr=90° apmax=0.433	APKT11T3□□-APF/APM APKT11T3□□-ALH	Face milling steel, alloy steel, stainless steel, cast iron and Al alloy	
		Kr=90° apmax=0.630	APKT160408-APF/APM APKT160408-ALH		

Square shoulder milling tools

Operating pattern	Series/Shape	Approach angle / Max. cutting depth.(inch)	Applicable insert	Application overview	Features
Square shoulder milling	EMP03  D309	Kr=90° apmax=1.535	APKT11T3□□-APF/APM APKT11T3□□-ALH	Adopting large cutting depth, for milling steel, alloy steel, stainless steel, cast iron and Al alloy	- Diameter range Ø2.00"~Ø4.00" - End milling tools with positive helical angle, good chip removal - For side face milling and slot machining - Close pitch, high machining efficiency
	EMP04  D310	Kr=90° apmax=1.157~2.283	APKT11T3□□-APF/APM APKT11T3□□-ALH	Adopting large cutting depth, for milling steel, alloy steel, stainless steel, cast iron and Al alloy	- Diameter range Ø0.75"~Ø1.50" - End milling tools with positive helical angle, good chip removal - For side face milling and slot machining - Close pitch, high machining efficiency
	EMP05 <i>New</i>  D314  D314	Kr=90° apmax=0.787~1.575	ADKT□□-GM	Drilling, milling, and multi-functional processing of steel, alloy steel, stainless steel, cast iron materials	- Tool diameter Ø0.625"-Ø2.00" - Tool functions include drilling, slotting, shoulder milling - Slot milling, and ramp milling
	EMP08 <i>New</i>  D320	Kr=90° apmax=0.197	SNMY07T308PNR-GM	Face & square shoulder milling for steel and cast iron	- Diameter range: Ø1.00"~Ø2.50" - Inserts adopt space curve cutting edge design, delivering excellent step-line finish in layered milling - Double-sided 8-cutting-edge inserts for outstanding cost efficiency - Suitable for general face milling and square shoulder milling
	 D319	Kr=90° apmax=0.315	SNGY12T508PNR-GL/GM/GH	Face & square shoulder milling for steel and cast iron	- Tool diameter: Ø1.25"~Ø8.00" - Fully ground inserts ensure high precision - Cutter body with variable tooth pitch design - Double-sided 8-edge inserts feature excellent cost efficiency - Suitable for general face milling and square shoulder milling
	EMP09  D323	Kr=90° apmax=0.315	LNKT0804□□PNR-GM/GL	Multifunction milling machining for steel, alloy steel, stainless steel and cast iron	- Diameter range Ø1.00"~Ø1.50" 2 kinds of interface of straight shank and Weldon shank - With 90° approach angle, the cutter can be used in shoulder milling, chamfer milling and other tangential machining, and the cutter can stand greater cutting force
		Kr=90° apmax=0.453	LNKT1206□□PNR-GM/GL		
	 D324-D325	Kr=90° apmax=0.315	LNKT0804□□PNR-GM/GL	Face milling for steel, alloy steel, stainless steel and cast iron	- Diameter range Ø1.50"~Ø6.00" - With 90° approach angle, the cutter can be used in shoulder milling, chamfer milling and other tangential machining, and the cutter has better rigidity
		Kr=90° apmax=0.453	LNKT1206□□PNR-GM/GL		
		Kr=90° apmax=0.591	LNKT1607□□PNR-GM/GL		



• Square shoulder milling tools

Operating pattern	Series/Shape	Approach angle / Max. cutting depth.(inch)	Applicable insert	Application overview	Features
Square shoulder milling	EMP09  D326	Kr=90° apmax=1.7	LNKT1206□□PNR-GM/GL	Large cutting depth milling for steel, alloy steel, stainless steel and cast iron	- Diameter range Ø1.50"~Ø3.00" - Used in side milling and slot machining - Spiral cutting-edge design ensures easier and faster cutting
	 D327	Kr=90° apmax=1.215~1.5	LNKT0804□□PNR-GM/GL	Large cutting depth milling for steel, alloy steel, stainless steel and cast iron	- Diameter range Ø1.00"~Ø1.25" - Greater nose strength and shaper cutting-edge - Used in side milling and slot machining - Tangential inserts clamping style improves the capability of cutting force bearing
	EMP10   D331	Kr=90° apmax=0.315	SOKX1306□□-□□	Face & square shoulder milling for steel, alloy steel, stainless steel and cast iron	- Tool Diameter: Ø1.25"~Ø6.00" 90° square shoulder milling - Vertically mounted inserts with 8 cutting edges maximize cost efficiency for square shoulder milling; spiral cutting edge design. - Positive rake angle ensures smooth cutting performance.
	 D332				
	EMP13  D335	Kr=90° apmax=0.441	ANGX1105□□PNR-GM/LH	Face milling steel, alloy steel, stainless steel and cast iron	- Diameter range Ø2.00"~Ø6.00" - Kr 90°, for square shoulder milling - Double negative rake angle of the tool body in combination with extra thick insert achieves double positive tool angle, which will help reduce cutting resistance and greatly improve impact resistance - Properly designed cutting edge with high precision control can achieve high quality 90°square shoulder milling
		Kr=90° apmax=0.571	ANGX1506□□PNR-GM/LH		
	 D336	Kr=90° apmax=0.441	ANGX1105□□PNR-GM/LH	Multi-function milling steel, alloy steel, stainless steel and cast iron	- Two mounting modes: Straight shank and Weldon shank, Diameter range Ø0.75"~Ø1.50" - Kr90°, for square shoulder milling, slot milling, ramp milling ect - Double negative rake angle of the tool body in combination with extra thick insert achieves double positive tool angle, which will help reduce cutting resistance and greatly improve impact resistance - Properly designed cutting edge with high precision control can achieve high quality 90°square shoulder milling
		Kr=90° apmax=0.571	ANGX1506□□PNR-GM/LH		



• Square shoulder milling tools

Operating pattern	Series/Shape	Approach angle / Max. cutting depth.(inch)	Applicable insert	Application overview	Features
Square shoulder milling	EMP14 <i>New</i>  D340	Kr=90° apmax=0.472	VPGT□□□□-LP	Suitable for face milling, square shoulder milling, cavity milling and high-speed milling in aluminum alloy.	Diameter range: Ø2.00"~Ø4.00", V-shaped structure design insert with stable positioning
	 D341		VPGT□□□□-LP		Diameter range: Ø1.25"~Ø1.50", V-shaped structure design insert with stable positioning

• Profile milling tools

Operating pattern	Series/Shape	Approach angle / Max. cutting depth.	Applicable insert	Application overview	Features
Profile milling	BMR02  D343	Cutting depth: see the detailed information about tool specifications	ROHX□□	Profile machining steel, stainless steel and cast iron	- Diameter range Ø0.625"~Ø1.00" - Applied for profile finish machining - Good assembly stability - Insert with two cutting edges, perfect economical efficiency
	BMR04  D345		ZOHX□□	Profile machining steel, stainless steel and cast iron	- Diameter range Ø0.625"~Ø1.25" - High precision, for finish profile machining - Two types of chipbreaker, used in different machining condition - High assembling precision, good stability



Special milling tools

Operating pattern	Series/Shape	Approach angle / Max. cutting depth.	Applicable insert	Application overview	Features
Special milling (high feed)	XMR01	Cutting depth: see the detailed information about tool specifications	SDMT□□-DM/PM/NM	Face and profile milling steel, stainless steel, high-temperature alloy and cast iron in cavity applications	• Diameter range Ø0.75"~Ø6.00" • Two mounting types: Straight shank and Arbor mounting • The cutting forces are decomposed effectively, realize cutting with high feed rate • For plunge milling • Double clamping, firm and reliable
	 D349				
	 D350				
	 D352				
	 D353		WPGT□□ZSR WPGT□□ZSR-PM	Face and profile milling steel, stainless steel and cast iron in cavity applications	• Diameter range Ø0.75"~Ø4.00" • Two mounting types: Straight shank and Arbor mounting • The cutting forces are decomposed effectively, realize cutting with high feed rate • For plunge milling • Double clamping, firm and reliable
	 D353				
	 D353				
	 D353				
	XMR12 		ENMX1206□□-□□	Cavity milling and face milling of steel and alloy steel materials	• Tool diameter Ø0.625"~Ø2.50" • Three interface forms: straight handle, sleeve type and interchangeable type • The type of the assembly insert determines the function of the tool, enabling square shoulders, large feeds, profiling, etc • The insert adopts double-sided chipbreaker design and is extremely economical
	 D359				
	 D360				
	 D360				
	XMR13 		SNMU1305□□-□□	Steel, alloy steel, stainless steel and cast iron High feed face milling	• Tool diameter: Ø2.00"~Ø6.00" • Double-sided grooving milling inserts with 8 cutting edges deliver outstanding cost efficiency • Built-in wiper edges and complex rake angles balance strength and sharpness. The 3D convex cutting edge line reduces cutting resistance and provides excellent vibration resistance
	 D364				

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Side and face milling tools

Operating pattern	Series/Shape	Approach angle / Max. cutting depth.	Applicable insert	Application overview	Features
Side and face milling tools	SMP08 	Cutting depth: see the detailed information about tool specifications	LNET10□□□□-GM LNET12□□□□-GM	Steel, alloy steel, stainless steel, cast iron slot milling	- Tool diameter Ø2.50"~Ø10.00" - The positioning structure of the cutter body is optimized and the positioning is reliable. The insert adopts a vertical mounting structure, which has excellent impact resistance and makes cutting faster - The size of the tool tip arc can be customized according to different cutting widths and diameters. The optimized design of the tool body is matched with a high-precision insert to process the groove bottom surface with good quality and high precision
	 D368-D369				- Tool diameter Ø2.50"~Ø10.00" - Optimized design of cutter body positioning structure, reliable positioning - The insert adopts a vertical structure, which has excellent impact resistance and makes cutting faster - The size of the tool tip arc can be customized according to different cutting widths and diameters - The optimized design of the cutter body is matched with a high-precision insert to process the groove bottom with good surface quality and high precision
	 D370-D371		LNGX0804□□-GM LNGX1005□□-GM LNGX1407□□-GM	Steel, alloy steel, stainless steel, cast iron slot milling	- Tool diameter Ø3.00"~Ø10.00" - Optimized design for tool body positioning, reliable positioning - Insert adopts vertical installation structure, excellent impact resistance, with a large front angle design, effectively reducing cutting forces, ensuring swift cutting - Tools and inserts can be customized to meet various width and arc size groove processing needs
	 D373				- Tool diameter Ø3.00"~Ø12.00" - Optimized design for tool body positioning, reliable positioning - Insert adopts vertical installation structure, excellent impact resistance, with a large front angle design, effectively reducing cutting forces, ensuring swift cutting - Tools and inserts can be customized to meet various width and arc size groove processing needs
	 D374				

Chamfer milling tools

Operating pattern	Series/Shape	Approach angle / Max. cutting depth.	Applicable insert	Application overview	Features
Chamfer machining	CMA01  D377	Kr=45°	SPMT120408	Chamfer machining steel, alloy steel, stainless steel and cast iron	- Diameter range Ø0.50"~Ø1.25" - With the function of milling small surface
	CMD01  D378	Kr=60°			



Upgraded *FMA12* Series

*High Performance Face Mill
with 16 edges for outstanding economy;
New ONHU inserts with GL, GM and GH chipbreakers
for a wide range of applications.*





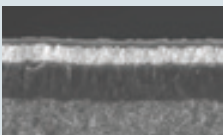
FMA17 FME17 FMP17

New Generation High Efficiency and High Precision Milling Cutters

Milling insert grades overview

ISO		Coated grade		Cermet	Cemented carbide	PCBN&PCD
		CVD	PVD			
P Steel	P01					
	P10		YBG202 YBG205 YBG205H YB9320	YNG151 YNG151C		
	P20	YBC302 YBM253				
	P30					
	P40		YBG302			
	P40					
M Stainless steel	M01					
	M10		YBG202 YBG205 YBG205H YB9320	YNG151 YNG151C		
	M20	YBM253				
	M30		YBG202 YBG205 YBG205H YB9320 YBS303 YBG302			
	M40					
	M40					
K Cast iron	K01					YCB011
	K10	YBD152 YBD203	YBG105	YNG151 YNG151C		
	K20				YD201	
	K30	YBD252				
	K40					
	K40					
N Non-ferrous metal	N01					YCD011
	N10				YD101	
	N20				YD201	
	N30					
S Heat-resistant steel	S01					
	S10		YBG202 YBS203 YBS303			
	S20					
	S30					
H Hardened material	H01					YCB012
	H10					
	H20					
	H30					

Coated Cemented Carbide CVD

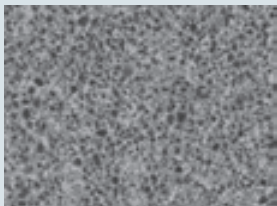
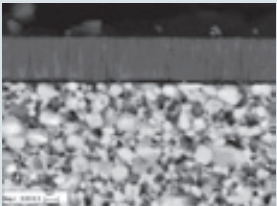
Grade	Coating structure	Micro-structure	ISO applied range	Application field
YBM253	Combination of high-toughness gradient substrate and coating composed of TiCN and ultra fine Al ₂ O ₃		P15~40	Suitable for rough milling of ISO P, ISO M materials
			M10~30	
YBD152	Good combination of substrate with high wear-resistant and coating composed of TiCN and thick Al ₂ O ₃		K05~25	Suitable for finish and semi-finish milling of ISO K materials
YBD252	Good combination of substrate with high wear-resistant and coating composed of TiCN and thick Al ₂ O ₃		K15~35	Suitable for rough and semi-finish milling of ISO K materials
YBC302	Combination of high toughness, high strength substrate and coating composed of TiCN, thin Al ₂ O ₃ and TiN		P15~35	Suitable for rough and semi-finish milling of ISO P materials
YBD203	The matrix with good toughness and wear resistance is combined with TiCN and Al ₂ O ₃ coatings with high toughness and high bonding strength		K10~30	Suitable for universal purpose milling of ISO K materials such as ductile iron and vermicular iron

Coated Cemented Carbide PVD

Grade	Coating structure	ISO applied range	Application field
YBG105	Fine grain carbide substrate+Nano coating	K05~20	Applicable for finish and semi-finish milling K type materials
YBG202	Carbide substrate with excellent deformation resistance +Nano coating	P10~30	PVD grade with wide application,widely applicable for semifinish milling type P, M, S materials
		M10~30	
		S05~20	
YBG205	Ultra fine carbide substrate + Nano coating	P10~30	Suitable for rough milling of P, M type materials
		M10~30	
YBG205H	Ultra-modern TiAlSiN PVD coating	P10~30	Suitable for machining steel, stainless steel and hardened steel
		M10~30	
YBG302	Substrate with high toughness and strength + Nano-coating	P25~40	Applicable for rough milling type P and M materials
		M25~40	
YB9320	Substrate with good toughness and strength +TiAlN Nano coating	P10~30	PVD grade with wide application,widely applicable for semifinish milling type P, M materials
		M10~30	
YBS203	Substrate with marvelous anti-deformation capability + nano coating	S10~20	Grade for S material's general machining, suitable for S material's milling
YBS303	Substrate with both good toughness and strength + nano coating	M20~30	Grade for S, M materials, especially suitable for milling Ti-alloy
		S20~30	



Cermet

Grade	Coating structure	ISO applied range	Application field
YNG151		P05~20	Wide application of finish milling P, M, K type materials
		M05~20	
		K05~20	
YNG151C		P01~20	Wide application of finish milling P, M, K type materials
		M01~20	
		K01~20	

Cemented Carbide

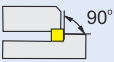
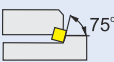
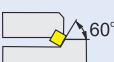
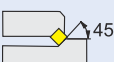
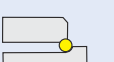
Grade	Coating structure	ISO applied range	Application field
YD101		N05~25	Applicable for semi-finish and finish milling type N material
YD201		K15~35	Applicable for rough and semi-finish type K material, and for rough milling type N material
		N15~30	

D

Cutter type

FM	Face milling
EM	Square shoulder milling
HM	Helical end milling
SM	Side and face milling
BM	Profile milling
CM	Chamfer milling
XM	Special milling

Approach angle

P	90°	
E	75°	
D	60°	
A	45°	
R		

Sequence number of series

Cutting diameter ØD

Side and face milling tool: diameter
X cutting edge width

Arbor/spindle Mounting (as follow figure)

A	A type of mounting	XP	Weldon shank
B	B type of mounting	G	Straight shank
C	C type of mounting	MW	Morse adapter with a conical hole and without a flat end
D	D type of mounting		

FM

A

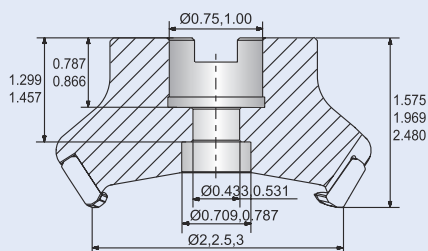
02

- 2.00"

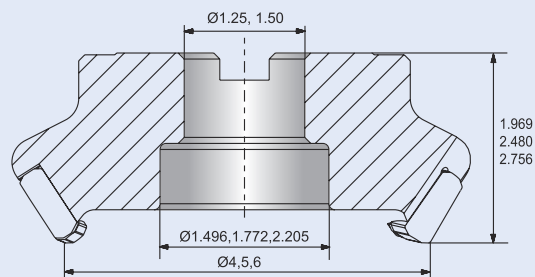
- A

Arbor/spindle Mounting

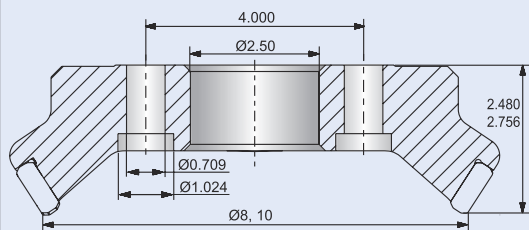
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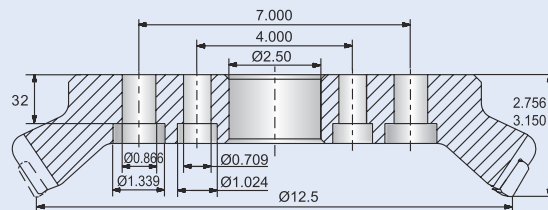
B



C



D



Arbor hole size(inch)
(as follow figure)

Insert shape			
 C	 D	 R	 S
 T	 L	 H	 O

Insert clearance angle						
N	B	C	P	D	E	F
0°	5°	7°	11°	15°	20°	25°

0.75"

S

E

12

- 04

L

C

D

Cutting edge length of insert

Inscribed circle	Insert shape					
	C	D	R	S	T	L
0.219	—	—	—	—	09	—
0.250	06	07	—	—	11	—
0.375	09	11	09	09	16	—
0.500	12	15	12	12	22	—
0.625	16	19	15	15	27	—
0.750	19	—	19	19	33	—
1.000	25	—	25	25	44	2

Number of teeth

(Number of flute for corn-shaped milling tools)

Cutting direction

(Default:Right L:Left)

Internal cooling structure