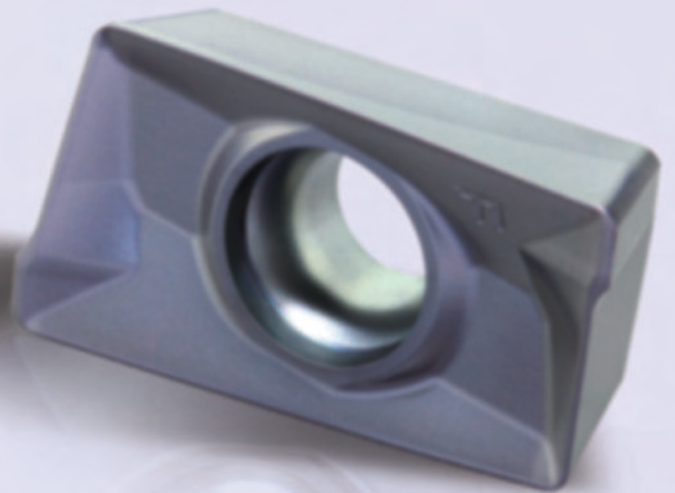
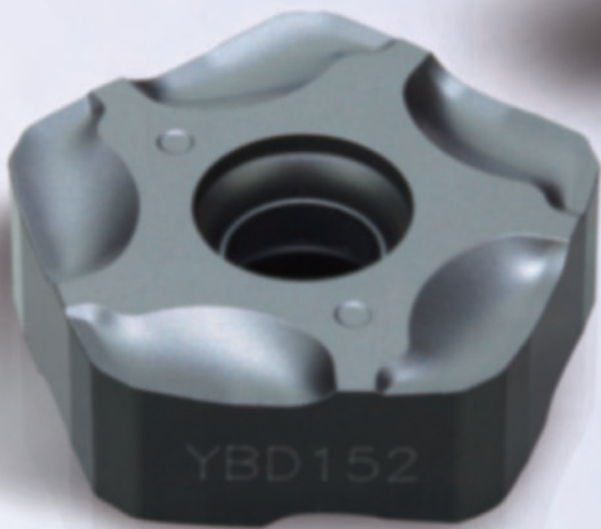
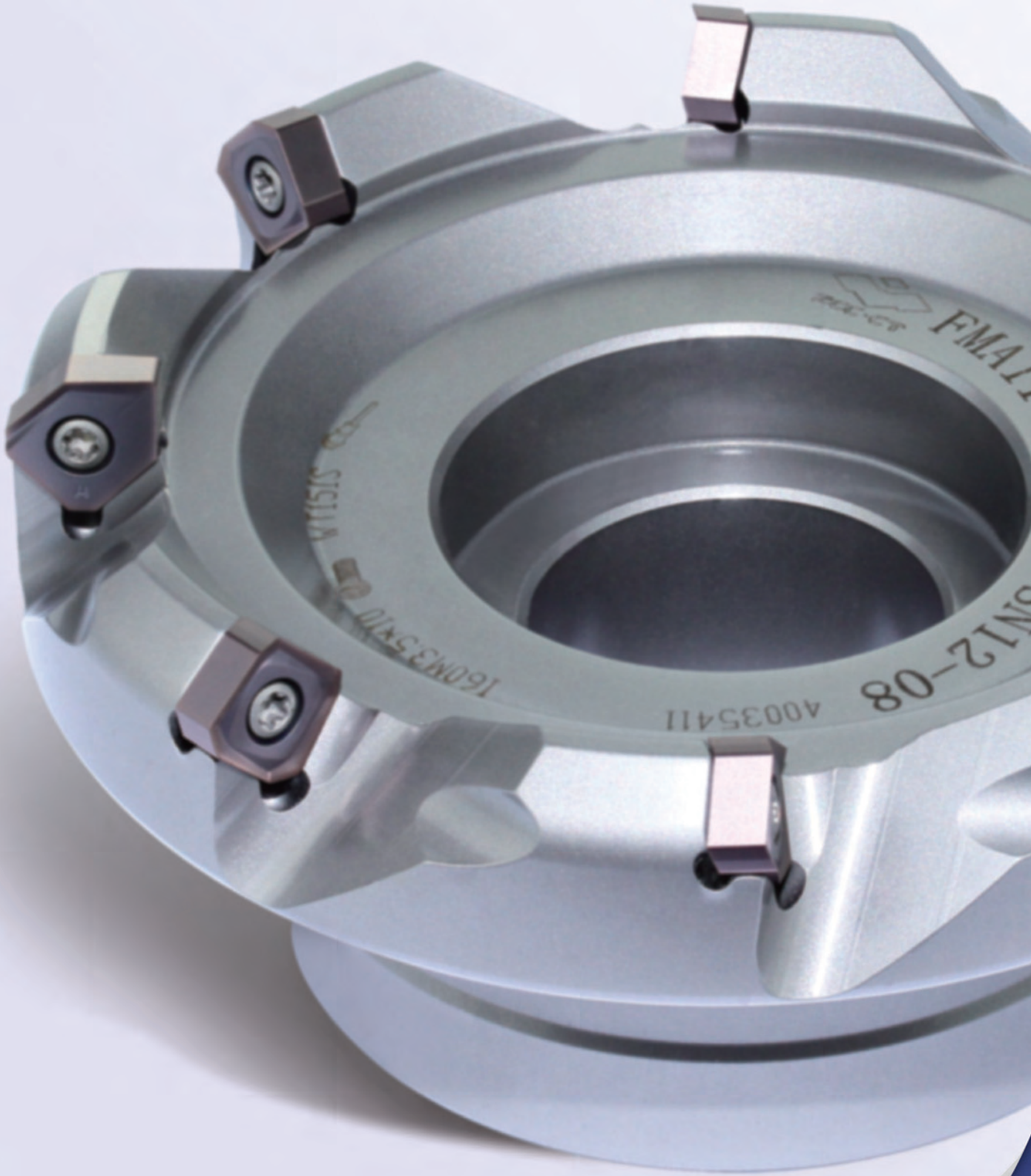


Milling Tools





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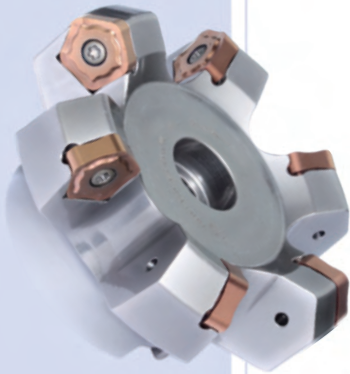
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160M3-5X10



Next generation Multi Functional Heavy Duty Shoulder Milling Tool

EMP09 Series




















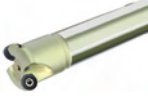
MILLING TOOLS

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MILLING




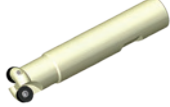

● Face milling tools

Operating pattern	Series/Shape	Approach angle / Max. cutting depth.(inch)	Applicable insert	Application overview	Features
Face milling	FMA01  P200-201	Kr=45° apmax=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	<ul style="list-style-type: none"> • 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° apmax=0.384	SEET18T6-DM/EM/W		
	FMA02  P202	Kr=45° apmax=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	<ul style="list-style-type: none"> • 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  P205	Kr=45° apmax=0.217	SE□N1203AF□□ SE□R1203AF□□	General face milling steel, stainless steel, cast iron	<ul style="list-style-type: none"> • Diameter range Ø3.00"~Ø12.00" • Large rake angle makes cutting more light and fast • Top clamping achieves better reduces vibrations resistance
		Kr=45° apmax=0.295	SE□N1504AF□□ SE□R1504AF□□		
	FMA04  P208  P211	Kr=45° apmax=0.138	OFKT05T3-DF/DM OFKT05T3-LH	Face milling steel, alloy steel, cast iron, aluminum alloy	<ul style="list-style-type: none"> • Diameter range Ø2.00"~ Ø6.00" • High economy milling tool with 8 cutting edges • Screw clamping, high precision
		Kr=45° apmax=0.197	OFKR0704-DF/DM	Face milling steel, alloy steel and cast iron	
	FMA11  P215-216	Kr=45° apmax=0.216	SNEG1205ANR-GM/HGR/W	General face milling steel, stainless steel, high-temperature alloy, cast iron	<ul style="list-style-type: none"> • 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° apmax=0.275	SNEG1506ANR-GM/HGR/W		
		Kr=45° apmax=0.354	SNEG1907ANR-HGR		
	FMA12  P219	Kr=45° apmax=0.157	ONHU060404ANN-GL ONHU060408ANN-GM/GH	General face milling steel, stainless steel, cast iron	<ul style="list-style-type: none"> • 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° apmax=0.197	ONHU08T624R-GM		
FMA14 <i>New</i>  P222页	Kr=45° apmax=0.217	PNEG110512-GL PNEG110530-GM PNEG110530-GH	General face milling for steel, stainless steel and cast iron	<ul style="list-style-type: none"> • 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 	
FMD02  P225-226	Kr=67° apmax=0.197	PNEG110512R/L-CF/CM/CR	Face milling of cast iron and steel	<ul style="list-style-type: none"> • Diameter range Ø2.00"~Ø12.00" • High-economy milling tool with 10 cutting edges 	
	Kr=67° apmax=0.276	PNEG110512R/L-PF/PM/PR			
	Kr=67° apmax=0.256	PNEG110512-KH/KM/KL			
FMD03  P229	Kr=60° apmax=0.472	LNKT2007DN-ZR	Heavy-duty face milling of steel, alloy steel, stainless steel and cast iron	<ul style="list-style-type: none"> • 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° apmax=0.669	LNKT2510-ZR			



Operating pattern	Series/Shape	Approach angle / Max. cutting depth. (inch)	Applicable insert	Application overview	Features
Face milling	FMD04  P231	$K_r=67^\circ$ $a_{pmax}=0.472$	PNGU170712R-GR PNGU170712-HDR	Rough milling of steel and cast iron	<ul style="list-style-type: none"> Diameter range $\varnothing 5.00''\sim\varnothing 12.00''$ 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  P233	$K_r=75^\circ$ $a_{pmax}=0.472$	LNKT1506EN-ZR	Heavy-duty face milling of steel, alloy steel, stainless steel and cast iron	<ul style="list-style-type: none"> Diameter range $\varnothing 5.00''\sim\varnothing 12.00''$ 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
	FMP01  P235	$K_r=90^\circ$ $a_{pmax}=0.709$	TP□N2204PD□ TPKN2204PDF□ TPKN2204PDT□	Face milling steel, alloy steel and cast iron	<ul style="list-style-type: none"> Diameter range $\varnothing 3.00''\sim\varnothing 12.00''$ $K_r 90^\circ$, square shoulder milling Top clamping is easy to assemble and disassemble
	FMP02  P237	$K_r=90^\circ$ $a_{pmax}=0.285$	SEET09T308PER-APF/APM/APR	Face milling steel, alloy steel, stainless steel, cast iron and AL alloy	<ul style="list-style-type: none"> Diameter range $\varnothing 2.00''\sim\varnothing 10.00''$ $K_r 90^\circ$, 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
		$K_r=90^\circ$ $a_{pmax}=0.425$	SEET120308PER-APF/APM/APR SEET120308-LH		
	FMP03  P240	$K_r=90^\circ$ $a_{pmax}=0.512$	LNKT1506EN-ZR	Heavy-duty face milling of steel and alloy steel	<ul style="list-style-type: none"> Diameter range $\varnothing 5.00''\sim\varnothing 12.00''$ 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
		$K_r=90^\circ$ $a_{pmax}=0.669$	LNKT2007DN-ZR		
		$K_r=90^\circ$ $a_{pmax}=0.866$	LNKT2510-ZR		
	FMP12  P243	$K_r=90^\circ$ $a_{pmax}=0.224$	WNHU060404PNR-GM WNHU060408PNR-GM	Steel, alloy steel, cast iron and AL alloy	<ul style="list-style-type: none"> Diameter range $\varnothing 2.00''\sim\varnothing 6.00''$ 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
		$K_r=90^\circ$ $a_{pmax}=0.303$	WNHU080608PNR-GM WNHU080612PNR-GM WNHU080616PNR-GM WNHU080608PNR-LH		
FMP12  P244	$K_r=90^\circ$ $a_{pmax}=0.224$	WNHU060404PNR-GM WNHU060408PNR-GM		<ul style="list-style-type: none"> Diameter range $\varnothing 1.00''\sim\varnothing 2.00''$ 90° approach angle can be used for shoulder milling, face milling, groove milling, etc Six cutting edges Double negative angle of cutter body combined with unique insert structure to achieve double positive tool angle, reducing cutting forces 	
FMR01  P246	$a_{pmax}=0.197$	RCKT10T3MO-DM	Cavity profile milling steel, alloy steel, stainless steel, high-temperature alloy and cast iron	<ul style="list-style-type: none"> Diameter range $\varnothing 1.00''\sim\varnothing 2.00''$ R-type inserts possess stronger cutting edges Suitable for machining curved surface of mould Economical milling cutters with screw clamping 	
	$a_{pmax}=0.236$	RCKT1204MO-DM/DR/ER/NM			






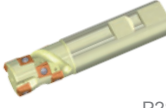




● Face milling tools

Operating pattern	Series/Shape	Approach angle / Max. cutting depth. (inch)	Applicable insert	Application overview	Features
Face milling	FMR02  P249	$a_{pmax}=0.236$	RCKT1204MO-DM/DR/ER/NM	Face milling and cavity profile milling steel, alloy steel, stainless steel, high-temperature alloy and cast iron	<ul style="list-style-type: none"> • Diameter range $\varnothing 2.50''\sim\varnothing 6.00''$ • R-type inserts possess stronger cutting edges • Suitable for machining curved surface of mould • Economical milling tools with screw clamping
		$a_{pmax}=0.315$	RCKT1606MO-DM/DR/ER/NM		
		$a_{pmax}=0.394$	RCKT2006MO-DR/ER/NM		
	FMR03  P253	$a_{pmax}=0.157$	RDKW0803MO	Cavity profile milling steel, alloy steel, stainless steel, high-temperature alloy and cast iron	<ul style="list-style-type: none"> • Diameter range $\varnothing 1.00''\sim\varnothing 2.00''$ • R-type inserts possess stronger cutting edges • Suitable for machining curved surface of mould • Economical milling tools with screw clamping
		$a_{pmax}=0.197$	RDKW10T3MO RDKT10T3MO-NM		
		$a_{pmax}=0.236$	RDKW1204MO		
	FMR04  P256	$a_{pmax}=0.236$	RDKW1204MO	Face milling and cavity profile milling steel, alloy steel, stainless steel and cast iron	<ul style="list-style-type: none"> • 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  P259  P260	$a_{pmax}=0.125$	RPMW2T200	Cavity profile milling steel, alloy steel, stainless steel and cast iron	<ul style="list-style-type: none"> • 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		
		$a_{pmax}=0.250$	RPMW43	Face milling and cavity profile milling steel, alloy steel, stainless steel and cast iron	<ul style="list-style-type: none"> • 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			



● Square shoulder milling tools

Operating pattern	Series/Shape	Approach angle / Max. cutting depth. (inch)	Applicable insert	Application overview	Features
Square shoulder milling	EMP01  P263-264	$Kr=90^\circ$ $a_{pmax}=0.433$	APKT11T3□□-APF/APM APKT11T3□□-ALH	Multi-function milling steel, alloy steel, stainless steel, cast iron and Al alloy	<ul style="list-style-type: none"> • Two mounting modes: Straight shank and Weldon shank, Diameter range $\varnothing 0.50''\sim\varnothing 2.50''$ • $Kr 90^\circ$, 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
		$Kr=90^\circ$ $a_{pmax}=0.630$	APKT160408-APF/APM APKT160408-ALH		
	EMP02  P269	$Kr=90^\circ$ $a_{pmax}=0.433$	APKT11T3□□-APF/APM APKT11T3□□-ALH	Face milling steel, alloy steel, stainless steel, cast iron and Al alloy	<ul style="list-style-type: none"> • Diameter range $\varnothing 2.00''\sim\varnothing 8.00''$ • $Kr 90^\circ$, for square shoulder milling • Wiper inserts also suitable for face milling • Inserts with 3D helical cutting edge, less cutting force
		$Kr=90^\circ$ $a_{pmax}=0.630$	APKT160408-APF/APM APKT160408-ALH		





Operating pattern	Series/Shape	Approach angle / Max. cutting depth.(inch)	Applicable insert	Application overview	Features
Square shoulder milling	EMP03  P272	$K_r=90^\circ$ $a_{pmax}=1.535$	APKT11T3□□-APF/APM APKT11T3□□-ALH	Adopting large cutting depth, for milling steel, alloy steel, stainless steel, cast iron and Al alloy	<ul style="list-style-type: none"> • Diameter range $\varnothing 2.00''\sim\varnothing 4.00''$ • End milling tools with positive helical angle, good chip removal • For side face milling and slot machining • Close pitch, high machining efficiency
	EMP04  P273	$K_r=90^\circ$ $a_{pmax}=1.157\sim 2.283$	APKT11T3□□-APF/APM APKT11T3□□-ALH	Adopting large cutting depth, for milling steel, alloy steel, stainless steel, cast iron and Al alloy	<ul style="list-style-type: none"> • Diameter range $\varnothing 0.75''\sim\varnothing 1.50''$ • End milling tools with positive helical angle, good chip removal • For side face milling and slot machining • Close pitch, high machining efficiency
	EMP09 <i>New</i>  P277	$K_r=90^\circ$ $a_{pmax}=0.315$	LNKT0804□□PNR-GM/GL	Multifunction milling machining for steel, alloy steel, stainless steel and cast iron	<ul style="list-style-type: none"> • Diameter range $\varnothing 1.00''\sim\varnothing 1.50''$ • 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
		$K_r=90^\circ$ $a_{pmax}=0.453$	LNKT1206□□PNR-GM/GL		
	 P278-279	$K_r=90^\circ$ $a_{pmax}=0.315$	LNKT0804□□PNR-GM/GL	Face milling for steel, alloy steel, stainless steel and cast iron	<ul style="list-style-type: none"> • Diameter range $\varnothing 1.50''\sim\varnothing 6.00''$ • With 90° approach angle, the cutter can be used in shoulder milling, chamfer milling and other tangential machining, and the cutter has better rigidity
		$K_r=90^\circ$ $a_{pmax}=0.453$	LNKT1206□□PNR-GM/GL		
		$K_r=90^\circ$ $a_{pmax}=0.591$	LNKT1607□□PNR-GM/GL		
	 P280	$K_r=90^\circ$ $a_{pmax}=1.7$	LNKT1206□□PNR-GM/GL	Large cutting depth milling for steel, alloy steel, stainless steel and cast iron	<ul style="list-style-type: none"> • Diameter range $\varnothing 1.50''\sim\varnothing 3.00''$ • Used in side milling and slot machining • Spiral cutting-edge design ensures easier and faster cutting
	 P281	$K_r=90^\circ$ $a_{pmax}=1.215\sim 1.5$	LNKT0804□□PNR-GM/GL	Large cutting depth milling for steel, alloy steel, stainless steel and cast iron	<ul style="list-style-type: none"> • Diameter range $\varnothing 1.00''\sim\varnothing 1.25''$ • 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
	EMP13  P285	$K_r=90^\circ$ $a_{pmax}=0.441$	ANGX1105□□PNR-GM/LH	Face milling steel, alloy steel, stainless steel and cast iron	<ul style="list-style-type: none"> • Diameter range $\varnothing 2.00''\sim\varnothing 6.00''$ • $K_r 90^\circ$, 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 90osquare shoulder milling
		$K_r=90^\circ$ $a_{pmax}=0.571$	ANGX1506□□PNR-GM/LH		
	EMP13  P286	$K_r=90^\circ$ $a_{pmax}=0.441$	ANGX1105□□PNR-GM/LH	Multi-function milling steel, alloy steel, stainless steel and cast iron	<ul style="list-style-type: none"> • Two mounting modes: Straight shank and Weldon shank, Diameter range $\varnothing 0.75''\sim\varnothing 1.50''$ • $K_r 90^\circ$, 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 90osquare shoulder milling
$K_r=90^\circ$ $a_{pmax}=0.571$		ANGX1506□□PNR-GM/LH			





Profile milling tools

Operating pattern	Series/Shape	Approach angle / Max. cutting depth.	Applicable insert	Application overview	Features
Profile milling	BMR02  P288	Cutting depth: see the detailed information about tool specifications	ROHX□□	Profile machining steel, stainless steel and cast iron	<ul style="list-style-type: none"> Diameter range $\varnothing 0.625''\sim\varnothing 1.00''$ Applied for profile finish machining Good assembly stability Insert with two cutting edges, perfect economical efficiency
	BMR04  P290		ZOHX□□	Profile machining steel, stainless steel and cast iron	<ul style="list-style-type: none"> Diameter range $\varnothing 0.625''\sim\varnothing 1.25''$ 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  P294	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	<ul style="list-style-type: none"> Diameter range $\varnothing 0.75''\sim\varnothing 6.00''$ 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
	 P295				
	 P297		WPGT□□ZSR WPGT□□ZSR-PM	Face and profile milling steel, stainless steel and cast iron in cavity applications	<ul style="list-style-type: none"> Diameter range $\varnothing 0.75''\sim\varnothing 4.00''$ 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
	 P298				

Chamfer milling tools


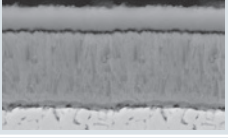
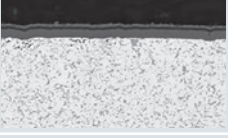
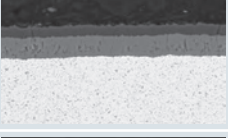

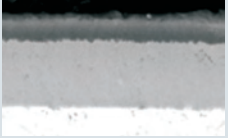
Operating pattern	Series/Shape	Approach angle / Max. cutting depth.	Applicable insert	Application overview	Features
Chamfer machining	CMA01  P303	Kr=45°	SPMT120408	Chamfer machining steel, alloy steel, stainless steel and cast iron	<ul style="list-style-type: none"> Diameter range $\varnothing 0.50''\sim\varnothing 1.25''$ With the function of milling small surface
	CMD01  P304	Kr=60°			

Milling insert grades overview

ISO	Coated grade		Coated cermet	Cemented carbide	PCBN&PCD
	CVD	PVD			
P Steel	P01				
	P10		YBG202 YBG205 YB9320 YBG252	YNG151 YNG151C	
	P20	YBC302 YBM251 YBM253 YBM351			
	P30				YC30S
	P40		YBG302		
M Stainless steel	M01				
	M10	YBM251 YBM253 YBM351	YBG202 YBG205 YB9320 YBG252	YNG151 YNG151C	
	M20				
	M30		YBG302		YC30S
	M40				
K Cast iron	K01				YCB011
	K10	YBD151 YBD152 YBD252	YBG102 YBG102 YBG152 YBG252	YNG151 YNG151C YD051 YD201	
	K20				
	K30				
	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				



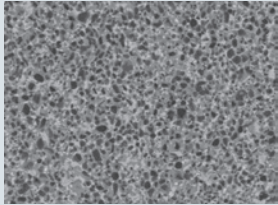
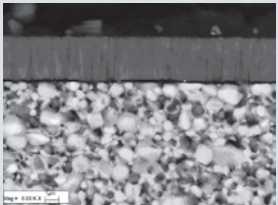
● Coated Cemented Carbide CVD

Grade	Coating structure	Micro-structure	ISO applied range	Application field
YBM251	Combination of high toughness and strength substrate and the coating comprised of TiCN, thin Al ₂ O ₃ , TiN		P15~40	Applicable for semi-finish and rough milling P, M type materials
			M10~30	
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 P, M-type material
			M10~30	
YBM351	Combination of high toughness substrate and the coating composed of TiCN, thin Al ₂ O ₃ , TiN		P25~40	Applicable for rough milling P, M type materials
			M20~35	
YBD152	Good combination of substrate with high wear-resistance and coating composed of TiCN and thick Al ₂ O ₃		K05~25	Suitable for finish and semi-finish milling of K-type material
YBD252	Good combination of substrate with high wear-resistance and coating composed of TiCN and thick Al ₂ O ₃		K15~35	Suitable for rough and semi-finish milling of K-type material
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 P type material


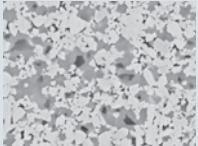
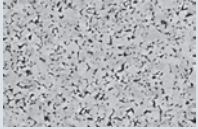
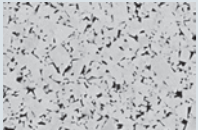
● Coated Cemented Carbide PVD

Grade	Coating structure	ISO applied range	Application field
YBG102	Fine grain carbide substrate+Nano coating	K05~20	Applicable for finish and semi-finish milling K type material
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 material
		M10~30	
YBG302	Substrate with high toughness and strength + Nano-coating	P25~40	Applicable for rough milling type P and M materials
		M25~40	
YBG152	Substrate with reasonable hardness and strength + Nano coating	K20~35	Applicable for rough and semi-finish milling type K material
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	S20~30	Grade for S material's roughing, especially suitable for milling Ti-alloy

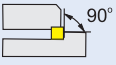
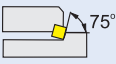
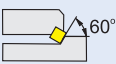
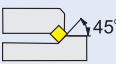
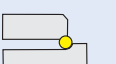
● Cermet

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
YC30S		P25~40	Applicable for roughing milling Code P, M type materials
		M25~40	
YD051		K05~20	Applicable for finishing milling type K material
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	

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 $\varnothing D$

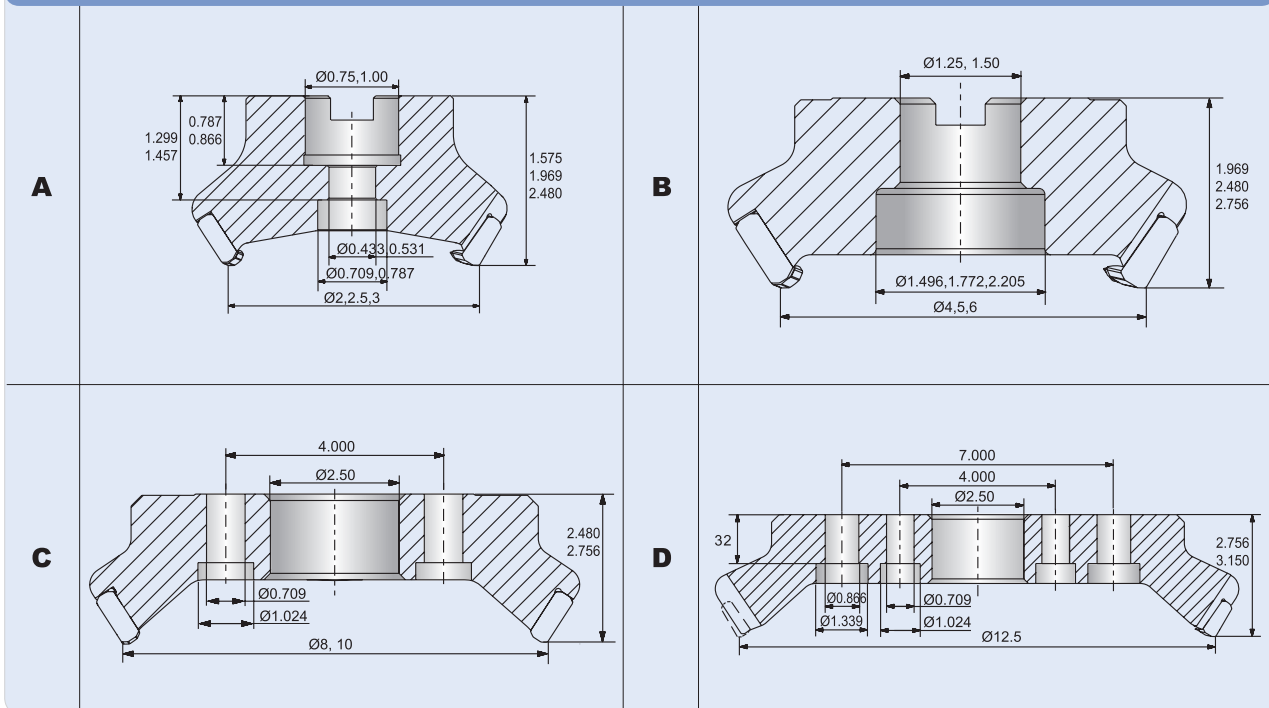
Side and face milling tool: diameter
X cutting edge width

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

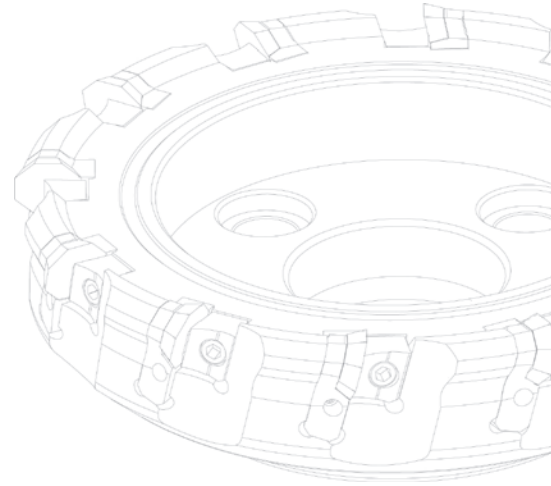
Arbor/spindle Mounting



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

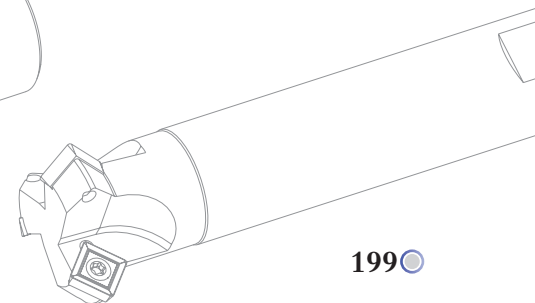
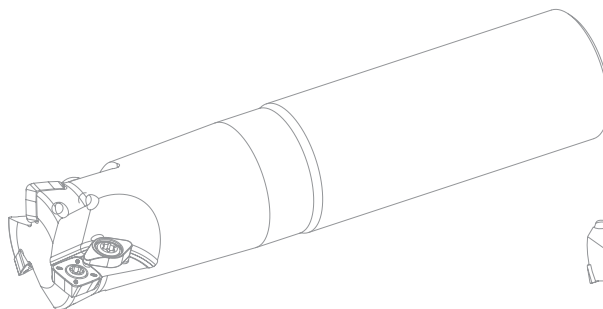
Cutting edge length of insert

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



Face milling tools

Kr:45°

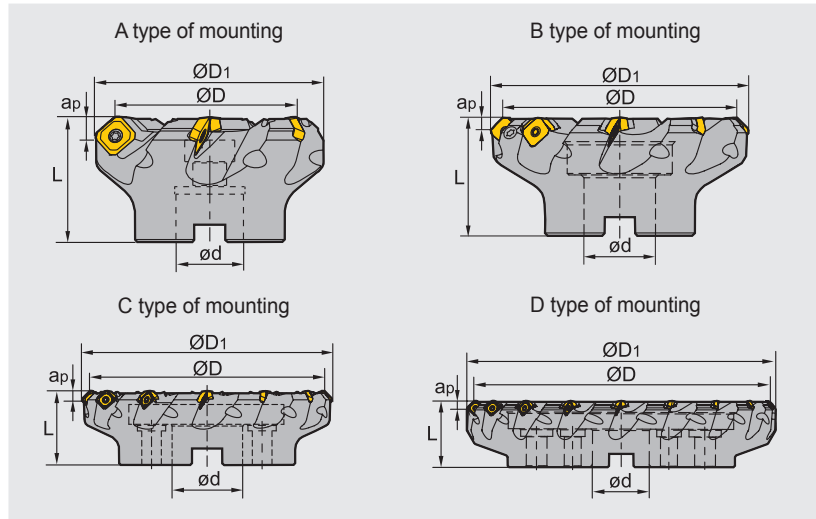


FMA01

P M K N S



Coarse pitch



Specification of tools

Type		Dimensions(inch)						
		ØD	ØD1	ød	L	apmax	Z (Number of teeth)	Interface form
FMA01	-2.00"-A0.75"-SE12-04	2.000	2.510	0.750	1.750	0.236	4	A
	-2.50"-A0.75"-SE12-05	2.500	3.010	0.750	1.750	0.236	5	A
	-3.00"-A1.00"-SE12-06	3.000	3.510	1.000	2.000	0.236	6	A
	-4.00"-B1.25"-SE12-07	4.000	4.510	1.250	2.000	0.236	7	B
	-5.00"-B1.50"-SE12-08	5.000	5.510	1.500	2.500	0.236	8	B
	-6.00"-B1.50"-SE12-07	6.000	6.510	1.500	2.500	0.236	7	B
	-6.00"-B1.50"-SE12-10	6.000	6.510	1.500	2.500	0.236	10	B
	-8.00"-C2.50"-SE12-08	8.000	8.510	2.500	2.500	0.236	8	C
	-8.00"-C2.50"-SE12-12	8.000	8.510	2.500	2.500	0.236	12	C
	-10.0"-C2.50"-SE12-10	10.000	10.510	2.500	2.500	0.236	10	C
	-10.0"-C2.50"-SE12-14	10.000	10.510	2.500	2.500	0.236	14	C
	-12.0"-D2.50"-SE12-18	12.000	12.510	2.500	2.750	0.236	18	D
	-4.00"-B1.25"-SE18-04	4.000	4.510	1.250	2.500	0.384	4	B
	-5.00"-B1.50"-SE18-05	5.000	5.510	1.500	2.500	0.384	5	B
	-6.00"-B1.50"-SE18-06	6.000	6.510	1.500	2.500	0.384	6	B
	-8.00"-C2.50"-SE18-08	8.000	8.510	2.500	2.500	0.384	8	C
-10.0"-C2.50"-SE18-10	10.000	10.510	2.500	2.500	0.384	10	C	
-12.0"-D2.50"-SE18-12	12.000	12.510	2.500	3.000	0.384	12	D	

Face milling tools

Kr:45°

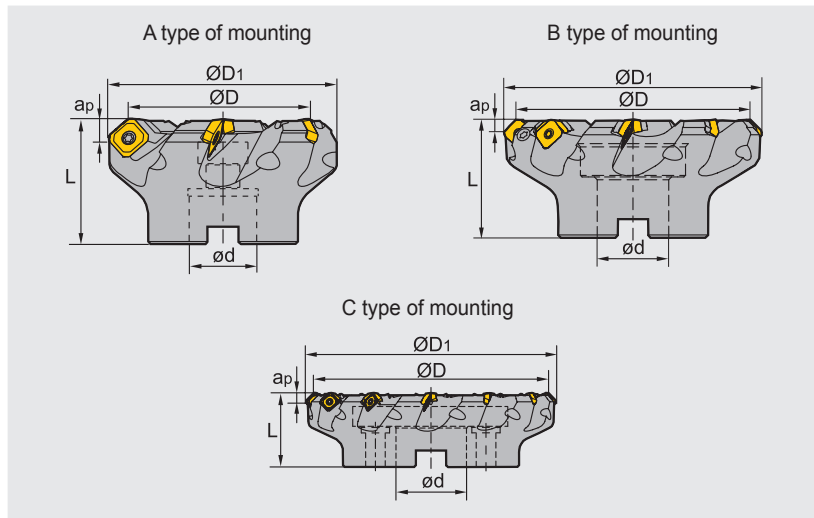


FMA01

P M K N S



Close pitch



Specification of tools

Type		Dimensions(inch)						
		ØD	ØD1	ød	L	ap _{max}	Z (Number of teeth)	Interface form
FMA01	-2.00"-A0.75"-SE12-05	2.000	2.510	0.750	1.750	0.236	5	A
	-2.50"-A0.75"-SE12-06	2.500	3.010	0.750	1.750	0.236	6	A
	-3.00"-A1.00"-SE12-08	3.000	3.510	1.000	2.000	0.236	8	A
	-4.00"-B1.25"-SE12-10	4.000	4.510	1.250	2.000	0.236	10	B
	-5.00"-B1.50"-SE12-12	5.000	5.510	1.500	2.500	0.236	12	B
	-6.00"-B1.50"-SE12-16	6.000	6.510	1.500	2.500	0.236	16	B
	-8.00"-C2.50"-SE12-20	8.000	8.510	2.500	2.500	0.236	20	C
	-10.00"-C2.50"-SE12-24	10.000	10.510	2.500	2.500	0.236	24	C
	-4.00"-B1.25"-SE18-06	4.000	4.510	1.250	2.500	0.384	6	B
	-5.00"-B1.50"-SE18-07	5.000	5.510	1.500	2.500	0.384	7	B
	-8.00"-C2.50"-SE18-12	8.000	8.510	2.500	2.500	0.384	12	C
	-10.00"-C2.50"-SE18-14	10.000	10.510	2.500	2.500	0.384	14	C

Spare parts

Diameter ØD	Insert specification	Insert screw	Shim	Shim screw	Wrench	Wrench	Sketch of installation
Ø2", Ø2.5" Ø3", Ø4"	SEET12T3-□□	I60M3.5×10	--	--	WT15IS	--	
Ø5", Ø6" Ø8", Ø10"	SEET12T3-□□	I60M3.5×12	S13BS	SM5×7XA		WH35L	
Ø4"~Ø8"	SEET18T6-□□	I60M5×17	S18BS	SM8×9XA	WT20IT	WH50L	

Face milling tools **Kr:45°**



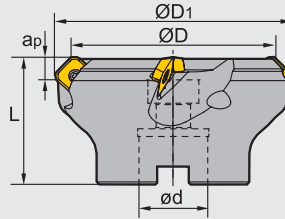
FMA02

P M K N S

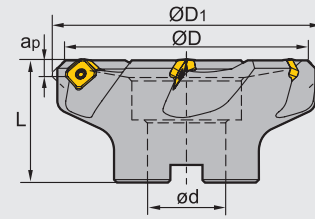


Coarse pitch differential

A type of mounting






B type of mounting

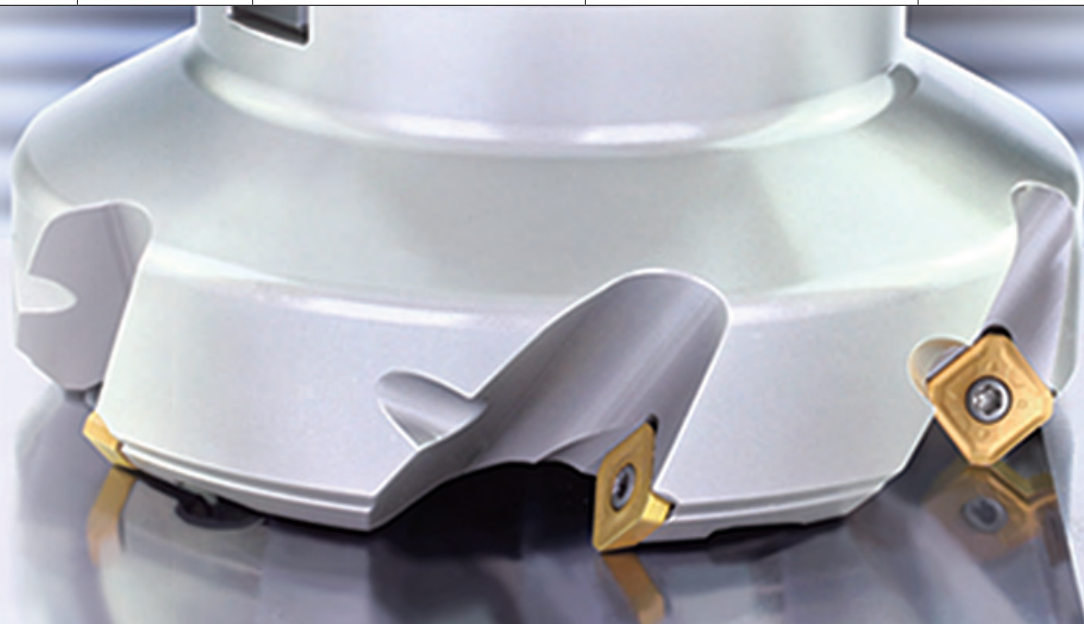


Specification of tools

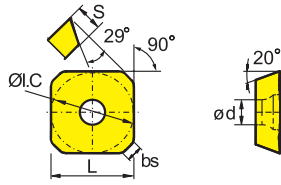
Type		Dimensions(inch)						
		ØD	ØD ₁	ød	L	a _p max	Z (Number of teeth)	Interface form
FMA02	-2.00"-A0.75"-SE12-04	2.000	2.510	0.750	1.750	0.236	4	A
	-2.50"-A0.75"-SE12-05	2.500	3.010	0.750	1.750	0.236	5	A
	-3.00"-A1.00"-SE12-05	3.000	3.510	1.000	2.000	0.236	5	A
	-4.00"-B1.25"-SE12-07	4.000	4.510	1.250	2.000	0.236	7	B
	-5.00"-B1.50"-SE12-08	5.000	5.510	1.500	2.500	0.236	8	B

Spare parts

Diameter ØD	Insert specification	Insert screw	Wrench	Sketch of installation
				
Ø2.00"~Ø5.00"	SEET12T3-□□	I60M3.5×10	WT15JS	



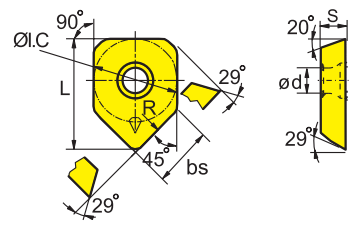
Selection of inserts



☺ 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										Cermet	Cemented carbide									
		L	Ø.I.C	S	ød	bs	R	YBC302	YBM251	YBM253	YBM351	YBD152	YBD252	YBG102	YBG202	YBG205	YB9320	YBG302	YBG152	YBG252	YBS203	YBS303	YNG151	YNG151C	YC30S	YD051	YD101	YD201
	SEET12T3-DF	0.528	0.528	0.156	0.161	0.100		●	○							●	○											
	SEET12T3-CF	0.528	0.528	0.156	0.161	0.100					○		●			○	○											
	SEET12T3-EF	0.528	0.528	0.156	0.161	0.100										●	○											
	SEET12T3-DM	0.528	0.528	0.156	0.161	0.100		●	●							○	●											
	SEET18T6-DM	0.709	0.709	0.24	0.217	0.059		●	●							●												
	SEET12T3-CM	0.528	0.528	0.156	0.161	0.100			●		●					●	○											
	SEET12T3-EM	0.528	0.528	0.156	0.161	0.100			●	●						●	●											
	SEET18T6-EM	0.709	0.709	0.240	0.217	0.059				○							○											
	SEET12T3-DR	0.528	0.528	0.156	0.161	0.100		●			●					●	●											
	SEET12T3-CR	0.528	0.528	0.156	0.161	0.100						●				●	●											
	SEET12T3-LH	0.528	0.528	0.156	0.161	0.100			●																	○	●	
	SEET12T3-W	0.702	0.528	0.156	0.161	0.372	19.685	●	●		●					●							●					
	SEET18T6-W	0.976	0.709	0.240	0.217	0.433	19.685									○												



● Always stock available ○ Produce according to order

Chipbreaker selection for FMA01

Function Classification	For finishing	For semi-finishing	For roughing
P	-DF	-DM	-DR
M,S	-EF	-EM	
K	-CF	-CM	-CR
AL		-LH	

Recommended cutting parameters

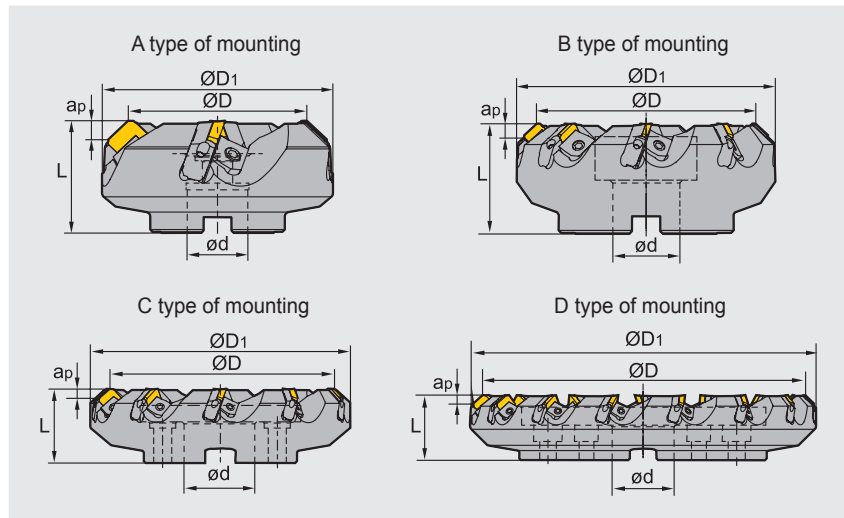
Workpiece material	Hardness HB	Insert grade	Cutting parameters				
			V(SFPM)	f(IPT)			
				-DF	-DM	-DR	
P	Low-carbon steel, Soft steel	YBM251 YBM253	900(700-1200)	0.006(0.004-0.008)	0.008(0.004-0.012)	0.012(0.008-0.016)	
		YBC302	900(700-1200)	0.006(0.004-0.008)	0.008(0.004-0.012)	0.012(0.008-0.016)	
		YBG205	900(650-1200)	0.006(0.004-0.008)	0.008(0.004-0.012)	0.012(0.008-0.016)	
		YB9320	900(650-1200)	0.006(0.004-0.008)	0.008(0.004-0.012)	0.012(0.008-0.016)	
		YBG302	750(550-1200)	0.006(0.004-0.008)	0.008(0.004-0.012)	0.012(0.008-0.016)	
	High-carbon steel, Alloy steel	180-280	YBM251 YBM253	800(700-1000)	0.006(0.004-0.008)	0.008(0.004-0.012)	0.012(0.008-0.016)
			YBG205	800(600-1200)	0.006(0.004-0.008)	0.008(0.004-0.012)	0.012(0.008-0.016)
			YB9320	800(600-1200)	0.006(0.004-0.008)	0.008(0.004-0.012)	0.012(0.008-0.016)
			YBG302	700(500-1100)	0.006(0.004-0.008)	0.008(0.004-0.012)	0.012(0.008-0.016)
	Alloy tool steel	280-350	YBM251 YBM253	700(600-1000)	0.006(0.004-0.008)	0.008(0.004-0.012)	0.012(0.008-0.016)
			YBG205	700(550-1100)	0.006(0.004-0.008)	0.008(0.004-0.012)	0.012(0.008-0.016)
			YB9320	700(550-1100)	0.006(0.004-0.008)	0.008(0.004-0.012)	0.012(0.008-0.016)
YBG302			600(400-1000)	0.006(0.004-0.008)	0.008(0.004-0.012)	0.012(0.008-0.016)	
M	Stainless steel	YBM251 YBM253 YBG205 YB9320 YBG302	500(400-800) 500(360-900) 500(360-900) 450(300-800)	-EF	-EM		
				0.006(0.004-0.008)	0.008(0.004-0.012)		
				0.006(0.004-0.008)	0.008(0.004-0.012)		
				0.006(0.004-0.008)	0.008(0.004-0.012)		
K	Cast iron	180-250	YBG102	700(400-1000)	-CF	-CM	-CR
					0.006(0.004-0.008)	0.008(0.004-0.012)	0.012(0.008-0.016)
N	Al alloy steel	-	YD101	1000-	-LH 0.010(0.004-0.016)		
			YD201	1000-			
S	High-temperature alloy	≤400	YBG102	150(60-200)	-EF	-EM	
					0.004(0.004-0.008)	0.006(0.004-0.012)	

Face milling tools

Kr:45°









FMA03



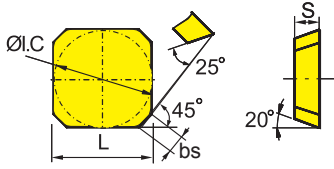
Specification of tools

Type		Dimensions(inch)						
		ØD	ØD1	ød	L	apmax	Z (Number of teeth)	Interface form
FMA03	-3.00"-A1.00"-SE12-04	3.000	3.858	1.000	2.000	0.217	4	A
	-4.00"-B1.25"-SE12-05	4.000	4.858	1.250	2.000	0.217	5	B
	-5.00"-B1.50"-SE12-06	5.000	5.858	1.500	2.500	0.217	6	B
	-6.00"-B1.50"-SE12-08	6.000	6.858	1.500	2.500	0.217	8	B
	-8.00"-C2.50"-SE12-10	8.000	8.858	2.500	2.500	0.217	10	C
	-10.0"-C2.50"-SE12-12	10.000	10.858	2.500	2.500	0.217	12	C
	-12.0"-D2.50"-SE12-15	12.000	12.858	2.500	2.500	0.217	15	D
	-3.00"-A1.00"-SE15-04	3.000	3.858	1.000	2.000	0.295	4	A
	-4.00"-B1.25"-SE15-05	4.000	4.858	1.250	2.000	0.295	5	B
	-5.00"-B1.50"-SE15-06	5.000	5.858	1.500	2.500	0.295	6	B
	-6.00"-B1.50"-SE15-08	6.000	6.858	1.500	2.500	0.295	8	B
	-8.00"-C2.50"-SE15-10	8.000	8.858	2.500	2.500	0.295	10	C
	-10.0"-C2.50"-SE15-12	10.000	10.858	2.500	2.500	0.295	12	C
	-12.0"-D2.50"-SE15-15	12.000	12.858	2.500	2.500	0.295	15	D

Spare parts

Locator	Wedge	Wedge screw	Locator screw	Wrench	Sketch of installation
 LSE 12R/L (Suitable for 12mm inserts)	 W01R/L	 DM8×21X	 LOM5×15.1	 WT20T WH40T	
LSE 15R/L (Suitable for 15mm inserts)					

Selection of inserts



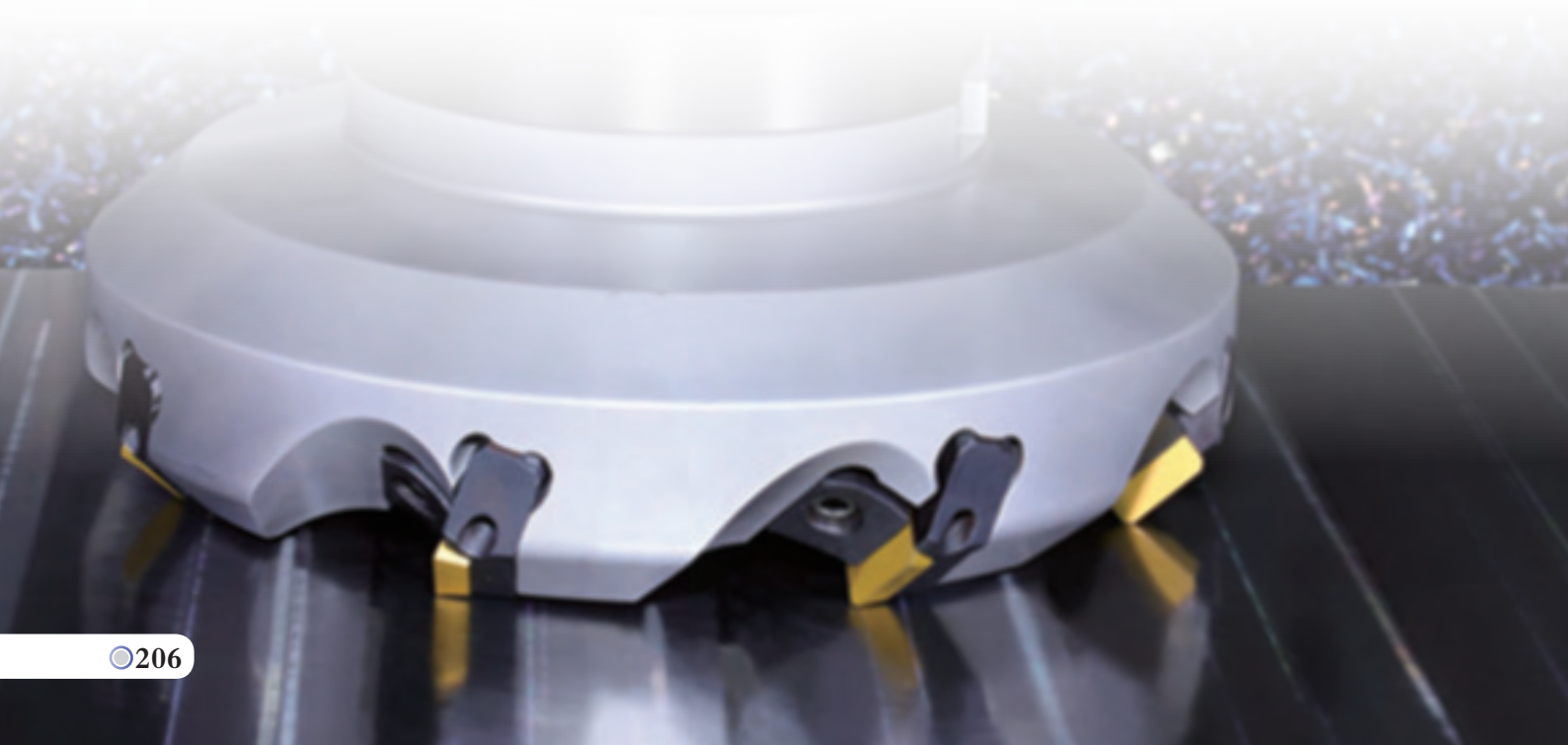
☺ Good working conditions 😐 General working conditions ☹ Adverse working conditions

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

Insert shape	Type	Dimensions (inch)				Coated grade										Cermet	Cemented carbide									
		L	ØI.C	bs	S	YBC302	YBM251	YBM253	YBM351	YBD152	YBD252	YBG102	YBG202	YBG205	YB9320		YBG302	YBG152	YBG252	YBS203	YBS303	YNG151	YNG151C	YC30S	YD051	YD101
	SEEN1203AFTN	0.500	0.500	0.071	0.125							○										●				
	SEKN1203AFFN	0.500	0.500	0.071	0.125							●														
	SEKN1203AFN	0.500	0.500	0.071	0.125							○												●		○
	SEKN1203AFTN	0.500	0.500	0.071	0.125	●		●				●		○									●			●
	SEKR1203AFN	0.500	0.500	0.071	0.125							○				○										
	SEKN1504AFN	0.625	0.625	0.063	0.187		●																		●	
	SEKN1504AFTN	0.625	0.625	0.063	0.187		●		●							○							●		●	
	SEKR1504AFN	0.625	0.625	0.063	0.187						●					●										

● Always stock available ○ Produce according to order

D



Recommended cutting parameters

Workpiece material	Hardness HB	Insert grade	Cutting parameters		
			V(SFPM)	f(IPT)	
P	Low-carbon steel, Soft steel	≤ 180	YNG151	1400 (1100-1600)	0.008 (0.004-0.016)
			YBM251	900 (700-1100)	0.008 (0.004-0.016)
			YBM351	700 (600-1000)	0.01 (0.006-0.012)
			YBG202	900 (650-1200)	0.008 (0.004-0.012)
			YBG302	900 (650-1200)	0.008 (0.004-0.012)
			YC30S	450 (300-700)	0.011 (0.004-0.016)
	High-carbon steel, Alloy steel	180-280	YNG151	1300 (1000-1600)	0.008 (0.004-0.016)
			YBM251	800 (650-1000)	0.008 (0.006-0.016)
			YBM351	650 (500-900)	0.010 (0.006-0.012)
			YBG202	800 (600-1100)	0.008 (0.004-0.012)
			YBG302	800 (600-1100)	0.008 (0.004-0.012)
			YC30S	400 (260-650)	0.011 (0.004-0.016)
	Alloy tool steel	280-350	YNG151	1100 (1000-1500)	0.008 (0.004-0.016)
			YBM251	700 (600-1000)	0.008 (0.004-0.016)
			YBM351	600 (500-800)	0.01 (0.006-0.012)
			YBG202	700 (550-1100)	0.008 (0.004-0.012)
			YBG302	700 (550-1100)	0.008 (0.004-0.012)
			YC30S	300 (200-600)	0.011 (0.004-0.016)
M	Stainless steel	≤ 270	YNG151	700 (500-900)	0.008 (0.004-0.016)
			YBM251	400 (300-700)	0.008 (0.004-0.016)
			YBM351	450 (300-800)	0.01 (0.006-0.012)
			YBG202	450 (300-800)	0.008 (0.004-0.012)
			YBG302	450 (300-800)	0.008 (0.004-0.012)
K	Cast iron	180-250	YBG102	700 (400-1000)	0.008 (0.004-0.012)
			YBD252	650 (490-820)	0.008 (0.004-0.016)
			YD201	300 (260-500)	0.01 (0.004-0.016)

D

Face milling tools

Kr:45°

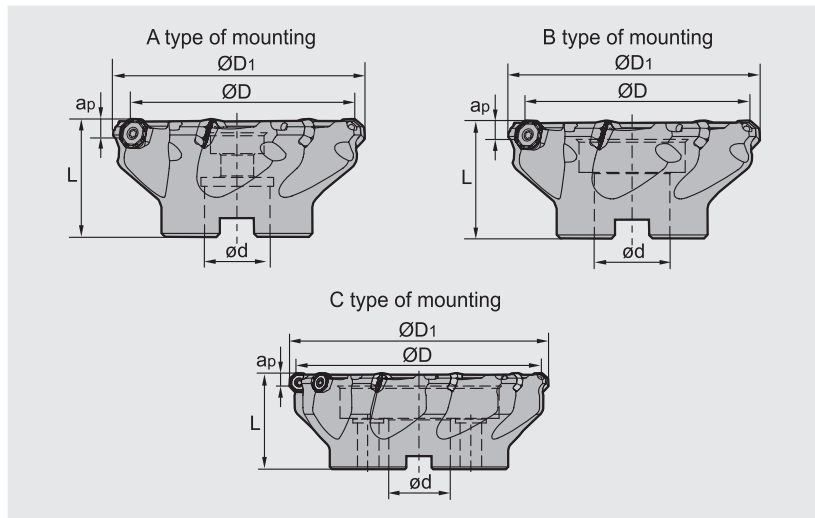


FMA04

P M K N



Screw clamping



Specification of tools

Type		Dimensions(inch)						
		ØD	ØD1	ød	L	apmax	Z (Number of teeth)	Interface form
FMA04	-2.00" -A0.75" -OF05-04	2.000	2.356	0.750	1.750	0.138	4	A
	-2.00" -A0.75" -OF05-05	2.000	2.356	0.750	1.750	0.138	5	A
	-2.50" -A0.75" -OF05-05	2.500	2.856	0.750	1.750	0.138	5	A
	-3.00" -A1.00" -OF05-06	3.000	3.356	1.000	2.000	0.138	6	A
	-4.00" -B1.25" -OF05-07	4.000	4.356	1.250	2.000	0.138	7	B
	-5.00" -B1.50" -OF05-08	5.000	5.356	1.500	2.500	0.138	8	B
	-6.00" -B1.50" -OF05-10	6.000	6.356	1.500	2.500	0.138	10	B
	-6.00" -C1.50" -OF05-10	6.000	6.356	1.500	2.500	0.138	10	C

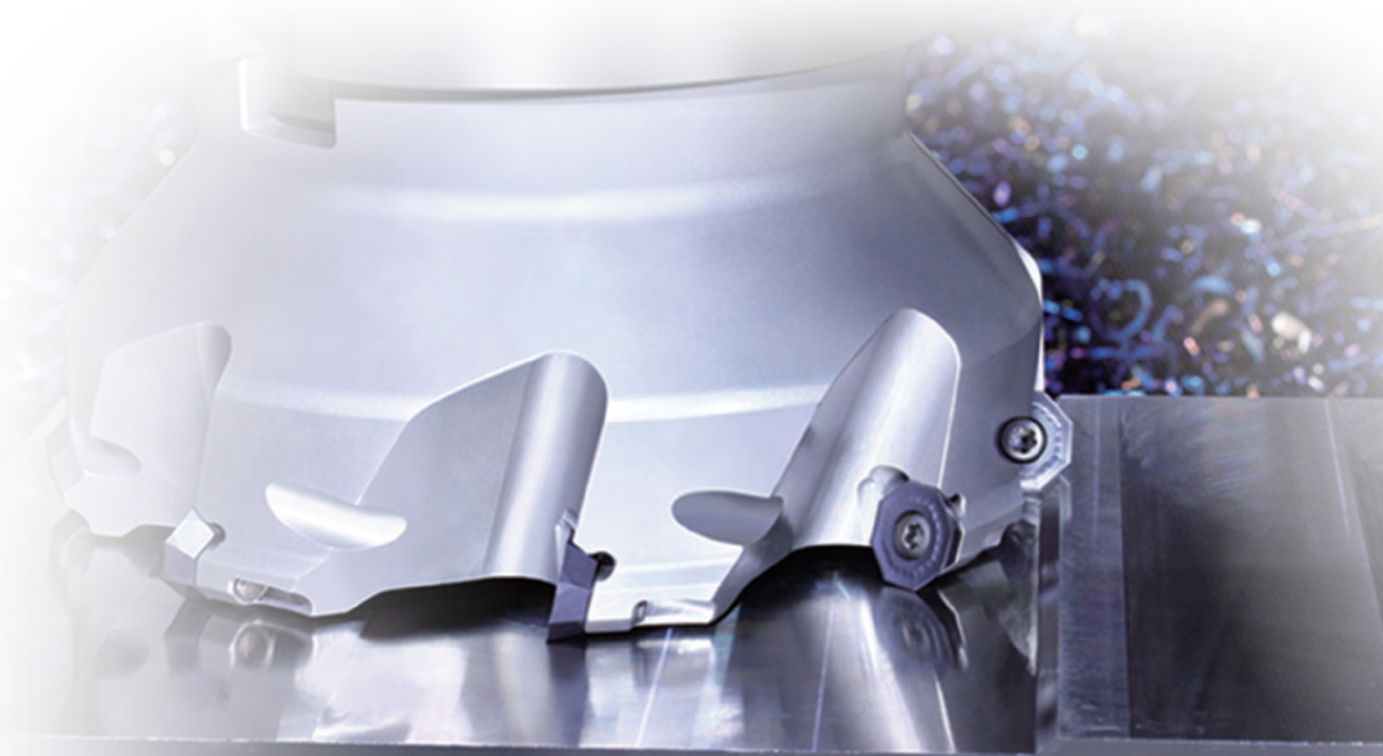
Spare parts

Adaptable tool holders	Insert screw	Wrench	Sketch of installation
Ø2", Ø2.5"	I60M4×8.4	WT15IS	
Ø3", Ø4", Ø5", Ø6"	I60M4×10	WT15IS	

Recommended cutting parameters

Workpiece material	Hardness HB	Insert grade	Cutting parameters			
			V(SFPM)	f(IPT)		
				-DF	-DM	
P	Low-carbon steel, Soft steel	YBM251	900(700-1100)	0.008(0.004-0.012)	0.01(0.004-0.016)	
		YBG202	900(650-1200)	0.008(0.004-0.012)	0.01(0.004-0.016)	
		YBG302 YB9320	750(550-1200)	0.008(0.004-0.012)	0.01(0.004-0.016)	
	High-carbon steel, Alloy steel	YBM251	800(650-1100)	0.006(0.004-0.012)	0.008(0.004-0.016)	
		YBG202	800(600-1100)	0.006(0.004-0.012)	0.008(0.004-0.016)	
		YBG302 YB9320	700(500-1100)	0.008(0.004-0.012)	0.01(0.004-0.016)	
	Alloy tool steel	YBM251	700(600-1000)	0.008(0.004-0.012)	0.008(0.004-0.016)	
		YBG202	700(550-1100)	0.008(0.004-0.012)	0.008(0.004-0.016)	
		YBG302 YB9320	600(400-1000)	0.008(0.004-0.012)	0.01(0.004-0.016)	
M	Stainless steel	YBG202	450(300-800)	0.006(0.004-0.012)	0.008(0.004-0.016)	
		YBM251	490(390-820)	0.006(0.004-0.012)	0.008(0.004-0.016)	
		YBG302 YB9320	500(400-800)	0.006(0.004-0.012)	0.008(0.004-0.016)	
K	Cast iron	180-250	YBG102	700(400-1000)	0.008(0.004-0.012)	0.01(0.004-0.016)
N				-LH		
	Aluminium alloy	-	YD101	1000-	0.006(0.002-0.012)	

D



Face milling tools

Kr:45°

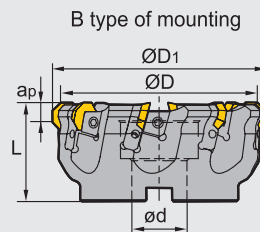


FMA04

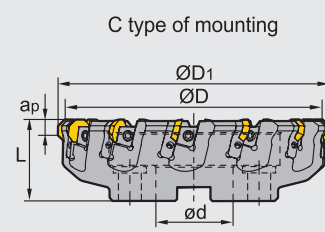
P M K



Top clamping



B type of mounting






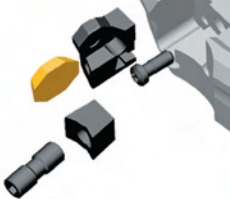


C type of mounting

Specification of tools

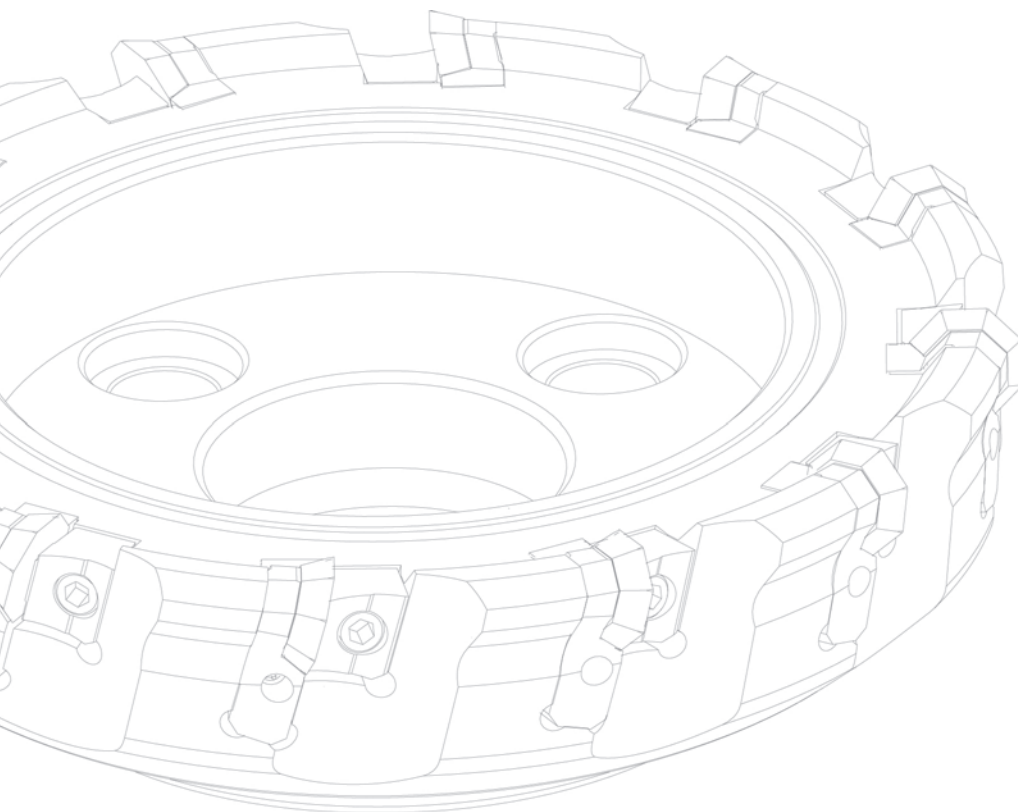
Type		Dimensions (inch)						
		$\varnothing D$	$\varnothing D_1$	$\varnothing d$	L	a_{pmax}	Z (Number of teeth)	Interface form
FMA04	-5.00"-B1.50"-OF07-08	5.000	5.469	1.500	2.500	0.197	8	B
	-6.00"-B1.50"-OF07-10	6.000	6.469	1.500	2.500	0.197	10	B
	-8.00"-C2.50"-OF07-12	8.000	8.469	2.500	2.500	0.197	12	C

Spare parts

Locator	Wedge	Wedge screw	Locator screw	Wrench	Sketch of installation
 LOF07R/L	 W02R/L	 DM8×21X	 LOM5×15.1	 WH20T WH40T	

Recommended cutting parameters

Workpiece material	Hardness HB	Insert grade	Cutting parameters			
			V(SFPM)	f(IPT)		
				-DF	-DM	
P Low-carbon steel, Soft steel	≤ 180	YBM251 YBM253	900(700-1100)	0.008(0.004-0.012)	0.01(0.004-0.016)	
		YBG202	900(650-1200)	0.008(0.004-0.012)	0.01(0.004-0.016)	
		YBM351	700(600-1000)	0.008(0.004-0.012)	0.01(0.004-0.016)	
		YBG302	750(550-1100)	0.008(0.004-0.012)	0.01(0.004-0.016)	
	High-carbon steel, Alloy steel	180-280	YBM251 YBM253	800(650-1000)	0.006(0.004-0.012)	0.008(0.004-0.016)
			YBG202	800(600-1100)	0.006(0.004-0.012)	0.008(0.004-0.016)
			YBM351	650(500-900)	0.008(0.004-0.012)	0.01(0.004-0.016)
			YBG302	700(500-1100)	0.008(0.004-0.012)	0.01(0.004-0.016)
	Alloy tool steel	280-350	YBM251 YBM253	700(600-1000)	0.006(0.004-0.012)	0.008(0.004-0.016)
			YBG202	700(550-1100)	0.006(0.004-0.012)	0.008(0.004-0.016)
			YBM351	600(500-800)	0.008(0.004-0.012)	0.01(0.004-0.016)
			YBG302	600(400-1000)	0.008(0.004-0.012)	0.01(0.004-0.016)
M Stainless steel	≤ 270	YBG202	500(360-900)	0.006(0.004-0.012)	0.008(0.004-0.016)	
		YBG302	450(300-800)	0.006(0.004-0.012)	0.008(0.004-0.016)	
		YBM251 YBM253	500(400-800) 750(550-1000)	0.006(0.004-0.012)	0.008(0.004-0.016)	
K Cast iron	180-250	YBG102	700(400-1000)	0.008(0.002-0.012)	0.01(0.004-0.016)	
		YBD252	600(500-800)	0.008(0.002-0.012)	0.01(0.004-0.016)	



FMA11 Kr:45° Series Face Mills

With outstanding economy and high performance

Cutter body with PVD coating for superior corrosion and heat resistance resulting in longer service life.

4 × 2 = 8 edge

Comprehensive upgrading of -GM geometry, good chip breaking performance, large rake angle, reduced cutting force.

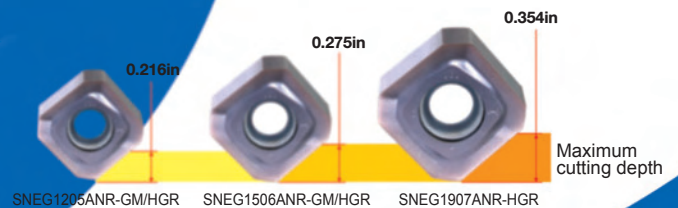
New -HGR geometry, high edge strength, excellent breakage resistance.

Insert with wiper, smoother surface roughness.

Complete range of insert specifications and geometries, for different cutting depths and different machining demands.

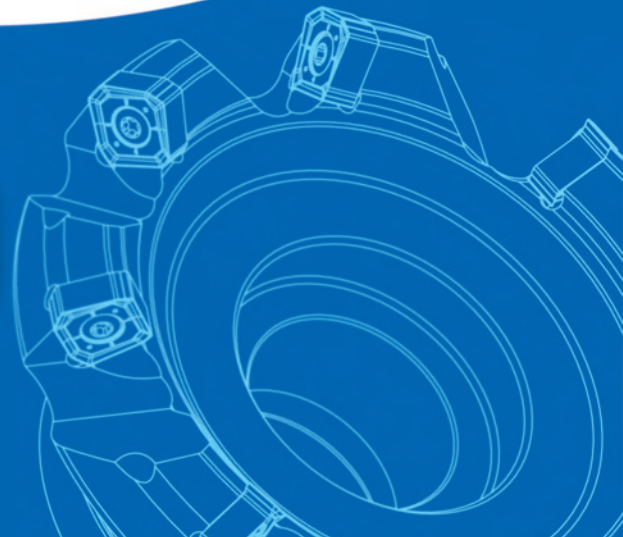
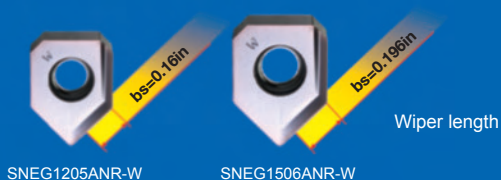
Double negative structure, excellent impact resistance.

Optimized design of pitch and chip pocket, for unobstructed chip flow and higher cutting efficiency.



-W special geometry for wiper inserts, large arc design, improved workpiece quality.

Extra long wiper, moresuited to semi-finishing and finishing with large diameter cutters.



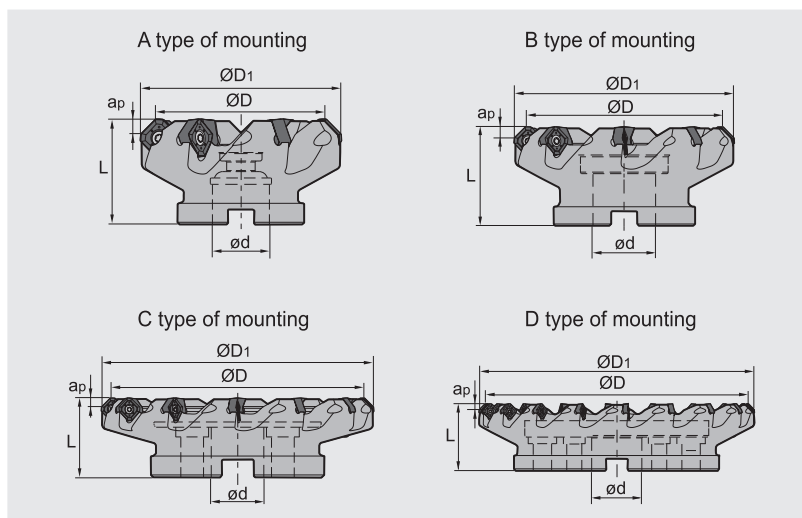
Face milling tools

Kr:45°



FMA11

P K S



Specification of tools

Type		Dimensions (inch)						Interface form
		ØD	ØD ₁	ød	L	a _{pmax}	Z (Number of teeth)	
FMA11 Coarse pitch	-2.00"-A0.75"-SN12-04C	2.000	2.453	0.750	1.750	0.216	4	A
	-2.50"-A0.75"-SN12-05C	2.500	2.953	0.750	1.750	0.216	5	A
	-3.00"-A1.00"-SN12-06C	3.000	3.453	1.000	2.000	0.216	6	A
	-4.00"-B1.50"-SN12-07	4.000	4.453	1.500	2.500	0.216	7	B
	-5.00"-B1.50"-SN12-08	5.000	5.453	1.500	2.500	0.216	8	B
	-6.00"-B2.00"-SN12-10	6.000	6.453	2.000	2.500	0.216	10	B
	-2.00"-A0.75"-SN15-04C	2.000	2.602	0.750	1.750	0.275	4	A
	-2.50"-A0.75"-SN15-05C	2.500	3.102	0.750	1.750	0.275	5	A
	-3.00"-A1.00"-SN15-06C	3.000	3.602	1.000	2.000	0.275	6	A
	-4.00"-B1.50"-SN15-07	4.000	4.602	1.500	2.500	0.275	7	B
	-5.00"-B1.50"-SN15-08	5.000	5.602	1.500	2.500	0.275	8	B
	-6.00"-B2.00"-SN15-10	6.000	6.602	2.000	2.500	0.275	10	B
	-8.00"-C2.50"-SN15-12	8.000	8.602	2.500	2.500	0.275	12	C
	-10.00"-C2.50"-SN15-14	10.000	10.602	2.500	2.500	0.275	14	C
	-12.00"-D2.50"-SN15-18	12.000	12.602	2.500	2.500	0.275	18	D
	-5.00"-B1.50"-SN19-07	5.000	5.720	1.500	2.500	0.354	7	B
-6.00"-B2.00"-SN19-09	6.000	6.720	2.000	2.500	0.354	9	B	
-8.00"-C2.50"-SN19-11	8.000	8.720	2.500	2.500	0.354	11	C	
-10.00"-C2.50"-SN19-13	10.000	10.720	2.500	2.500	0.354	13	C	
-12.00"-D2.50"-SN19-16	12.000	12.720	2.500	2.500	0.354	16	D	

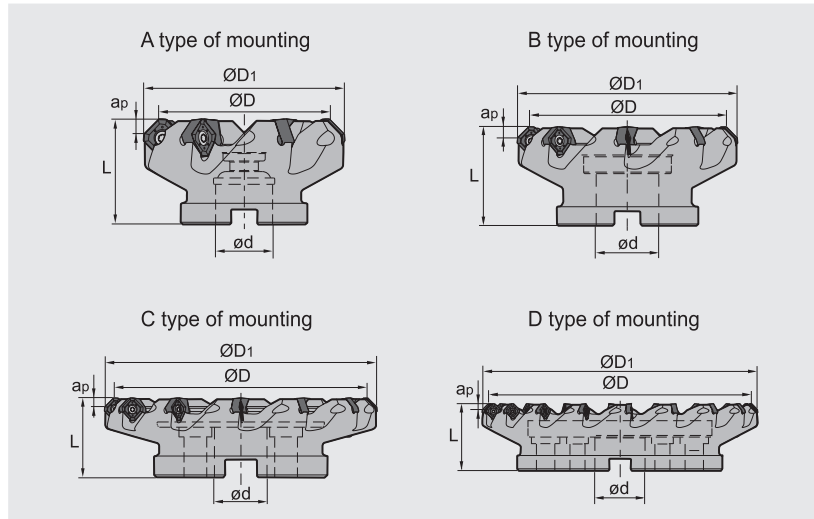


Face milling tools

Kr:45°



FMA11



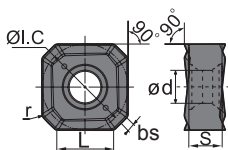
Specification of tools

Type		Dimensions (inch)						Interface form
		ØD	ØD1	ød	L	apmax	Z (Number of teeth)	
FMA11 Close pitch	-2.50"-A0.75"-SN12-06C	2.500	2.953	0.750	1.750	0.216	6	A
	-3.00"-A1.00"-SN12-07C	3.000	3.453	1.000	2.000	0.216	7	A
	-4.00"-B1.50"-SN12-09	4.000	4.453	1.500	2.500	0.216	9	B
	-5.00"-B1.50"-SN12-10	5.000	5.453	1.500	2.500	0.216	10	B
	-6.00"-B2.00"-SN12-12	6.000	6.453	2.000	2.500	0.216	12	B
	-2.50"-A0.75"-SN15-06C	2.500	3.102	0.750	1.750	0.275	6	A
	-3.00"-A1.00"-SN15-07C	3.000	3.602	1.000	2.000	0.275	7	A
	-4.00"-B1.50"-SN15-09	4.000	4.602	1.500	2.500	0.275	9	B
	-5.00"-B1.50"-SN15-10	5.000	5.602	1.500	2.500	0.275	10	B
	-6.00"-B2.00"-SN15-12	6.000	6.602	2.000	2.500	0.275	12	B
	-8.00"-C2.50"-SN15-15	8.000	8.602	2.500	2.500	0.275	15	C
	-10.00"-C2.50"-SN15-18	10.000	10.602	2.500	2.500	0.275	18	C
	-12.00"-D2.50"-SN15-22	12.000	12.602	2.500	2.500	0.275	22	D
	-5.00"-B1.50"-SN19-09	5.000	5.720	1.500	2.500	0.354	9	B
	-6.00"-B2.00"-SN19-11	6.000	6.720	2.000	2.500	0.354	11	B
	-8.00"-C2.50"-SN19-14	8.000	8.720	2.500	2.500	0.354	14	C
	-10.00"-C2.50"-SN19-17	10.000	10.720	2.500	2.500	0.354	17	C
	-12.00"-D2.50"-SN19-20	12.000	12.720	2.500	2.500	0.354	20	D

Spare parts

Diameter ØD	Insert specification	Insert screw	Wrench		Sketch of installation
Ø2.00" ~ Ø6.00"	SNEG1205ANR-GM/HGR/W	I60M3.5×10	--	WT15IS	
Ø2.00" ~ Ø12.00"	SNEG1506ANR-GM/HGR/W	I60M5×13	WT20IT	--	
Ø5.00" ~ Ø12.00"	SNEG1907ANR-HGR	I43M6×16	WT25IT	--	

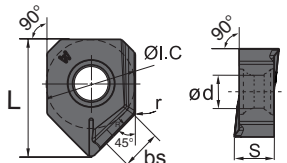
Selection of inserts



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

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

Insert shape	Type	Dimensions(inch)						Coated grade										Cermet	Cemented carbide									
		L	ØI.C	S	bs	ød	r	YBC302	YBM251	YBM253	YBM351	YBD152	YBD252	YBG102	YBG202	YBG205	YB9320	YBC302	YBG152	YBG252	YBS203	YBS303	YNG151	YNG151C	YC30S	YD051	YD101	YD201
	SNEG1205ANR-GM	0.299	0.472	0.187	0.041	0.181	0.031	●	●	●	●	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
	SNEG1506ANR-GM	0.370	0.591	0.218	0.051	0.217	0.035	●	●	●	●	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	
	SNEG1205ANR-HGR	0.299	0.472	0.187	0.041	0.181	0.031	●	●	●	●	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	
	SNEG1506ANR-HGR	0.370	0.591	0.218	0.051	0.217	0.035	●	●	●	●	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	
	SNEG1907ANR-HGR	0.476	0.748	0.276	0.066	0.283	0.039	●	●	●	●	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	
	SNEG1205ANR-W	0.626	0.472	0.187	0.16	0.181	0.236	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	
	SNEG1506ANR-W	0.783	0.591	0.218	0.196	0.217	0.035	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	



● Always stock available ○ Produce according to order

Recommended cutting parameters

Workpiece material	Hardness HB	Grade	Cutting data		
			V(SFPM)	f(IPT)	a _{pmax} (inch)
P Low carbon steel Soft steel	≤ 180	YBM253 YBC302	880 (720-1200)	0.008 (0.004-0.016)	0.216(SN12) 0.275(SN15) 0.354(SN19)
		YBG205 YB9320			
		High carbon steel Alloy steel			
Alloy tool steel	280-350	YBM253 YBC302	780 (590-1000)	0.008 (0.004-0.016)	
		YBG205 YB9320			
K Cast iron	180-250	YBD152	880 (490-980)	0.012 (0.004-0.02)	
		YBD252	650 (490-820)	0.016 (0.008-0.024)	
S High-temperature alloy	≤ 400	YBS203 YBS303	300 (200-400)	0.006 (0.003-0.012)	

Case for FMA11

(Comparison of tool life)

Workpiece material: NAK80
 Operation: Face milling
 Tool: FMA11-5.00"-B1.50"-SN12-08
 Insert: SNEG1205ANR-HGR/YBG205
 Cutting data: V_c=650 SFPM, f_z=0.08IPT,
 A_p=0.08in, A_e=2.0in



	Products of company A	-HGR/YBG205
Test Group 1		
Life	22 minutes Breakage	35 minutes, wear 0.0008in
Test Group 2		
Life	27 minutes Breakage	35 minutes, wear 0.0004 in

FMA 12 Series Kr:45°

High Performance Face Mill with 16 edges for outstanding economy

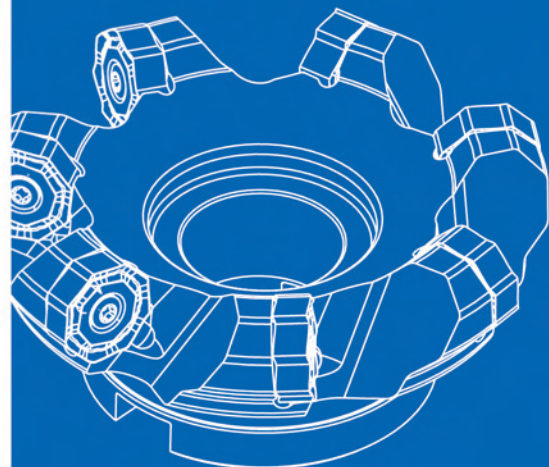
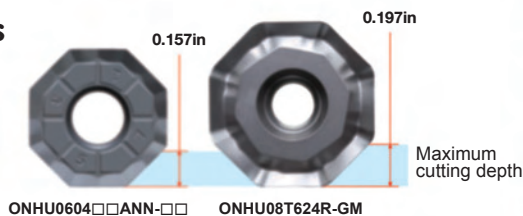


Unique 3-dimensional edge

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.



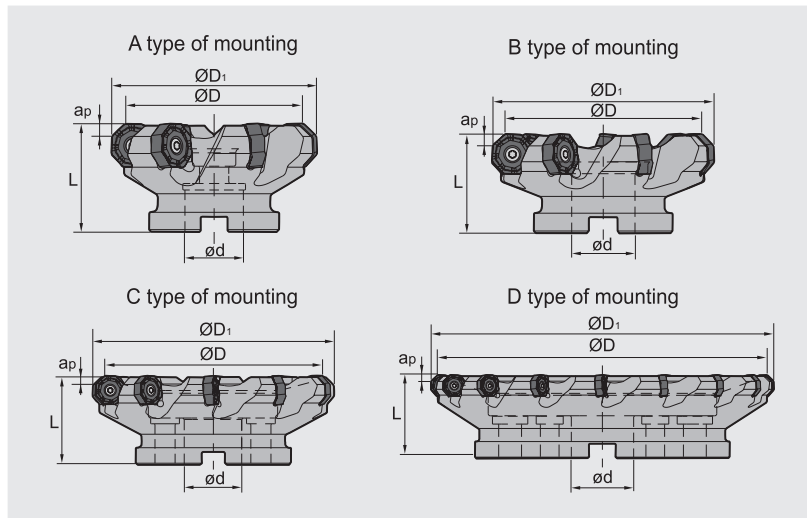
8 x 2 = 16 edges



Face milling tools **Kr:45°**



FMA12 **P M K**



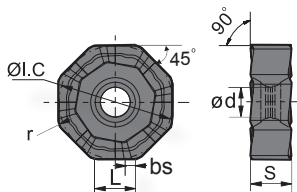
Specification of tools

Type		Dimensions (inch)						Interface form
		ØD	ØD1	ød	L	apmax	Z (Number of teeth)	
FMA12 Coarse pitch	-2.00"-A0.75"-ON06-04C	2.000	2.591	0.750	1.500	0.157	4	A
	-2.50"-A1.00"-ON06-05C	2.500	3.091	1.000	2.000	0.157	5	A
	-3.00"-A1.00"-ON06-07C	3.000	3.591	1.000	2.000	0.157	7	A
	-4.00"-A1.25"-ON06-08C	4.000	4.591	1.250	2.000	0.157	8	A
	-5.00"-B1.50"-ON06-10	5.000	5.591	1.500	2.500	0.157	10	B
	-6.00"-C1.50"-ON06-12	6.000	6.591	1.500	2.500	0.157	12	C
	-2.50"-A0.75"-ON08-05	2.500	3.091	0.750	1.750	0.197	5	A
	-3.00"-A1.00"-ON08-06	3.000	3.591	1.000	2.000	0.197	6	A
	-4.00"-B1.25"-ON08-07	4.000	4.591	1.250	2.500	0.197	7	B
	-5.00"-B1.50"-ON08-08	5.000	5.591	1.500	2.500	0.197	8	B
	-6.00"-B2.00"-ON08-10	6.000	6.591	2.000	2.500	0.197	10	B
	-8.00"-C2.50"-ON08-12	8.000	8.591	2.500	2.500	0.197	12	C
Close pitch	-10.00"-C2.50"-ON08-14	10.000	10.591	2.500	2.500	0.197	14	C
	-12.00"-D2.50"-ON08-16	12.000	12.591	2.500	2.500	0.197	16	D
	-2.00"-A0.75"-ON06-05C	2.000	2.591	0.750	1.500	0.157	5	A
	-2.50"-A1.00"-ON06-07C	2.500	3.091	1.000	2.000	0.157	7	A
	-3.00"-A1.00"-ON06-09C	3.000	3.591	1.000	2.000	0.157	9	A
	-4.00"-A1.25"-ON06-11C	4.000	4.591	1.250	2.000	0.157	11	A
	-5.00"-B1.50"-ON06-14	5.000	5.591	1.500	2.500	0.157	14	B
	-6.00"-C1.50"-ON06-18	6.000	6.591	1.500	2.500	0.157	18	C

Spare parts

Diameter ØD	Insert specification	Insert screw	Wrench	Sketch of installation
Ø2.00"~Ø6.00"	ONHU06□□□□ANN-GM/ GL/GH	IRM4X10	WT15IS	
Ø2.50"~Ø12.00"	ONHU08T624R-GM	I60M5X13	WT20IT	

Selection of inserts



😊 Good working conditions 😊 General working conditions ☹️ Adverse working conditions

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

Insert shape	Type	Dimensions (inch)						Coated grade										Cermet		Cemented carbide								
		L	Øl.C	S	ød	r	bs	YBC302	YBM251	YBM253	YBM351	YBD152	YBD252	YBG102	YBG202	YBG205	YB9320	YBG302	YBG152	YBG252	YBS203	YBS303	YNG151	YNG151C	YC30S	YD051	YD101	YD201
	ONHU060404ANN-GL	0.242	0.625	0.218	0.236	0.016	0.047			●		●				●	●											
	ONHU060408ANN-GM	0.242	0.625	0.218	0.236	0.031	0.039			●		●				●	●											
	ONHU08T624R-GM	0.251	0.791	0.248	0.209	0.094	-			●		●				●												
	ONHU060408ANN-GH	0.242	0.623	0.218	0.236	0.031	0.039			●		●				●	●											

Note: ONHU08T508-PF, ONHU08T508-PM also compatible.
Inserts can be assembled in both left and right side.

● Always stock available ○ Produce according to order

Recommended cutting parameters

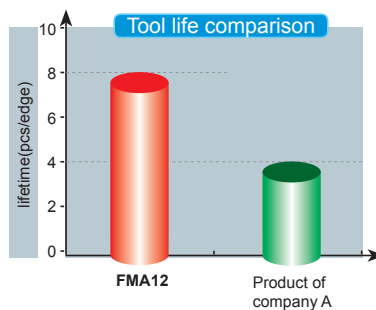
Workpiece material	Hardness HB	Grade	Cutting data			
			Cutting speed (SFPM)	f(IPT)	a _{pmax} (in)	
P	Low carbon steel	≤ 180	YB9320 YBM253 YBG205	900(700-1100)	0.008(0.004-0.012)	0.157(ON06) 0.197(ON08)
	Alloy steel	180-350	YBM253 YBG205 YB9320	800(600-1000)	0.006(0.004-0.012)	
M	Stainless steel	≤ 270	YBM253 YBG205 YB9320	750(600-950) 500(360-900)	0.006 (0.004-0.012)	
K	Cast iron	180-260	YBD152	900(500-950)	0.008(0.004-0.012)	

Case for FMA12

Case (Cast iron machining)



Workpiece: Cylinder
Workpiece material: Gray cast iron (HB250)
Machining location: Milling 4 sides
Tool: FMA12-6.00"-C1.50"-ON08-10
Insert: ONHU08T624R-GM/YBD152
Cutting data: V_c=500 SFPM, f_z=0.01IPT,
a_p=0.12in, a_e=6in
System of cooling: External

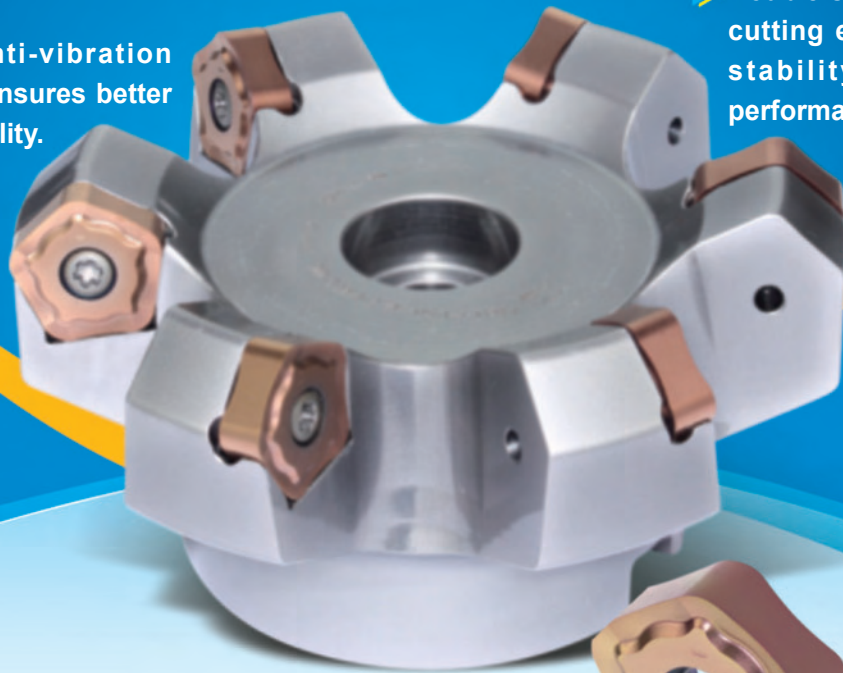


Doubled tool life of FMA12 series compared to similar product of company A.

FMA 14

High efficiency and multiple cutting edge general milling cutter

- > 45° approach angle balanced design realizes low cutting resistance and high efficiency machining.
- > Brand new optimized chip breaker, suitable for steel and cast iron.
- > Greater anti-vibration capability ensures better surface quality.
- > Double sided pentagon, 10 cutting edges, both great stability and economy performance.



Spiral cutting-edge design ensures easier and faster cutting.

Optimized chip breaker ensures the nose strength and improves the capability of anti-breakage.

Multi series of chip breakers for different kinds of machining.

-GM: First choice for P material

Big nose radius design. Strengthened cutting edge design

-GL: Suitable for stable machining

Suitable for low cutting force and low machine power machining

-GH: High anti-breakage capability

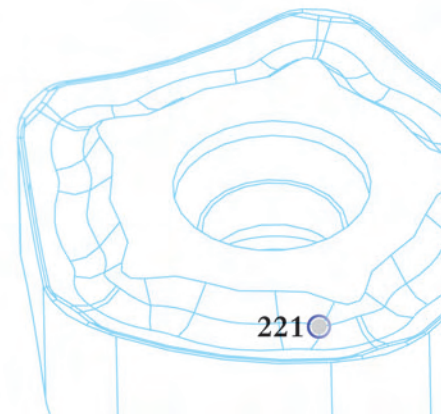
High inserts strength inhibits the breakage effectively

Pair with the brand-new grade YB9320 ensures longer cutting life and more stable machining.



5 × 2 = 10 cutting edges

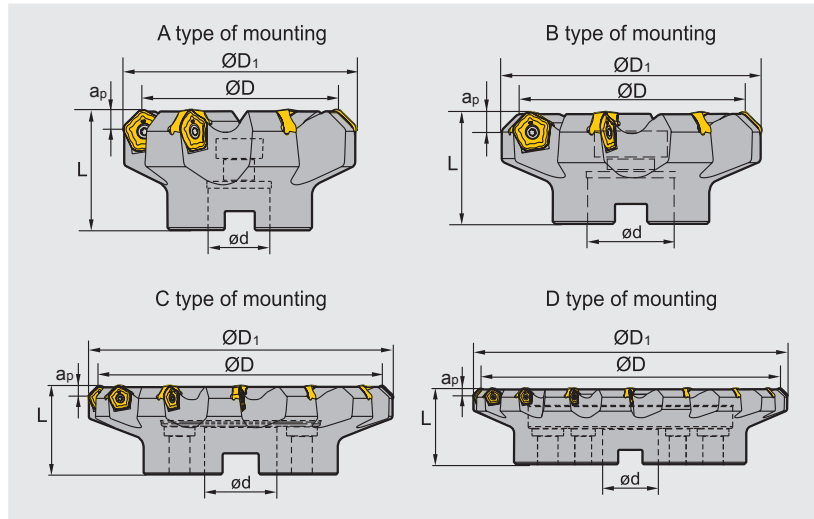
-GHI-GMI-GL



Face milling tools **Kr:45°**



FMA14 **P M K**



Specification of tools

Type		Dimensions (inch)						Z (Number of teeth)	Interface form
		$\varnothing D$	$\varnothing D_1$	L	$\varnothing d$	a_{pmax}			
FMA14 Coarse pitch	-2.00"-A0.75"-PN11-04	2.000	2.657	2.000	0.750	0.217	4	A	
	-2.50"-A0.75"-PN11-05	2.500	3.157	2.000	0.750	0.217	5	A	
	-3.00"-A1.00"-PN11-06	3.000	3.657	2.000	1.000	0.217	6	A	
	-4.00"-B1.25"-PN11-07	4.000	4.657	2.000	1.250	0.217	7	B	
	-5.00"-B1.50"-PN11-08	5.000	5.657	2.500	1.500	0.217	8	B	
	-6.00"-B1.50"-PN11-10	6.000	6.657	2.500	1.500	0.217	10	B	
	-8.00"-C2.50"-PN11-12	8.000	8.657	2.500	2.500	0.217	12	C	
	-10.00"-C2.50"-PN11-14	10.000	10.657	2.500	2.500	0.217	14	C	
Close pitch	-12.00"-D2.50"-PN11-16	12.000	12.657	3.000	2.500	0.217	16	D	
	-2.00"-A0.75"-PN11-05	2.000	2.657	2.000	0.750	0.217	5	A	
	-2.50"-A0.75"-PN11-06	2.500	3.157	2.000	0.750	0.217	6	A	
	-3.00"-A1.00"-PN11-08	3.000	3.657	2.000	1.000	0.217	8	A	
	-4.00"-B1.25"-PN11-10	4.000	4.657	2.000	1.250	0.217	10	B	
	-5.00"-B1.50"-PN11-12	5.000	5.657	2.500	1.500	0.217	12	B	
	-6.00"-B1.50"-PN11-14	6.000	6.657	2.500	1.500	0.217	14	B	
	-8.00"-C2.50"-PN11-16	8.000	8.657	2.500	2.500	0.217	16	C	
-10.00"-C2.50"-PN11-18	10.000	10.657	2.500	2.500	0.217	18	C		
-12.00"-D2.50"-PN11-26	12.000	12.657	3.000	2.500	0.217	26	D		

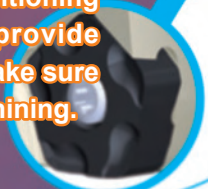
Spare parts

Insert specification	Insert screw	Wrench	Sketch of installation
PNEG11□□□□-GL/GM/GH	I60M4×10	WT15IS	

FMD02 series

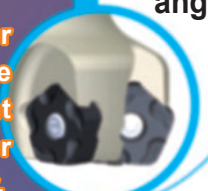
High price performance ratio milling tool

Optimized acute angle position style, good self-locking capability and high positioning precision. Tools can provide enough resistance to make sure the stability during machining.



High strength screw locking

Wide chip breaker and big rake angle design meets different machining needs under different machine power.



67° approach angle

Inserts are design with wiper on, which enabled fine surface quality under different feed rate.



Wiper

Double sided cutting edges



Great economy features and multi series of chip breakers for most kind of machining circumstances.

New
New chip breaker for machining in cast iron
-KH -KM -KL

-KH

Nose strengthened type
Anti-breakage machining



-KM

General machining chip breaker
First choice for cast iron machining



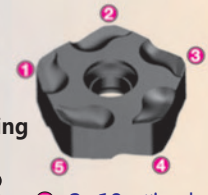
-KL

Low-cutting-power machining
Preventing vibration inhibiting sentus
Guarantee the surface quality



General face milling for steel and cast iron
-GF -GM -GR

5×2=10 cutting edges



General face milling for cast iron
-PF -PM -PR

5×2=10 cutting edges

Spiral cutting-edge structure, double rake angle and variable beveling design make the inserts meet the need of different cutting depth machining perfectly.

10 cutting edges design improves the price performance ratio.

Strengthened nose design, cutting edges' toughness is improved, great wear resistance and long cutting life.

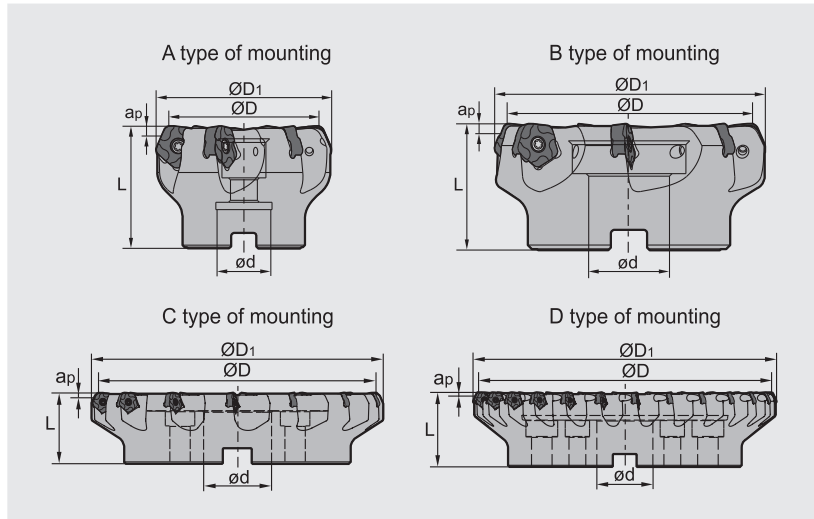
Low cutting resistance design inhibits vibration perfectly. Pair with FMD02 to realize high efficient machining of cast iron.

Face milling tools

Kr:67°






FMD02



Specification of tools

Type		Dimensions (inch)						
		ØD	ØD1	ød	L	apmax	Z (Number of teeth)	Interface form
FMD02 Coarse pitch (unequal pitch)	-2.00"-A0.75"-PN11-04	2.000	2.398	0.750	1.750	0.197/0.256/0.276	4	A
	-2.50"-A0.75"-PN11-05	2.500	2.898	0.750	1.750	0.197/0.256/0.276	5	A
	-3.00"-A1.00"-PN11-06	3.000	3.398	1.000	2.000	0.197/0.256/0.276	6	A
	-4.00"-B1.25"-PN11-07	4.000	4.398	1.250	2.000	0.197/0.256/0.276	7	B
	-5.00"-B1.50"-PN11-08	5.000	5.398	1.500	2.500	0.197/0.256/0.276	8	B
	-6.00"-B1.50"-PN11-10	6.000	6.398	1.500	2.500	0.197/0.256/0.276	10	B
	-8.00"-C2.50"-PN11-12	8.000	8.398	2.500	2.500	0.197/0.256/0.276	12	C
	-10.00"-C2.50"-PN11-14	10.000	10.398	2.500	2.500	0.197/0.256/0.276	14	C
Close pitch	-2.00"-A0.75"-PN11-05	2.000	2.398	0.750	1.750	0.197/0.256/0.276	5	A
	-2.50"-A0.75"-PN11-06	2.500	2.898	0.750	1.750	0.197/0.256/0.276	6	A
	-3.00"-A1.00"-PN11-08	3.000	3.398	1.000	2.000	0.197/0.256/0.276	8	A
	-4.00"-B1.25"-PN11-10	4.000	4.398	1.250	2.000	0.197/0.256/0.276	10	B
	-5.00"-B1.50"-PN11-12	5.000	5.398	1.500	2.500	0.197/0.256/0.276	12	B
	-6.00"-B1.50"-PN11-14	6.000	6.398	1.500	2.500	0.197/0.256/0.276	14	B
	-8.00"-C2.50"-PN11-16	8.000	8.398	2.500	2.500	0.197/0.256/0.276	16	C
	-10.00"-C2.50"-PN11-18	10.000	10.398	2.500	2.500	0.197/0.256/0.276	18	C
-12.00"-D2.50"-PN11-26	12.000	12.398	2.500	2.500	0.197/0.256/0.276	26	D	

Spare parts

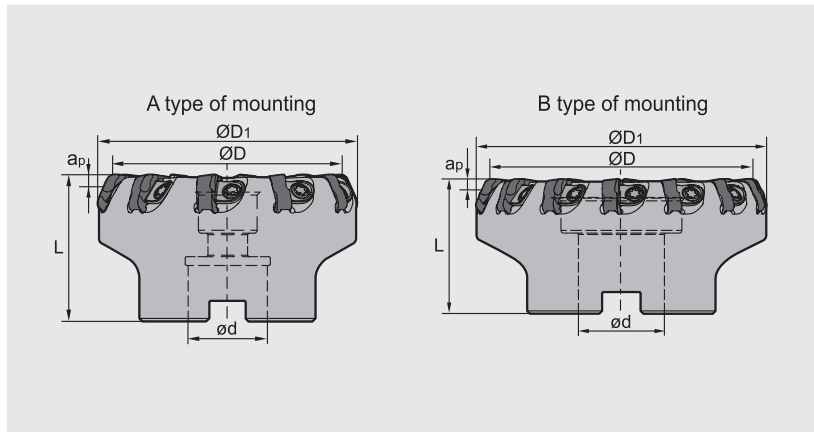
Diameter ØD	Insert screw	Wrench	Sketch of installation
Ø2.00"~Ø12.00"	 I60M4x10	 WT15IS	

Face milling tools

Kr:67°







FMD02



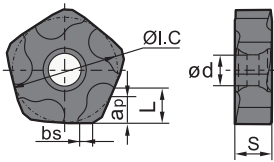
Specification of tools

Type		Dimensions(inch)						
		$\varnothing D$	$\varnothing D_1$	$\varnothing d$	L	a_{pmax}	Z (Number of teeth)	Interface form
FMD02 Extra close pitch	-3.00"-A1.00"-PN11-10	3.000	3.398	1.000	1.750	0.197/0.256/0.276	10	A
	-4.00"-B1.25"-PN11-14	4.000	4.398	1.250	2.000	0.197/0.256/0.276	14	B
	-5.00"-B1.50"-PN11-18	5.000	5.398	1.500	2.500	0.197/0.256/0.276	18	B
	-6.00"-B1.50"-PN11-22	6.000	6.398	1.500	2.500	0.197/0.256/0.276	22	B

Spare parts

Diameter $\varnothing D$	Wedge	Insert screw	Wrench	Sketch of installation
$\varnothing 3.00'' \sim \varnothing 6.00''$	 W18N	 DM6x20A	 WT15IT	

Selection of inserts



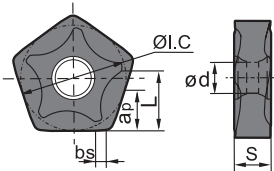
☺ Good working conditions ☹ General working conditions ☹ Adverse working conditions

Workpiece material	Coated grade																				
	YBC302	YBM251	YBM253	YBM351	YBD152	YBD252	YBG102	YBG202	YBG205	YB9320	YBG302	YBG152	YBG252	YBS203	YBS303	YNG151	YNG151C	YC30S	YD051	YD101	YD201
P Steel	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺
M Stainless steel	☹	☹	☹	☹	☹	☹	☹	☹	☹	☹	☹	☹	☹	☹	☹	☹	☹	☹	☹	☹	☹
K Cast iron																					
N Ferrite materials																					
S Heat-resistant steel																					

Insert shape	Type	Dimensions(inch)						Coated grade														Cermet	Cemented carbide					
		L	ØI.C	S	ød	bs	apmax	YBC302	YBM251	YBM253	YBM351	YBD152	YBD252	YBG102	YBG202	YBG205	YB9320	YBG302	YBG152	YBG252	YBS203		YBS303	YNG151	YNG151C	YC30S	YD051	YD101
	PNEG110512R-CF	0.213	0.625	0.219	0.183	0.063	0.197																					
	PNEG110512L-CF	0.213	0.625	0.219	0.183	0.063	0.197																					
	PNEG110512R-CM	0.213	0.625	0.219	0.183	0.063	0.197																					
	PNEG110512L-CM	0.213	0.625	0.219	0.183	0.063	0.197																					
	PNEG110512R-CR	0.213	0.625	0.219	0.183	0.063	0.197																					
	PNEG110512L-CR	0.213	0.625	0.219	0.183	0.063	0.197																					

● Always stock available ○ Produce according to order

Selection of inserts



☺ Good working conditions ☹ General working conditions ☹ Adverse working conditions

Workpiece material	Coated grade																				
	YBC302	YBM251	YBM253	YBM351	YBD152	YBD252	YBG102	YBG202	YBG205	YB9320	YBG302	YBG152	YBG252	YBS203	YBS303	YNG151	YNG151C	YC30S	YD051	YD101	YD201
P Steel	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺
M Stainless steel	☹	☹	☹	☹	☹	☹	☹	☹	☹	☹	☹	☹	☹	☹	☹	☹	☹	☹	☹	☹	☹
K Cast iron																					
N Ferrite materials																					
S Heat-resistant steel																					

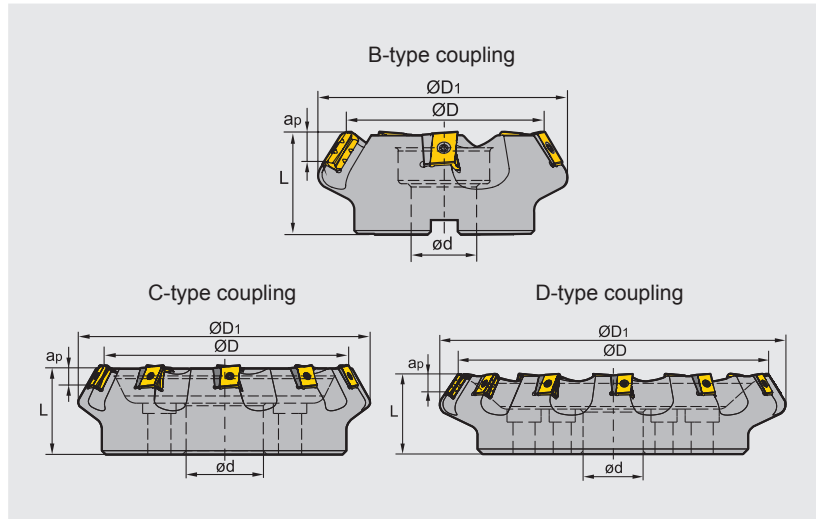
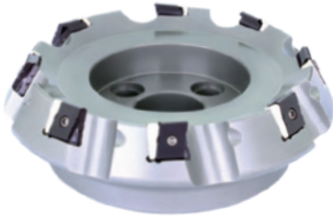
Insert shape	Type	Dimensions(inch)						Coated grade														Cermet	Cemented carbide					
		L	ØI.C	S	ød	bs	apmax	YBC302	YBM251	YBM253	YBM351	YBD152	YBD252	YBG102	YBG202	YBG205	YB9320	YBG302	YBG152	YBG252	YBS203		YBS303	YNG151	YNG151C	YC30S	YD051	YD101
	PNEG110512R-PF	0.296	0.625	0.219	0.183	0.056	0.276	●																				
	PNEG110512L-PF	0.296	0.625	0.219	0.183	0.056	0.276	●																				
	PNEG110512R-PM	0.296	0.625	0.219	0.183	0.056	0.276	●																				
	PNEG110512L-PM	0.296	0.625	0.219	0.183	0.056	0.276	●																				
	PNEG110512R-PR	0.296	0.625	0.219	0.183	0.056	0.276	●																				
	PNEG110512L-PR	0.296	0.625	0.219	0.183	0.056	0.276	●																				

● Always stock available ○ Produce according to order

Face milling tools **Kr:60°**



FMD03 **P M K**



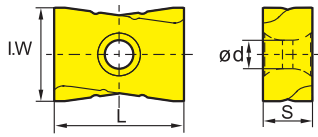
Specification of tools

Type		Dimensions(inch)						
		ØD	ØD ₁	ød	L	a _{pmax}	Z (Number of teeth)	Interface form
FMD03	-5.00"-B1.5"-LN20-06	5.000	6.053	1.500	2.500	0.472	6	B
	-6.00"-C1.5"-LN20-08	6.000	7.053	1.500	2.500	0.472	8	C
	-8.00"-C2.5"-LN20-10	8.000	9.053	2.500	2.500	0.472	10	C
	-10.00"-C2.5"-LN20-12	10.000	11.053	2.500	2.500	0.472	12	C
	-12.00"-D2.5"-LN20-15	12.000	13.053	2.500	2.500	0.472	15	D
	-5.00"-B1.5"-LN25-05	5.000	6.172	1.500	2.500	0.669	5	B
	-6.00"-C1.5"-LN25-06	6.000	7.172	1.500	2.500	0.669	6	C
	-8.00"-C2.5"-LN25-08	8.000	9.172	2.500	2.500	0.669	8	C
	-10.00"-C2.5"-LN25-10	10.000	11.172	2.500	2.500	0.669	10	C
	-12.00"-D2.5"-LN25-12	12.000	13.172	2.500	2.500	0.669	12	D

Spare parts

Insert specification	Shim	Shim screw	Insert screw	Wrench		Sketch of installation
LNKT2007DN-ZR	LLN20R-ZR	I60M3×7	I60M4×15	WT15IS	WT09IS	
LNKT2510-ZR	LLN25R-ZR	I60M3.5×10.4	I60M5×17	WT20IT	WT15IS	

Selection of inserts



😊 Good working conditions 🤨 General working conditions 🙄 Adverse working conditions

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

Insert shape	Type	Dimensions(inch)				Coated grade										Cermet	Cemented carbide										
		L	I.W	S	ød	YBC302	YBM251	YBM253	YBM351	YBD152	YBD252	YBG102	YBG202	YBG205	YB9320	YBG302	YBG152	YBG252	YBS203	YBS303	YNG151	YNG151C	YC30S	YD051	YD101	YD201	
	LNKT2007DN-ZR	0.787	0.669	0.313	0.181				○	○						●											
	LNKT2510-ZR	0.984	0.709	0.375	0.217				○	○						●											

● Always stock available ○ Produce according to order

Recommended cutting parameters

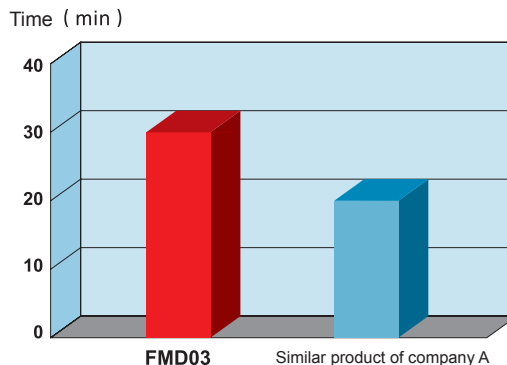
Workpiece material	Hardness HB	Insert grade	Cutting parameters	
			V(SFPM)	f(IPT)
P Low carbon steel, Soft steel	≤ 180	YBG302	600 (500-1000)	0.02 (0.008-0.031)
		YBM351	600 (500-1000)	0.02 (0.008-0.031)
	180-280	YBG302	500 (400-900)	0.02 (0.008-0.031)
		YBM351	450 (400-900)	0.02 (0.008-0.031)
Alloy tool steel	280-350	YBG302	400 (250-800)	0.018 (0.008-0.024)
		YBM351	300 (250-800)	0.018 (0.008-0.024)
M Stainless steel	≤ 270	YBG302	400 (250-650)	0.018 (0.008-0.024)
		YBM351	300 (250-650)	0.018 (0.008-0.024)
K Cast iron	180-250	YBD152	700 (500-1000)	0.02 (0.008-0.031)
		YBD252	680 (500-1000)	0.02 (0.008-0.031)
		YBG302	650 (500-1000)	0.02 (0.008-0.031)

Note: Cutting parameters can be adjusted according to the Max. power of machine.

Case for FMD03

(Comparison of machining time) ➔

Workpiece material: ASTM A743
CA-6NM(HB200)
Cooling system: Dry cutting
Machine: NC floor type boring and milling
machine, spindle power ≥ 30KW
Cutting parameters: V_c=400 SFPM
a_p=0.472in
f_z=0.022IPT
a_e=9in

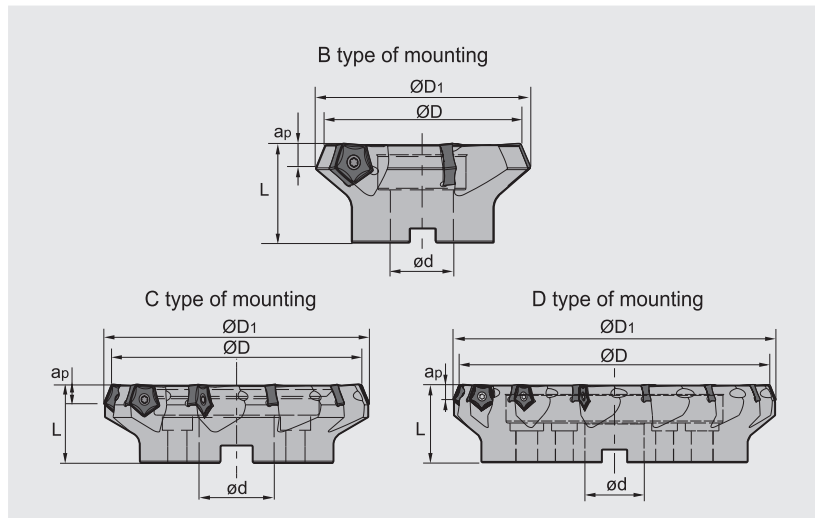


Face milling tools

Kr:67°





FMD04



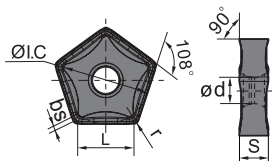
Specification of tools

Type		Dimensions(inch)						
		ØD	ØD ₁	ød	L	a _{pmax}	Z (Number of teeth)	Interface form
FMD04	-5.00"-B1.50"-PN17-06	5.000	5.496	1.500	2.500	0.472	6	B
	-6.00"-B2.00"-PN17-08	6.000	6.496	2.000	2.500	0.472	8	B
	-8.00"-C2.50"-PN17-10	8.000	8.496	2.500	2.500	0.472	10	C
	-10.00"-C2.50"-PN17-12	10.000	10.496	2.500	2.500	0.472	12	C
	-12.00"-D2.50"-PN17-14	12.000	12.496	2.500	2.500	0.472	14	D

Spare parts

Diameter ØD	Insert specification	Insert screw	Wrench	Sketch of installation		
					Ø5.00" ~Ø12.00"	PNGU170712R-GR/HDR

Selection of inserts



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

Workpiece material	YBC302	YBM251	YBM253	YBM351	YBD152	YBD252	YBG102	YBG202	YBG205	YB9320	YBG302	YBG152	YBG252	YBS203	YBS303	YNG151	YNG151C	YC30S	YD051	YD101	YD201
P Steel	😊😊😊😊😊	😊😊😊😊😊	😊😊😊😊😊	😊😊😊😊😊	😊😊😊😊😊	😊😊😊😊😊	😊😊😊😊😊	😊😊😊😊😊	😊😊😊😊😊	😊😊😊😊😊	😊😊😊😊😊	😊😊😊😊😊	😊😊😊😊😊	😊😊😊😊😊	😊😊😊😊😊	😊😊😊😊😊	😊😊😊😊😊	😊😊😊😊😊	😊😊😊😊😊	😊😊😊😊😊	😊😊😊😊😊
M Stainless steel	😊😊😊😊😊	😊😊😊😊😊	😊😊😊😊😊	😊😊😊😊😊	😊😊😊😊😊	😊😊😊😊😊	😊😊😊😊😊	😊😊😊😊😊	😊😊😊😊😊	😊😊😊😊😊	😊😊😊😊😊	😊😊😊😊😊	😊😊😊😊😊	😊😊😊😊😊	😊😊😊😊😊	😊😊😊😊😊	😊😊😊😊😊	😊😊😊😊😊	😊😊😊😊😊	😊😊😊😊😊	😊😊😊😊😊
K Cast iron	😊😊😊😊😊	😊😊😊😊😊	😊😊😊😊😊	😊😊😊😊😊	😊😊😊😊😊	😊😊😊😊😊	😊😊😊😊😊	😊😊😊😊😊	😊😊😊😊😊	😊😊😊😊😊	😊😊😊😊😊	😊😊😊😊😊	😊😊😊😊😊	😊😊😊😊😊	😊😊😊😊😊	😊😊😊😊😊	😊😊😊😊😊	😊😊😊😊😊	😊😊😊😊😊	😊😊😊😊😊	😊😊😊😊😊
N Ferrite materials	😊😊😊😊😊	😊😊😊😊😊	😊😊😊😊😊	😊😊😊😊😊	😊😊😊😊😊	😊😊😊😊😊	😊😊😊😊😊	😊😊😊😊😊	😊😊😊😊😊	😊😊😊😊😊	😊😊😊😊😊	😊😊😊😊😊	😊😊😊😊😊	😊😊😊😊😊	😊😊😊😊😊	😊😊😊😊😊	😊😊😊😊😊	😊😊😊😊😊	😊😊😊😊😊	😊😊😊😊😊	😊😊😊😊😊
S Heat-resistant steel	😊😊😊😊😊	😊😊😊😊😊	😊😊😊😊😊	😊😊😊😊😊	😊😊😊😊😊	😊😊😊😊😊	😊😊😊😊😊	😊😊😊😊😊	😊😊😊😊😊	😊😊😊😊😊	😊😊😊😊😊	😊😊😊😊😊	😊😊😊😊😊	😊😊😊😊😊	😊😊😊😊😊	😊😊😊😊😊	😊😊😊😊😊	😊😊😊😊😊	😊😊😊😊😊	😊😊😊😊😊	😊😊😊😊😊

Insert shape	Type	Dimensions (inch)						Coated grade													Cermet	Cemented carbide																	
		L	ØI.C	s	ød	bs	r	YBC302	YBM251	YBM253	YBM351	YBD152	YBD252	YBG102	YBG202	YBG205	YB9320	YBG302	YBG152	YBG252	YBS203	YBS303	YNG151	YNG151C	YC30S	YD051	YD101	YD201											
	PNGU170712R-GR	0.554	0.925	0.312	0.283	0.049	0.047	●	●	●																													
	PNGU170712-HDR	0.554	0.925	0.312	0.283	0.049	0.047											●																					

● Always stock available ○ Produce according to order

Recommended cutting parameters

Workpiece material	Hardness HB	Insert grade	Cutting parameters	
			V(SFPM)	f(IPT)
P Low carbon steel, Soft steel	≤ 180	YBC302 YBM253 YBG302	400(300-450)	0.012(0.008-0.016)
	180-280		350(300-400)	0.008(0.004-0.012)
	280-350		300(200-400)	0.008(0.004-0.012)
K Cast iron	180-250	YBD152	500(300-600)	0.012(0.008-0.016)

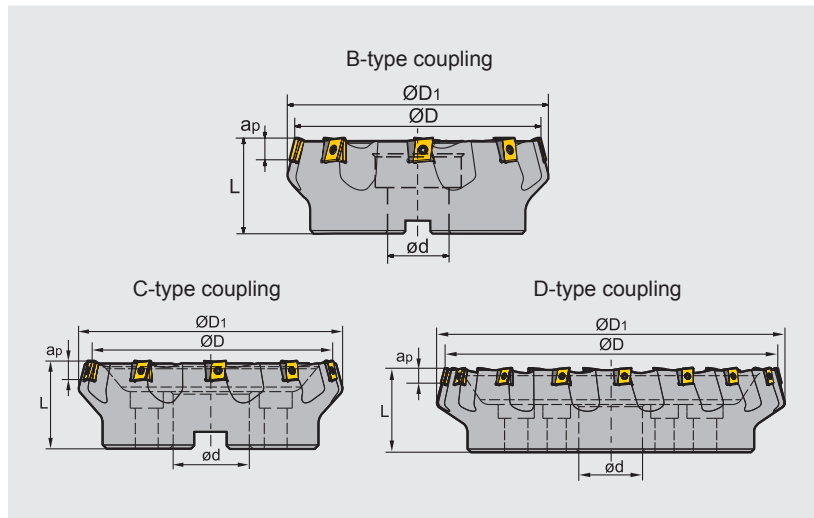
Face milling tools

Kr:75°



FME04

P M K



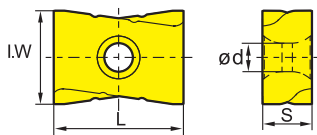
Specification of tools

Type		Dimensions(inch)						
		ØD	ØD1	ød	L	apmax	Z (Number of teeth)	Interface form
FME04	-5.00"-B1.5"-LN15-06	5.000	5.388	1.500	2.500	0.472	6	B
	-6.00"-B1.5"-LN15-08	6.000	6.388	1.500	2.500	0.472	8	B
	-8.00"-C2.5"-LN15-10	8.000	8.388	2.500	2.750	0.472	10	C
	-10.00"-C2.5"-LN15-12	10.000	10.388	2.500	2.750	0.472	12	C
	-12.00"-D2.5"-LN15-16	12.000	12.388	2.500	3.150	0.472	16	D

Spare parts


Diameter ØD	Insert specification	Shim	Shim screw	Insert screw	Wrench	Sketch of installation
Ø5.00"~Ø12.00"	LNKT1506EN-ZR	LLN15-ZR	I60M3×7	I60M4×12	WT15IS, WT09IS	

Selection of inserts



☺ Good working conditions ☹ General working conditions ☹ Adverse working conditions

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

Insert shape	Type	Dimensions(inch)				Coated grade												Cermet	Cemented carbide								
		L	I.W	s	ød	YBC302	YBM251	YBM253	YBM351	YBD152	YBD252	YBG102	YBG202	YBG205	YB9320	YBG302	YBG152		YBG252	YBS203	YBS303	YNG151	YNG151C	YC30S	YD051	YD101	YD201
	LNKT1506EN-ZR	0.625	0.551	0.25	0.181				○	○																	

● Always stock available ○ Produce according to order

Recommended cutting parameters

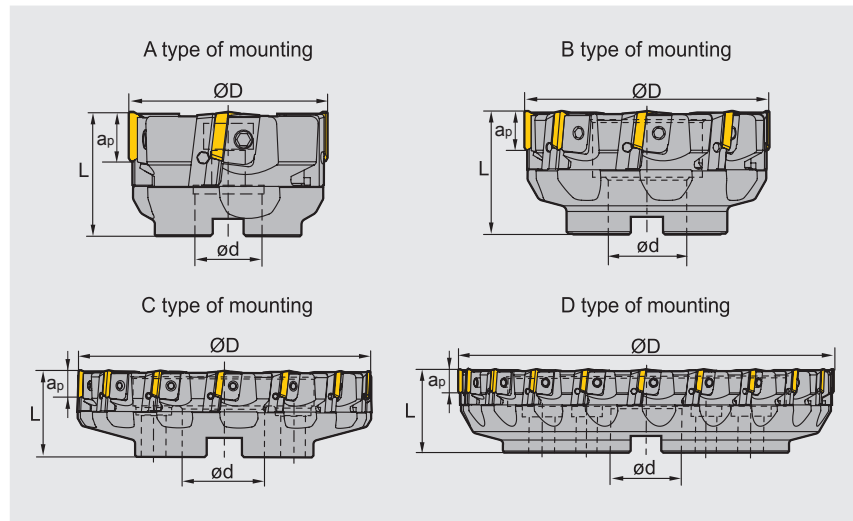
Workpiece material	Hardness HB	Insert grade	Cutting parameters	
			V(SFPM)	f(IPT)
P Low-carbon steel, Soft steel	≤ 180	YBG302	600 (500-1000)	0.02 (0.008-0.031)
		YBM351	600 (500-1000)	0.02 (0.008-0.031)
	180-280	YBG302	500 (400-900)	0.02 (0.008-0.031)
		YBM351	450 (400-900)	0.02 (0.008-0.031)
	280-350	YBG302	400 (250-800)	0.018 (0.008-0.024)
		YBM351	300 (250-800)	0.018 (0.008-0.024)
M Stainless steel	≤ 270	YBG302	400 (250-650)	0.018 (0.008-0.024)
		YBM351	300 (250-650)	0.018 (0.008-0.024)
K Cast iron	180-250	YBD152	700 (500-1000)	0.02 (0.008-0.031)
		YBG302	650 (500-1000)	0.02 (0.008-0.031)

Note: Cutting parameters can be adjusted according to the Max. power of machine.

Face milling tools **Kr:90°**



FMP01 **P M K**



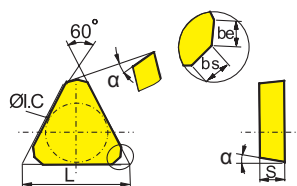
Specification of tools

Type		Dimensions(inch)					
		ØD	ød	L	apmax	Z (Number of teeth)	Interface form
FMP01	-3.00"-A1.00"-TP22-04	3.000	1.000	2.500	0.709	4	A
	-4.00"-B1.25"-TP22-06	4.000	1.250	2.500	0.709	6	B
	-5.00"-B1.50"-TP22-08	5.000	1.500	2.500	0.709	8	B
	-6.00"-B1.50"-TP22-10	6.000	1.500	2.500	0.709	10	B
	-8.00"-C2.50"-TP22-12	8.000	2.500	2.500	0.709	12	C
	-10.00"-C2.50"-TP22-16	10.00	2.500	2.500	0.709	16	C
	-12.00"-D2.50"-TP22-20	12.00	2.500	2.750	0.709	20	D

Spare parts

Diameter ØD	Locator	Wedge	Wedge screw	Locator Screw	Wrench	Sketch of installation
Ø3.00"~Ø4.00"	LTP4R1/L1	W04R/L	WM8×17	LOM5×15.1	WT20T	
Ø5.00"~Ø12.00"	LTP4R/L	W04R/L	WM8×22	LOM5×15.1	WT25T	

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											Cermet		Cemented carbide								
		L	ØI.C	S	Be	Bs	α	YBC302	YBM251	YBM253	YBM351	YBD152	YBD252	YBG102	YBG202	YBG205	YB9320	YBG302	YBG152	YBG252	YBS203	YBS303	YNG151	YNG151C	YC30S	YD051	YD101	YD201	
	TPKN2204PDFR	0.866	0.500	0.187	0.055	0.028	11°							○															○
	TPKN2204PDFL	0.866	0.500	0.187	0.055	0.028	11°							○															○
	TPKN2204PDR	0.866	0.500	0.187	0.055	0.028	11°				●			●	●				●							●		○	●
	TPKN2204PDL	0.866	0.500	0.187	0.055	0.028	11°																			●			
	TPKN2204PDTR	0.866	0.500	0.187	0.055	0.028	11°																			●			
	TPKN2204PDTL	0.866	0.500	0.187	0.055	0.028	11°																			●			

● Always stock available ○ Produce according to order

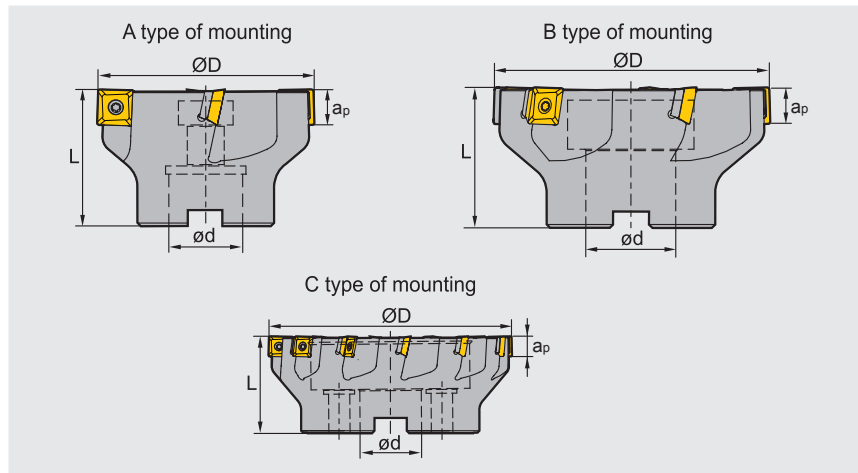
Recommended cutting parameters

Workpiece material	Hardness HB	Insert grade	Cutting parameters	
			V(SFPM)	f(IPT)
P	Low-carbon steel, Soft steel	YBM351	700 (600-1000)	0.008(0.003-0.012)
		YBG202	900 (650-1200)	0.008(0.004-0.012)
		YC30S	450 (300-700)	0.009(0.004-0.012)
	High-carbon steel, Alloy steel	YBM351	650 (500-900)	0.008(0.003-0.012)
		YBG202	800 (600-1100)	0.008(0.004-0.012)
		YC30S	400 (250-650)	0.009(0.004-0.012)
	Alloy tool steel	YBM351	600 (500-800)	0.008(0.003-0.012)
		YBG202	700 (550-1100)	0.008(0.004-0.012)
		YC30S	300 (200-600)	0.009(0.004-0.012)
M	Stainless steel	YBM351	450 (300-800)	0.008(0.003-0.012)
		YBG202	450 (300-800)	0.008(0.004-0.012)
K	Cast iron	YBG102	700 (400-1000)	0.008(0.004-0.012)
		YBG302	500 (400-650)	0.014(0.004-0.016)
		YD201	300 (250-500)	0.01(0.006-0.016)

Face milling tools



FMP02 P M K N



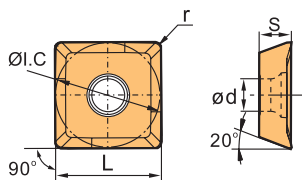
Specification of tools

Type		Dimensions (inch)					
		ØD	ød	L	apmax	Z (Number of teeth)	Interface form
FMP02	-2.00"-A0.75"-SE09-05	2.000	0.750	1.500	0.285	5	A
	-2.50"-A1.00"-SE09-06	2.500	1.000	1.500	0.285	6	A
	-3.00"-A1.00"-SE09-08	3.000	1.000	2.000	0.285	8	A
	-4.00"-B1.25"-SE09-10	4.000	1.250	2.000	0.285	10	B
	-5.00"-B1.50"-SE09-12	5.000	1.500	2.500	0.285	12	B
	-6.00"-C1.50"-SE09-14	6.000	1.500	2.500	0.285	14	C
	-2.00"-A0.75"-SE12-03	2.000	0.750	1.500	0.425	3	A
	-2.00"-A1.00"-SE12-04	2.000	1.000	1.500	0.425	4	A
	-2.50"-A1.00"-SE12-04	2.500	1.000	1.500	0.425	4	A
	-2.50"-A1.00"-SE12-05	2.500	1.000	1.500	0.425	5	A
	-2.50"-A1.00"-SE12-06	2.500	1.000	1.500	0.425	6	A
	-3.00"-A1.00"-SE12-08	3.000	1.000	2.000	0.425	8	B
	-4.00"-B1.25"-SE12-10	4.000	1.250	2.000	0.425	10	B
	-5.00"-B1.50"-SE12-08	5.000	1.500	2.500	0.425	8	B
	-5.00"-B1.50"-SE12-12	5.000	1.500	2.500	0.425	12	C
	-6.00"-C1.50"-SE12-12	6.000	1.500	2.500	0.425	12	C
	-6.00"-C1.50"-SE12-15	6.000	1.500	2.500	0.425	15	C
	-8.00"-C2.50"-SE12-10	8.000	2.500	2.500	0.425	10	C
	-8.00"-C2.50"-SE12-16	8.000	2.500	2.500	0.425	16	C
	-10.00"-C2.50"-SE12-12	10.00	2.500	2.500	0.425	12	C
-10.00"-C2.50"-SE12-18	10.00	2.500	2.500	0.425	18	C	

Spare parts

Diameter ØD	Insert specification	Shim	Insert screw	Shim screw	Wrench		Sketch of installation
Ø2.00"~Ø6.00"	SE09	---	I60M3×7	---	WT09IS	---	
Ø2.00"	SE12	---	I60M3.5×10	---	WT15IS	---	
Ø2.50"~Ø10.00"		S12BSX	I60M3.5×12	SM5×7XA		WH35L	

Selection of inserts



☺ Good working conditions 😐 General working conditions ☹ Adverse working conditions

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

Insert shape	Type	Dimensions (inch)					Coated grade													Cermet		Cemented carbide						
		L	ØI.C	S	ød	r	YBC302	YBM251	YBM253	YBM351	YBD152	YBD252	YBG102	YBG202	YBG205	YB9320	YBG302	YBG152	YBG252	YBS203	YBS303	YNG151	YNG151C	YC30S	YD051	YD101	YD201	
	SEET09T308PER-APF	0.375	0.375	0.158	0.13	0.031				●	●			●		●												
	SEET120308PER-APF	0.524	0.524	0.159	0.161	0.031				●	●			●		●												
	SEET09T308PER-APM	0.375	0.375	0.158	0.13	0.031				●	●			●		●												
	SEET120308PER-APM	0.524	0.524	0.159	0.161	0.031				●	●			●		●												
	SEET09T308PER-APR	0.375	0.375	0.158	0.13	0.031				●	●			●		●												
	SEET120308PER-APR	0.524	0.524	0.159	0.161	0.031				●	●			●		●												
	SEET120308-LH	0.524	0.524	0.159	0.161	0.031																				●		

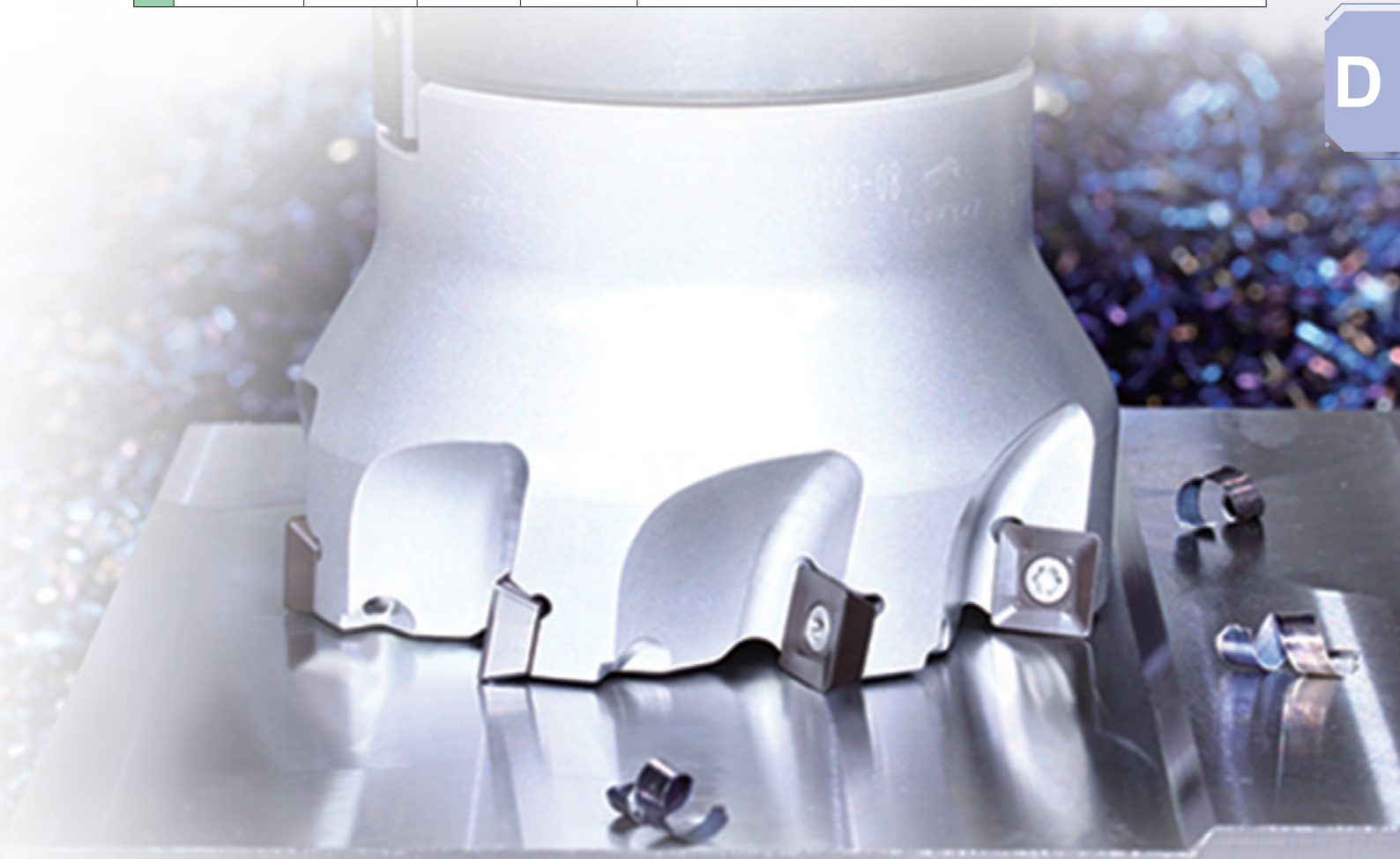
● Always stock available ○ Produce according to order

Chipbreaker selection for FMP02 milling inserts

Classification	Function	For finishing	For semi-finishing	For roughing
P		-APF	-APM	-APR
M				
K				
N			-LH	

Recommended cutting parameters

Workpiece material	Hardness HB	Insert grade	Cutting data				
			V(SFPM)	f(IPT)			
				-APF	-APM	-APR	
P Low carbon steel soft steel	≤ 180	YBG202	900(650-1200)	0.006(0.004-0.008)	0.008 (0.004-0.012)	0.012 (0.008-0.016)	
		YB9320	900(650-1200)	0.006(0.004-0.008)	0.008 (0.004-0.012)	0.012 (0.008-0.016)	
	High carbon steel alloy steel	180-280	YBM351	750 (660-1000)	0.006(0.004-0.008)	0.008 (0.004-0.012)	0.012 (0.008-0.016)
			YBG202	800 (600-1150)	0.006(0.004-0.008)	0.008 (0.004-0.012)	0.012 (0.008-0.016)
			YB9320	800 (600-1150)	0.006(0.004-0.008)	0.008 (0.004-0.012)	0.012 (0.008-0.016)
	Alloy tool steel	280-350	YBM351	700 (600-1000)	0.004(0.004-0.008)	0.008 (0.004-0.012)	0.012 (0.008-0.016)
			YBG202	700 (550-1100)	0.004(0.004-0.008)	0.008 (0.004-0.012)	0.012 (0.008-0.016)
			YB9320	700 (550-1100)	0.004(0.004-0.008)	0.008 (0.004-0.012)	0.012 (0.008-0.016)
	M Stainless steel	≤ 270	YBM351	500 (400-800)	0.004(0.004-0.008)	0.008 (0.004-0.012)	0.012 (0.008-0.016)
YBG202			500 (350-900)	0.004(0.004-0.008)	0.008 (0.004-0.012)	0.012 (0.008-0.016)	
YB9320			500 (350-900)	0.004(0.004-0.008)	0.008 (0.004-0.012)	0.012 (0.008-0.016)	
K Cast iron	180-250	YBG202	500 (400-650)	0.006(0.004-0.008)	0.008 (0.004-0.012)	0.012 (0.008-0.016)	
		YBD152	900 (500-1000)	0.006(0.004-0.008)	0.008 (0.004-0.012)	0.012 (0.008-0.016)	
N Al alloy steel	--	YD101	1000-	-LH			
				0.01 (0.004-0.016)			

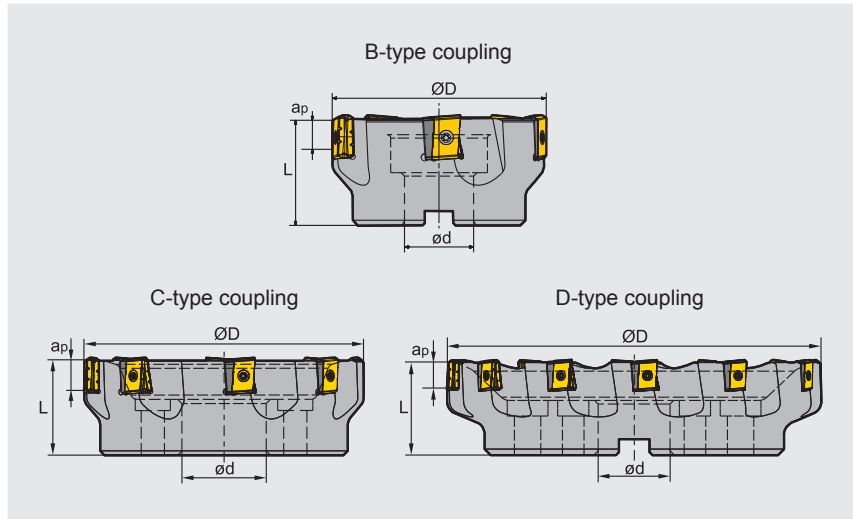


Face milling tools

Kr:90°



FMP03



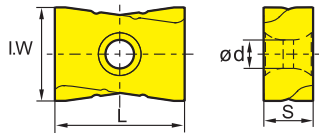
Specification of tools

Type		Dimensions (inch)					Z (Number of teeth)	Interface form
		ØD	ød	L	apmax			
FMP03	-5.00"-B1.5"-LN15-06	5.00	1.50	2.50	0.512	6	B	
	-6.00"-C1.5"-LN15-08	6.00	1.50	2.50	0.512	8	C	
	-8.00"-C2.5"-LN15-10	8.00	2.50	2.75	0.512	10	C	
	-10.00"-C2.5"-LN15-12	10.00	2.50	2.75	0.512	12	C	
	-12.00"-D2.5"-LN15-16	12.00	2.50	3.15	0.512	16	D	
	-5.00"-B1.5"-LN20-06	5.00	1.50	2.50	0.669	6	B	
	-6.00"-C1.5"-LN20-08	6.00	1.50	2.50	0.669	8	C	
	-8.00"-C2.5"-LN20-10	8.00	2.50	2.75	0.669	10	C	
	-10.00"-C2.5"-LN20-12	10.00	2.50	2.75	0.669	12	C	
	-12.00"-D2.5"-LN20-15	12.00	2.50	3.15	0.669	15	D	
	-5.00"-B1.5"-LN25-05	5.00	1.50	2.50	0.866	5	B	
	-6.00"-C1.5"-LN25-06	6.00	1.50	2.50	0.866	6	C	
-8.00"-C2.5"-LN25-08	8.00	2.50	2.75	0.866	8	C		
-10.00"-C2.5"-LN25-10	10.00	2.50	2.75	0.866	10	C		
-12.00"-D2.5"-LN25-12	12.00	2.50	3.15	0.866	12	D		

Spare parts


Insert specification	Shim	Shim screw	Insert screw	Wrench		Sketch of installation
LNKT1506EN-ZR	LLN15-ZR	I60M3×7	I60M4×12	WT15IS	WT09IS	
LNKT2007DN-ZR	LLN20R-ZR	I60M3×7	I60M4×15	WT15IS	WT09IS	
LNKT2510-ZR	LLN25R-ZR	I60M3.5×10.4	I60M5×17	WT20IT	WT15IS	

Selection of inserts



☺ Good working conditions ☹ General working conditions ☹ Adverse working conditions

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

Insert shape	Type	Dimensions(inch)				Coated grade												Cermet	Cemented carbide								
		L	ØI.C	S	ød	YBC302	YBM251	YBM253	YBM351	YBD152	YBD252	YBG102	YBG202	YBG205	YB9320	YBG302	YBG152		YBG252	YBS203	YBS303	YNG151	YNG151C	YC30S	YD051	YD101	YD201
	LNKT1506EN-ZR	0.625	0.551	0.25	0.181				○	○						●											
	LNKT2007DN-ZR	0.787	0.669	0.313	0.181				○							●											
	LNKT2510-ZR	0.984	0.709	0.375	0.217				○	○						●											

● Always stock available ○ Produce according to order

Recommended cutting parameters

Workpiece material	Hardness HB	Insert grade	Cutting parameters	
			V(SFPM)	f(IPT)
P Low-carbon steel, Soft steel	≤ 180	YBG302	600 (500-1000)	0.02 (0.008-0.031)
		YBM351	600 (500-1000)	0.02 (0.008-0.031)
	180-280	YBG302	500 (400-900)	0.02 (0.008-0.031)
		YBM351	450 (400-900)	0.02 (0.008-0.031)
Alloy tool steel	280-350	YBG302	400 (250-800)	0.018 (0.008-0.024)
		YBM351	300 (250-800)	0.018 (0.008-0.024)
M Stainless steel	≤ 270	YBG302	400 (250-650)	0.018 (0.008-0.024)
		YBM351	300 (250-650)	0.018 (0.008-0.024)
K Cast iron	180-250	YBD152	700 (500-1000)	0.02 (0.008-0.031)
		YBD252	680 (500-1000)	0.02 (0.008-0.031)
		YBG302	650 (500-1000)	0.02 (0.008-0.031)

Note: Cutting parameters can be adjusted according to the Max. power of machine.

Case for FMP03



Tool type: FMP03-8"-C2.5"-LN25-08

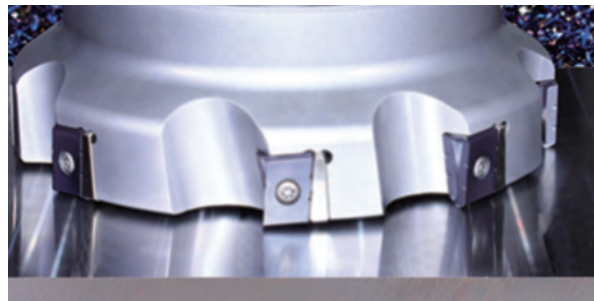
Insert type/grade: LNKT2510-ZR/YBG302

Workpiece material: 45#

Hardness(HB): 190

Cooling system: Dry cutting

Cutting parameters: $V_c=420$ SFPM, $a_p=0.047$ in, $f_z=0.02$ IPT, $a_e=5.51$ in

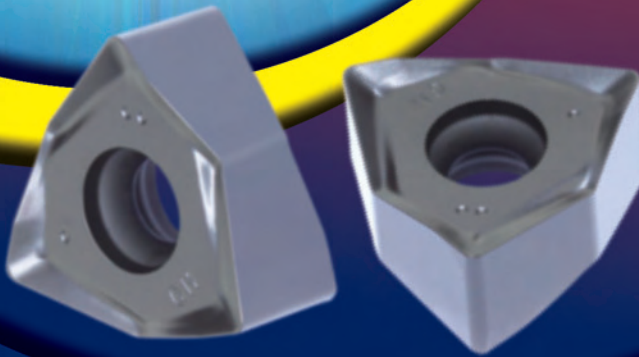
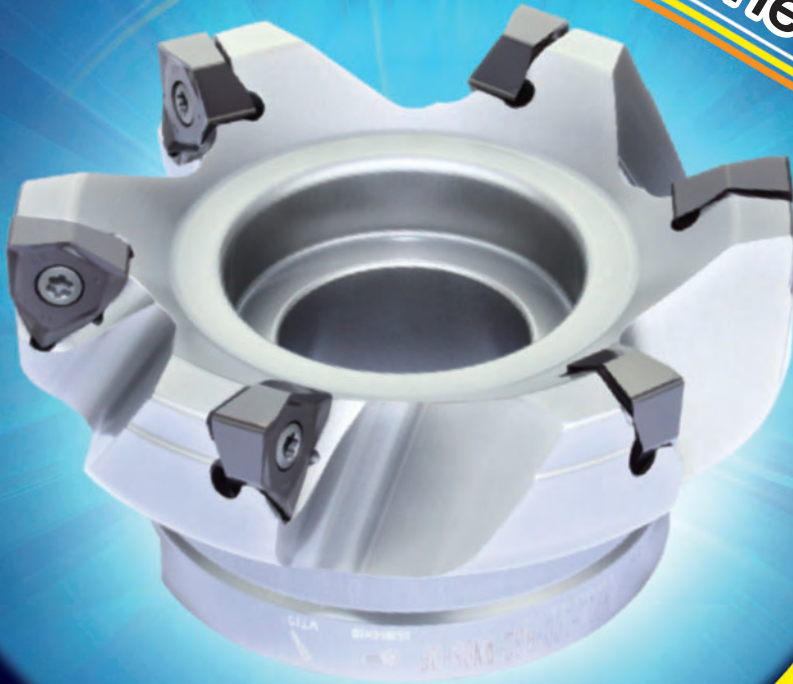


The tool operates easily and fast at high cutting depth with good chip breaking performance. Cutting efficiency is doubled, and tool life increases to 1-2 times that of the original.

FMP12

Series Milling Tools

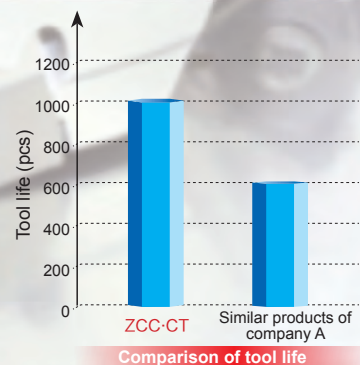
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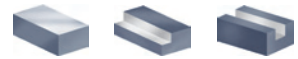
- Double negative angle of the cutter, combined with unique insert structure, to achieve double positive tool angle, which is beneficial to reducing cutting force;
- 6-flute cutting double-sided slot milling inserts, enabling high-quality 90° square shoulder milling, face milling and slot milling;
- Insert with wiper enables large feed and better surface finish.

Application case

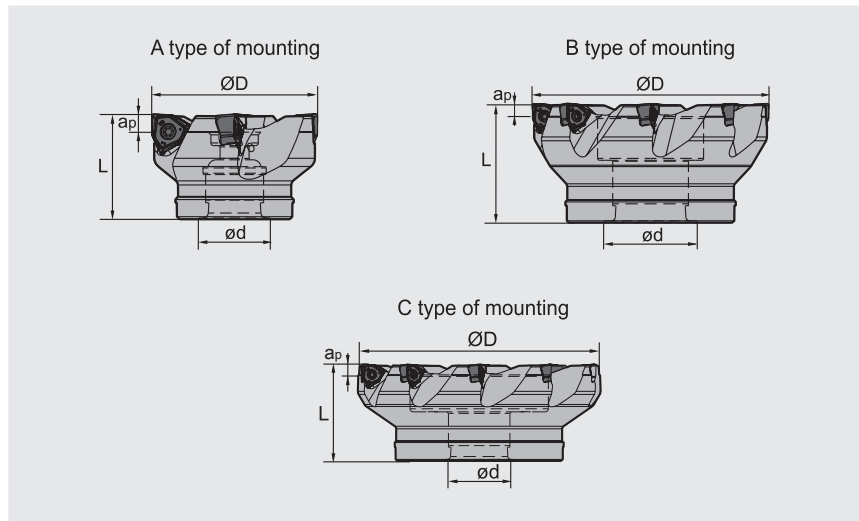
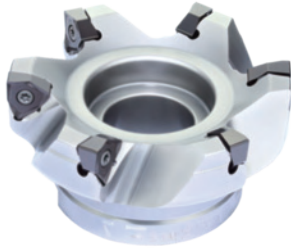
Tool specification: FMP12-3.00"-A1.00"-WN08-05C
 Insert specification/grade: WNHU080608PNR-GM/YBD152
 Part Name: Turbine Housing
 Workpiece material: QT450
 Hardness: HB230-280
 Cooling : Dry cutting
 Machine: Vertical machining center
 Cutting data: $V_c=850$ SFPM, $a_p=0.04$ in, $f_z=0.004$ IPT, $a_e=1.18$ in
 Milling style: Down milling Area of machining: End surface



Face milling tools






FMP12 P K N



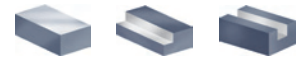
Specification of tools

Type		Dimensions (inch)					
		ØD	ød	L	apmax	Z (Number of teeth)	Interface form
FMP12	-2.00"-A0.75"-WN06-05C	2.00	0.75	1.75	0.224	5	A
	-2.50"-A0.75"-WN06-06C	2.50	0.75	1.75	0.224	6	A
	-2.50"-A1.00"-WN06-06C	2.50	1.00	2.00	0.224	6	A
	-3.00"-A1.00"-WN06-07C	3.00	1.00	2.00	0.224	7	A
	-4.00"-B1.25"-WN06-09	4.00	1.25	2.00	0.224	9	B
	-5.00"-B1.50"-WN06-11	5.00	1.50	2.50	0.224	11	B
	-6.00"-C1.50"-WN06-14	6.00	1.50	2.50	0.224	14	C
	-2.50"-A0.75"-WN08-05C	2.50	0.75	1.75	0.303	5	A
	-2.50"-A1.00"-WN08-05C	2.50	1.00	2.00	0.303	5	A
	-3.00"-A1.00"-WN08-06C	3.00	1.00	2.00	0.303	6	A
	-4.00"-B1.25"-WN08-08	4.00	1.25	2.00	0.303	8	B
	-5.00"-B1.50"-WN08-10	5.00	1.50	2.50	0.303	10	B
-6.00"-C1.50"-WN08-12	6.00	1.50	2.50	0.303	12	C	

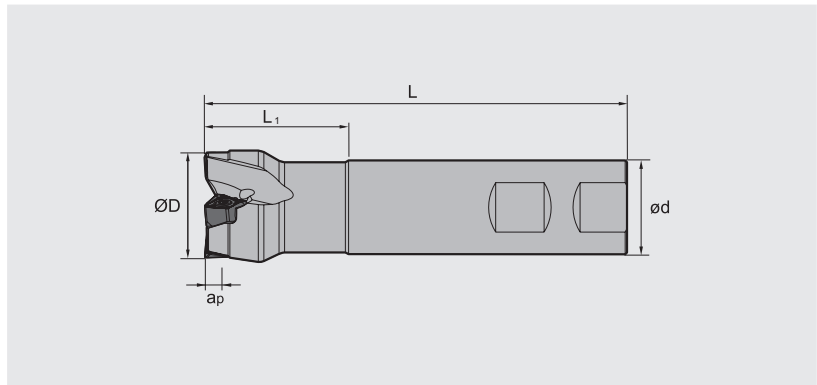
Spare parts

Diameter ØD	Insert specification	Insert tightening screw	Wrench	Sketch of installation
				
Ø2.00"~Ø6.00"	WNHU06□□□□PNR-GM	I60M3×9	WT09IS	
Ø2.50"~Ø6.00"	WNHU08□□□□PNR-GM/LH	I60M4×10	WT15IS	

Face milling tools





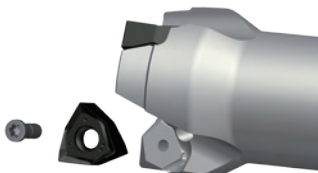
FMP12 P K N



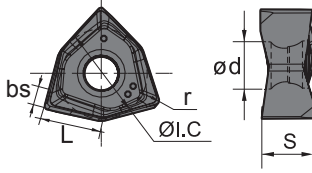
Specification of tools

Type		Dimensions(inch)					
		ØD	ød	L	L ₁	a _{pmax}	Z (Number of teeth)
FMP12	-1.00"-XP1.00"-WN06-02C	1.00	1.00	4.0	1.25	0.224	2
	-1.25"-XP1.00"-WN06-03C	1.25	1.00	4.5	1.50	0.224	3
	-1.50"-XP1.25"-WN06-04C	1.50	1.25	4.5	1.50	0.224	4
	-2.00"-XP1.50"-WN06-05C	2.00	1.50	4.5	1.50	0.224	5

Spare parts

Diameter ØD	Insert specification	Insert tightening screw	Wrench	Sketch of installation
Ø1.00"~Ø2.00"	WNHU06□□□□PNR-GM	 I60M3×9	 WT09IS	

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										Cermets	Cemented carbide														
		L	ØI.C	S	ød	bs	r	YBC302	YBM251	YBM253	YBM351	YBD152	YBD252	YBG102	YBG202	YBG205	YB9320		YBG302	YBG152	YBG252	YBS203	YBS303	YNG151	YNG151C	YC30S	YD051	YD101	YD201				
	WNHU060404PNR-GM	0.224	0.375	0.157	0.138	0.053	0.016			●		●					●	●															
	WNHU060408PNR-GM	0.224	0.375	0.157	0.138	0.053	0.031			●		●					●	●															
	WNHU080608PNR-GM	0.303	0.500	0.213	0.173	0.063	0.031			●		●					●	●															
	WNHU080612PNR-GM	0.303	0.500	0.213	0.173	0.063	0.047			●		●					●	●															
	WNHU080616PNR-GM	0.303	0.500	0.213	0.173	0.063	0.063			●		●					●	●															
	WNHU080608PNR-LH	0.303	0.500	0.213	0.173	0.063	0.031																									●	

● Always stock available ○ Produce according to order



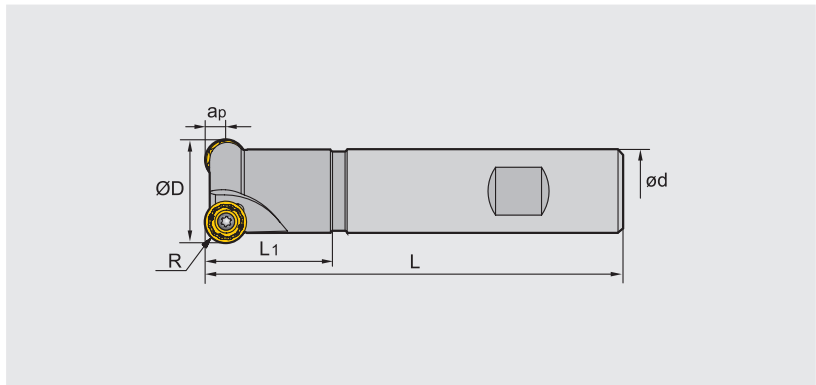
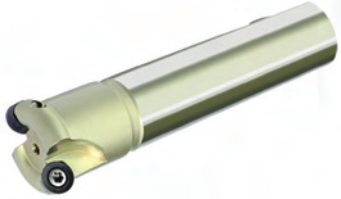
Recommended cutting parameters

	Workpiece material	Hardness HB	Insert grade	Cutting parameters		
				V(SFPM)	f(IPT)	apmax(in)
P	Low-carbon steel, Soft steel	≤ 180	YBM253 YBG205 YB9320	900 (700-1150)	0.008 (0.004-0.016)	0.224(WN06) 0.303(WN08)
	High-carbon steel, Alloy steel	180-280	YBM253 YBG205 YB9320	850 (650-1100)	0.008 (0.004-0.016)	
	Alloy tool steel	280-350	YBM253 YBG205 YB9320	750 (600-1000)	0.008 (0.004-0.016)	
K	Cast iron	180-250	YBD152	900 (500-1000)	0.008 (0.004-0.016)	
N	Al alloy steel	--	YD101	1000-	0.01 (0.004-0.016)	

Face milling tools





FMR01 P M K S

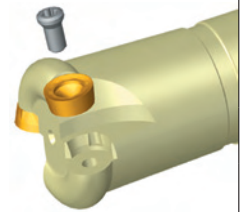


Specification of tools

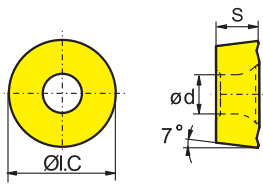
Type		Dimensions(inch)						
		ØD	R	ød	L1	L	apmax	Z (Number of teeth)
FMR01	-1.00"-XP0.75" -RC10-02	1.00	0.197	0.75	1.75	4.00	0.197	2
	-1.25"-XP1.00" -RC10-02	1.25	0.197	1.00	2.50	4.75	0.197	2
	-1.50"-XP1.25" -RC12-03	1.50	0.236	1.25	2.50	4.75	0.236	3
	-2.00"-XP1.25" -RC12-03	2.00	0.236	1.25	2.50	4.75	0.236	3

Spare parts

Diameter ØD	Insert specification	Insert screw	Wrench	Sketch of installation
Ø1.00"~Ø1.25"	RCKT10T3MO-DM	 I60M4×8.4	 WT15S	
Ø1.50"~Ø2.00"	RCKT1204MO-□□	I60M3.5×10	WT15S	



Selection of inserts



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

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

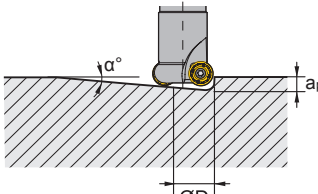
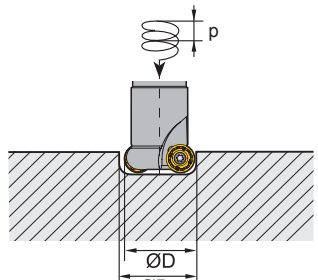
Insert shape	Type	Dimensions (inch)			Coated grade												Cermet	Cemented carbide									
		ØI.C	S	ød	YBC302	YBM251	YBM253	YBM351	YBD152	YBD252	YBG102	YBG202	YBG205	YB9320	YBG302	YBG152		YBG252	YBS202	YBS303	YNG151	YNG151C	YC30S	YD051	YD101	YD201	
	RCKT10T3MO-DM	0.394	0.156	0.173				●					●	●													
	RCKT1204MO-DM	0.472	0.187	0.157		●		●	○				●	●		●											
	RCKT1204MO-DR	0.472	0.187	0.157			○		○					●													
	RCKT1204MO-ER	0.472	0.187	0.157				○	●																		
	RCKT1204MO-NM	0.472	0.187	0.157				○											○	○							

● Always stock available ○ Produce according to order

Recommended cutting parameters

Workpiece material	Hardness HB	Insert grade	Cutting parameters			
			V(SFPM)	f(IPM)		
				-DM	-DR	-ER
P Low-carbon steel, Soft steel	≤ 180	YBM251	900(700-1100)	0.008(0.004-0.02)	0.012(0.008-0.032)	
		YBM351	700(600-1000)	0.01(0.004-0.02)	0.012(0.008-0.032)	
		YBG302	900(650-1200)	0.008(0.004-0.02)	0.012(0.008-0.032)	
	180-280	YBG202	800(650-1000)	0.008(0.004-0.02)	0.012(0.008-0.032)	
		YBM251 YBG302	650(500-900)	0.01(0.004-0.02)	0.012(0.008-0.032)	
		YBM351	800(600-1100)	0.008(0.004-0.02)	0.012(0.008-0.032)	
Alloy tool steel	280-350	YBC302	700(600-1000)	0.008(0.004-0.016)	0.012(0.008-0.032)	
		YBG202	600(500-800)	0.008(0.004-0.02)	0.012(0.008-0.032)	
		YBM251 YBC301	700(550-1100)	0.008(0.004-0.016)	0.012(0.008-0.032)	
M Stainless steel	≤ 270	YBM251	500(400-800)	0.008(0.004-0.016)	0.012(0.008-0.024)	
		YBM253	500(300-800)	0.008(0.004-0.016)	0.012(0.008-0.024)	0.012(0.008-0.024)
		YBG351	500(300-700)	0.008(0.004-0.016)	0.012(0.008-0.024)	
		YBG202 YBG205	500(360-900)	0.008(0.004-0.016)	0.012(0.008-0.024)	
K Cast iron	180-250	YBG302	700(400-1000)	0.008(0.004-0.02)	0.012(0.008-0.032)	
S High-temperature alloy	≤ 400					-NM
		YBS203 YBS303	300(200-400)			0.006(0.004-0.012)

Ramp milling, helical interpolation milling

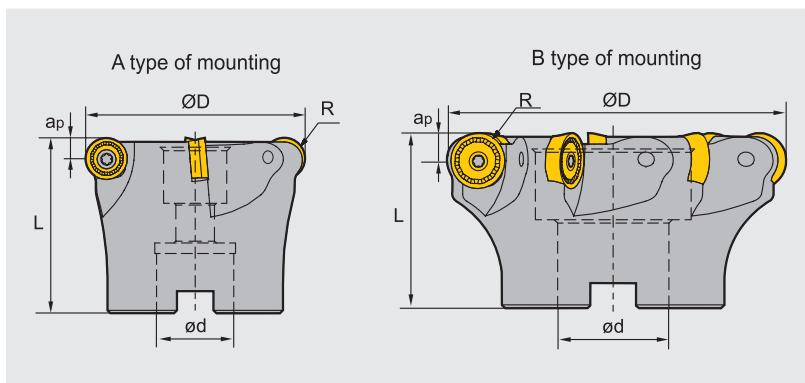
	Insert	Diameter ØD(in)	Max.cutting depth ap(in)	Max.cutting depth α°	Min.length Lm(in)	Min.diameter ØD1(in)	Max.diameter (in)
<p>● Ramp milling</p>  <p>$L_m = \frac{a_p}{\tan \alpha}$ α: Plunge angle</p>	RCKT10**	1.00"	0.197	14.4	0.768	1.575	0.197
		1.25"	0.197	8.4	1.339	2.126	0.197
<p>● Helical interpolation milling</p>  <p>$P = \tan \alpha \times \pi \times D_1$ α: Helix angle</p>	RCKT12**	1.50"	0.236	10.3	1.307	2.677	0.236
		2.00"	0.236	7.1	1.890	3.465	0.236

Reduce the feed rate when plunging and circular milling.
"Attention"—drilling can form long chips.

Face milling tools





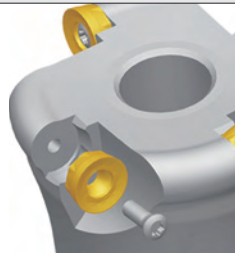
FMR02 P M K S



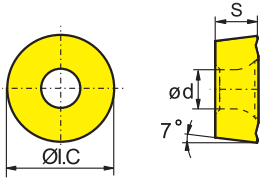
Specification of tools

Type		Dimensions(inch)						
		ØD	R	ød	L	apmax	Z (Number of teeth)	Interface form
FMR02	-2.50"-A0.75" -RC12-04	2.50	0.236	0.75	2.00	0.236	4	A
	-3.00"-B1.00" -RC16-05	3.00	0.315	1.00	2.00	0.315	5	B
	-4.00"-B1.25" -RC16-06	4.00	0.315	1.25	2.50	0.315	6	B
	-5.00"-B1.50" -RC20-07	5.00	0.394	1.50	2.50	0.394	7	B
	-6.00"-B1.50" -RC20-08	6.00	0.394	1.50	2.50	0.394	8	B

Spare parts

Diameter ØD	Insert specification	Insert screw	Wrench	Sketch of installation
				
Ø2.50"	RC□□1204MO-□□	I60M3.5×10	WT15IS	
Ø3.00"~Ø4.00"	RC□□1606MO-□□	I60M5×13	WT20IT	
Ø5.00"~Ø6.00"	RC□□2006MO-□□	I43M6×16	WT25IT	

Selection of inserts



☺ Good working conditions ☹ General working conditions ☹ Adverse working conditions

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

Insert shape	Type	Dimensions(inch)			Coated grade												Cermet		Cemented carbide								
		ØI.C	S	ød	YBC302	YBM251	YBM253	YBM351	YBD152	YBD252	YBG102	YBG202	YBG205	YBG212	YB9320	YBG302	YBG152	YBG252	YBS203	YBS303	YNG151	YNG151C	YC30S	YD051	YD101	YD201	
	RCKT1204MO-DM	0.472	0.187	0.157		●		○				●	●			●											
	RCKT1606MO-DM	0.630	0.250	0.219												●											
	RCKT1204MO-DR	0.472	0.187	0.157		○		○				○	●														
	RCKT1606MO-DR	0.630	0.250	0.219				●				●	●														
	RCKT2006MO-DR	0.787	0.250	0.258				●				○	●			●											
	RCKT1204MO-ER	0.472	0.187	0.157			●																				
	RCKT1606MO-ER	0.630	0.250	0.219			●																				
	RCKT2006MO-ER	0.787	0.250	0.258			●																				
	RCKT1204MO-NM	0.472	0.187	0.157			●	●					●	●					○	○							
	RCKT1606MO-NM	0.630	0.250	0.219									●	●					○	○							
	RCKT2006MO-NM	0.787	0.250	0.258				●						●	●				○	○							

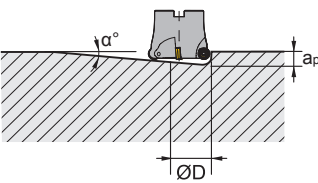
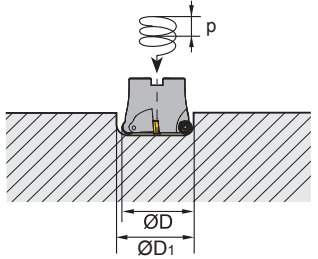
● Always stock available ○ Produce according to order



Recommended cutting parameters

Workpiece material	Hardness HB	Insert grade	Cutting parameters				
			V(SFPM)	f(IPT)			
				-DM	-DR	-ER	
P	Low-carbon steel, Soft steel	≤ 180	YBM251	900(700-1200)	0.008(0.004-0.02)	0.012(0.008-0.032)	
			YBM351 YBG302	700(600-1000)	0.01(0.004-0.02)	0.012(0.008-0.032)	
			YBG202 YB9320	900(650-1200)	0.008(0.004-0.02)	0.012(0.008-0.032)	
	High-carbon steel, Alloy steel	180-280	YBM251	800(650-1000)	0.008(0.004-0.02)	0.012(0.008-0.032)	
			YBM351 YBG302	650(500-1000)	0.01(0.004-0.02)	0.012(0.008-0.032)	
			YBG202 YB9320	800(600-1200)	0.008(0.004-0.02)	0.012(0.008-0.032)	
	Alloy tool steel	280-350	YBM251	700(600-1000)	0.008(0.004-0.016)	0.012(0.008-0.032)	
			YBM351 YBG302	600(500-800)	0.008(0.004-0.02)	0.012(0.008-0.032)	
			YBG202 YB9320	700(550-1100)	0.008(0.004-0.016)	0.012(0.008-0.024)	
M	Stainless steel	≤ 270	YBM251	500(400-800)	0.008(0.004-0.016)	0.012(0.008-0.024)	
			YBM253	500(300-800)	0.008(0.004-0.016)	0.012(0.008-0.024)	0.012(0.008-0.024)
			YBM351	500(300-700)	0.008(0.004-0.016)	0.012(0.008-0.024)	
			YBG202 YBG205 YB9320	500(350-900)	0.008(0.004-0.016)	0.012(0.008-0.024)	
K	Cast iron	180-250	YBG302	700(400-1000)	0.008(0.004-0.02)	0.012(0.008-0.032)	
S	High-temperature alloy	≤ 400			-NM		
			YBG212	150(60-200)	0.004(0.004-0.008)		
			YBS203 YBS303	300(200-400)	0.006(0.004-0.012)		

Ramp milling, helical interpolation milling

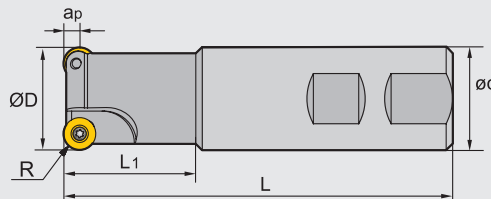
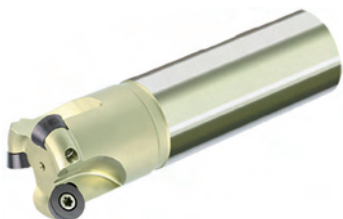
	Insert	Diameter ØD(in)	Max. cutting depth ap(in)	Max. cutting depth α°	Min. length Lm(in)	Min. diameter ØD1(in)	Max. diameter (in)
<p>● Ramp milling</p>  $L_m = \frac{a_p}{\tan \alpha}$ <p>α: Plunge angle</p>	RCKT12**	2.50"	0.236	5.1	2.657	4.488	0.236
	RCKT16**	3.00"	0.315	5.6	3.190	5.669	0.315
<p>● Helical interpolation milling</p>  $P = \tan \alpha \times \pi \times D_1$ <p>α: Helix angle</p>	RCKT16**	4.00"	0.315	4.1	4.362	7.244	0.315
	RCKT20**	5.00"	0.394	4.2	5.362	9.055	0.394
	RCKT20**	6.00"	0.394	3.0	7.512	11.810	0.394

Reduce the feed rate when plunging and circular milling.
"Attention"—drilling can form long chips.

Face milling tools





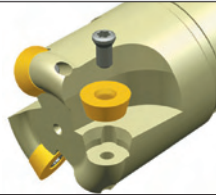
FMR03

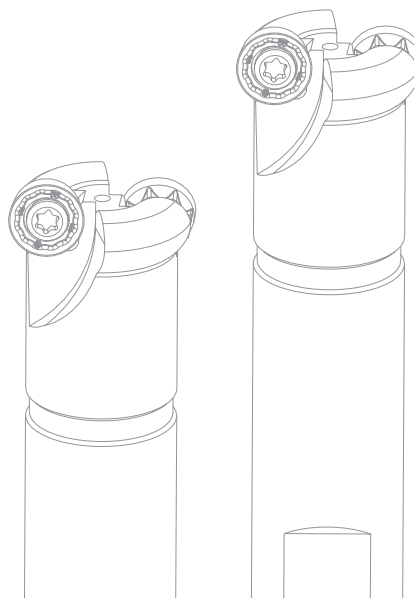


Specification of tools

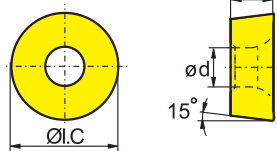
Type		Dimensions(inch)						
		ØD	R	ød	L1	L	apmax	Z (Number of teeth)
FMR03	-1.00"-XP1.00" -RD08-02	1.00	0.157	1.00	1.75	4.00	0.157	2
	-1.25"-XP1.25" -RD10-02	1.25	0.197	1.25	2.50	4.75	0.197	2
	-1.50"-XP1.25" -RD12-03	1.50	0.236	1.25	2.50	4.75	0.236	3
	-2.00"-XP1.25" -RD12-03	2.00	0.236	1.25	2.50	4.75	0.236	3

Spare parts

Diameter ØD	Insert specification	Insert screw	Wrench	Sketch of installation
				
Ø1.00"	RDKW0803MO	I60M3×7	WT09IP	
Ø1.25"	RDKW10T3MO	I60M4×10	WT15IP	
Ø1.50"~Ø2.00"	RDKW1204MO			



Selection of inserts



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

Workpiece material	YBC302	YBM251	YBM253	YBM351	YBD152	YBD252	YBG102	YBG202	YBG205	YB9320	YBG302	YBG152	YBG252	YBS203	YBS303	YNG151	YNG151C	YC30S	YD051	YD101	YD201
P Steel	😊	😊	😊	😊	😊	😊	😊	😊	😊	😊	😊	😊	😊	😊	😊	😊	😊	😊	😊	😊	😊
M Stainless steel	😊	😊	😊	😊	😊	😊	😊	😊	😊	😊	😊	😊	😊	😊	😊	😊	😊	😊	😊	😊	😊
K Cast iron	😊	😊	😊	😊	😊	😊	😊	😊	😊	😊	😊	😊	😊	😊	😊	😊	😊	😊	😊	😊	😊
N Ferrite materials	😊	😊	😊	😊	😊	😊	😊	😊	😊	😊	😊	😊	😊	😊	😊	😊	😊	😊	😊	😊	😊
S Heat-resistant steel	😊	😊	😊	😊	😊	😊	😊	😊	😊	😊	😊	😊	😊	😊	😊	😊	😊	😊	😊	😊	😊

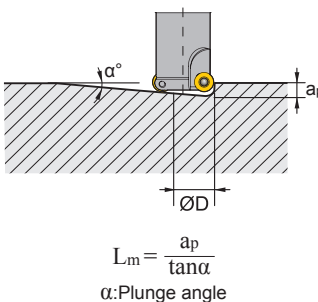
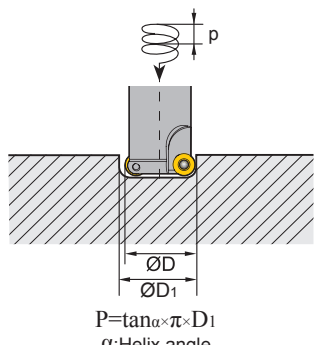
Insert shape	Type	Dimensions(inch)			Coated grade												Cermet		Cemented carbide						
		Ø1.C	S	ød	YBC302	YBM251	YBM253	YBM351	YBD152	YBD252	YBG102	YBG202	YBG205	YB9320	YBG302	YBG152	YBG252	YBS203	YBS303	YNG151	YNG151C	YC30S	YD051	YD101	YD201
	RDKW0803MO	0.315	0.125	0.134				○					●	●											
	RDKW10T3MO	0.394	0.156	0.173				●					●	●											
	RDKW1204MO	0.472	0.186	0.173	●		●						●	●											
	RDKT10T3MO-NM	0.394	0.156	0.173										○	○										

● Always stock available ○ Produce according to order

Recommended cutting parameters

Workpiece material	Hardness HB	Insert grade	Cutting parameters		
			V(SFPM)	f(IPT)	
P Low-carbon steel, Soft steel	≦ 180	YBM251	900(700-1200)	0.008(0.003-0.018)	
		YBM351 YBG302	700(600-1000)	0.01(0.006-0.018)	
		YBG202	900(650-1200)	0.008(0.004-0.018)	
	High-carbon steel, Alloy steel	180-280	YBM251	800(650-1000)	0.008(0.003-0.018)
			YBM351 YBG302	650(500-1000)	0.01(0.006-0.018)
			YBG202	800(600-1200)	0.008(0.004-0.018)
Alloy tool steel	280-350	YBM251	700(600-1000)	0.008(0.003-0.018)	
		YBM351 YBG302	600(500-800)	0.01(0.006-0.018)	
		YBG202	700(550-1100)	0.008(0.003-0.018)	
M Stainless steel	≦ 270	YBM251	500(400-800)	0.008(0.004-0.018)	
		YBM351	500(300-700)	0.01(0.004-0.018)	
		YBG202 YBG205	500(350-900)	0.008(0.004-0.018)	
K Cast iron	180-250	YBG302	700(400-1000)	0.008(0.004-0.018)	
S High-temperature alloy	≦ 400	YBS203	300(200-400)	0.006(0.004-0.012)	
		YBS303			

Ramp milling, helical interpolation milling

	Insert	Diameter ØD(in)	Max.cutting depth ap(in)	Max.cutting depth α°	Min.length Lm(in)	Min.diameter ØD1(in)	Max.diameter (in)
<p>● Ramp milling</p>  <p>$L_m = \frac{a_p}{\tan \alpha}$ α: Plunge angle</p>	RD**08**	1.00"	0.157	8.8	1.016	1.634	0.157
	RD**10**	1.25"	0.197	8.4	1.340	2.126	0.197
<p>● Helical interpolation milling</p>  <p>$P = \tan \alpha \times \pi \times D_1$ α: Helix angle</p>	RD**12**	1.50"	0.236	10.3	1.300	2.677	0.236
		2.00"	0.236	7.1	1.890	3.465	0.236

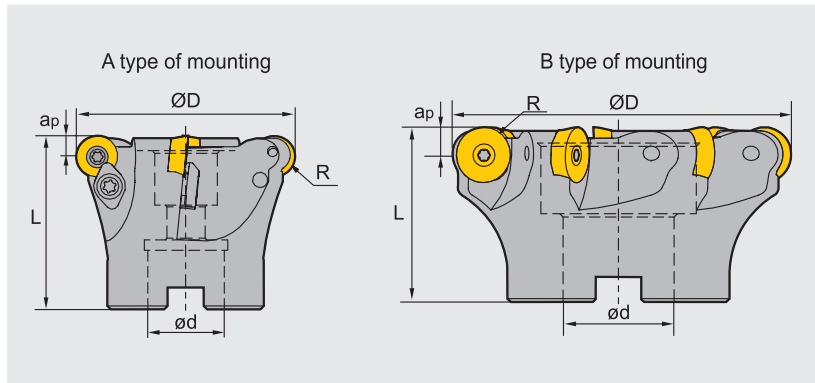
Reduce the feed rate when plunging and circular milling.
"Attention"—drilling can form long chips.



Face milling tools







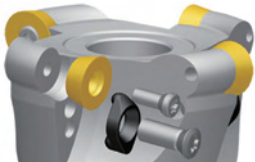
FMR04 P M K



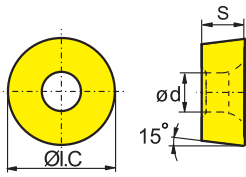
Specification of tools

Type		Dimensions(inch)						
		ØD	R	ød	L	apmax	Z (Number of teeth)	Interface form
FMR04	-2.00"-A0.75"-RD12-04	2.00	0.236	0.75	2.00	0.236	4	A
	-2.50"-A0.75"-RD12-04	2.50	0.236	0.75	2.00	0.236	4	A
	-3.00"-A1.00"-RD16-05	3.00	0.315	1.00	2.00	0.315	5	A
	-4.00"-B1.25"-RD16-06	4.00	0.315	1.25	2.00	0.315	6	B
	-5.00"-B1.50"-RD20-06	5.00	0.394	1.50	2.50	0.394	6	B
	-6.00"-B1.50"-RD20-07	6.00	0.394	1.50	2.50	0.394	7	B

Spare parts

Diameter ØD	Insert specification	Insert screw 	Wedge 	Wedge Screw 	Wrench 	Sketch of installation 
Ø2.00"~Ø2.50"	RDKW1204MO	I60M3.5×10	WD-204	I60M4×10	WT15IT	
Ø3.00"~Ø4.00"	RDKW1605MO	I60M5×13	WD-207	I60M5×13	WT20IT	
Ø5.00"~Ø6.00"	RDKW2006MO	I43M6×16	--	--	WT25IT	

Selection of inserts



☺ Good working conditions ☹ General working conditions ☹ Adverse working conditions

Workpiece material	P Steel	M Stainless steel	K Cast iron	N Ferrite materials	S Heat-resistant steel
YBC302	☺☺☺☺☺	☹☹☹☹☹	☹☹☹☹☹	☹☹☹☹☹	☹☹☹☹☹
YBM251	☺☺☺☺☺	☹☹☹☹☹	☹☹☹☹☹	☹☹☹☹☹	☹☹☹☹☹
YBM253	☺☺☺☺☺	☹☹☹☹☹	☹☹☹☹☹	☹☹☹☹☹	☹☹☹☹☹
YBM351	☺☺☺☺☺	☹☹☹☹☹	☹☹☹☹☹	☹☹☹☹☹	☹☹☹☹☹
YBD152	☺☺☺☺☺	☹☹☹☹☹	☹☹☹☹☹	☹☹☹☹☹	☹☹☹☹☹
YBD252	☺☺☺☺☺	☹☹☹☹☹	☹☹☹☹☹	☹☹☹☹☹	☹☹☹☹☹
YBG102	☺☺☺☺☺	☹☹☹☹☹	☹☹☹☹☹	☹☹☹☹☹	☹☹☹☹☹
YBG202	☺☺☺☺☺	☹☹☹☹☹	☹☹☹☹☹	☹☹☹☹☹	☹☹☹☹☹
YBG205	☺☺☺☺☺	☹☹☹☹☹	☹☹☹☹☹	☹☹☹☹☹	☹☹☹☹☹
YB9320	☺☺☺☺☺	☹☹☹☹☹	☹☹☹☹☹	☹☹☹☹☹	☹☹☹☹☹
YBG302	☺☺☺☺☺	☹☹☹☹☹	☹☹☹☹☹	☹☹☹☹☹	☹☹☹☹☹
YBG152	☺☺☺☺☺	☹☹☹☹☹	☹☹☹☹☹	☹☹☹☹☹	☹☹☹☹☹
YBG252	☺☺☺☺☺	☹☹☹☹☹	☹☹☹☹☹	☹☹☹☹☹	☹☹☹☹☹
YBS203	☺☺☺☺☺	☹☹☹☹☹	☹☹☹☹☹	☹☹☹☹☹	☹☹☹☹☹
YBS303	☺☺☺☺☺	☹☹☹☹☹	☹☹☹☹☹	☹☹☹☹☹	☹☹☹☹☹
YNG151	☺☺☺☺☺	☹☹☹☹☹	☹☹☹☹☹	☹☹☹☹☹	☹☹☹☹☹
YNG151C	☺☺☺☺☺	☹☹☹☹☹	☹☹☹☹☹	☹☹☹☹☹	☹☹☹☹☹
YC30S	☺☺☺☺☺	☹☹☹☹☹	☹☹☹☹☹	☹☹☹☹☹	☹☹☹☹☹
YD051	☺☺☺☺☺	☹☹☹☹☹	☹☹☹☹☹	☹☹☹☹☹	☹☹☹☹☹
YD101	☺☺☺☺☺	☹☹☹☹☹	☹☹☹☹☹	☹☹☹☹☹	☹☹☹☹☹
YD201	☺☺☺☺☺	☹☹☹☹☹	☹☹☹☹☹	☹☹☹☹☹	☹☹☹☹☹

Insert shape	Type	Dimensions(inch)			Coated grade										Cermet	Cemented carbide											
		ØI.C	S	ød	YBC302	YBM251	YBM253	YBM351	YBD152	YBD252	YBG102	YBG202	YBG205	YB9320		YBG302	YBG152	YBG252	YBS203	YBS303	YNG151	YNG151C	YC30S	YD051	YD101	YD201	
	RDKW1204MO	0.472	0.187	0.173		●		●					●	●		●											
	RDKW1605MO	0.630	0.219	0.217				○					○	●		○											
	RDKW2006MO	0.787	0.250	0.256				○					○														

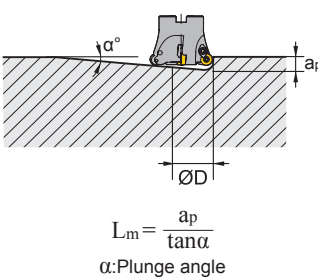
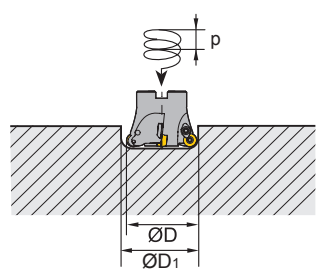
● Always stock available ○ Produce according to order

Recommended cutting parameters

Workpiece material	Hardness HB	Insert grade	Cutting parameters	
			V(SFPM)	f(IPT)
P Low-carbon steel, Soft steel	≤180	YBM251	900(700-1200)	0.008(0.003-0.018)
		YBM351 YBG302	700(600-1000)	0.01(0.006-0.018)
		YBG202	900(650-1200)	0.008(0.004-0.018)
	180-280	YBM251	800(650-1000)	0.008(0.003-0.018)
		YBM351 YBG302	650(500-1000)	0.01(0.006-0.018)
		YBG202	800(600-1200)	0.008(0.004-0.018)
	280-350	YBM251	700(600-1000)	0.008(0.003-0.018)
		YBM351 YBG302	600(500-800)	0.01(0.006-0.018)
		YBG202	700(550-1100)	0.008(0.004-0.018)
M Stainless steel	≤270	YBM251	500(400-800)	0.008(0.003-0.018)
		YBM351 YBG302	500(300-700)	0.01(0.004-0.018)
		YBG202 YBG205	500(350-900)	0.008(0.004-0.018)
K Cast iron	180-250	YBG302	700(400-1000)	0.008(0.004-0.018)



Ramp milling, helical interpolation milling

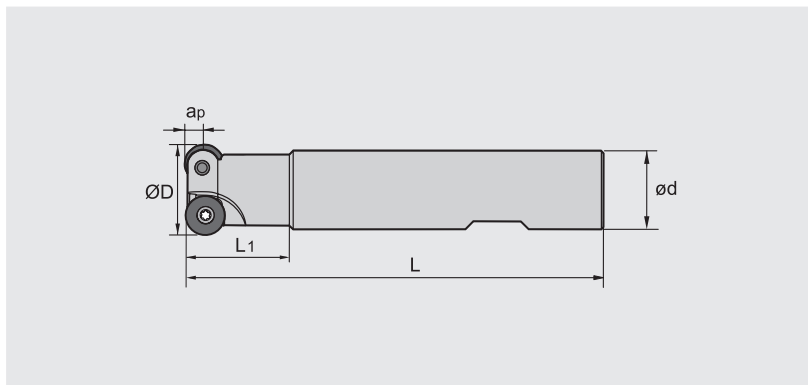
	Insert	Diameter ØD(in)	Max. cutting depth ap(in)	Max. cutting depth α°	Min. length Lm(in)	Min. diameter ØD1(in)	Max. diameter (in)
<p>● Ramp milling</p>  <p>$L_m = \frac{a_p}{\tan \alpha}$ α: Plunge angle</p> <p>● Helical interpolation milling</p>  <p>$P = \tan \alpha \times \pi \times D_1$ α: Helix angle</p>	RDKW12**	2.00"	0.236	7.1	1.890	3.465	0.236
		2.50"	0.236	5.1	2.638	4.488	0.236
	RDKW16**	3.00"	0.315	5.6	3.209	5.669	0.315
		4.00"	0.315	4.1	4.350	7.244	0.315
	RDKW20**	5.00"	0.394	4.2	5.360	9.055	0.394
		6.00"	0.394	3.0	7.480	11.810	0.394

Reduce the feed rate when plunging and circular milling.
"Attention"—drilling can form long chips.

Face milling tools



FMR05



Specification of tools

Type		Dimensions(inch)					
		ØD	ød	L1	L	apmax	Z (Number of teeth)
FMR05	-0.625"-XP0.75"-RP2-02	0.625	0.75	1.75	4	0.125	2
	-0.750"-XP0.75"-RP2-02	0.750	0.75	1.75	4	0.125	2
	-0.875"-XP0.75"-RP2-03	0.875	0.75	1.75	4	0.125	3
	-0.875"-XP0.75"-RP3-02	0.875	0.75	1.75	4	0.180	2
	-1.000"-XP0.75"-RP3-02	1.000	0.75	1.75	4	0.180	2
	-1.250"-XP1.00"-RP3-03	1.250	1.00	2.75	5	0.180	3
	-1.250"-XP1.00"-RP4-02	1.250	1.00	2.75	5	0.250	2
	-1.500"-XP1.25"-RP4-03	1.500	1.25	2.75	5	0.250	3
	-1.750"-XP1.50"-RP4-04	1.750	1.50	2.75	5	0.250	4

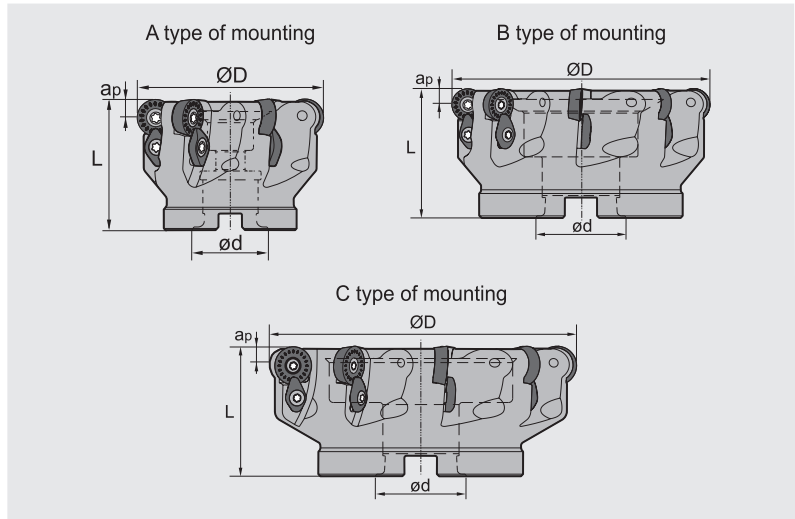
Spare parts

Diameter ØD	Insert specification	Insert screw	Wrench	Sketch of installation
Ø0.625"~Ø0.875"	RPMW06T200	I60M2.2×5.5	WT07IP	
	RPMW2T200			
Ø0.875"~Ø1.250"	RPMW09T300	I60M3×7	WT09IP	
	RPMW3(2.5)			
Ø1.250"~Ø1.750"	RPMW12T400	I60M4×8.4	WT15IP	
	RPMW43			

Face milling tools



FMR05

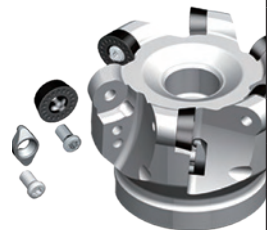


Specification of tools

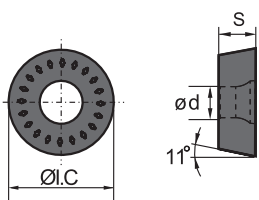
Type		Dimensions(inch)					
		ØD	ød	L	apmax	Z (Number of teeth)	Interface form
FMR05	-2.00"-A0.75"-RP4-05	2.00	0.75	1.75	0.250	5	A
	-2.50"-A0.75"-RP4-06	2.50	0.75	1.75	0.250	6	A
	-3.00"-A1.00"-RP4-07	3.00	1.00	2.00	0.250	7	A
	-3.00"-A1.00"-RP5-05	3.00	1.00	2.00	0.315	5	A
	-4.00"-B1.50"-RP5-07	4.00	1.50	2.50	0.315	7	B
	-5.00"-B1.50"-RP5-08	5.00	1.50	2.50	0.315	8	B
	-5.00"-B1.50"-RP6-07	5.00	1.50	2.50	0.375	7	B
	-6.00"-B2.00"-RP6-08	6.00	2.00	2.50	0.375	8	B
	-8.00"-C2.50"-RP6-09	8.00	2.50	2.50	0.375	9	C

Spare parts

Diameter ØD	Insert specification	Insert screw	Wedge	Wedge Screw	Wrench	Sketch of installation
Ø2.00"~Ø3.00"	RPMW120400	I60M4×8.4	WD-204	I60M4×10	WT15IP	
	RPMW43					
Ø3.00"~Ø5.00"	RPMW160500	I60M5×13	WD-208	I60M5×13	WT20IP	
	RPMW50500					
Ø5.00"~Ø8.00"	RPMW190600	I60M5×13	WD-208	I60M5×13	WT20IP	
	RPMW64					



Selection of inserts



☺ Good working conditions ☹ General working conditions ☹ Adverse working conditions

Workpiece material	Steel	Stainless steel	Cast iron	Ferrite materials	Heat-resistant steel
Steel	☺☺☺☺☺☺	☹☹☹☹☹☹	☹☹☹☹☹☹	☹☹☹☹☹☹	☹☹☹☹☹☹
Stainless steel	☹☹☹☹☹☹	☹☹☹☹☹☹	☹☹☹☹☹☹	☹☹☹☹☹☹	☹☹☹☹☹☹
Cast iron	☹☹☹☹☹☹	☹☹☹☹☹☹	☹☹☹☹☹☹	☹☹☹☹☹☹	☹☹☹☹☹☹
Ferrite materials	☹☹☹☹☹☹	☹☹☹☹☹☹	☹☹☹☹☹☹	☹☹☹☹☹☹	☹☹☹☹☹☹
Heat-resistant steel	☹☹☹☹☹☹	☹☹☹☹☹☹	☹☹☹☹☹☹	☹☹☹☹☹☹	☹☹☹☹☹☹

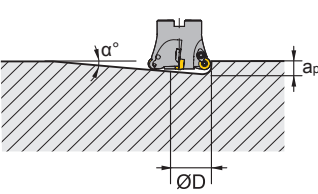
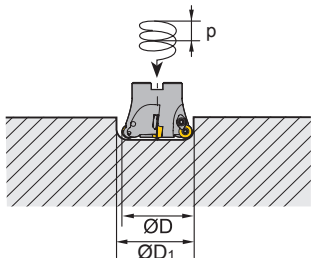
Insert shape	Type	Dimensions(inch)			Coated grade										Cermet		Cemented carbide									
		ØI.C	S	ød	YBC302	YBM251	YBM253	YBM351	YBD152	YBD252	YBG102	YBG202	YBG205	YB9320	YBG302	YBG152	YBG252	YBS203	YBS303	YNG151	YNG151C	YC30S	YD051	YD101	YD201	
	RPMW2T200	0.250	0.101	0.098								○	●	○												
	RPMW3(2.5)	0.375	0.156	0.134								○	●	○												
	RPMW43	0.500	0.187	0.173								○	●	○												
	RPMW50500	0.625	0.219	0.217								○	●	○												
	RPMW64	0.750	0.250	0.256								○	●	○												

● Always stock available ○ Produce according to order

Recommended cutting parameters

Workpiece material	Hardness HB	Insert grade	Cutting parameters		
			V(SFPM)	f(IPT)	
P Steel	Low-carbon steel, Soft steel	≤ 180	YBG202	900(650-1200)	0.008(0.004-0.018)
			YBG302	700(600-1000)	0.010(0.006-0.018)
	High-carbon steel, Alloy steel	180-280	YBG202	800(600-1200)	0.008(0.004-0.018)
			YBG302	650(500-1000)	0.010(0.006-0.018)
	Alloy tool steel	280-350	YBG202	700(550-1100)	0.008(0.004-0.018)
			YBG302	600(500-800)	0.010(0.006-0.018)
M Stainless steel	≤ 270	YBG302	500(300-700)	0.010(0.004-0.018)	
		YBG202	500(350-900)	0.008(0.004-0.018)	
		YBG205			
K Cast iron	180-250	YBG302	700(400-1000)	0.008(0.004-0.018)	

Ramp milling, helical interpolation milling

Insert	Diameter ØD(in)	Max.cutting depth ap(in)	Max.cutting depth α°	Min.length Lm(in)	Min.diameter ØD1(in)	Max.diameter (in)	
<p>● Ramp milling</p>  $L_m = \frac{a_p}{\tan \alpha}$ <p>α: Plunge angle</p>	RPMW2**	0.625"	0.118	13.0	0.512	1.012	0.118
		0.750"	0.118	9.0	0.748	1.26	0.118
		0.875"	0.118	6.5	1.035	1.516	0.118
<p>● Helical interpolation milling</p>  $P = \tan \alpha \times \pi \times D_1$ <p>α: Helix angle</p>	RPMW3**	0.875"	0.185	15.0	0.689	1.380	0.185
		1.000"	0.185	13.0	0.803	1.630	0.185
		1.250"	0.185	9.5	1.106	2.130	0.185
	RPMW4**	1.250"	0.248	13.0	1.142	2.004	0.248
		1.500"	0.248	9.0	1.567	2.504	0.248
		1.750"	0.248	6.5	2.177	3.004	0.248
		2.000"	0.248	7.0	2.020	3.504	0.248
		2.500"	0.248	5.3	2.670	4.504	0.248
		3.000"	0.248	4.0	3.547	5.504	0.248
	RPMW5**	3.000"	0.299	5.0	3.421	5.402	0.299
		4.000"	0.299	3.7	4.626	7.402	0.299
		5.000"	0.299	2.7	6.346	9.402	0.299
	RPMW6**	5.000"	0.374	3.5	6.114	9.252	0.374
		6.000"	0.374	2.7	7.929	11.252	0.374
		8.000"	0.374	2.0	10.709	15.252	0.374

Reduce the feed rate when plunging and circular milling.
 "Attention"—drilling can form long chips.