

OTOMOTİV | 

**20
25**

KATALOG
CATALOGUE

İÇİNDEKİLER - CONTENTS

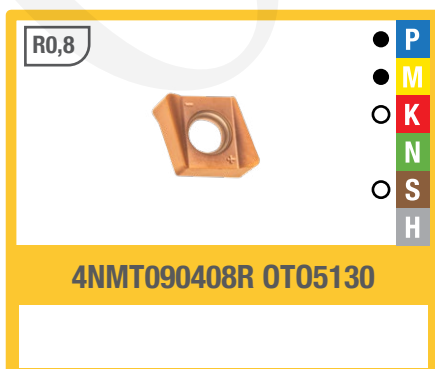
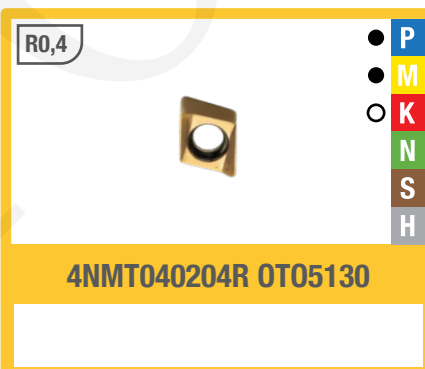
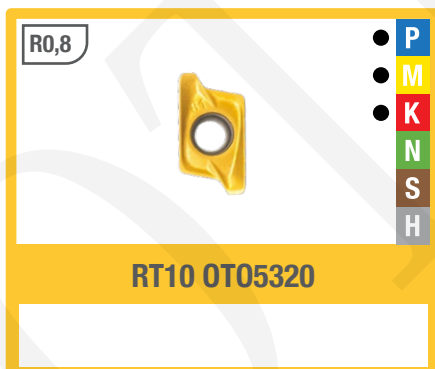
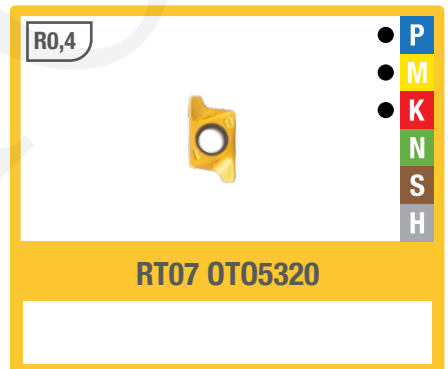
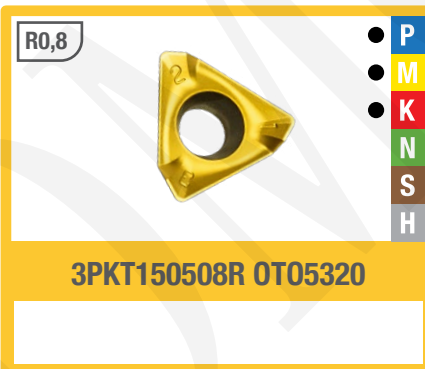
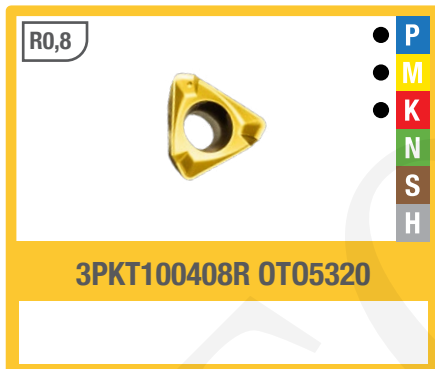
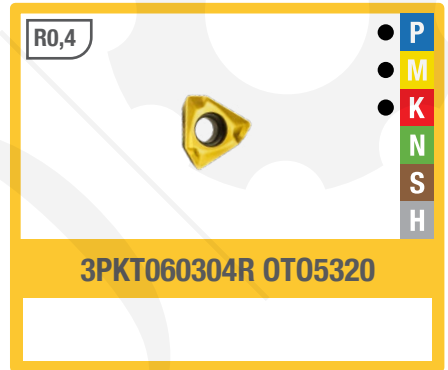
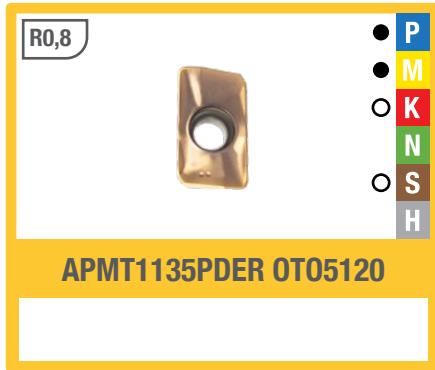
FREZELEME UÇLARI - MILLING INSERTS	- 3
TORNALAMA UÇLARI - TURNING INSERTS	- 7
BARALAMA UÇLARI - BORING INSERTS	- 9
KANAL VE KESME UÇLARI - GROOVING AND CUT-OFF INSERTS	- 10
DELİK İŞLEME UÇLARI - DRILLING INSERTS	- 12
ALÜMİNYUM TORNALAMA UÇLARI - ALUMINIUM TURNING INSERTS	- 14
ALÜMİNYUM FREZELEME UÇLARI - ALUMINIUM MILLING INSERTS	- 15
ALÜMİNYUM KANAL VE KESME UÇLARI	- 16
ALUMINIUM GROOVING AND CUT-OFF INSERTS	
TAŞLANMIŞ KESME, KANAL VE TORNALAMA UÇLARI	- 17
GROUND PARTING, GROOVING AND TURNING INSERTS	
TAKMA UÇLU MATKAP - MODULAR DRILL SYSTEM	- 59
DİŞ UÇLARI - THREADING INSERTS	- 97
AĞIR İŞ TORNALAMA UÇLARI - HEAVY DUTY TURNING INSERTS	- 129
DERİN DELİK MATKAPLARI - DEEP HOLE DRILLING INSERTS	- 134
ALÜMİNYUM JANT İŞLEME UÇLARI	- 139
ALUMINIUM WHEEL HUB INSERTS	
DEMİRYOLU ENDÜSTRİSİ KARBÜR UÇLARI	- 145
RAILWAY INDUSTRY CARBIDE INSERTS	
KABUK SOYMA UÇLARI - BAR PEELING INSERT	- 149
BORU İŞLEME UÇLARI - TUBE SCRAPER INSERTS	- 150
DİŞ FREZELERİ - THREAD MILLS	- 154

FREZELEME UÇLARI

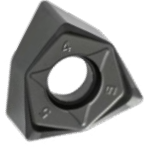
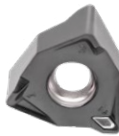
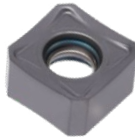
MILLING
INSERTS



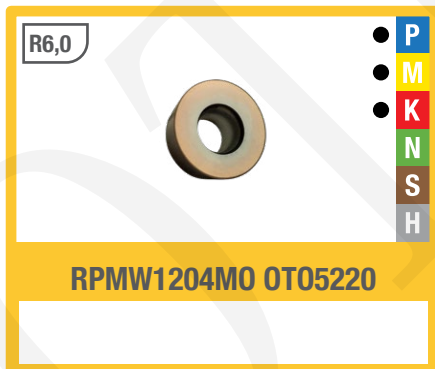
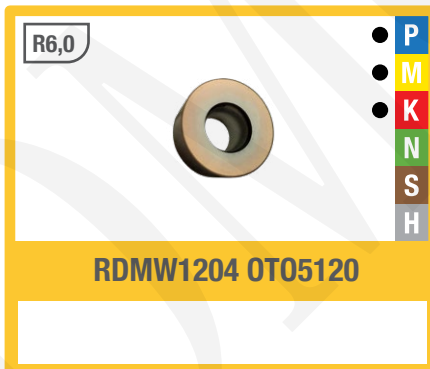
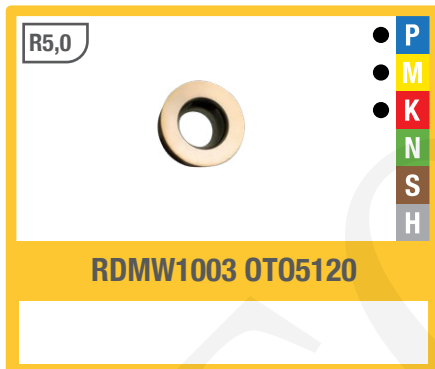
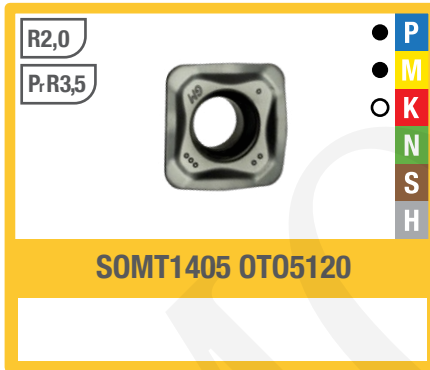
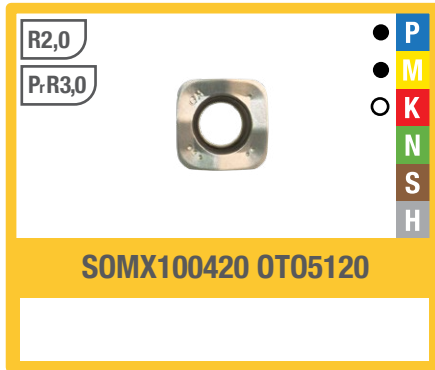
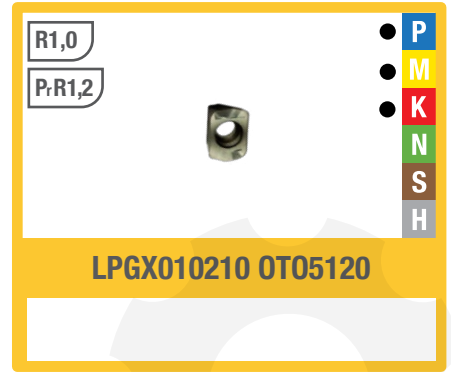
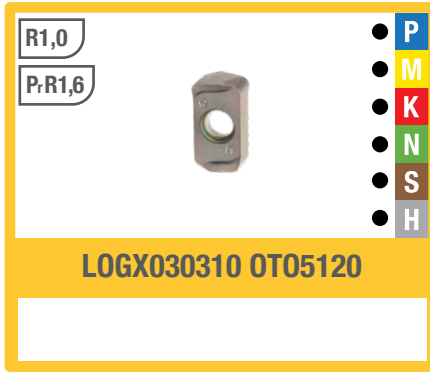
FREZELEME UÇLARI - MILLING INSERTS



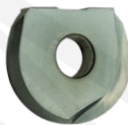
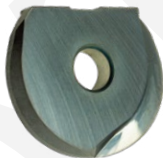
FREZELEME UÇLARI - MILLING INSERTS

R0,8  P M K N S H WNKU080608 OT05120	R0,8  P M K N S H XNEX040304 OT05120	R0,8  P M K N S H XNEX080608 OT05120
 P M K N S H TPKN1603PDER OT05120	 P M K N S H TPKN2204PDER OT05120	 P M K N S H TNMX2207PNTN OT05120
 P M K N S H TPKW2205 OT05320	R0,8  P M K N S H LNHX1306 OT05220	R0,4 R0,8  P M K N S H LNHU090408R OT08320
 P M K N S H LNHU120608R OT08320	 P M K N S H LNMU/LNHU160812R OT08320	 P M K N S H SNMX1206 OT05120 45°
R0,8  P M K N S H SNMX1206 OT05120 88°	R0,8 P-R1,5  P M K N S H BLMP0603R OT05120	R0,8 P-R2,5  P M K N S H BLMP0904R OT05120

FREZELEME UÇLARI - MILLING INSERTS

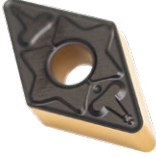


FINISH FREZELEME UÇLARI - FINISH MILLING INSERTS

R0,8  • P ○ M • K • N • S • H MPHW060308ZEL OT05130	R1,0  • P ○ M • K • N • S • H XDHW060210 OT05120	R1,0  • P ○ M • K • N • S • H XDHW10T310 OT05120
R0,1  • P • M • K • N • S • H CNHG070310 OT05130	R4,0  • P • M • K • N • S • H P3204 D08 OT05120	R5,0  • P • M • K • N • S • H P3204 D10 OT05120
R6,0  • P • M • K • N • S • H P3204 D12 OT05120	R8,0  • P • M • K • N • S • H P3204 D16 OT05120	R10,0  • P • M • K • N • S • H P3204 D20 OT05120
R12,50  • P • M • K • N • S • H P3204 D25 OT05120	 • P • M ○ K • N • S • H XNMU0906 OT05220	R0,2  • P • M • K • N • S • H SPMW090302 OT05120
R0,2  • P • M • K • N • S • H SPMW120408 OT05120		

TORNALAMA UÇLARI - TURNING INSERTS

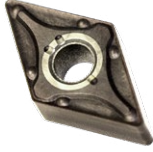
R0,4
 R0,8
 R1,2



P
 M
 K
 N
 S
 H

DNMG150604-MT OT08125

R0,4
 R0,8



P
 M
 K
 N
 S
 H

DNMG150604-MA OT07225

R0,8



P
 M
 K
 N
 S
 H

DNMG150608-CQ OT08125

R0,4
 R0,8
 R1,2



P
 M
 K
 N
 S
 H

WNMG080404-MT OT08125

R0,4
 R0,8



P
 M
 K
 N
 S
 H

WNMG080408-MA OT07225

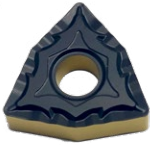
R0,8
 R1,2



P
 M
 K
 N
 S
 H

WNMG080408-MF OT07225

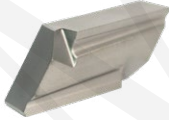
R0,8
 R1,2



P
 M
 K
 N
 S
 H

WNMG080408-CQ OT08125

R05



P
 M
 K
 N
 S
 H

KNUX160405R OT07225

R05



P
 M
 K
 N
 S
 H

KNUX160405L OT07225

R04
 R08



P
 M
 K
 N
 S
 H

DCMT11T304-MP OT07226

R04
 R08



P
 M
 K
 N
 S
 H

DCMT11T304-JW OT08125

R0,2
 R0,4



P
 M
 K
 N
 S
 H

DCMT070204-MP OT07226

R04
 R08



P
 M
 K
 N
 S
 H

CCMT09T304-MP OT07226

R04
 R08



P
 M
 K
 N
 S
 H

CCMT09T304-JW OT08125

R0,2
 R0,4



P
 M
 K
 N
 S
 H

CCMT060204-MP OT07226

TORNALAMA UÇLARI - TURNING INSERTS

R0,4
R0,8



• P
• M
• K
• N
• S
• H

CCMT120404 OT05140

R0,8



• P
• M
• K
• N
• S
• H

TNMG160408-CQ OT08125

R0,4
R0,8
R1,2



• P
• M
• K
• N
• S
• H

TNMG160408-MF OT07225

R0,2
R0,4
R0,8



• P
• M
• K
• N
• S
• H

VBMT160402-PF3 OT05130

R0,4
R0,8
R1,2



• P
• M
• K
• N
• S
• H

CNMG120408-MF OT07225

R0,2
R0,4
R0,8



• P
• M
• K
• N
• S
• H

VNMG160408-BF OT05130

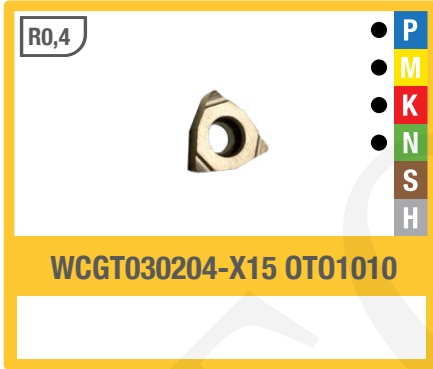
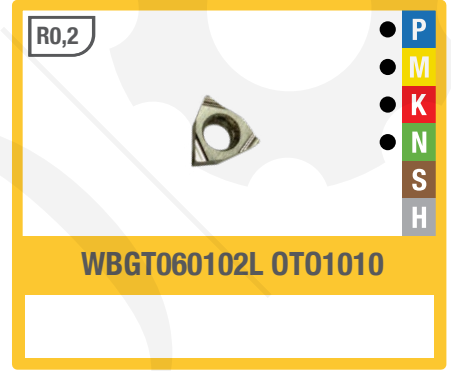
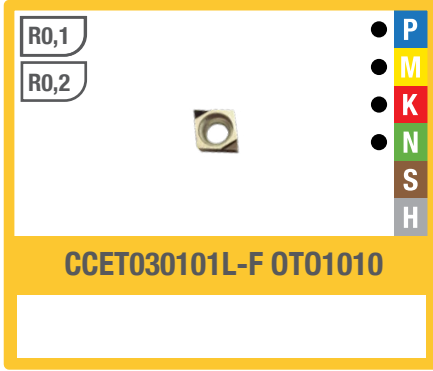
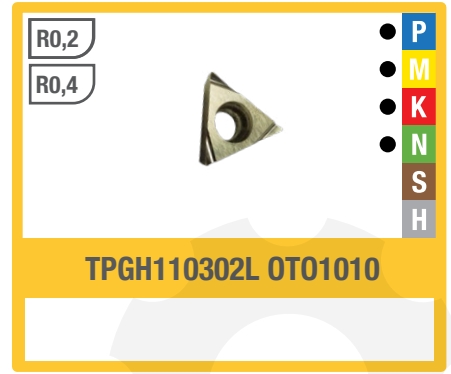
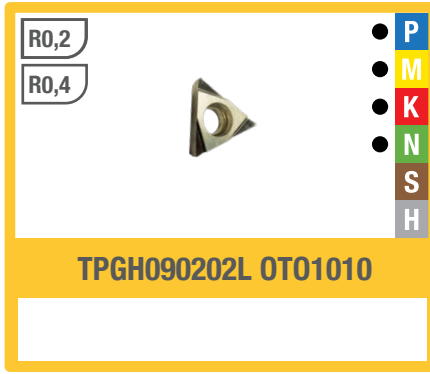
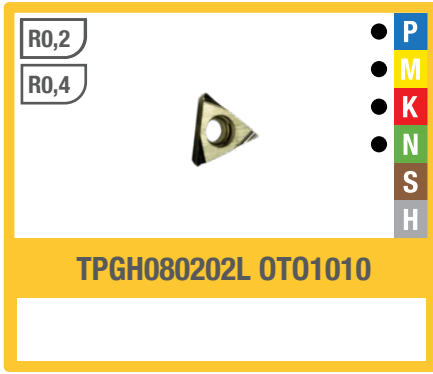


• P
• M
• K
• N
• S
• H

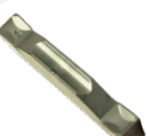
RCMT1204 OT08125



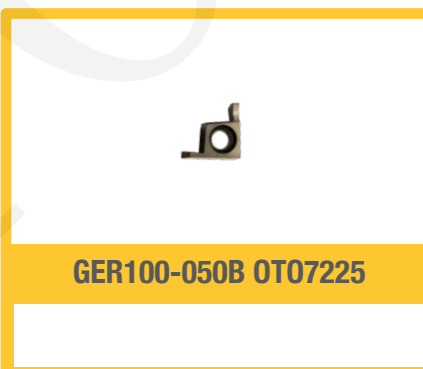
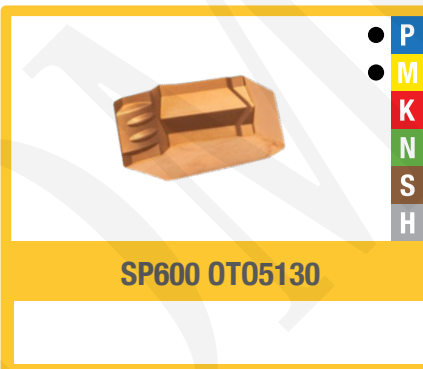
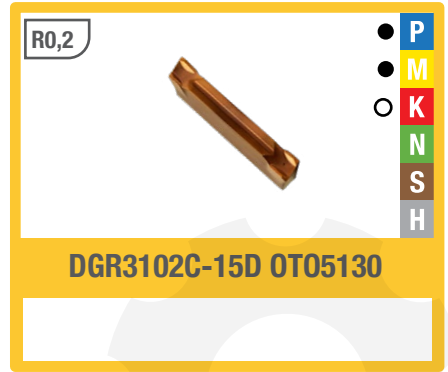
BARALAMA UÇLARI - BORING INSERTS



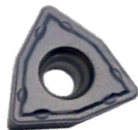
KANAL VE KESME UÇLARI - GROOVING AND CUT-OFF INSERTS

R0,2  ● P ● M ○ K ● N ● S ● H MGMN150-M OT07125	R0,2  ● P ● M ○ K ● N ● S ● H MGMN200-M OT07125	R0,4  ● P ● M ○ K ● N ● S ● H MGMN250-M OT07125
R0,4  ● P ● M ○ K ● N ● S ● H MGMN300-M OT07125	R0,4  ● P ● M ○ K ● N ● S ● H MGMN400-M OT07125	R0,4  ● P ● M ○ K ● N ● S ● H MGMN500-M OT07125
R0,4  ● P ● M ○ K ● N ● S ● H MGMN600-M OT07125	R0,2  ● P ● M ○ K ● N ● S ● H TDC200 OT07125	R0,2  ● P ● M ○ K ● N ● S ● H TDC300 OT07125
R0,2  ● P ● M ○ K ● N ● S ● H DGN1502J OT05130	R0,2  ● P ● M ○ K ● N ● S ● H DGN2002C OT05130	R0,2  ● P ● M ○ K ● N ● S ● H DGN2202J OT05130
R0,2  ● P ● M ○ K ● N ● S ● H DGN2202C OT05130	R0,2  ● P ● M ○ K ● N ● S ● H DGN3102C OT05130	R0,2  ● P ● M ○ K ● N ● S ● H DGR2202C-6D OT05130

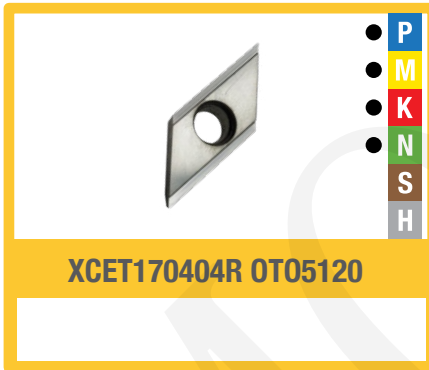
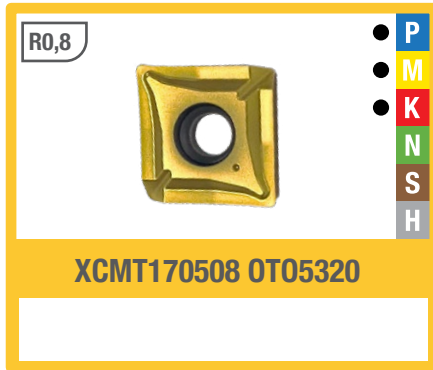
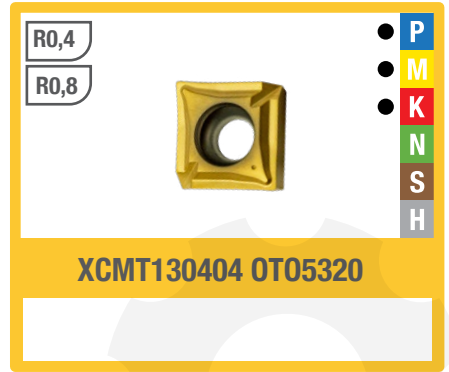
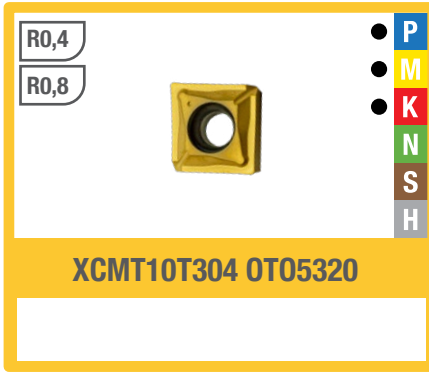
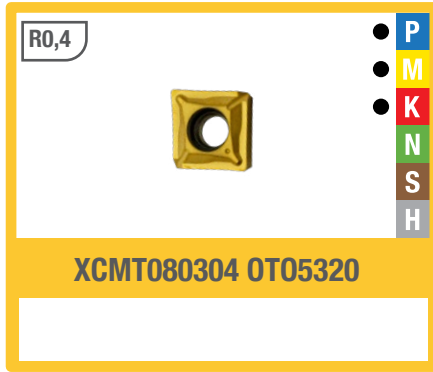
KANAL VE KESME UÇLARI - GROOVING AND CUT-OFF INSERTS



DELİK İŞLEME UÇLARI - DRILLING INSERTS

 P M K N S H WCMX03 OT05131	 P M K N S H WCMX04 OT05131	 P M K N S H WCMX05 OT05131
 P M K N S H WCMX06 OT05131	 P M K N S H WCMX08 OT05131	 P M K N S H SPMG05 OT05131
 P M K N S H SPMG06 OT05131	 P M K N S H SPMG07 OT05131	 P M K N S H SPMG09 OT05131
 P M K N S H SPMG11 OT05131	 P M K N S H SPMG14 OT05131	R0,4  P M K N S H XCMT040104R OT05320
R0,4  P M K N S H XCMT050204R OT05320	R0,4  P M K N S H XCMT060204 OT05320	R0,4  P M K N S H XCMT070304 OT05320

DELİK İŞLEME UÇLARI - DRILLING INSERTS



ALÜMİNYUM TORNALAMA UÇLARI - ALUMINIUM TURNING INSERTS

R0,4
R0,8



P
M
K
N
S
H

DNGG150604-HA

R0,2
R0,4
R0,8



P
M
K
N
S
H

TNGG160402-AL

R0,1
R0,2
R0,4
R0,8



P
M
K
N
S
H

VNGG160401-HA

R0,2
R0,4
R0,8



P
M
K
N
S
H

WNGG080402-HA

R0,2
R0,4
R0,8



P
M
K
N
S
H

DCGT070202-AL

R0,1
R0,2
R0,4
R0,8



P
M
K
N
S
H

DCGT11T301-AL

R0,2
R0,4
R0,8



P
M
K
N
S
H

CCGT060202-AL

R0,2
R0,4
R0,8



P
M
K
N
S
H

CCGT09T302-AL

R0,2
R0,4
R0,8



P
M
K
N
S
H

CCGT120402-AL

R0,2
R0,4
R0,8



P
M
K
N
S
H

VCGT110302-AL

R0,2
R0,4
R0,8



P
M
K
N
S
H

VCGT160402-AL

R0,2
R0,4



P
M
K
N
S
H

TCGT090202-AL

R0,2
R0,4
R0,8



P
M
K
N
S
H

TCGT110202-AL

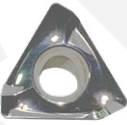
R0,2
R0,4
R0,8



P
M
K
N
S
H

TCGT16T302-AL

ALÜMİNYUM FREZELEME UÇLARI - ALUMINIUM MILLING INSERTS

R0,5  P M K N S H APKT1003	R0,4 R0,8  P M K N S H APGT113504-G2	R0,8  P M K N S H APKT1604PDFR-MA3
 P M K N S H RCGT0803-M0	 P M K N S H RCGT1003-M0	 P M K N S H RCGT1204-M0
 P M K N S H SEHT1204	R0,1 P.R1,6  P M K N S H LOGX0303-AL	R0,8  P M K N S H 4NGT060308-GM
R0,8  P M K N S H 3PHT150508-AL	R0,8  P M K N S H WNGU080608-AL	R0,8  P M K N S H XEKT190508FR-MA
R3,0  P M K N S H VCGT220530		

ALÜMİNYUM KANAL VE KESME UÇLARI

ALUMINIUM GROOVING AND CUT-OFF INSERTS



P
M
K
N
S
H

MGGN150-G



P
M
K
N
S
H

MGGN200-G



P
M
K
N
S
H

MGGN250-G



P
M
K
N
S
H

MGGN300-M



P
M
K
N
S
H

MGGN400-M



P
M
K
N
S
H

MGGN150R-8



P
M
K
N
S
H

MGGN200R-8



P
M
K
N
S
H

MGGN250R-8



P
M
K
N
S
H

MGGN300R-8



P
M
K
N
S
H

MRGN200



P
M
K
N
S
H

MRGN300



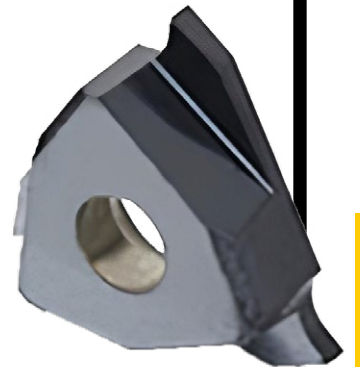
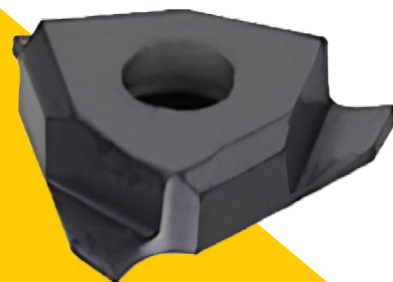
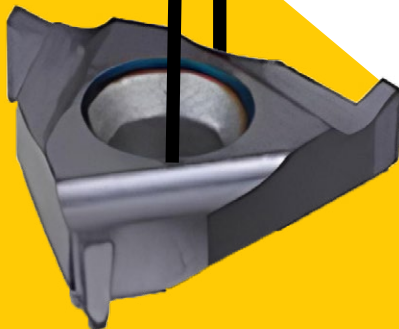
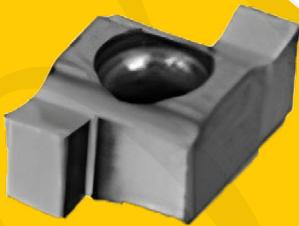
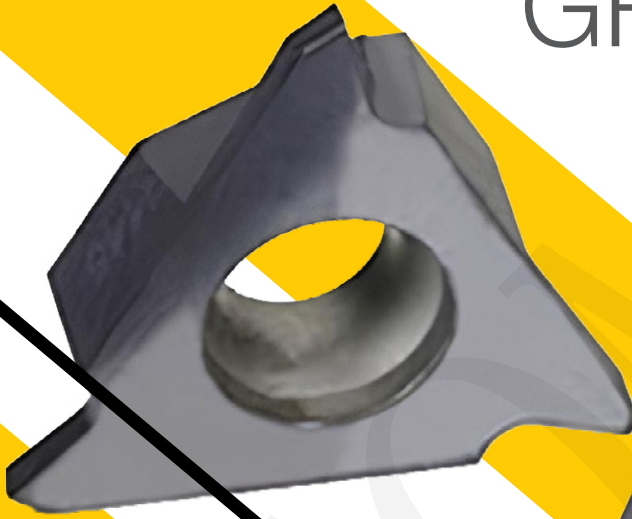
P
M
K
N
S
H

MRGN400

TAŞLANMIŞ KESME, KANAL VE TORNALAMA

UÇLARI

GROUND PARTING,
GROOVING AND
TURNING
INSERTS



Inserts Grades System

		← Wear resistance			Toughness →	
ISO		01	10	20	30	40
Workpiece						
P Steel					OTO7225	
					OTO1000	
		OTO7226				
		OTO7225C				
M Stainless Steel		OTO7226				
		OTO7225C				
		OTO7225				
K Cast Iron		OTO7225				
		OTO7226				
		OTO7225C				
N Non-Ferrous		H10				

Coating: PVD TiAlN+TiSiN

OTO7225C (M15/P20)

OTO7225C General grade for steel, stainless steel and cast iron. It has excellent performance at high cutting speed.

Coating: PVD TiAlN

OTO7225 (M15/P20)

OTO7225 General grade for steel, stainless steel and cast iron. It has excellent performance in normal conditions

Coating: PVD TiAlN

OTO7226 (M15/P20)

OTO7226 Grade for all kinds of steel bearing parts, it has excellent performance in stainless steel.

Coating: Uncoated

H10

H10 is the first option for aluminum alloy, copper and other non-ferrous materials.

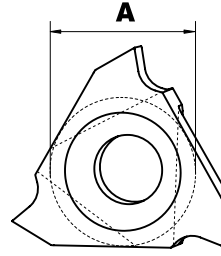
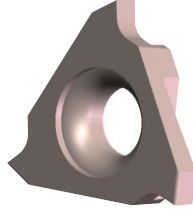
OTO1000

OTO1000 is a cermet carbide grade, first option for steel.

TAŞLANMIŞ KESME, KANAL VE TORNALAMA UÇLARI

GROUND PARTING, GROOVING AND TURNING INSERTS

TGF32 SHALLOW GROOVING INSERTS



Right Hand Tool Shown

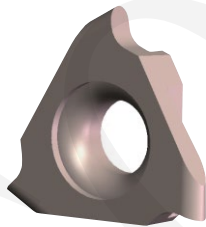
Unit:mm

Designation		Dimensions						Grades			
Right	Left	A	T	Φd	W	L	R	OTO7225	OTO7225C	OTO7226	H10
TGF32R033	TGF32L033	9.525	3.18	4.4	0.33	0.80	0.05				
TGF32R040	TGF32L040				0.40						
TGF32R050	TGF32L050				0.50			1.20			
TGF32R060	TGF32L060				0.60	1.40					
TGF32R070	TGF32L070				0.70						
TGF32R075	TGF32L075				0.75	2.00					
TGF32R080	TGF32L080				0.80						
TGF32R085	TGF32L085				0.85						
TGF32R090	TGF32L090				0.90						
TGF32R095	TGF32L095				0.95						
TGF32R100	TGF32L100				1.00	2.20	0.10				
TGF32R105	TGF32L105				1.05						
TGF32R110	TGF32L110				1.10						
TGF32R115	TGF32L115				1.15						
TGF32R120	TGF32L120				1.20						
TGF32R125	TGF32L125				1.25						
TGF32R130	TGF32L130				1.30						
TGF32R135	TGF32L135				1.35						
TGF32R140	TGF32L140				1.40						
TGF32R145	TGF32L145				1.45						
TGF32R150	TGF32L150				1.50	2.70					
TGF32R160	TGF32L160				1.60						
TGF32R170	TGF32L170				1.70						
TGF32R175	TGF32L175				1.75						
TGF32R180	TGF32L180	1.80									
TGF32R185	TGF32L185	1.85									
TGF32R190	TGF32L190	1.90									
TGF32R200	TGF32L200	2.00	3.00	0.15							
TGF32R210	TGF32L210	2.10									
TGF32R220	TGF32L220	2.20									
TGF32R225	TGF32L225	2.25									
TGF32R230	TGF32L230	2.30									
TGF32R240	TGF32L240	2.40									

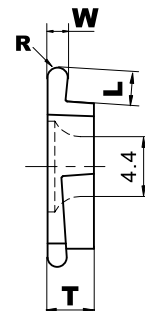
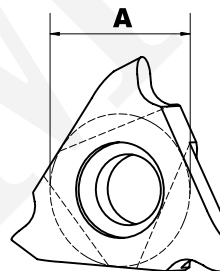
Unit:mm

Designation		Dimensions						Grades			
Right	Left	A	T	$\varnothing d$	W	L	R	OTO7225	OTO7225C	OTO7226	H10
TGF32R250	TGF32L250	9.525	3.18	4.4	2.50	3.20	0.20				
TGF32R260	TGF32L260				2.60						
TGF32R265	TGF32L265				2.65						
TGF32R270	TGF32L270				2.70						
TGF32R275	TGF32L275				2.75						
TGF32R280	TGF32L280				2.80						
TGF32R285	TGF32L285				2.85						
TGF32R290	TGF32L290				2.90						
TGF32R295	TGF32L295				2.95						
TGF32R300	TGF32L300				3.00						
* TGF32R310	* TGF32L310				3.10						
* TGF32R315	* TGF32L315				3.15						
* TGF32R320	* TGF32L320				3.20						

TGF32
FULL RADIUS
SHALLOW
GROOVING
INSERTS



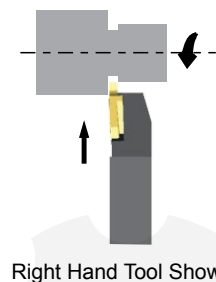
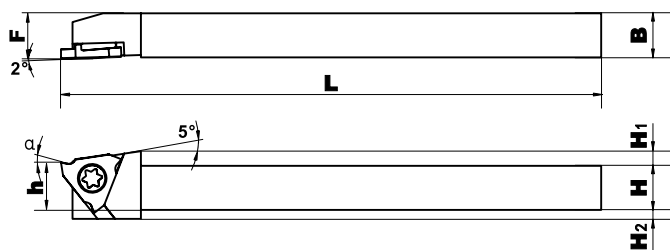
Right Hand Tool Shown



Unit:mm

Designation		Dimensions						Grades			
Right	Left	A	T	$\varnothing d$	W	L	R	OTO7225	OTO7225C	OTO7226	H10
TGF32R040-R0.20	TGF32L040-R0.20	9.525	3.18	4.4	0.40	1.00	0.20				
TGF32R050-R0.25	TGF32L050-R0.25				0.50	1.20	0.25				
TGF32R060-R0.30	TGF32L060-R0.30				0.60	1.40	0.30				
TGF32R080-R0.40	TGF32L080-R0.40				0.80	2.00	0.40				
TGF32R100-R0.50	TGF32L100-R0.50				1.00	2.20	0.50				
TGF32R120-R0.60	TGF32L120-R0.60				1.20		0.60				
TGF32R150-R0.75	TGF32L150-R0.75				1.50	2.70	0.75				
TGF32R200-R1.00	TGF32L200-R1.00				2.00		1.00				
TGF32R250-R1.25	TGF32L250-R1.25				2.50	3.20	1.25				
TGF32R300-R1.50	TGF32L300-R1.50				3.00		1.50				

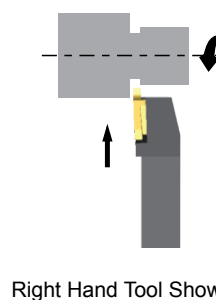
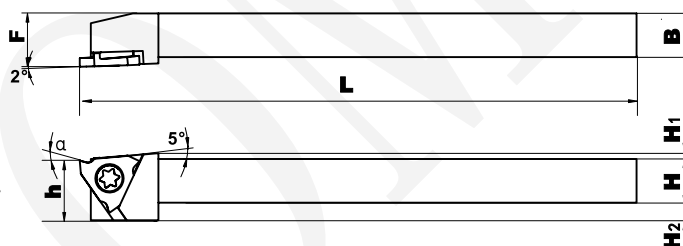
KTGF-F
EXTERNAL
GROOVING
TOOLHOLDERS
(Without Offset)



Designation		Dimension							Inserts	Spare Parts	
Right	Left	H	H1	H2	h	B	F	L		Screw	Torex Wrench
KTGFR1010H-16F	KTGFL1010H-16F	10	2.5	2	10	10	10	100	TGF32R*** (R-hand Toolholder For R-hand inserts)	M4*8	T15
KTGFR1212H-16F	KTGFL1212H-16F	12		12	12	12	12				
KTGFR1616H-16F	KTGFL1616H-16F	16			16	16	16				
KTGFR2020K-16F	KTGFL2020K-16F	20			20	20	20	125			
KTGFR2525M-16F	KTGFL2525M-16F	25			25	25	25	150	TGF32L*** (L-hand Toolholder For L-hand inserts)		

Unit:mm

KTGF-F
EXTERNAL
GROOVING
TOOLHOLDERS
(With Offset)

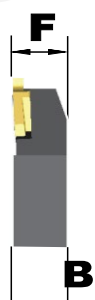


Designation		Dimension							Inserts	Spare Parts	
Right	Left	H	H ₁	H ₂	h	B	F	L		Screw	Torx Wrench
KTGFR1010H-16	KTGFL1010H-16	10	2.5	4	10	10	12	100	TGF32R*** (R-hand Toolholder For R-hand inserts)	M4*8	T15
KTGFR1212H-16	KTGFL1212H-16	12		2	12	12	16		TGF32L*** (L-hand Toolholder For L-hand inserts)		
KTGFR1616H-16	KTGFL1616H-16	16			16	16	20				
KTGFR2020K-16	KTGFL2020K-16	20			20	20	25	125			
KTGFR2525M-16	KTGFL2525M-16	25			25	25	32	150			

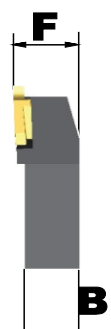
Unit:mm



The difference bettwn KTGF-F and KTGF toolholders :

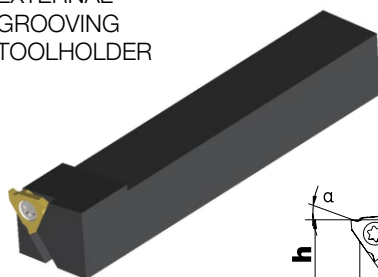


$$F=B$$

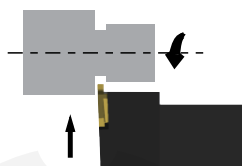
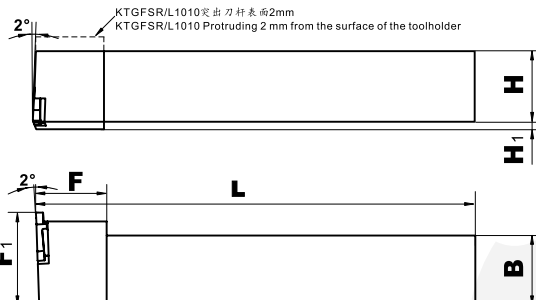
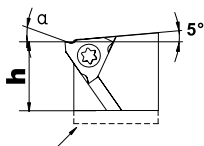


$$F>B$$

B-KTGF
“L-STYLED”
EXTERNAL
GROOVING
TOOLHOLDER



KTGFSR/L1010突出刀杆表面2mm
KTGFSR/L1010 Protruding 2 mm from the surface of the toolholder

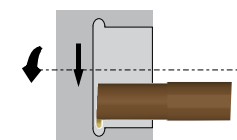
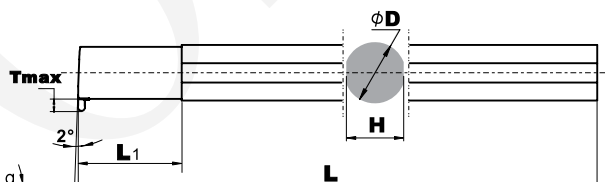
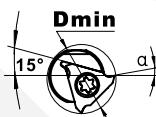


Left Hand Tool Shown

Designation		Dimension						Inserts	Spare Parts	
Left	Right	H	H ₁	B	F	F ₁	L		Screw	Torx Wrench
B-KTGFL1212H16	B-KTGFR1212H16	12	2.5	12	16	20	100	TGF32R*** (R-hand inserts For L-hand Toolholder)	M4*8	T15
B-KTGFL1616H16	B-KTGFR1616H16	16		16	20	24		TGF32L*** (L-hand inserts For R-hand Toolholder)		
B-KTGFL2020K16	B-KTGFR2020K16	20		20	25	30	125			
B-KTGFL2525M16	B-KTGFR2525M16	25		25	32	35	150			

Unit:mm

TGF32
INTERNAL
GROOVING
TOOLHOLDER

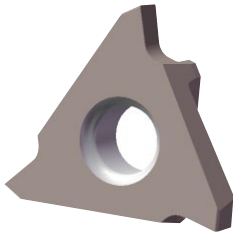


Right Hand Tool Shown

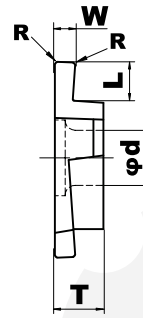
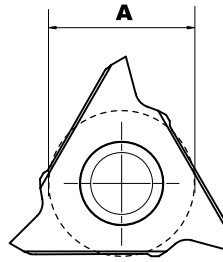
Designation		Dimension				Inserts	Spare Parts	
Left	Right	H	d 1	L	Dmin		Screw	Torx Wrench
S16N-KTGFL16	S16N-KTGFR16	15	16	160	20	TGF32R***	M4*8	T15
S20Q-KTGFL16	S20Q-KTGFR16	19	20	180	24	(R-hand inserts For L-hand Toolholder)		
S25R-KTGFL16	S25R-KTGFR16	23	25	200	29	TGF32L***		
S32S-KTGFL16	S32S-KTGFR16	30	32	250	36	(L-hand inserts For R-hand Toolholder)		

Unit:mm

GBA43
SHALLOW
GROOVING
INSERTS



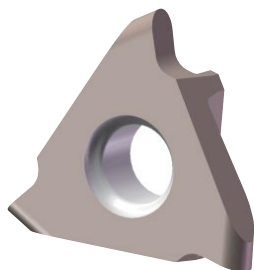
Right Hand Tool Shown



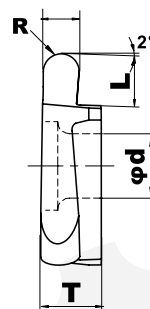
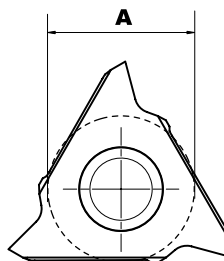
Unit:mm

Designation		Dimensions						Grades				
Right	Left	A	T	Φd	W	L	R	OTO7225	OTO7225C	OTO7226	H10	
GBA43R100	GBA43L100	12.7	4.76	5.4	1.00	2.2	0.1					
GBA43R120	GBA43L120				1.20							
GBA43R125	GBA43L125				1.25							
GBA43R140	GBA43L140				1.40							
GBA43R145	GBA43L145				1.45							
GBA43R150	GBA43L150				1.50	3.5	0.2					
GBA43R170	GBA43L170				1.70							
GBA43R175	GBA43L175				1.75							
GBA43R185	GBA43L185				1.85							
GBA43R200	GBA43L200				2.00							
GBA43R225	GBA43L225				2.25							
GBA43R230	GBA43L230				2.30							
GBA43R250	GBA43L250				2.50	5.0		0.3				
GBA43R265	GBA43L265				2.65							
GBA43R280	GBA43L280				2.80							
GBA43R300	GBA43L300				3.00							
GBA43R330	GBA43L330				3.30							
GBA43R350	GBA43L350				3.50							
GBA43R360	GBA43L360				3.60							
GBA43R400	GBA43L400				4.00							
GBA43R420	GBA43L420				4.20							
GBA43R450	GBA43L450				4.50							
GBA43R480	GBA43L480				4.80							

GBA43
SHALLOW
GROOVING
INSERTS



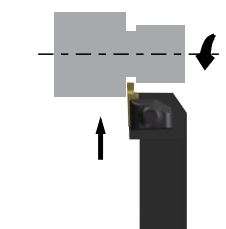
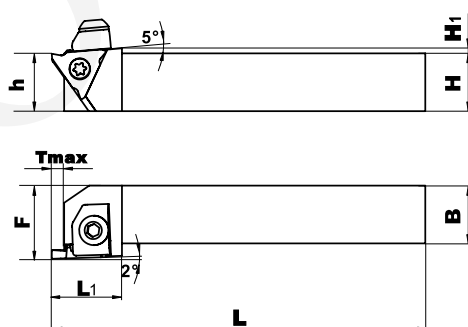
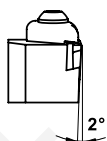
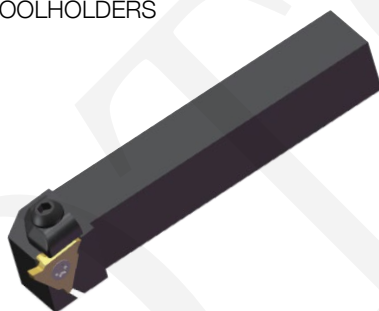
Right Hand Tool Shown



Unit:mm

Designation		Dimensions					Grades			
Right	Left	A	T	W	L	R	OTO7225	OTO7225C	OTO7226	H10
GBA43R100-R050	GBA43L100-R050			1.00	2.00	0.50	●	●	●	●
GBA43R120-R060	GBA43L120-R060			1.20	3.50	0.60	●	●	●	●
GBA43R150-R075	GBA43L150-R075			1.50		0.75	●	●	●	●
GBA43R200-R100	GBA43L200-R100			2.00		1.00	●	●	●	●
GBA43R250-R125	GBA43L250-R125			2.50	5.00	1.25	●	●	●	●
GBA43R300-R150	GBA43L300-R150			3.00		1.50	●	●	●	●
GBA43R350-R175	GBA43L350-R175			3.50		1.75	●	●	●	●
GBA43R400-R200	GBA43L400-R200			4.00		2.00	●	●	●	●

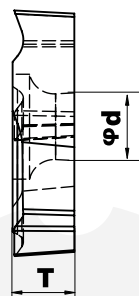
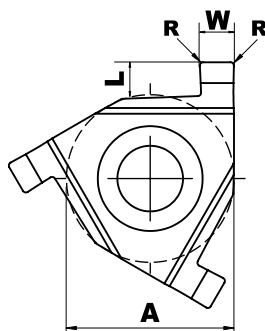
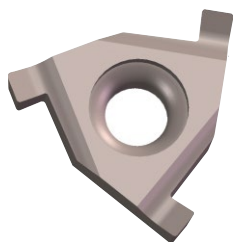
KGBA
EXTERNAL
GROOVING
TOOLHOLDERS



Right Hand Tool Shown

Designation		Dimension								Spare Parts			
Right	Left	H	B	h	H1	L	L1	F	Tmax	Clamp	Clamp Screw	Screw	Torx Wrench
KGBAR2020K22	KGBAL2020K22	20	20	20	4	125	25	25	5	HI1814	MI0625	M4*8	T15
KGBAR2525M22	KGBAL2525M22	25	25	25		150		32					
KGBAR3232P22	KGBAL3232P22	32	32	32		170		40					

T11/16
SHALLOW
GROOVING
INSERTS

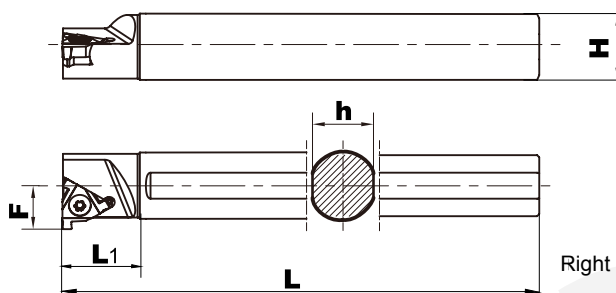
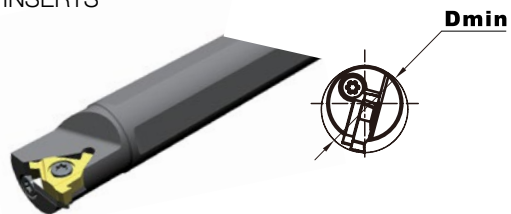


Unit:mm

Designation		Dimensions						Grades						
External	Intenal	A	T	φd	W	L	R	OTO7225	OTO7225C	OTO7226	H10			
T11E050	T11N050	6.35	3.18	2.9	0.50	1.00	0.05							
T11E060	T11N060				0.60									
T11E070	T11N070				0.70									
T11E080	T11N080				0.80	1.20								
T11E090	T11N090				0.90									
T11E100	T11N100				1.00									
T11E110	T11N110				1.10	1.50	0.10							
T11E120	T11N120				1.20									
T11E130	T11N130				1.30									
T11E140	T11N140				1.45									
T11E150	T11N150				1.50									
T11E160	T11N160				1.60			1.40						
T11E170	T11N170				1.70									
T11E180	T11N180				1.80				1.30					
T11E200	T11N200				2.00			1.20						
T16E050	T16N050				9.525	3.65	4.0	0.50	1.60	0.05				
T16E060	T16N060							0.60						
T16E070	T16N070	0.70												
T16E080	T16N080	0.80	2.10	0.10										
T16E090	T16N090	0.90												
T16E100	T16N100	1.00												
T16E110	T16N110	1.10												
T16E120	T16N120	1.20												
T16E130	T16N130	1.30												
T16E140	T16N140	1.40												
T16E150	T16N150	1.50												
T16E160	T16N160	1.60												
T16E170	T16N170	1.70												
T16E180	T16N180	1.80												
T16E200	T16N200	2.00	2.00											
T16E215	T16N215	2.15												
T16E230	T16N230	2.30												
T16E250	T16N250	2.50												
T16E265	T16N265	2.65	2.20											
T16E300	T16N300	3.00	2.00											
T16E100-R050	T16N100-R050	1.00	2.10	0.50										
T16E120-R060	T16N120-R060	1.20		0.60										
T16E150-R075	T16N150-R075	1.50		0.75										
T16E200-R100	T16N200-R100	2.00	2.00	1.00										
T16E250-R125	T16N250-R125	2.50		1.25										
T16E300-R150	T16N300-R150	3.00		1.50										

T11/16N

SHALLOW
GROOVING
INSERTS



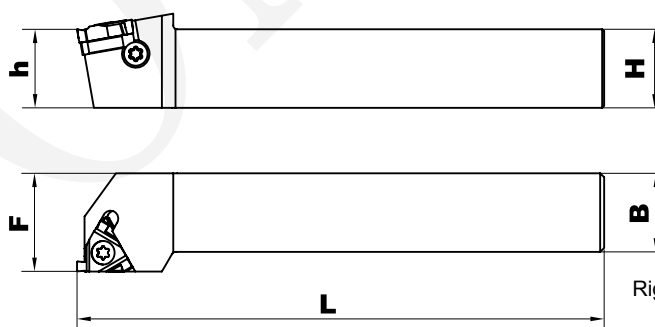
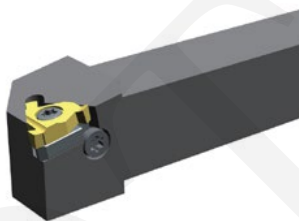
Right Hand Tool Shown

Unit:mm

Designation	Dimension						Inserts	Spare Parts	
	H	h	F	L1	L	Dmin		Screw	Torx Wrench
SNR0010H11	10	9	7.4	12	100	12	T11N***	M2.5*8	T8
SNR0012K11	12	11	8.4	15	125	15			
SNR0013M11	13	12	8.9	25	150	15			
SNR0013M16	13	12	10.2	25	150	16	T16N***	M3.5*12	T15
SNR0016M16	16	15	11.7	30	150	19			
SNR0020Q16	20	18	13.7	32	180	24			
SNR0025R16	25	23	16.2	35	200	29			
SNR0032S16	32	30	19.7	36	250	36			
SNR0040T16	40	37	23.7	45	300	44			
SNR0050U16	50	46	28.7	55	350	54			

T16E

SHALLOW
GROOVING
INSERTS

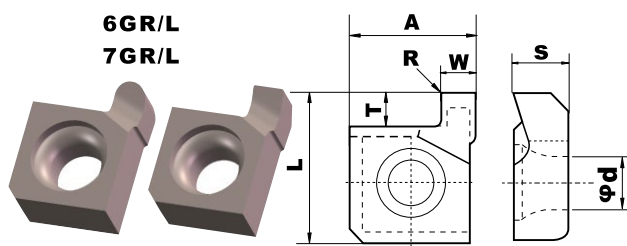


Right Hand Tool Shown

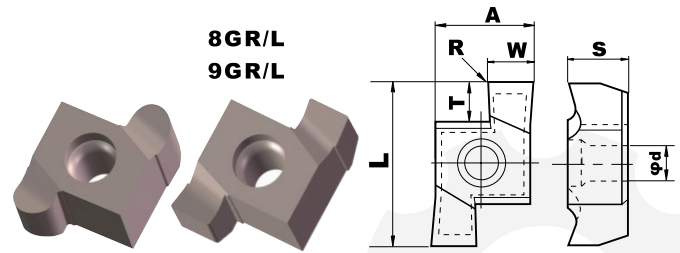
Unit:mm

Designation	Dimension					Inserts	Spare Parts	
	H	h	B	F	L		Screw	Torx Wrench
SER1212F16	12	12	12	16	80	T16E***	M3.5*12	T15
SER1616H16	16	16	16	20	100			
SER2020K16	20	20	20	25	125			
SER2525M16	25	25	25	32	150			
SER3232P16	32	32	32	40	170			

GR
SHALLOW
GROOVING
INSERTS



Right Hand Tool Shown

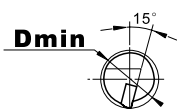


Right Hand Tool Shown

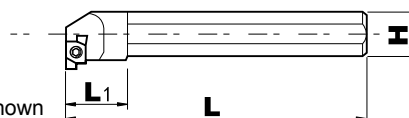
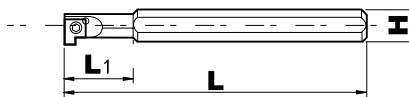
Unit:mm

Designation		Dimensions							Grades						
Right	Left	L	A	S	φd	W	T	R	OTO7225	OTO7225C	OTO7226	H10			
6GR100	6GL100	6.44	5.60	2.34	2.30	1.00	1.50	0.20							
6GR150	6GL150					1.50									
6GR200	6GL200					2.00									
7GR100	7GL100	7.36		3.08	1.00										
7GR150	7GL150				1.50										
7GR200	7GL200				2.00										
7GR100-R050	7GL100-R050				1.00										
7GR150-R075	7GL150-R075				1.50										
7GR200-R100	7GL200-R100				2.00										
8GR100	8GL100	10.16	6.20	3.87	2.58	1.00	2.00	0.50							
8GR150	8GL150					1.50									
8GR200	8GL200					2.00									
8GR250	8GL250					2.50									
8GR300	8GL300					3.00									
8GR350	8GL350					3.50									
8GR100-R050	8GL100-R050				1.00					1.00	0.75				
8GR150-R075	8GL150-R075				1.50										
8GR200-R100	8GL200-R100				2.00										
8GR250-R125	8GL250-R125				2.50										
8GR300-R150	8GL300-R150				3.00										
8GR350-R175	8GL350-R175				3.50										
9GR100	9GL100	12.95	7.70	4.66	2.86	1.00	3.00	0.20							
9GR150	9GL150					1.50									
9GR200	9GL200					2.00									
9GR250	9GL250					2.50									
9GR300	9GL300					3.00									
9GR350	9GL350					3.50									
9GR100-R050	9GL100-R050				1.00				1.00	0.50					
9GR150-R075	9GL150-R075				1.50										
9GR200-R100	9GL200-R100				2.00										
9GR250-R125	9GL250-R125				2.50										
9GR300-R150	9GL300-R150				3.00										
9GR350-R175	9GL350-R175				3.50										

GR
SHALLOW
GROOVING
INSERTS



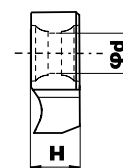
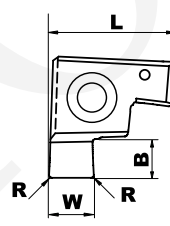
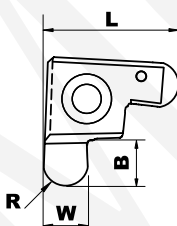
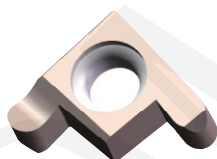
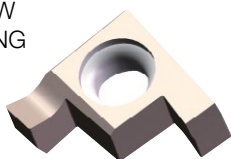
Right Hand Tool Shown



Unit:mm

Designation		Dimension				Inserts	Spare Parts	
Right	Left	H	L ₁	L	Dmin		Screw	Torx Wrench
SNGR08H06	SNGL08H06	08	18	100	8	6GR/L ***	M2.0*6	T6
SNGR08H07	SNGL08H07	08	23	100	10	7GR/L ***	M2.2*6	
SNGR10K07	SNGL10K07	10	29	125	12			
SNGR10K08	SNGL10K08	10	15	125	14	8GR/L ***		
SNGR12M08	SNGL12M08	12	18	125	16			
SNGR16Q09	SNGL16Q09	16	20	180	20	9GR/L ***	M2.5*8	T7
SNGR20R09	SNGL20R09	20	25	200	24			

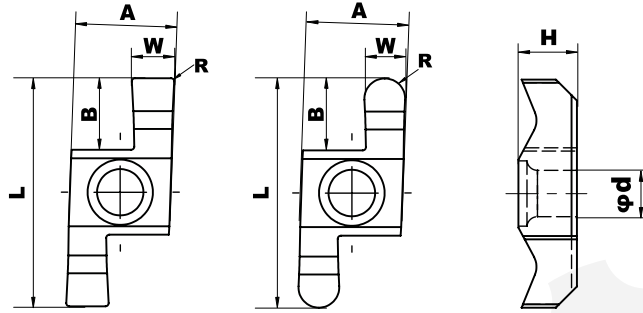
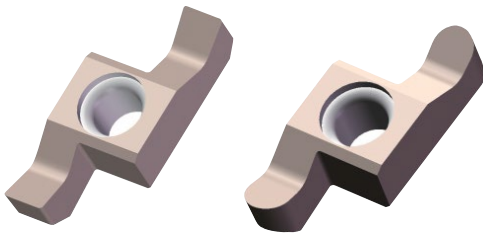
GR/L-A/B
SHALLOW
GROOVING
INSERTS



Right Hand Tool Shown Unit:mm

Designation		Dimensions						Grades			
Right	Left	L	H	ϕd	W	B	R	OTO7225	OTO7225C	OTO7226	H10
GER100-A	GEL100-A	6.69	2.58	2.50	1.00	1.50	0.10	●	●	●	●
GER120-A	GEL120-A				1.20			●	●	●	●
GER150-A	GEL150-A				1.50			●	●	●	●
GER200-A	GEL200-A				2.00			●	●	●	●
GER100-050AR	GEL100-050AR				1.00		0.50	●	●	●	●
GER150-075AR	GEL150-075AR				1.50		0.75	●	●	●	●
GER200-100AR	GEL200-100AR				2.00		1.00	●	●	●	●
GER100-B	GEL100-B	8.46	3.18	2.8	1.00	2.20	0.10	●	●	●	●
GER120-B	GEL120-B				1.20			●	●	●	●
GER150-B	GEL150-B				1.50			●	●	●	●
GER200-B	GEL200-B				2.00			●	●	●	●
GER250-B	GEL250-B				2.50		0.20	●	●	●	●
GER300-B	GEL300-B				3.00			●	●	●	●
GER100-050BR	GEL100-050BR				1.00			●	●	●	●
GER120-060BR	GEL120-060BR				1.20		0.60	●	●	●	●
GER150-075BR	GEL150-075BR				1.50		0.75	●	●	●	●
GER200-100BR	GEL200-100BR				2.00		1.00	●	●	●	●
GER250-125BR	GEL250-125BR				2.50		1.25	●	●	●	●
GER300-150BR	GEL300-150BR				3.00		1.50	●	●	●	●

GER/L-C/D/E
GROOVING
INSERTS



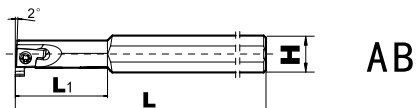
Right Hand Tool Shown

Unit:mm

Designation		Dimensions							Grades			
Right	Left	L	A	H	ϕd	W	B	R	OTO7225	OTO7225C	OTO7226	H10
GER100-C	GEL100-C	11.48	5.8	4.05	2.80	1.00	2.50	0.10	●	●	●	●
GER120-C	GEL120-C					1.20			●	●	●	●
GER150-C	GEL150-C					1.50			●	●	●	●
GER200-C	GEL200-C					2.00			●	●	●	●
GER250-C	GEL250-C					2.50			●	●	●	●
GER300-C	GEL300-C					3.00			●	●	●	●
GER350-C	GEL350-C					3.50			●	●	●	●
GER100-050CR	GEL100-050CR					1.00		0.50	●	●	●	●
GER120-060CR	GEL120-060CR					1.20		0.60	●	●	●	●
GER150-075CR	GEL150-075CR					1.50		0.75	●	●	●	●
GER200-100CR	GEL200-100CR					2.00		1.00	●	●	●	●
GER250-125CR	GEL250-125CR					2.50		1.25	●	●	●	●
GER300-150CR	GEL300-150CR					3.00		1.50	●	●	●	●
GER100-D	GEL100-D	16.44	6.8	5.05	3.40	1.00	4.50	0.10	●	●	●	●
GER120-D	GEL120-D					1.20			●	●	●	●
GER150-D	GEL150-D					1.50			●	●	●	●
GER200-D	GEL200-D					2.00			●	●	●	●
GER250-D	GEL250-D					2.50		0.20	●	●	●	●
GER300-D	GEL300-D					3.00			●	●	●	●
GER350-D	GEL350-D					3.50			●	●	●	●
GER400-D	GEL400-D					4.00			●	●	●	●
GER100-050DR	GEL100-050DR					1.00		0.50	●	●	●	●
GER120-060DR	GEL120-060DR					1.20		0.60	●	●	●	●
GER150-075DR	GEL150-075DR					1.50		0.75	●	●	●	●
GER200-100DR	GEL200-100DR					2.00		1.00	●	●	●	●
GER250-125DR	GEL250-125DR					2.50		1.25	●	●	●	●
GER300-150DR	GEL300-150DR					3.00		1.50	●	●	●	●
GER350-175DR	GEL350-175DR					3.50		1.75	●	●	●	●
GER400-200DR	GEL400-200DR					4.00		2.00	●	●	●	●
GER100-E	GEL100-E	21.66	9.54	5.55	4.40	1.00	6.50	0.10	●	●	●	●
GER120-E	GEL120-E					1.20			●	●	●	●
GER150-E	GEL150-E					1.50			●	●	●	●
GER200-E	GEL200-E					2.00			●	●	●	●
GER250-E	GEL250-E					2.50		0.20	●	●	●	●
GER300-E	GEL300-E					3.00			●	●	●	●
GER350-E	GEL350-E					3.50			●	●	●	●
GER400-E	GEL400-E					4.00			●	●	●	●
GER450-E	GEL450-E					4.50			●	●	●	●
GER500-E	GEL500-E					5.00			●	●	●	●
GER100-050ER	GEL100-050ER					1.00		0.50	●	●	●	●
GER120-060ER	GEL120-060ER					1.20		0.60	●	●	●	●
GER150-075ER	GEL150-075ER					1.50		0.75	●	●	●	●
GER200-100ER	GEL200-100ER					2.00		1.00	●	●	●	●
GER250-125ER	GEL250-125ER					2.50		1.25	●	●	●	●
GER300-150ER	GEL300-150ER					3.00		1.50	●	●	●	●
GER350-175ER	GEL350-175ER					3.50		1.75	●	●	●	●
GER400-200ER	GEL400-200ER					4.00		2.00	●	●	●	●
GER450-225ER	GEL450-225ER					4.50		2.25	●	●	●	●
GER500-250ER	GEL500-250ER					5.00		2.50	●	●	●	●

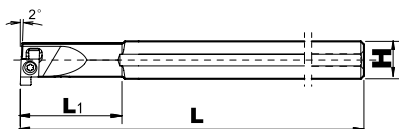
GER/L-A/B/C/D/E TOOLHOLDER

Dmin



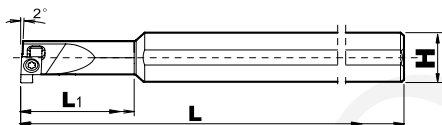
AB

Dmin



C

Dmin



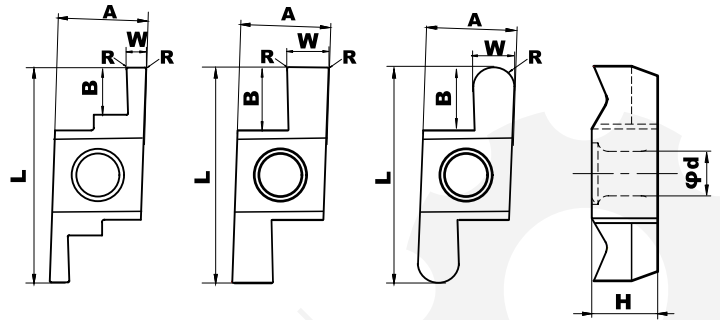
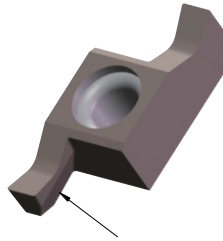
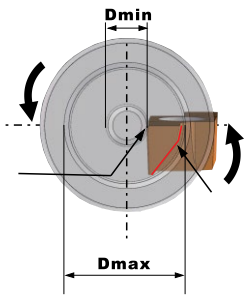
D/E

Right Hand Tool Shown

Unit:mm

Designation		Dimension				Inserts	Spare Parts	
Right	Left	H	L ₁	L	Dmin		Screw	Torx Wrench
SIGER0808A-EH	SIGEL0808A-EH	08	20	100	8	GER/L***-A	M2.2*6	T6
SIGER1010B-EH	SIGEL1010B-EH	10	25	125	10	GER/L***-B	M2.5*8	T7
SIGER1210B-EH	SIGEL1210B-EH	10	30		12			
SIGER1412C-EH	SIGEL1412C-EH	12	33	150	14	GER/L***-C		
SIGER1612C-EH	SIGEL1612C-EH	12	20		16			
SIGER1616C-EH	SIGEL1616C-EH	16	36	160	16			
SIGER2020D-EH	SIGEL2020D-EH	20	40	180	20	GER/L***-D	M3*10	T8
SIGER2525D-EH	SIGEL2525D-EH	25	45	200	25			
SIGER2525E-EH	SIGEL2525E-EH	25	45		25	GER/L***-E	M4*12	T15
SIGER3232E-EH	SIGEL3232E-EH	32	55	220	32			

GER/L-DD/EE
FACEGROOVING
INSERTS

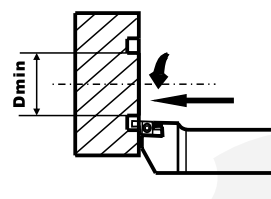
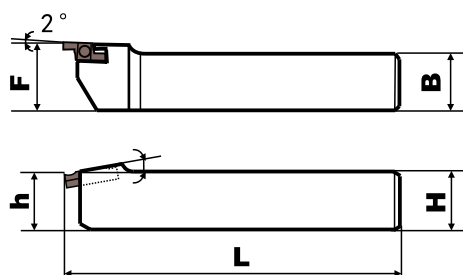


Right Hand Tool Shown

Unit:mm

Designation		Dimensions									Toolholder	Grades			
Right	Left	A	L	ϕd	H	W	B	R	Dmin	Dmax		OTO7225	OTO7225C	OTO7226	H10
GER100-DD	GEL100-DD	6.80	16.44	3.4	5.05	1.00	2.50	0.10	15	+ ∞	SGEL** SGEL** SGEL** SGEL** (For Right-hand inserts)	●	●	●	●
GER120-DD	GEL120-DD					1.20	2.50	0.10	15			●	●	●	●
GER150-DD	GEL150-DD					1.50	3.20	0.10	15			●	●	●	●
GER200-DD	GEL200-DD					2.00	3.20	0.10	15			●	●	●	●
GER250-DD	GEL250-DD					2.50	4.50	0.15	10			●	●	●	●
GER300-DD	GEL300-DD					3.00	4.50	0.15	10			●	●	●	●
GER350-DD	GEL350-DD					3.50	4.50	0.15	10			●	●	●	●
GER400-DD	GEL400-DD					4.00	4.50	0.15	10			●	●	●	●
GER100-R050DD	GEL100-R050DD					1.00	2.50	0.50	15			●	●	●	●
GER120-R060DD	GEL120-R060DD					1.20	3.20	0.60	15			●	●	●	●
GER150-R075DD	GEL150-R075DD					1.50	3.20	0.75	15			●	●	●	●
GER200-R100DD	GEL200-R100DD					2.00	4.50	1.00	10			●	●	●	●
GER250-R125DD	GEL250-R125DD					2.50	4.50	1.25	10			●	●	●	●
GER300-R150DD	GEL300-R150DD					3.00	4.50	1.50	10			●	●	●	●
GER350-R175DD	GEL350-R175DD					3.50	4.50	1.75	10			●	●	●	●
GER400-R200DD	GEL400-R200DD					4.00	4.50	2.00	10			●	●	●	●
GER150-EE	GEL150-EE	9.54	21.66	4.4	5.55	1.50	3.20	0.15	15		B-SGEL** B-SGEL** B-SGEL** (For Left-hand inserts) B-SGER** B-SGER** B-SGER** (For Right-hand inserts)	●	●	●	●
GER200-EE	GEL200-EE					2.00	4.50	0.15	15			●	●	●	●
GER250-EE	GEL250-EE					2.50	6.50	0.15	10			●	●	●	●
GER300-EE	GEL300-EE					3.00	6.50	0.15	10			●	●	●	●
GER350-EE	GEL350-EE					3.50	6.50	0.15	10			●	●	●	●
GER400-EE	GEL400-EE					4.00	6.50	0.15	10			●	●	●	●
GER450-EE	GEL450-EE					4.50	6.50	0.15	10			●	●	●	●
GER500-EE	GEL500-EE					5.00	6.50	0.15	10			●	●	●	●
GER150-R075EE	GEL150-R075EE					1.50	3.20	0.75	15			●	●	●	●
GER200-R100EE	GEL200-R100EE					2.00	4.50	1.00	10			●	●	●	●
GER250-R125EE	GEL250-R125EE					2.50	6.50	1.25	10			●	●	●	●
GER300-R150EE	GEL300-R150EE					3.00	6.50	1.50	10			●	●	●	●
GER350-R175EE	GEL350-R175EE					3.50	6.50	1.75	10			●	●	●	●
GER400-R200EE	GEL400-R200EE					4.00	6.50	2.00	10			●	●	●	●
GER450-R225EE	GEL450-R225EE					4.50	6.50	2.25	10			●	●	●	●
GER500-R250EE	GEL500-R250EE					5.00	6.50	2.50	10			●	●	●	●

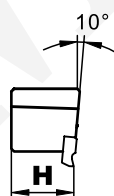
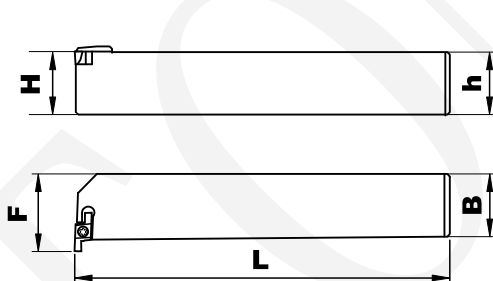
GER/L-DD/EE
FACEGROOVING
TOOLHOLDER



Left Hand Tool Shown

Unit:mm

Designation		Dimension						Inserts	Spare Parts	
Right	Left	H	B	h	F	L	Dmin		Screw	Torx Wrench
SGER1212H-D	SGEL1212H-D	12	12	12	16	100	10	GER**DD/EE (For Left-hand Toolholder)	M3*8	T10
SGER1616H-D	SGEL1616H-D	16	16	16	20	100				
SGER2020K-D	SGEL2020K-D	20	20	20	25	125				
SGER2525M-D	SGEL2525M-D	25	25	25	32	150				
SGER1212H-E	SGEL1212H-E	12	12	12	16	100		GEL**DD/EE (For Right-hand Toolholder)	M4*12	T15
SGER1616H-E	SGEL1616H-E	16	16	16	20	100				
SGER2020K-E	SGEL2020K-E	20	20	20	25	125				
SGER2525M-E	SGEL2525M-E	25	25	25	32	150				

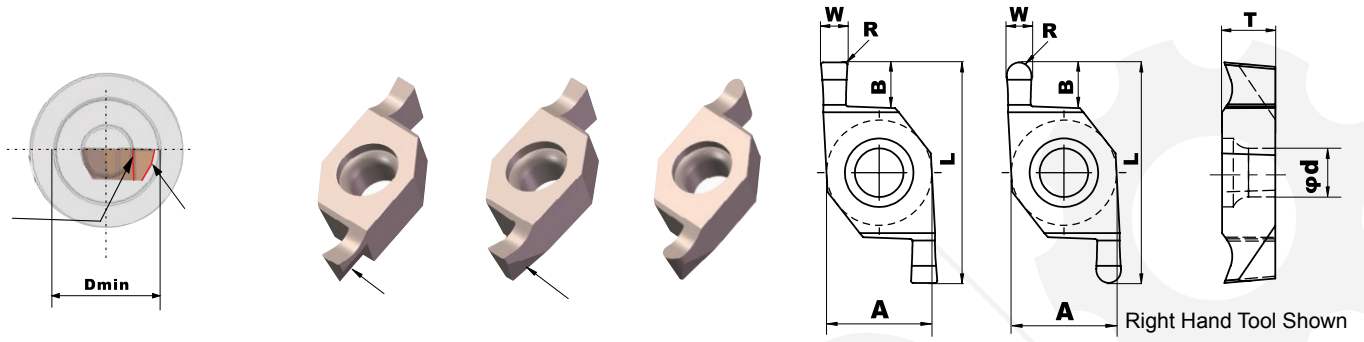


Right Hand Tool Shown

Unit:mm

Designation		Dimension						Inserts	Spare Parts	
Right	Left	H	B	h	F	L	Dmin		Screw	Torx Wrench
B-SGER1212H-D	B-SGEL1212H-D	12	12	12	18	100	10	GEL**DD/EE (For Left-hand Toolholder)	M3*8	T10
B-SGER1616H-D	B-SGEL1616H-D	16	16	16	22	100				
B-SGER2020K-D	B-SGEL2020K-D	20	20	20	26	125				
B-SGER2525M-D	B-SGEL2525M-D	25	25	25	31	150				
B-SGER1212H-E	B-SGEL1212H-E	12	12	12	19	100		GER**DD/EE (For Right-hand Toolholder)	M4*12	T15
B-SGER1616H-E	B-SGEL1616H-E	16	16	16	23	100				
B-SGER2020K-E	B-SGEL2020K-E	20	20	20	27	125				
B-SGER2525M-E	B-SGEL2525M-E	25	25	25	32	150				

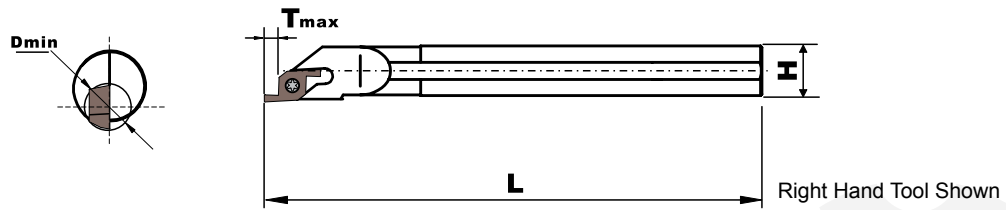
VNF,VC11/16
INTERNAL
FACEGROOVING
TOOLHOLDER



Unit:mm

Designation		Dimensions								Toolholder	Grades				
Right	Left	A	L	φd	H	W	B	R	Dmin		OTO7225	OTO7225C	OTO7226	H10	
VNF100RD6	VNF100LD6	6.35	14.0	2.8	2.38	1.00	1.50	0.05	06	SVNFR**	●	●	●	●	
VNF150RD6	VNF150LD6					1.50	2.50				●	●	●	●	
VNF200RD6	VNF200LD6					2.00	3.00				●	●	●	●	
VNF100RD6-R050DMC	VNF100LD6-R050DMC					1.00	1.50	0.50		●	●	●	●		
VNF150RD6-R075DMC	VNF150LD6-R075DMC					1.50	2.50	0.75		●	●	●	●		
VNF200RD6-R100DMC	VNF200LD6-R100DMC					2.00	3.00	1.00		●	●	●	●		
VC1103R100	VC1103L100	6.35	14.0	2.8	3.18	1.00	2.30		14	SGIVFR** SGIVFL**	●	●	●	●	
VC1103R150	VC1103L150					1.50					●	●	●	●	
VC1103R200	VC1103L200					2.00	2.80				●	●	●	●	
VC1103R250	VC1103L250					2.50					●	●	●	●	
VC1103R100-R050	VC1103L100-R050					1.00	2.30	0.50			●	●	●	●	
VC1103R150-R075	VC1103L150-R075					1.50		0.75			●	●	●	●	
VC1103R200-R100	VC1103L200-R100					2.00	2.80	1.00			●	●	●	●	
VC1103R250-R100	VC1103L250-R100					2.50		1.25			●	●	●	●	
VC1604R100	VC1604L100	9.525	19.0	4.4	4.76	1.00	2.60	0.15	20		SGIVFR**	●	●	●	●
VC1604R150	VC1604L150					1.50	3.60	0.20				●	●	●	●
VC1604R200	VC1604L200					2.00	4.10				0.30	●	●	●	●
VC1604R250	VC1604L250					2.50		SGIVFL**				●	●	●	●
VC1604R300	VC1604L300					3.00	5.10					●	●	●	●
VC1604R350	VC1604L350					3.50						●	●	●	●
VC1604R400	VC1604L400					4.00	4.60				●	●	●	●	
VC1604R100-R050	VC1604L100-R050					1.00	2.60	0.50			●	●	●	●	
VC1604R150-R075	VC1604L150-R075					1.50	3.60	0.75		●	●	●	●		
VC1604R200-R100	VC1604L200-R100					2.00	4.10	1.00		●	●	●	●		
VC1604R250-R125	VC1604L250-R125					2.50	5.10	1.25		●	●	●	●		
VC1604R300-R150	VC1604L300-R150					3.00		1.50		●	●	●	●		
VC1604R350-R175	VC1604L350-R175					3.50		1.75		●	●	●	●		
VC1604R400-R200	VC1604L400-R200					4.00		2.00		●	●	●	●		

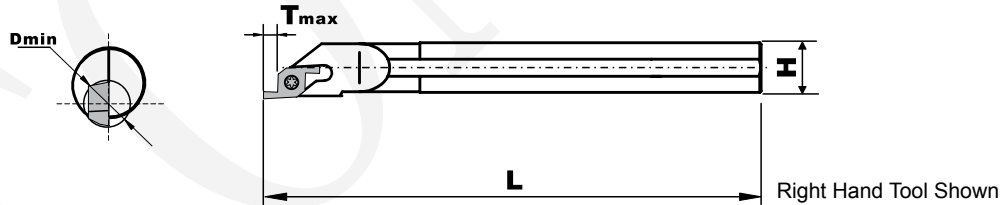
VNF
INTERNAL
FACEGROOVING
TOOLHOLDER



Unit:mm

Designation		Dimension				Inserts	Spare Parts	
Right	Left	H	L	T _{max}	D _{min}		Screw	Torx Wrench
S10K-SVNFR11	S10K-SVNFR11	10	125	3.0	6	VNF***	M2.5*8	T8
S12M-SVNFR11	S12M-SVNFR11	12	150					
S16Q-SVNFR11	S16Q-SVNFR11	16	180					
S20Q-SVNFR11	S20Q-SVNFR11	20						
S25Q-SVNFR11	S25Q-SVNFR11	25						

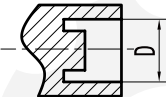
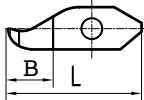
VC11/16
INTERNAL
FACEGROOVING
TOOLS



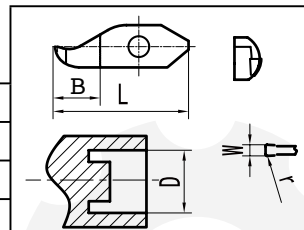
Unit:mm

Designation		Dimension				Inserts	Spare Parts	
Right	Left	H	L	T _{max}	D _{min}		Screw	Torx Wrench
SGIVFR10K11	SGIVFL10K11	10	125	2.8	14	VC1103R***	M2.5*8	T8
SGIVFR12M11	SGIVFL12M11	12	150					
SGIVFR16Q11	SGIVFL16Q11	16	180					
SGIVFR16Q16	SGIVFL16Q16	16						
SGIVFR20R16	SGIVFL20R16	20	200	5.1	20	VC1604R***	M4.0*12	T15
SGIVFR25R16	SGIVFL25R16	25						

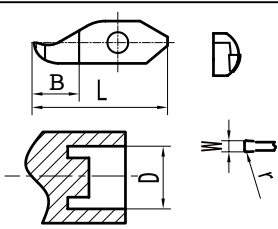
INTERNAL
FACEGROOVING
INSERTS

Model		L		☺ Good recommendation ☹ General recommendation 					
SPDR**DM06A		13.6							
SPDR**DM10		25.1							
				Material Recommendation			P	☺	
							M	☺	
							K	☹	
							N		☺
Insert	Right Hand	Max D		width	Depth H	Radius	PM125	DK110	
		min	max	WBr	B	r			Toolholders
	SPDR080DM06A	6		0.8	4.5	0.1	○	○	KSPDR0010F06A KSPDR0012F06A
	SPDR100DM06A	6		1.0	6	0.15	○	○	
	SPDR120DM06A	6		1.2	6	0.15	○	○	
	SPDR150DM06A	6		1.5	6	0.15	○	○	
	SPDR175DM06A	6		1.75	6	0.15	○	○	
	SPDR200DM06A	6		2.0	6	0.15	○	○	
	SPDR100DM10	10	32	1.0	5.4	0.2	●	○	KSPDR0012F10 KSPDR0016F10 KSPDR0020F10
	SPDR150DM10	10	32	1.5	6.4	0.2	●	○	
	SPDR200DM10	10		2.0	7.8	0.2	●	○	
	SPDR250DM10	10		2.5	9.9	0.2	●	○	
	SPDR300DM10	10		3.0	9.9	0.2	●	○	

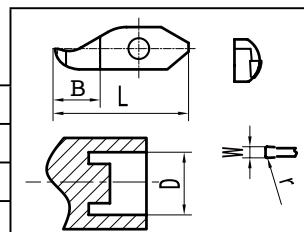
☺ Good recommendation
☹ General recommendation

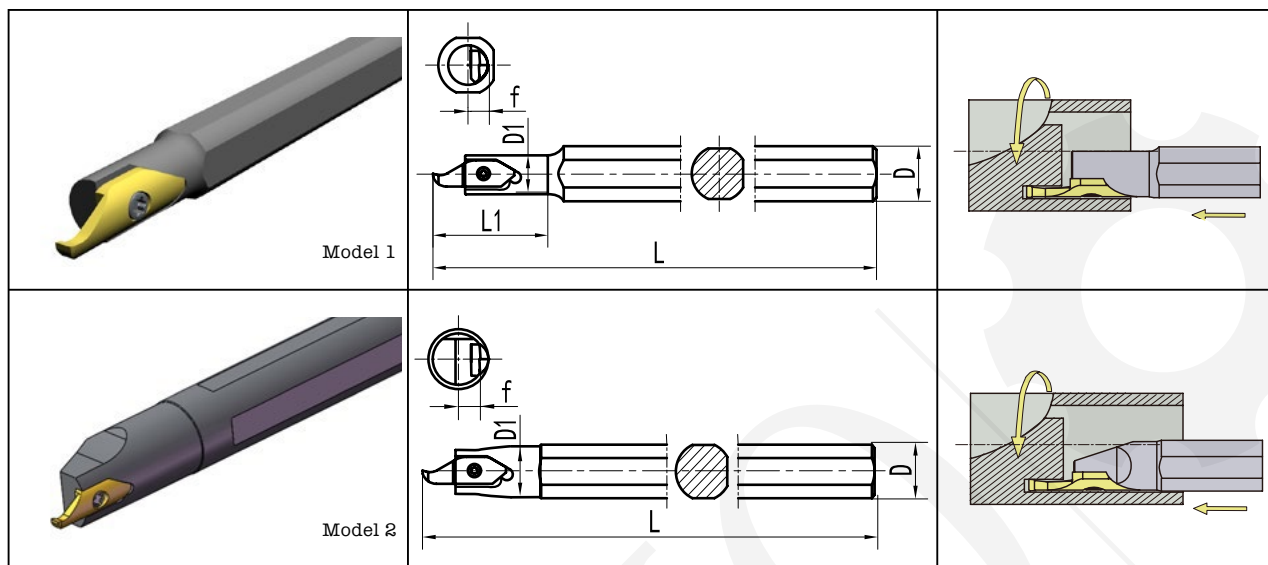


INTERNAL BALL TYPE
FACEGROOVING
INSERTS

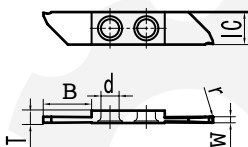
Model		L		☺ Good recommendation ☹ General recommendation												
SPDR**DM06		13.6									Material Recommendation			P	☺	
SPDR**DM10		25.1												M	☺	
														K	☹	
														N		☺
Insert	Right Hand	Max D		width	Depth H	Radius	PM125	DK110								
		min	max	WBr	B	r										
	SPDR080DM06A-R0.40	6		0.80	4.5	0.40	○	○	KSPDR0010F06A KSPDR0012F06A							
	SPDR100DM06A-R0.50	6		1.00	6.0	0.50	○	○								
	SPDR120DM06A-R0.60	6		1.20	6.0	0.60	○	○								
	SPDR150DM06A-R0.75	6		1.50	6.0	0.75	○	○								
	SPDR180DM06A-R0.90	6		1.80	6.0	0.90	○	○								
	SPDR200DM06A-R1.00	6		2.00	6.0	1.00	○	○								
	SPDR100DM10-R0.50	10	32	1.00	5.4	0.50	●	○	KSPDR0012F10 KSPDR0016F10 KSPDR0020F10							
	SPDR150DM10-R0.75	10	32	1.50	6.4	0.75	●	○								
	SPDR200DM10-R1.00	10		2.00	7.8	1.00	●	○								

☺ Good recommendation
☹ General recommendation

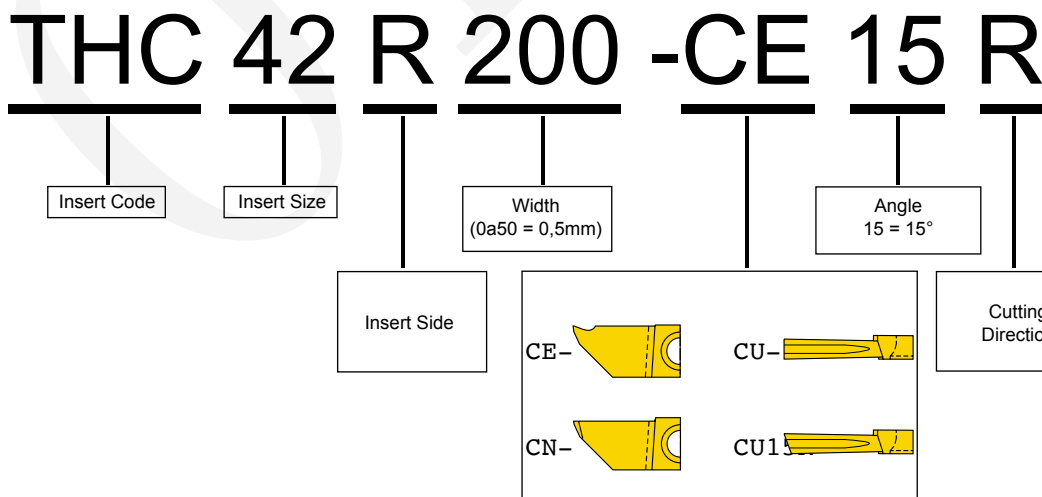


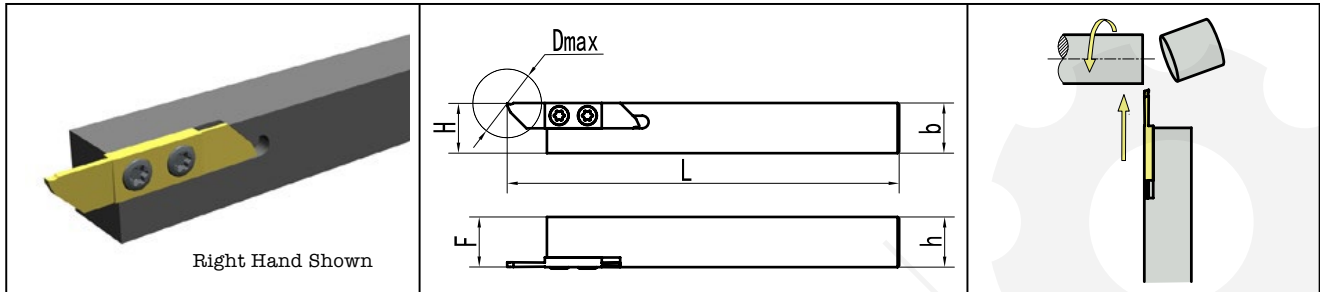


Toolholder Type	Insert Type	Type	Dimensions (mm)					Insert Screw	Torx Key
			D	D1	L	L1	f		
KSPDR0010F06A	SPDR**DM06A	Model 1	10	6	90	18	3	L60M2*6	T-6
KSPDR0012H06A			12	6	100	18	3	L60M2*6	T-6
KSPDR0016K06A			16	6	125	18	3	L60M2*6	T-6
KSPDR0012H10	SPDR**DM10	Model 1	12	10	100	32	5.2	L60M3*8	T-10
KSPDR0016K10			16	10	125	36	5.2	L60M3*8	T-10
KSPDR0020M10			20	10	150	42	5.2	L60M3*8	T-10
KSPDR0012K10F		Model 2	12	11.5	125	-	6.8	L60M3*8	T-10
KSPDR0016M10F			16	15.5	150	-	8.8	L60M3*8	T-10
KSPDR0020P10F			20	19.5	170	-	10.8	L60M3*8	T-10

Model	IC (mm)	d (mm)	☺ Good recommendation ☹ General recommendation											
THC42**	7.94	4.35												
			Material Recommendation			P	☺							
						M	☺							
						K	☹							
						N		☺						
Insert	Right Hand	Left Hand	width	Depth H	Radius	Angle	PM125		DK110			Toolholder		
			W	B	r	α	R	L	R	L	T			
	THC42R100-CE	THC42L100-CE	1.0	5	0.06	0	●		○		3.07	- THCR1010J42 THCR1212J42 THCR1616J42 THCR2020K42 THCR2525M42		
	THC42R150-CE	THC42L150-CE	1.5	8.5	0.06	0	●		○		3.07			
	THC42R200-CE	THC42L200-CE	2.0	11.5	0.1	0	●		○		3.07			
	THC42R250-CE	THC42L250-CE	2.5	11.5	0.1	0	●		○		3.07			
	THC42R300-CE	THC42L300-CE	3.0	11.5	0.2	0	●		○		3.07			
	THC42R340-CE	THC42L340-CE	3.4	11.5	0.2	0					3.47			
	THC42R100-CE15R	THC42L100-CE15R	1.0	5	0.06	15	●		○		3.07			
	THC42R150-CE15R	THC42L150-CE15R	1.5	8.5	0.06	15	●		○		3.07			
	THC42R200-CE15R	THC42L200-CE15R	2.0	11.5	0.1	15	●		○		3.07			
	THC42R250-CE15R	THC42L250-CE15R	2.5	11.5	0.1	15	●		○		3.07			
	THC42R300-CE15R	THC42L300-CE15R	3.0	11.5	0.2	15	●		○		3.07			
	THC42R340-CE15R	THC42L340-CE15R	3.4	11.5	0.2	15					3.47			
	THC42R200-CN	THC42L200-CN	2.0	11.5	0.1	0	●		○		3.07	- THCL1010J42 THCL1212J42 THCL1616J42 THCL2020K42 THCL2525M42		
	THC42R250-CN	THC42L250-CN	2.5	11.5	0.1	0	●		○		3.07			
	THC42R300-CN	THC42L300-CN	3.0	11.5	0.2	0	●		○		3.07			
	THC42R200-CU15R	THC42L200-CU15R	2.0	11.5	0.1	15	●		○		3.07			
	THC42R250-CU15R	THC42L250-CU15R	2.5	11.5	0.1	15	●		○		3.07			
	THC42R300-CU15R	THC42L300-CU15R	3.0	11.5	0.2	15	●		○		3.07			

Representation method for insert type

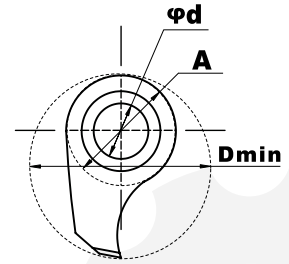
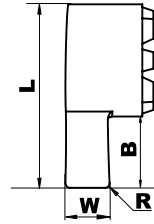
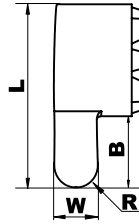
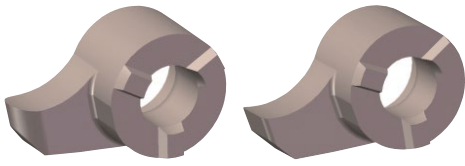




Toolholder Type		Insert Type	Dimensions (mm)						Insert Screw	Torx Key
			h	b	H	F	L	D max		
THCR	1010J42	THC42R**	10	10	10	10	110	23	L60M4*10	T-15
	1212J42		12	12	12	12				
	1616J42		16	16	16	16				
	2020K42		20	20	20	20	125			
	2525M42		25	25	25	25	150			
THCL	1010J42	THC42L**	10	10	10	10	110	23	L60M4*10	T-15
	1212J42		12	12	12	12				
	1616J42		16	16	16	16				
	2020K42		20	20	20	20	125			
	2525M42		25	25	25	25	150			



MB
INTERNAL
GROOVING
INSERTS

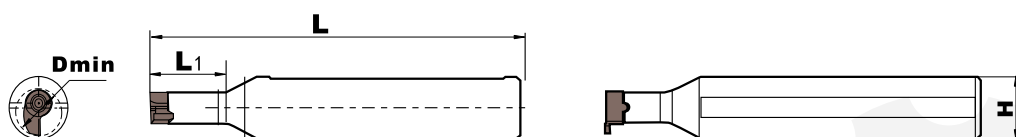


Right Hand Inserts Shown

Unit:mm

Designation		Dimensions							Grades			
Right	Left	L	A	Dmin	φd	W	B	R	OTO7225	OTO7225C	OTO7226	H10
MB05GR100D09	MB05GL100D09	8.3	5.0	9.0	2.50	1.00	2.80	0.10				
MB05GR150D09	MB05GL150D09					1.50						
MB05GR200D09	MB05GL200D09					2.00						
MB05GR250D09	MB05GL250D09					2.50		0.20				
MB05GR300D09	MB05GL300D09					3.00						
MB05GR100-R050D09	MB05GL100-R050D09					1.00		0.50				
MB05GR150-R075D09	MB05GL150-R075D09					1.50		0.75				
MB05GR200-R100D09	MB05GL200-R100D09					2.00		1.00				
MB05GR250-R125D09	MB05GL250-R125D09					2.50		1.25				
MB05GR300-R150D09	MB05GL300-R150D09					3.00		1.50				
MB07GR100D12	MB07GL100D12	11.0	7.0	12.0	3.40	1.00	3.50	0.10				
MB07GR150D12	MB07GL150D12					1.50						
MB07GR200D12	MB07GL200D12					2.00						
MB07GR250D12	MB07GL250D12					2.50		0.20				
MB07GR300D12	MB07GL300D12					3.00						
MB07GR100-R050D12	MB07GL100-R050D12					1.00		0.50				
MB07GR150-R075D12	MB07GL150-R075D12					1.50		0.75				
MB07GR200-R100D12	MB07GL200-R100D12					2.00		1.00				
MB07GR250-R125D12	MB07GL250-R125D12					2.50		1.25				
MB07GR300-R150D12	MB07GL300-R150D12					3.00		1.50				
MB09GR100D17	MB09GL100D17	16.0	9.0	17.0	4.40	1.00	6.50	0.10				
MB09GR150D17	MB09GL150D17					1.50						
MB09GR200D17	MB09GL200D17					2.00						
MB09GR250D17	MB09GL250D17					2.50		0.20				
MB09GR300D17	MB09GL300D17					3.00						
MB09GR100-R050D17	MB09GL100-R050D17					1.00		0.50				
MB09GR150-R075D17	MB09GL150-R075D17					1.50		0.75				
MB09GR200-R100D17	MB09GL200-R100D17					2.00		1.00				
MB09GR250-R125D17	MB09GL250-R125D17					2.50		1.25				
MB09GR300-R150D17	MB09GL300-R150D17					3.00		1.50				
MB11GR100D20	MB11GL100D20	19.5	11.0	20.0	5.40	1.00	8.00	0.10				
MB11GR150D20	MB11GL150D20					1.50						
MB11GR200D20	MB11GL200D20					2.00						
MB11GR250D20	MB11GL250D20					2.50		0.20				
MB11GR300D20	MB11GL300D20					3.00						
MB11GR350D20	MB11GL350D20					3.50						
MB11GR400D20	MB11GL400D20					4.00						
MB11GR100-R050D20	MB11GL100-R050D20					1.00		0.50				
MB11GR150-R075D20	MB11GL150-R075D20					1.50		0.75				
MB11GR200-R100D20	MB11GL200-R100D20					2.00		1.00				
MB11GR250-R125D20	MB11GL250-R125D20					2.50		1.25				
MB11GR300-R150D20	MB11GL300-R150D20					3.00		1.50				
MB11GR350-R175D20	MB11GL350-R175D20					3.50		1.75				
MB11GR400-R200D20	MB11GL400-R200D20					4.00		2.00				

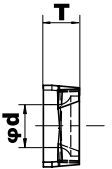
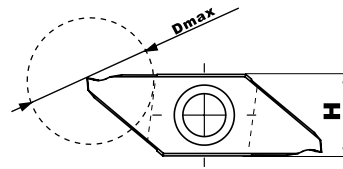
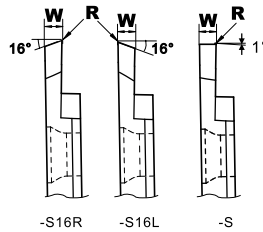
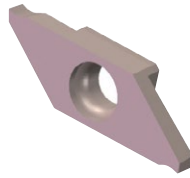
MB
INTERNAL
GROOVING
TOOLHOLDER



Unit:mm

Designation	Dimension				Inserts	Spare Parts	
	H	L1	L	Dmin		Screw	Torx Wrench
MG-H12-28-05	12	28	100	9	MB05GR/L**	M2.2*6	T6
MG-H16-20-07	16	20	125	12	MB07GR/L**	M3*10	T8
MG-H16-30-09	16	30		17	MB09GR/L**	M4*12	T15
MG-H20-40-11	20	40		20	MB11GR/L**	M5*16	T20

TKF12/16
GROOVING & CUT-OFF
INSERTS

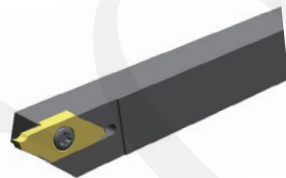


Right Hand Inserts Shown

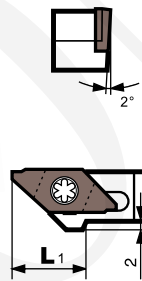
Unit:mm

Designation		Dimensions						Grades			
Right	Left	W	Dmax	T	H	Φd	R	OTO7225	OTO7225C	OTO7226	H10
TKF12R050-S	TKF12L050-S	0.50	5.0	3.0	8.7	5.0	0.05				
TKF12R070-S	TKF12L070-S	0.70	8.0								
TKF12R100-S	TKF12L100-S	1.00	12.0								
TKF12R150-S	TKF12L150-S	1.50									
TKF12R200-S	TKF12L200-S	2.00									
TKF12R050-S16R	TKF12L050-S16R	0.50	5.0								
TKF12R070-S16R	TKF12L070-S16R	0.70	8.0								
TKF12R100-S16R	TKF12L100-S16R	1.00	12.0								
TKF12R150-S16R	TKF12L150-S16R	1.50									
TKF12R200-S16R	TKF12L200-S16R	2.00									
TKF16R100-S	TKF16L100-S	1.00		16.0	4.0			9.5			
TKF16R150-S	TKF16L150-S	1.50									
TKF16R200-S	TKF16L200-S	2.00									
TKF16R250-S	TKF16L250-S	2.50									
TKF16R300-S	TKF16L300-S	3.00									
TKF16R100-S16R	TKF16L100-S16R	1.00									
TKF16R150-S16R	TKF16L150-S16R	1.50									
TKF16R200-S16R	TKF16L200-S16R	2.00									

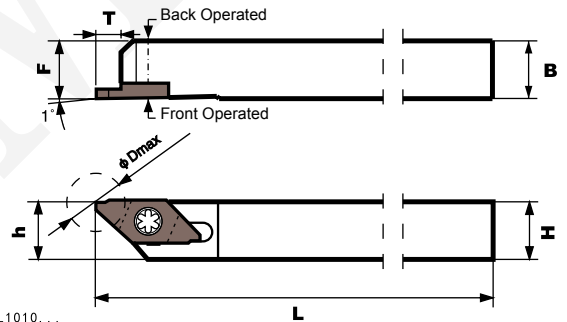
KTKF
GROOVING & CUT-OFF
TOOLHOLDERS



Right Hand Tool Shown



Only KTKFR/L1010...
shape for above

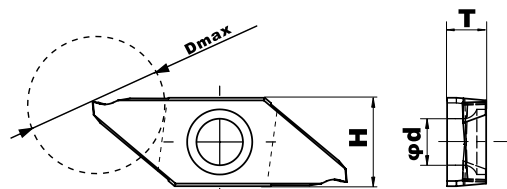
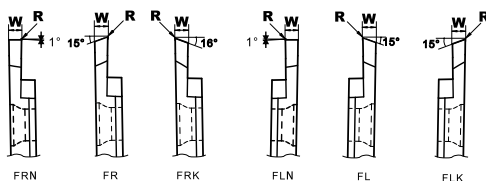
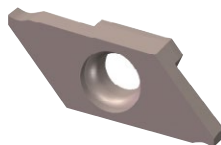


Designation		Dimension								Inserts	Spare Parts			
Right	Left	H	B	h	F ₂	L	L ₁	T	Dmax		Screw	Torx Wrench		
KTKFR1010K-12	KTKFL1010K-12	10	10	10	10	125	15	6	12	TKF12R*** (For Right-hand Toolholder) TKF12L*** (For Left-hand Toolholder)	M4*10	T15		
KTKFR1212K-12	KTKFL1212K-12	12	12	12	12									
KTKFR1616K-12	KTKFL1616K-12	16	16	16	16									
KTKFR2020K-12	KTKFL2020K-12	20	20	20	20									
KTKFR1010K-16	KTKFL1010K-16	10	10	10	10	125	20	8	16	TKF16R*** (For Right-hand Toolholder) TKF16L*** (For Left-hand Toolholder)				
KTKFR1212K-16	KTKFL1212K-16	12	12	12	12									
KTKFR1616K-16	KTKFL1616K-16	16	16	16	16									
KTKFR2020K-16	KTKFL2020K-16	20	20	20	20									
KTKFR2525K-16	KTKFL2525K-16	25	25	25	25									

Unit:mm

CTP/CTPA

GROOVING & CUT-OFF
INSERTS



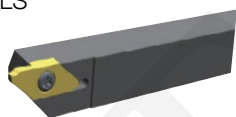
Right Hand Inserts Shown

Unit:mm

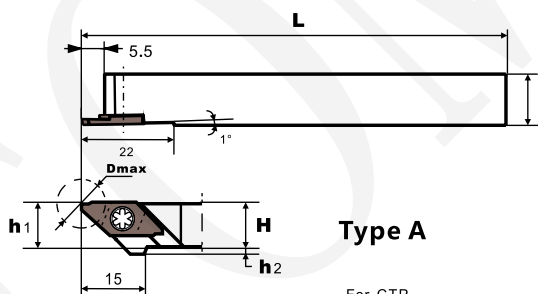
Designation		Dimensions						Grades			
Right	Left	W	Dmax	T	H	φd	R	OTO7225	OTO7225C	OTO7226	H10
CTP05FRN	CTP05FLN	0.50	5.0	2.5	8.0	5.0	0.05				
CTP07FRN	CTP07FLN	0.70	8.0								
CTP10FRN	CTP10FLN	1.00	12.0								
CTP15FRN	CTP15FLN	1.50									
CTP20FRN	CTP20FLN	2.00									
CTP05FR	CTP05FLK	0.50	5.0								
CTP07FR	CTP07FLK	0.70	8.0								
CTP10FR	CTP10FLK	1.00	12.0								
CTP15FR	CTP15FLK	1.50									
CTP20FR	CTP20FLK	2.00									
CTPA10FRN	CTPA10FLN	1.00	16.0	3.5	9.4	5.0	0.05				
CTPA15FRN	CTPA15FLN	1.50									
CTPA20FRN	CTPA20FLN	2.00									
CTPA25FRN	CTPA25FLN	2.50									
CTPA30FRN	CTPA30FLN	3.00									
CTPA10FR	CTPA10FLK	1.00									
CTPA15FR	CTPA15FLK	1.50									
CTPA20FR	CTPA20FLK	2.00									

CTP/CTPA

GROOVING & CUT-OFF
TOOLS

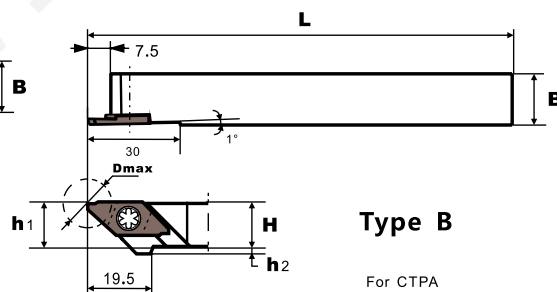


Right Hand Tool Shown



Type A

For CTP



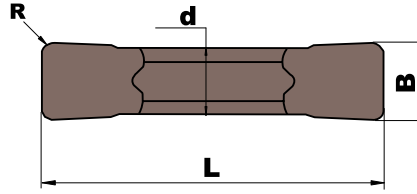
Type B

For CTPA

Unit:mm

Designation		Dimension							Type	Matching Inserts	Spare Parts	
Right	Left	H	B	h	h ₁	h ₂	L	Dmax			Screw	Torx Wrench
CTPR08	CTPL08	08	10	08	08	4	120	12	A	CTPL*** (For Right-hand Toolholder) CTP*** (For Left-hand Toolholder)	M4*10	T15
CTPR10	CTPL10	10	10	10	10	2						
CTPR12	CTPL12	12	12	12	12							
CTPR16	CTPL16	16	16	16	16							
CTPAR10	CTPAL10	10	10	10	10	2	160	16	B	CTPAL*** (For Right-hand Toolholder) CTPAL*** (For Left-hand Toolholder)		
CTPAR12	CTPAL12	12	12	12	12							
CTPAR16	CTPAL16	16	16	16	16							
CTPAR20	CTPAL20	20	20	20	20							
CTPAR25	CTPAL25	25	25	25	25							

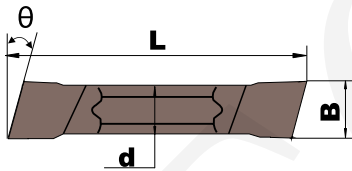
MGGN
GROOVING & CUT-OFF
INSERTS



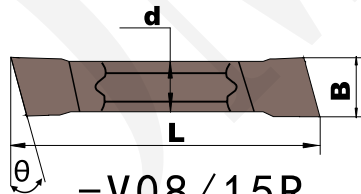
Unit:mm

Designation	Dimensions					Grades			
	L	B	d	h	R	OTO7225	OTO7225C	OTO7226	H10
MGGN150-V	16	1.5	1.2	3.5	0.15	⬢	⬢	⬢	⬢
MGGN200-V	16	2.0	1.6	3.5	0.2	⬢	⬢	⬢	⬢
MGGN250-V	18.5	2.5	2.0	3.85	0.2	⬢	⬢	⬢	⬢
MGGN300-V	21	3.0	2.35	4.8	0.4	⬢	⬢	⬢	⬢
MGGN400-V	21	4.0	3.3	4.8	0.4	⬢	⬢	⬢	⬢
MGGN500-V	26	5.0	4.1	5.8	0.8	⬢	⬢	⬢	⬢
MGGN600-V	26	6.0	5.0	5.8	0.8	⬢	⬢	⬢	⬢

MGGN
GROOVING & CUT-OFF
INSERTS



-V08/15L



-V08/15R

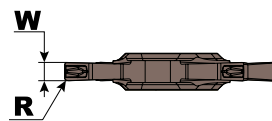
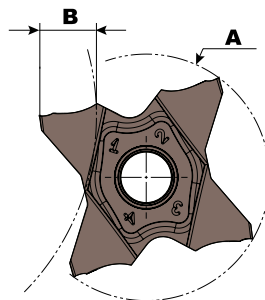


Unit:mm

Designation		Dimensions					Grades			
		L	B	d	h	θ	OTO7225	OTO7225C	OTO7226	H10
MGGN150-V08R	MGGN150-V08L	16	1.5	1.2	3.5	8°	⬢	⬢	⬢	⬢
MGGN200-V08R	MGGN200-V08L	16	2.0	1.6	3.5		⬢	⬢	⬢	⬢
MGGN250-V08R	MGGN250-V08L	18.5	2.5	2.0	3.85		⬢	⬢	⬢	⬢
MGGN300-V08R	MGGN300-V08L	21	3.0	2.35	4.8		⬢	⬢	⬢	⬢
MGGN400-V08R	MGGN400-V08L	21	4.0	3.3	4.8		⬢	⬢	⬢	⬢
MGGN150-V15R	MGGN150-V15L	16	1.5	1.2	3.5	15°	⬢	⬢	⬢	⬢
MGGN200-V15R	MGGN200-V15L	16	2.0	1.6	3.5		⬢	⬢	⬢	⬢
MGGN250-V15R	MGGN250-V15L	18.5	2.5	2.0	3.85		⬢	⬢	⬢	⬢
MGGN300-V15R	MGGN300-V15L	21	3.0	2.35	4.8		⬢	⬢	⬢	⬢
MGGN400-V15R	MGGN400-V15L	21	4.0	3.3	4.8		⬢	⬢	⬢	⬢

TQ-X27

GROOVING & CUT-OFF
INSERTS

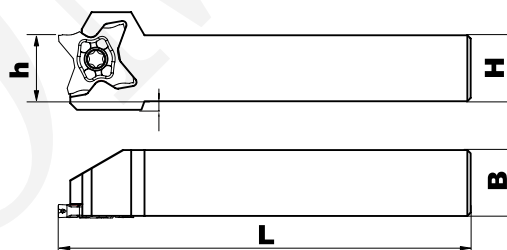
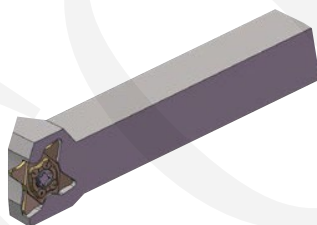


Unit:mm

Designation	Dimensions					Grades			
	W	B	A	h	R	OTO7225	OTO7225C	OTO7226	H10
TQJ27-100-010	1.00	3.5	27	4	0.10	✖	✖	✖	✖
TQJ27-150-020	1.50	5.7			0.20	✖	✖	✖	✖
TQJ27-200-020	2.00	6.4				✖	✖	✖	✖
TQJ27-250-030	2.50				0.30	✖	✖	✖	✖
TQJ27-300-020	3.00				0.20	✖	✖	✖	✖
TQJ27-300-040	3.00				0.40	✖	✖	✖	✖
TQJ27-350-020	3.50				0.20	✖	✖	✖	✖
TQJ27-400-020	4.00					✖	✖	✖	✖

TQ-X27

GROOVING & CUT-OFF
TOOLS

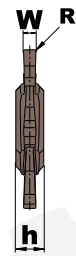
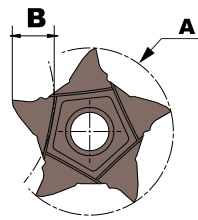


Right Hand Tool Shown

Unit:mm

Designation		Dimension				Inserts	Spare Parts	
Right	Left	H	h	B	L		Screw	Torx Wrench
TQHR10-27	TQHL10-27	10	10	10	120	TQJ27***	M5*16	T20
TQHR12-27	TQHL12-27	12	12	12				
TQHR16-27	TQHL16-27	16	16	16				
TQHR20-27	TQHL20-27	20	20	20				
TQHR25-27	TQHL25-27	25	25	25	135			

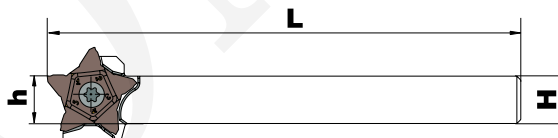
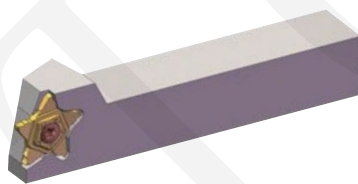
PEN24N
GROOVING & CUT OFF
INSERT-



Unit:mm

Designation	Dimensions					Grades			
	W	B	A	h	R	OTO7225	OTO7225C	OTO7226	H10
PEN24N050	0.50	2.5	24	4	0.05	✳	✳	✳	✳
PEN24N100	1.00	4.0			0.10	✳	✳	✳	✳
PEN24N150	1.50	6.0				✳	✳	✳	✳
PEN24N200	2.00				6.5	0.20	✳	✳	✳
PEN24N250	2.50	✳					✳	✳	✳
PEN24N300	3.00	✳					✳	✳	✳
PEN24N350	3.50	✳					✳	✳	✳
PEN24N400	4.00	✳					✳	✳	✳

PEN24N
GROOVING & CUT-OFF
TOOLS



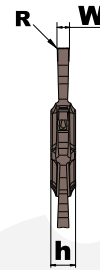
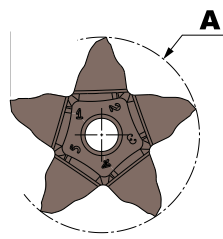
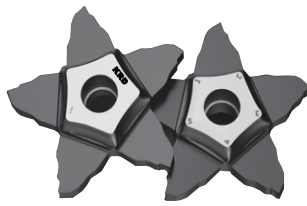
Right Hand Tool Shown

Unit:mm

Designation		Dimension				Inserts	Spare Parts	
Right	Left	H	h	B	L		Screw	Torx Wrench
PCHR10-24	PCHL10-24	10	10	10	120	PEN24N***	M5*16	T20
PCHR12-24	PCHL12-24	12	12	12				
PCHR16-24	PCHL16-24	16	16	16				
PCHR20-24	PCHL20-24	20	20	20				
PCHR25-24	PCHL25-24	25	25	25	135			

PEN34N

GROOVING & CUT-OFF
INSERTS

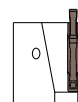
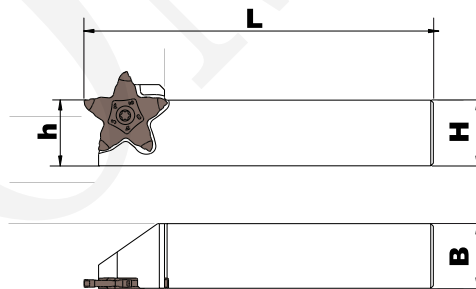


Unit:mm

Designation	Dimensions					Grades			
	W	B	A	h	R	OTO7225	OTO7225C	OTO7226	H10
PEN24N150	1.50	8.5	34	4.3	0.15				
PEN24N200	2.00				0.20				
PEN24N250	2.50	10.0							
PEN24N300	3.00								
PEN24N350	3.50								
PEN24N400	4.00								

PEN34N

GROOVING & CUT-OFF
TOOLHOLDER

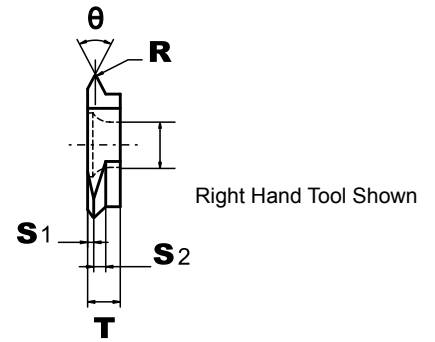
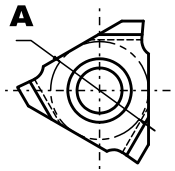
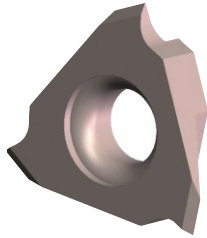


Right Hand Tool Shown

Unit:mm

Designation		Dimension				Inserts	Spare Parts	
Right	Left	H	h	B	L		Screw	Torx Wrench
PCHR16-34	PCHL16-34	16	16	16	120	PEN34N***	M5*16	T20
PCHR20-34	PCHL20-34	20	20	20				
PCHR25-34	PCHL25-34	25	25	25	135			
PCHR32-34	PCHL32-34	32	32	32				

TTX32 THREADING INSERTS



Unit:mm

Designation		Pitch		Dimensions							Grades						
Right	Left	ISO (mm)	ANSI (Inch/Teeth)	A	T	φd	θ	R	S1	S2	OTO7225	OTO7225C	OTO7226	H10			
TTX32R6000	TTX32L6000	0.5~1.0	56~32	9.525	3.18	4.4	60°	0.00	0.6	1.12							
TTX32R60005	TTX32L60005	0.5~1.0	48~32					0.05									
TTX32R6001	TTX32L6001	1.0~2.0	28~14					0.10	1.1	1.62							
TTX32R6000S	TTX32L6000S	0.5	56~48					0.00	0.3	1.12							
TTX32R60005S	TTX32L60005S	0.5	48					0.05									
TTX32R5501	TTX32L5501		28~19							55°	0.10	0.75	1.01				
TTX32R55015	TTX32L55015		29~11								0.15	1.2	1.46				

Applicable Thread	M :	R, RC(PT)(BSPT) :
	UN :	W :
	UNF :	NPT :
	G(PF) :	

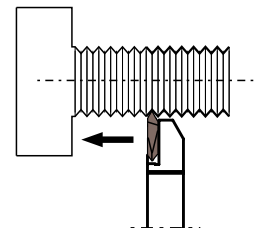


The inserts have no wiper.

距。

A Insert can process multiple pitches

KTTX EXTERNAL THREADING TOOLHOLDER



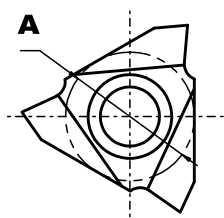
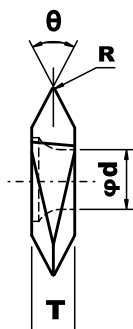
Can cut to the root of the thread

Right Insert for Right Toolholder, Left Insert for left toolholder.

Unit:mm

Designation		Dimension								Spare Parts	
		H	h	B	F	H ₁	H ₂	L ₁	L	Screw	Torx Wrench
KTTXR1010K-16F	KTTXL1010K-16F	10	10	10	10	2	2.5	17.6	125	M4*8	T15
KTTXR1212K-16F	KTTXL1212K-16F	12	12	12	12						
KTTXR1616K-16F	KTTXL1616K-16F	16	16	16	16						
KTTXR2020K-16F	KTTXL2020K-16F	20	20	20	20						

TT32 THREADING INSERTS



Right Hand Tool Shown

Unit:mm

Designation		Pitch		Dimensions					Grades			
Right	Left	ISO (mm)	ANSI (Teeth/inch)	A	T	ϕd	θ	R	OTO7225	OTO7225C	OTO7226	H10
TT32R6000	TT32L6000	0.5~2.5	56~10	9.525	3.18	4.4	60°	0.00				
TT32R6001	TT32L6001	1.0~2.5	24~10					0.10				
TT32R6002	TT32L6002	1.5~2.5	16~10					0.20				
TT32R6003	TT32L6003	2.5	11~10					0.30				
TT32R5501	TT32L5501		28~10				55°	0.10				
TT32R5502	TT32L5502		14~10					0.20				

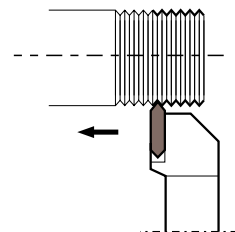
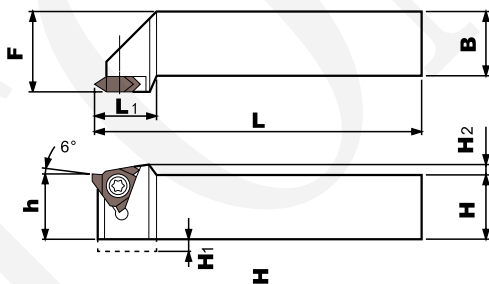
Applicable Thread	M :	R, RC(PT)(BSPT) :
	UN :	W :
	UNF :	NPT :
	G(PF) :	



The inserts have no wiper.

距。
A Insert can process multiple pitches

KTT EXTERNAL THREADING TOOLHOLDER

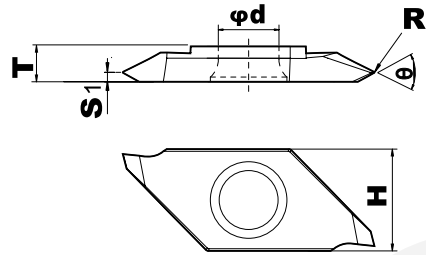
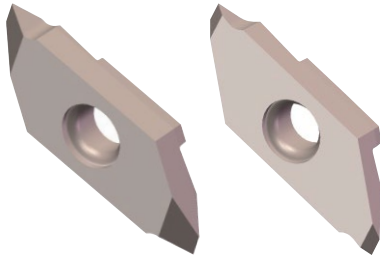


Right Hand Tool Shown

Unit:mm

Designation		Dimension								Spare Parts	
		H	h	B	F	H ₁	H ₂	L ₁	L	Screw	Torx Wrench
KTTR1010K-16	KTTL1010K-16	10	10	10	10	4	2.5	18	125	M4*8	T15
KTTR1212K-16	KTTL1212K-16	12	12	12	12	2					
KTTR1616K-16	KTTL1616K-16	16	16	16	16						
KTTR2020K-16	KTTL2020K-16	20	20	20	20						
KTTR2525M-16	KTTL2525M-16	25	25	25	25				150		

TKFT THREADING INSERTS



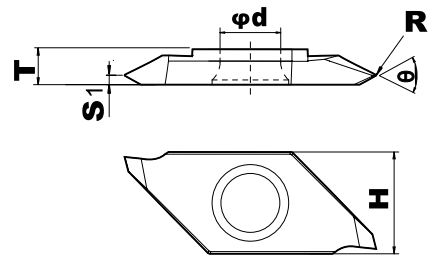
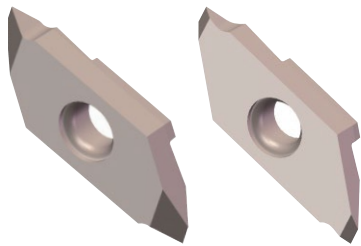
Right Hand Tool Shown

Unit:mm

Designation		Pitch		Dimensions						Grades			
Right	Left	ISO (mm)	ANSI (inch/Fests)	H	T	φd	θ	R	S1	OTO7225	OTO7225C	OTO7226	H10
TKFT12RA60005	TKFT12LA60005	0.5~1.25	48~24	8.7	3.0	5.0	60°	0.05	0.8	●	●	●	●
TKFT12RB60005	TKFT12LB60005	0.5~1.25	48~24							●	●	●	●
TKFT12RN6001	TKFT12LN6001	1.0~2.0	24~12							●	●	●	●
TKFT12RA55005	TKFT12LA55005		48~24				55°	0.05	0.8	●	●	●	●
TKFT12RB55005	TKFT12LB55005		48~24							●	●	●	●
TKFT12RN5501	TKFT12LN5501		24~12							●	●	●	●
TKFT16RA60005	TKFT16LA60005	0.5~1.25	48~24	9.5	4.0	5.0	60°	0.05	0.8	●	●	●	●
TKFT16RB60005	TKFT16LB60005	0.5~1.25	48~24							●	●	●	●
TKFT16RN6001	TKFT16LN6001	1.0~3.0	24~8							●	●	●	●
TKFT16RA55005	TKFT16LA55005		48~24				55°	0.05	0.8	●	●	●	●
TKFT16RB55005	TKFT16LB55005		48~24							●	●	●	●
TKFT16RN5501	TKFT16LN5501		24~8							●	●	●	●

TKFT12/16RN****	TKFT12/16RA****	TKFT12/16RB****
TKFT12/16LN****	TKFT12/16LA****	TKFT12/16LB****

TTP/TTPA
THREADING
INSERTS



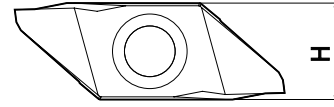
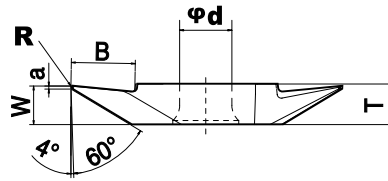
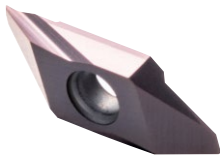
Right Hand Tool Shown

Unit:mm

Designation		Pitch		Dimensions						Grades				
Right	Left	ISO (mm)	ANSI (inch/Teeth)	H	T	φd	θ	R	S1	OTO7225	OTO7225C	OTO7226	H10	
TTP60FR-5A	TTP60FL-5A	0.25~1.0	48~24	8.0	2.5	5.0	60°	0.05	0.5					
TTP55FR-5A	TTP55FL-5A						55°							
TTP60FR-5B	TTP60FL-5B	0.25~1.0					60°							
TTP55FR-5B	TTP55FL-5B						55°							
TTP60FR-N	TTP60FL-N	0.5~2.0	48~12				60°		1.25					
TTP55FR-N	TTP55FL-N						55°							
TTPA60FR-5A	TTPA60FL-5A	0.25~1.0	48~24	9.4	3.5		60°		0.05	0.5				
TTPA55FR-5A	TTPA55FL-5A						55°							
TTPA60FR-5B	TTPA60FL-5B	0.25~1.0					60°							
TTPA55FR-5B	TTPA55FL-5B						55°							
TTPA60FR-N	TTPA60FL-N	0.5~3.0	48~8				60°			1.6				
TTPA55FR-N	TTPA55FL-N		24~8				55°							

右手刀				左手刀			
带衬套时		后车削时		带衬套时		后车削时	
 刀尖形状: A 型 导向衬套		 刀尖形状: B 型		 刀尖形状: B 型		 刀尖形状: A 型	
刀杆	TTPR	刀杆	TTPR	刀杆	TTPL	刀杆	TTPL
刀片	TTP□□FR□A	刀片	TTP□□FR□B	刀片	TTP□□FL□B	刀片	TTP□□FL□A

TKFB
BACKTURNING
INSERTS

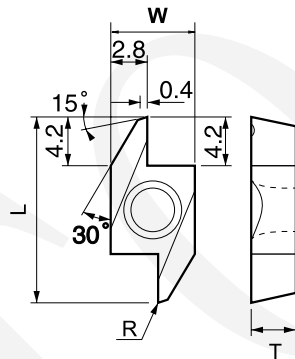
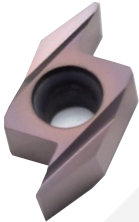


Right Hand Tool Shown

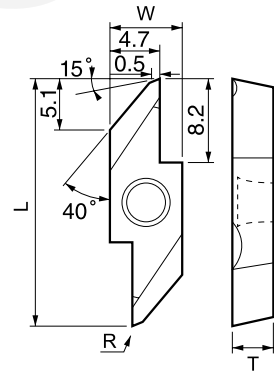
Unit:mm

Designation	Dimensions							Grades			
	W	B	T	H	φd	a	R	OTO7225	OTO7225C	OTO7226	H10
TKFB12R15005	1.5	2.6	3.0	8.7	5.2	0.25	0.05				
TKFB12R28005	2.0	4.6									
TKFB12R28010	2.5										
TKFB16R38005	3.8	6.3	4.0	9.5		0.3	0.05				
TKFB16R38010							0.10				

ABS/ABW
BACKTURNING
INSERTS



Right-hand Tool shown

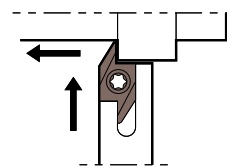
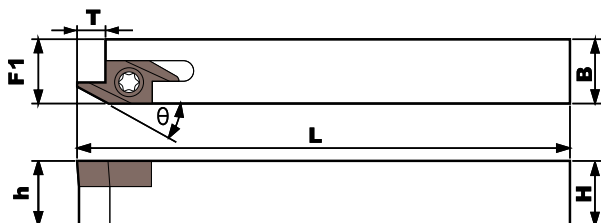


Right-hand Tool shown

Unit:mm

Designation	Dimensions				Grades			
	L	W	T	R	OTO7225	OTO7225C	OTO7226	H10
ABS15R4005	15.4	7.0	3.97	0.05	●	●	●	●
ABS15R4015				0.15	●	●	●	●
ABW23R5005	23.4	7.0	3.97	0.05	●	●	●	●
ABW23R5015				0.15	●	●	●	●

ABS
BACKTURNING
TOOLHOLDER

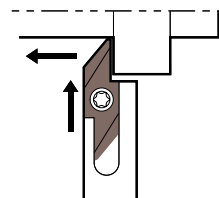
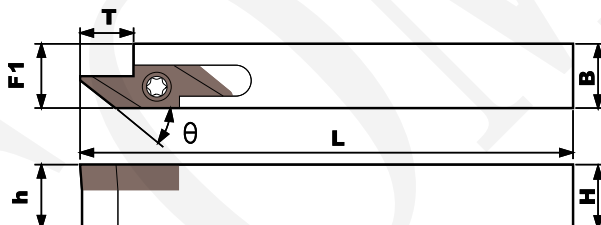


Right Hand Tool Shown

Unit:mm

Designation	Dimension							Inserts Inserts	Spare Parts	
	H	h	B	F1	T	L	θ		Screw	Torx Wrench
SABSR1010K-40F	10	10	10	10.2	4.2	125	30°	ABS15R*** (For Right-hand Toolholder)	M3*8	T10
SABSR1212K-40F	12	12	12	12.2						
SABSR1616K-40F	16	16	16	16.2						
SABSR2020K-40F	20	20	20	20.2						

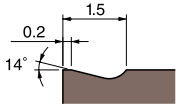
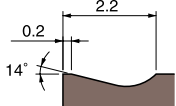
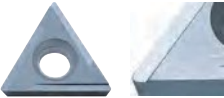
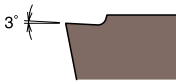
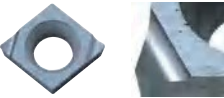
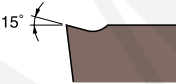
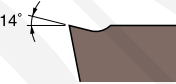
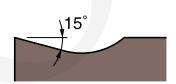
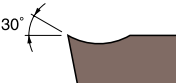
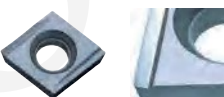
ABW-50F
BACKTURNING
TOOLHOLDER



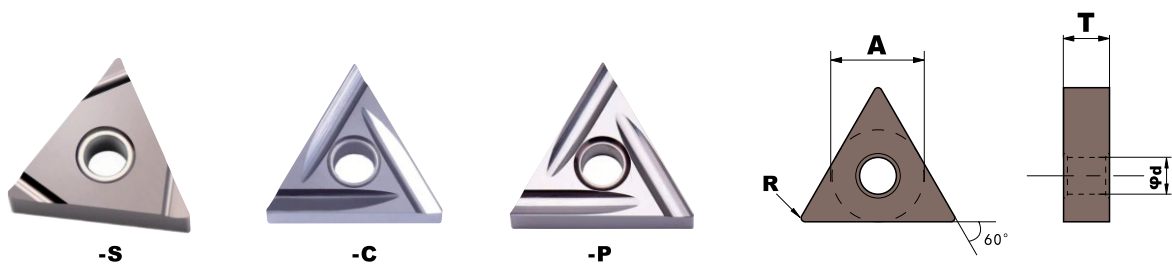
Right Hand Tool Shown

Unit:mm

Designation	Dimension							Inserts Inserts	Spare Parts	
	H	h	B	F1	T	L	θ		Screw	Torx Wrench
SABWR1010K-50F	10	10	10	10.2	8.2	125	40°	ABW23R*** (For Right-hand Toolholder)	M4*8	T15
SABWR1212K-50F	12	12	12	12.2						
SABWR1616K-50F	16	16	16	16.2						
SABWR2020K-50F	20	20	20	20.2						

Chipbreaker Code	Chipbreaker	Chipbreaker Section	Recommended Chipbreaker Applications	Aplication Suggest
B			0,15 - 0,25 mm/rev Low feed for general turning.	Finishing - Semi Finishing
C			General turning between 0,2 - 0,35 mm ap for 0,35 mm/rev	Roughing- Semi Finishing
H			Perfect cutting effect and small chips.	Semi Finishing
F			Easy to control chips, low cutting force.	Finishing
J			Good stability with low feed and low ap. Good fot automatic bar loading.	Low feed, low ap
S			Sharp cutting edge to reduce cutting forces. Easy to control chips.	Finishing
U			Reduces cutting forces at low feed conditions with different ap	Low feed, low ap.
Y			Perfect cutting effect, good surface finish.	Semi Finishing

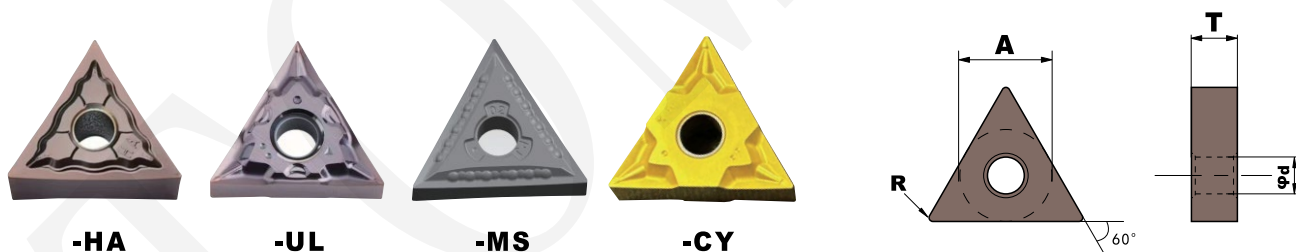
TNGG-S/C/P



Right Hand Tool Shown

Designation		Dimensions				Grades				
Right	Left	A	T	φd	R	OT01000	OTO7225	OTO7225C	OTO7226	H10
TNGG160401R-S	TNGG160401L-S	9.525	4.76	3.81	0.10	●	●	●	●	●
TNGG160402R-S	TNGG160402L-S				0.20	●	●	●	●	●
TNGG160404R-S	TNGG160404L-S				0.40	●	●	●	●	●
TNGG160401R-C	TNGG160401L-C				0.10	●	●	●	●	●
TNGG160402R-C	TNGG160402L-C				0.20	●	●	●	●	●
TNGG160404R-C	TNGG160404L-C				0.40	●	●	●	●	●
TNGG160401R-P	TNGG160401L-P				0.10	●	●	●	●	●
TNGG160402R-P	TNGG160402L-P				0.20	●	●	●	●	●
TNGG160404R-P	TNGG160404L-P				0.40	●	●	●	●	●

TNGG-HA/UL/MS/CY



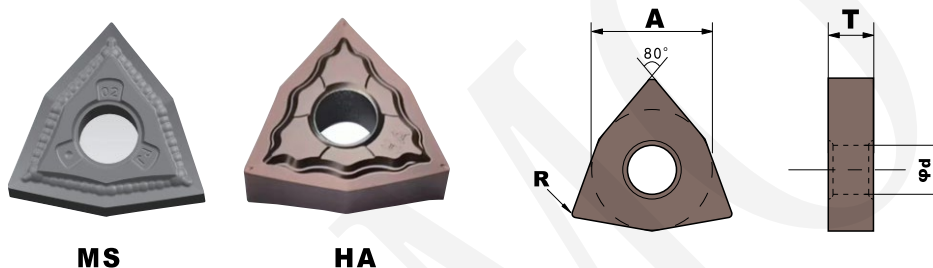
Designation	Dimensions				Grades				
	A	T	φd	R	OT01000	OTO7225	OTO7225C	OTO7226	H10
TNGG160401HA	9.525	4.76	3.81	0.10	●	●	●	●	●
TNGG160402HA				0.20	●	●	●	●	●
TNGG160401UL				0.10	●	●	●	●	●
TNGG160402UL				0.20	●	●	●	●	●
TNGG160401MS				0.10	●	●	●	●	●
TNGG160402MS				0.20	●	●	●	●	●
TNGG160404MS				0.40	●	●	●	●	●
TNGG160401CY				0.10	●	●	●	●	●
TNGG160402CY				0.20	●	●	●	●	●
TNGG160404CY				0.40	●	●	●	●	●

WNGG-S/C



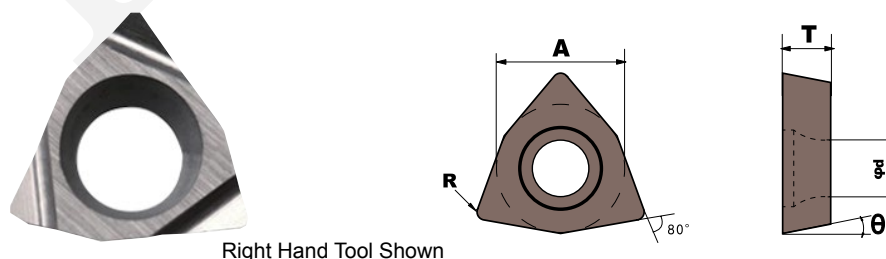
Designation		Dimensions				Grades				
Right	Left	A	T	φd	R	OT01000	OTO7225	OTO7225C	OTO7226	H10
WNGG080402R-S	WNGG080402L-S	12.7	4.76	5.16	0.20	●	●	●	●	●
WNGG080404R-S	WNGG080404L-S				0.40	●	●	●	●	●
WNGG080402R-C	WNGG080402L-C				0.20	●	●	●	●	●
WNGG080404R-C	WNGG080404L-C				0.40	●	●	●	●	●

WNGG-MS/HA



Designation		Dimensions				Grades				
		A	T	φd	R	OT01000	OTO7225	OTO7225C	OTO7226	H10
WNGG080402MS		12.7	4.76	5.16	0.20	●	●	●	●	●
WNGG080404MS					0.40	●	●	●	●	●
WNGG080402HA					0.20	●	●	●	●	●
WNGG080404HA					0.40	●	●	●	●	●

WBG-T-F

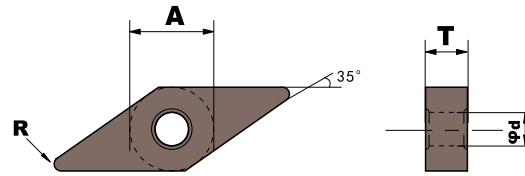
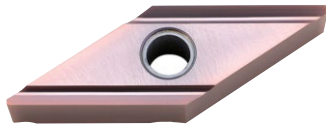


Right Hand Tool Shown

Unit:mm

Designation		Dimensions					Grades				
Right	Left	A	T	φd	θ	R	OT01000	OTO7225	OTO7225C	OTO7226	H10
WBG-T060102R-F	WBG-T060102L-F	3.97	1.59	2.3	5°	0.20	●	●	●	●	●
WBG-T060104R-F	WBG-T060104L-F					0.40	●	●	●	●	●

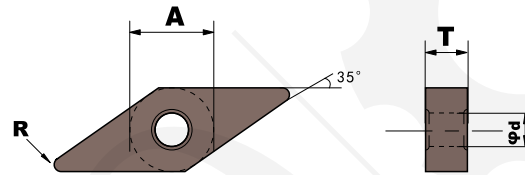
VNKG-H



Right Hand Tool Shown

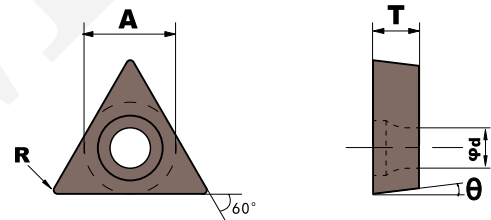
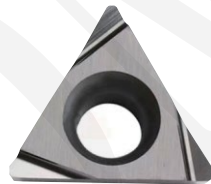
Designation		Dimensions				Grades				
Right	Left	A	T	ϕd	R	OT01000	OTO7225	OTO7225C	OTO7226	H10
VNKG160402R-H	VNKG160404L-H	9.525	4.76	3.81	0.20	⬢	⬢	⬢	⬢	⬢
VNKG160404R-H	VNKG160404L-H				0.40	⬢	⬢	⬢	⬢	⬢

VNKG-MS



Designation	Dimensions				Grades				
	A	T	Φd	R	OT01000	OTO7225	OTO7225C	OTO7226	H10
VNKG160402MS	9.525	4.76	3.81	0.20	⬢	⬢	⬢	⬢	⬢
VNKG160404MS				0.40	⬢	⬢	⬢	⬢	⬢

TBGT/TBGH/TCGT/TPGH-F

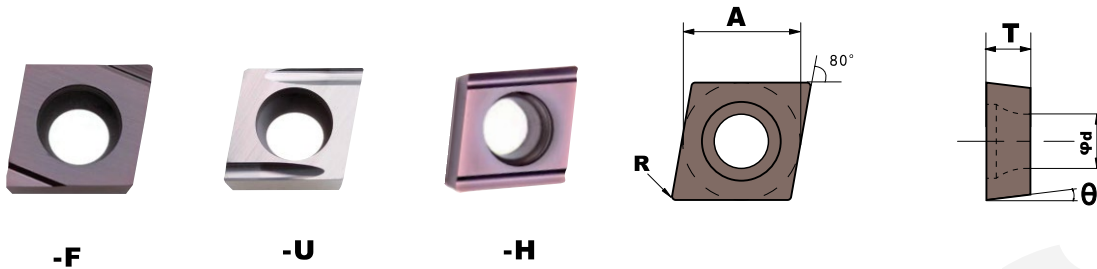


Right Hand Tool Shown

Unit:mm

Designation		Dimensions					Grades				
Right	Left	A	T	ϕd	θ	R	OT01000	OTO7225	OTO7225C	OTO7226	H10
TBGT060101R-F	TBGT060101L-F	3.97	1.59	2.3	5°	0.10	⬢	⬢	⬢	⬢	⬢
TBGT060102R-F	TBGT060102L-F					0.20	⬢	⬢	⬢	⬢	⬢
TBGT060104R-F	TBGT060104L-F					0.40	⬢	⬢	⬢	⬢	⬢
TPGH080201R-F	TPGH080201L-F	4.76	2.38	2.5	11°	0.10	⬢	⬢	⬢	⬢	⬢
TPGH080202R-F	TPGH080202L-F					0.20	⬢	⬢	⬢	⬢	⬢
TPGH080204R-F	TPGH080204L-F					0.40	⬢	⬢	⬢	⬢	⬢
TPGH090201R-F	TPGH090201L-F	5.56	2.38	2.5	11°	0.10	⬢	⬢	⬢	⬢	⬢
TPGH090202R-F	TPGH090202L-F					0.20	⬢	⬢	⬢	⬢	⬢
TPGH090204R-F	TPGH090204L-F					0.40	⬢	⬢	⬢	⬢	⬢
TPGH110301R-F	TPGH110301L-F	6.35	2.38	2.8	7°	0.10	⬢	⬢	⬢	⬢	⬢
TPGH110302R-F	TPGH110302L-F					0.20	⬢	⬢	⬢	⬢	⬢
TPGH110304R-F	TPGH110304L-F					0.40	⬢	⬢	⬢	⬢	⬢
TCGT110201R-F	TCGT110201L-F	6.35	2.38	2.8	7°	0.10	⬢	⬢	⬢	⬢	⬢
TCGT110202R-F	TCGT110202L-F					0.20	⬢	⬢	⬢	⬢	⬢
TCGT110204R-F	TCGT110204L-F					0.40	⬢	⬢	⬢	⬢	⬢

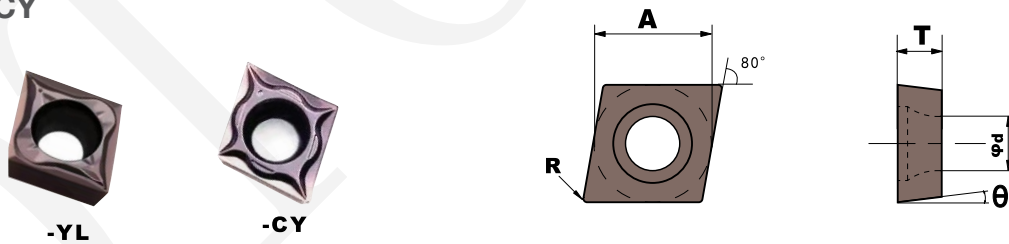
CCGT-F/U/H



Unit:mm

Designation		Dimensions					Grades				
Right	Left	A	T	φd	θ	R	OT01000	OTO7225	OTO7225C	OTO7226	H10
CCGT030101R-F	CCGT030101L-F	3.5	1.40	1.9	7°	0.10	⬢	⬢	⬢	⬢	⬢
CCGT030102R-F	CCGT030102L-F					0.20	⬢	⬢	⬢	⬢	⬢
CCGT030104R-F	CCGT030104L-F					0.40	⬢	⬢	⬢	⬢	⬢
CCGT040101R-F	CCGT040101L-F	4.3	1.80	2.3		0.10	⬢	⬢	⬢	⬢	⬢
CCGT040102R-F	CCGT040102L-F					0.20	⬢	⬢	⬢	⬢	⬢
CCGT040104R-F	CCGT040104L-F					0.40	⬢	⬢	⬢	⬢	⬢
CCGT060201R-F	CCGT060201L-F	6.35	2.38	2.8		0.10	⬢	⬢	⬢	⬢	⬢
CCGT060202R-F	CCGT060202L-F					0.20	⬢	⬢	⬢	⬢	⬢
CCGT060204R-F	CCGT060204L-F					0.40	⬢	⬢	⬢	⬢	⬢
CCGT060201R-U	CCGT060201L-U					0.10	⬢	⬢	⬢	⬢	⬢
CCGT060202R-U	CCGT060202L-U					0.20	⬢	⬢	⬢	⬢	⬢
CCGT060204R-U	CCGT060204L-U					0.40	⬢	⬢	⬢	⬢	⬢
CCGT09T301R-U	CCGT09T301L-U	9.525	3.97	4.4		0.10	⬢	⬢	⬢	⬢	⬢
CCGT09T302R-U	CCGT09T302L-U					0.20	⬢	⬢	⬢	⬢	⬢
CCGT09T304R-U	CCGT09T304L-U					0.40	⬢	⬢	⬢	⬢	⬢
CCGT09T301R-H	CCGT09T301L-H					0.10	⬢	⬢	⬢	⬢	⬢
CCGT09T302R-H	CCGT09T302L-H					0.20	⬢	⬢	⬢	⬢	⬢
CCGT09T304R-H	CCGT09T304L-H					0.40	⬢	⬢	⬢	⬢	⬢

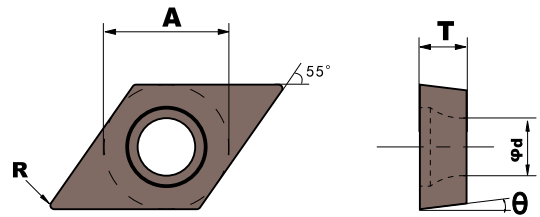
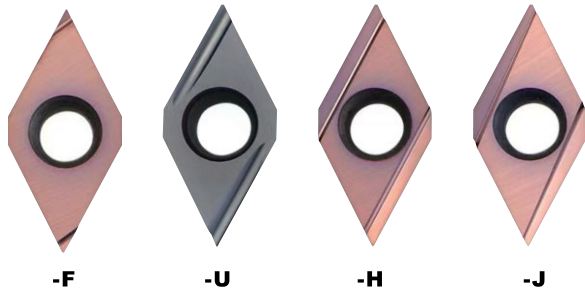
CCGT-YL/CY



Unit:mm

Designation	Dimensions					Grades				
	θ	A	T	φd	R	OT01000	OTO7225	OTO7225C	OTO7226	H10
CCGT09T301CY	7°	9.525	3.97	4.4	0.10	●	●	●	●	●
CCGT09T302CY					0.20	●	●	●	●	●
CCGT09T304CY					0.40	●	●	●	●	●
CCGT09T301YL					0.10	●	●	●	●	●
CCGT09T302YL					0.20	●	●	●	●	●
CCGT09T304YL					0.40	●	●	●	●	●

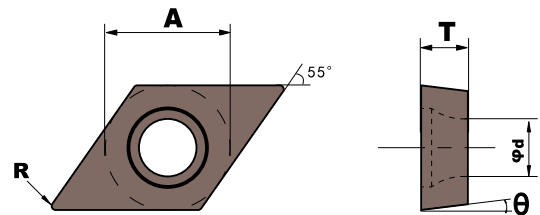
DCGT-F/U/H/J



Right Hand Tool Shown

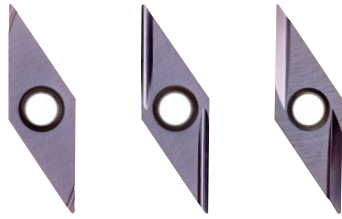
Designation		Dimensions					Grades				
Right	Left	A	T	Φd	θ	R	0T01000	0T07225	0T07225C	0T07226	H10
DCGT070202R-F	DCGT070202R-F	6.35	2.38	2.8	7°	0.20					
DCGT070204R-F	DCGT070204R-F					0.40					
DCGT070201R-U	DCGT070201R-U					0.10					
DCGT070202R-U	DCGT070202R-U					0.20					
DCGT070204R-U	DCGT070204R-U					0.40					
DCGT11T301R-F	DCGT11T301R-F	9.525	3.97	4.4		0.10					
DCGT11T302R-F	DCGT11T302R-F					0.20					
DCGT11T304R-F	DCGT11T304R-F					0.40					
DCGT11T301R-U	DCGT11T301R-U					0.10					
DCGT11T302R-U	DCGT11T302R-U					0.20					
DCGT11T304R-U	DCGT11T304R-U					0.40					
DCGT11T301R-J	DCGT11T301R-J					0.10					
DCGT11T302R-J	DCGT11T302R-J					0.20					
DCGT11T304R-J	DCGT11T304R-J					0.40					
DCGT11T301R-H	DCGT11T301R-H					0.10					
DCGT11T302R-H	DCGT11T302R-H					0.20					
DCGT11T304R-H	DCGT11T304R-H					0.40					

DCGT-YL/CY/ML



Designation	Dimensions					Grades				
	θ	A	T	φd	R	OT01000	OTO7225	OTO7225C	OTO7226	H10
DCGT11T301CY	7°	9.525	3.97	4.4	0.10					
DCGT11T302CY					0.20					
DCGT11T304CY					0.40					
DCGT11T301YL					0.10					
DCGT11T302YL					0.20					
DCGT11T304YL					0.40					
DCGT11T301ML					0.10					
DCGT11T302ML					0.20					
DCGT11T304ML					0.40					

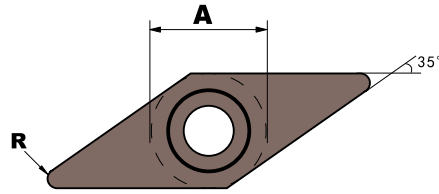
VB/VC/VPGT-F/U/Y



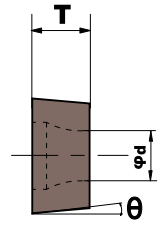
-F

-U

-Y



Right Hand Tool Shown



Unit:mm

Designation		Dimensions					Grades				
Right	Left	A	T	φd	θ	R	OT01000	OTO7225	OTO7225C	OTO7226	H10
VBGT1103005R-F	VBGT1103005L-F	6.35	3.18	2.8	5°	0.05	●	●	●	●	●
VBGT110301R-F	VBGT110301L-F					0.10	●	●	●	●	●
VBGT110302R-F	VBGT110302L-F					0.20	●	●	●	●	●
VBGT1103005R-Y	VBGT1103005L-Y					0.10	●	●	●	●	●
VBGT110301R-Y	VBGT110301L-Y					0.20	●	●	●	●	●
VBGT110302R-Y	VBGT110302L-Y					0.05	●	●	●	●	●
VBGT110304R-Y	VBGT110304L-Y					0.10	●	●	●	●	●
VPGT110301R-U	VPGT110301L-U				11°	0.20	●	●	●	●	●
VPGT110302R-U	VPGT110302L-U					0.40	●	●	●	●	●
VCGT160401R-Y	VCGT160401L-Y	9.525	3.97	4.4	7°	0.10	●	●	●	●	●
VCGT160402R-Y	VCGT160402L-Y					0.20	●	●	●	●	●
VCGT160404R-Y	VCGT160404L-Y					0.40	●	●	●	●	●

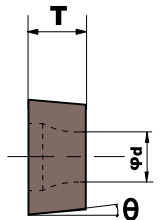
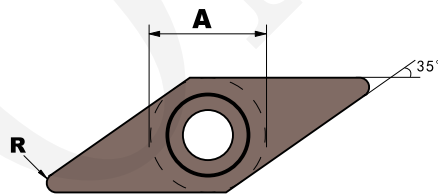
VBGT-YL/CY/ML



-YL

-CY

-ML



Unit:mm

Designation		Dimensions					Grades				
		θ	A	T	φd	R	OT01000	OTO7225	OTO7225C	OTO7226	H10
VBGT110301CY		5°	6.35	3.18	2.8	0.10	●	●	●	●	●
VBGT110302CY						0.20	●	●	●	●	●
VBGT110304CY						0.40	●	●	●	●	●
VBGT110301YL						0.10	●	●	●	●	●
VBGT110302YL						0.20	●	●	●	●	●
VBGT110301ML						0.10	●	●	●	●	●
VBGT110302ML						0.20	●	●	●	●	●

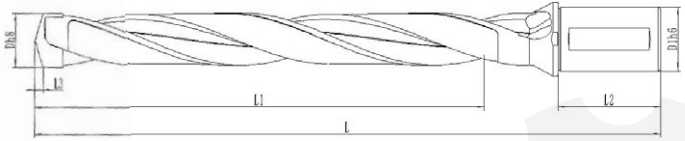


TAKMA UÇLU MATKAP MODULAR DRILL SYSTEMS

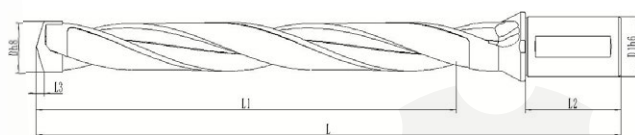


- Insert diameter range: 12.5-40mm, depth: 3,5,7,10x diameter.
- Excellent centering performance.
- Equipped with internal cooling holes to enhance tool life.
- Special design of inserts with low axial force for improved feed and machining efficiency.
- Optimized coating for better wear resistance.

PAW DRILL BODY



3D								
Model	Insert Diameter(D)	Effective Depth	Shank Length	Tip Height	Shank Diameter	Groove Size	Center Tightening Screws	Wrench
		L1	L2	L3	D1			
PD03-125-XP20	12.5-13.0	38	48	2.0	20	C	M3.0/M2.5*14	T6*156
PD03-130-XP20	13.0-13.5	39	48	2.1	20	C	M3.0/M2.5*14	T6*156
PD03-136-XP20	13.51-14.0	42	48	2.2	20	B	M3.0/M2.5*14	T6*156
PD03-140-XP20	14.0-14.5	42	48	2.2	20	B	M3.0/M2.5*14	T6*156
PD03-146-XP20	14.51-15.0	45	50	2.3	20	A	M3.0/M2.5*14	T6*156
PD03-150-XP20	15.0-15.5	45	50	2.4	20	A	M3.0/M2.5*14	T6*156
PD03-155-XP20	15.5-15.88	47	50	2.5	20	A	M3.0/M2.5*14	T6*156
PD03-160-XP20	15.89-16.5	48	50	2.5	20	1	*M3.5/M3.0*16	1.5*185
PD03-165-XP20	16.5-17.0	50	50	2.6	20	1	*M3.5/M3.0*16	1.5*185
PD03-170-XP20	17.0-17.5	51	50	2.7	20	1	*M3.5/M3.0*16	1.5*185
PD03-175-XP20	17.5-18.0	53	50	2.8	20	1	*M3.5/M3.0*16	1.5*185
PD03-181-XP25	18.01-18.5	56	56	2.9	25	2	M4.0/M3.0*16	2.0*210
PD03-185-XP25	18.5-19.0	56	56	2.9	25	2	M4.0/M3.0*16	2.0*210
PD03-190-XP25	19-19.5	57	56	3.0	25	2	M4.0/M3.0*16	2.0*210
PD03-195-XP25	19.5-19.99	59	56	3.1	25	2	M4.0/M3.0*16	2.0*210
PD03-200-XP25	20-20.5	60	56	3.2	25	3	M4.0/M3.0*19	2.0*210
PD03-205-XP25	20.5-21	62	56	3.3	25	3	M4.0/M3.0*19	2.0*210
PD03-210-XP25	21-21.5	63	56	3.3	25	3	M4.0/M3.0*19	2.0*210
PD03-215-XP25	21.5-22	65	56	3.4	25	3	M4.0/M3.0*19	2.0*210
PD03-221-XP25	22.01-22.5	68	56	3.5	25	4	M4.0/M3.0*19	2.0*210
PD03-225-XP25	22.5-23	68	56	3.6	25	4	M4.0/M3.0*19	2.0*210
PD03-230-XP25	23-23.5	69	56	3.7	25	4	M4.0/M3.0*19	2.0*210
PD03-235-XP25	23.5-24	71	56	3.7	25	4	M4.0/M3.0*19	2.0*210
PD03-241-XP32	24.01-24.5	74	60	3.8	32	5	M5.0/M4.0*23	2.5*240



3D								
Model	Insert Diameter(D)	Effective Depth	Shank Length	Tip Height	Shank Diameter	Groove Size	Center Tightening Screws	Wrench
		L1	L2	L3	D1			
PD03-245-XP32	24.5-25	74	60	3.9	32	5	M5.0/M4.0*23	2.5*240
PD03-250-XP32	25-25.5	75	60	3.8	32	5	M5.0/M4.0*23	2.5*240
PD03-255-XP32	25.5-26.0	77	60	3.9	32	5	M5.0/M4.0*23	2.5*240
PD03-261-XP32	26.01-26.5	80	60	4.0	32	6	M5.0/M4.0*23	2.5*240
PD03-265-XP32	26.5-27	80	60	4.1	32	6	M5.0/M4.0*23	2.5*240
PD03-270-XP32	27-27.5	81	60	4.2	32	6	M5.0/M4.0*23	2.5*240
PD03-275-XP32	27.5-28	83	60	4.2	32	6	M5.0/M4.0*23	2.5*240
PD03-281-XP32	28.01-28.5	86	60	4.3	32	7	M6.0/M5.0*28	3.0*265
PD03-285-XP32	28.5-29	86	60	4.4	32	7	M6.0/M5.0*28	3.0*265
PD03-290-XP32	29-29.5	87	60	4.5	32	7	M6.0/M5.0*28	3.0*265
PD03-295-XP32	29.5-30	89	60	4.5	32	7	M6.0/M5.0*28	3.0*265
PD03-301-XP32	30.01-30.5	91	60	4.6	32	8	M6.0/M5.0*28	3.0*265
PD03-305-XP32	30.5-31	91	60	4.7	32	8	M6.0/M5.0*28	3.0*265
PD03-310-XP32	31-31.5	93	60	4.8	32	8	M6.0/M5.0*28	3.0*265
PD03-315-XP32	31.5-32	95	60	4.8	32	8	M6.0/M5.0*28	3.0*265
PD03-321-XP40	32.01-33	99	70	4.9	40	9	M6.0/M6.0*32	3.0*265
PD03-330-XP40	33.0-34.0	99	70	5.1	40	9	M6.0/M6.0*32	3.0*265
PD03-340-XP40	34.0-35.0	102	70	5.2	40	9	M6.0/M6.0*32	3.0*265
PD03-350-XP40	35.0-36.0	105	70	5.4	40	9	M6.0/M6.0*32	3.0*265
PD03-361-XP40	36.01-37.0	111	70	5.5	40	10	M6.0/M6.0*32	3.0*265
PD03-370-XP40	37.0-38.0	111	70	5.7	40	10	M6.0/M6.0*32	3.0*265
PD03-380-XP40	38.0-39.0	114	70	5.8	40	10	M6.0/M6.0*32	3.0*265
PD03-390-XP40	39.0-40.0	117	70	6.0	40	10	M6.0/M6.0*32	3.0*265
PD03-400-XP40	40.0	120	70	6.2	40	10	M6.0/M6.0*32	3.0*265

* 15.89-18.00 diameter inserts have two types of screw holes, and the drill bodies are fitted with M3.5/M3.0 or M3.5/M2.5 screws depending on the insert(M3.5/M3.0 screws are used in most cases).
For 18.01-19.99 diameter inserts, because M3.5/M2.5 screws are easily damaged, the regular stock is M4.0/M3.0 screws.

PAW DRILL BODY



5D								
Model	Insert Diameter(D)					Groove Size	Center Tightening Screws	Wrench
		Effective Depth	Shank Length	Tip Height	Shank Diameter			
		L1	L2	L3	D1			
PD05-125-XP20	12.5-13.0	63	48	2.0	20	C	M3.0/M2.5*14	T6*156
PD05-130-XP20	13.0-13.5	65	48	2.1	20	C	M3.0/M2.5*14	T6*156
PD05-136-XP20	13.51-14.0	69	48	2.2	20	B	M3.0/M2.5*14	T6*156
PD05-140-XP20	14.0-14.5	70	48	2.2	20	B	M3.0/M2.5*14	T6*156
PD05-146-XP20	14.51-15.0	74	50	2.3	20	A	M3.0/M2.5*14	T6*156
PD05-150-XP20	15.0-15.5	75	50	2.4	20	A	M3.0/M2.5*14	T6*156
PD05-155-XP20	15.5-15.88	78	50	2.5	20	A	M3.0/M2.5*14	T6*156
PD05-160-XP20	15.89-16.5	80	50	2.5	20	1	*M3.5/M3.0*16	1.5*185
PD05-165-XP20	16.5-17.0	83	50	2.6	20	1	*M3.5/M3.0*16	1.5*185
PD05-170-XP20	17.0-17.5	85	50	2.7	20	1	*M3.5/M3.0*16	1.5*185
PD05-175-XP20	17.5-18.0	88	50	2.8	20	1	*M3.5/M3.0*16	1.5*185
PD05-181-XP25	18.01-18.5	92	56	2.9	25	2	M4.0/M3.0*16	2.0*210
PD05-185-XP25	18.5-19.0	93	56	2.9	25	2	M4.0/M3.0*16	2.0*210
PD05-190-XP25	19-19.5	95	56	3.0	25	2	M4.0/M3.0*16	2.0*210
PD05-195-XP25	19.5-19.99	98	56	3.1	25	2	M4.0/M3.0*16	2.0*210
PD05-200-XP25	20-20.5	100	56	3.2	25	3	M4.0/M3.0*19	2.0*210
PD05-205-XP25	20.5-21	103	56	3.3	25	3	M4.0/M3.0*19	2.0*210
PD05-210-XP25	21-21.5	105	56	3.3	25	3	M4.0/M3.0*19	2.0*210
PD05-215-XP25	21.5-22	108	56	3.4	25	3	M4.0/M3.0*19	2.0*210
PD05-221-XP25	22.01-22.5	112	56	3.5	25	4	M4.0/M3.0*19	2.0*210
PD05-225-XP25	22.5-23	113	56	3.6	25	4	M4.0/M3.0*19	2.0*210
PD05-230-XP25	23-23.5	115	56	3.7	25	4	M4.0/M3.0*19	2.0*210
PD05-235-XP25	23.5-24	118	56	3.7	25	4	M4.0/M3.0*19	2.0*210
PD05-241-XP32	24.01-24.5	122	60	3.8	32	5	M5.0/M4.0*23	2.5*240

PAW DRILL BODY

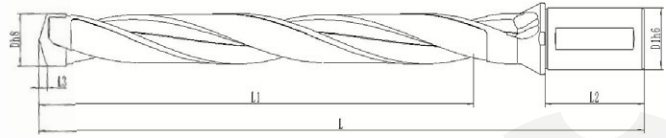


5D								
Model	Insert Diameter(D)	Effective Depth	Shank Length	Tip Height	Shank Diameter	Groove Size	Center Tightening Screws	Wrench
		L1	L2	L3	D1			
PD05-245-XP32	24.5-25	123	60	3.9	32	5	M5.0/M4.0*23	2.5*240
PD05-250-XP32	25-25.5	125	60	3.8	32	5	M5.0/M4.0*23	2.5*240
PD05-255-XP32	25.5-26.0	128	60	3.9	32	5	M5.0/M4.0*23	2.5*240
PD05-261-XP32	26.01-26.5	132	60	4.0	32	6	M5.0/M4.0*23	2.5*240
PD05-265-XP32	26.5-27	133	60	4.1	32	6	M5.0/M4.0*23	2.5*240
PD05-270-XP32	27-27.5	135	60	4.2	32	6	M5.0/M4.0*23	2.5*240
PD05-275-XP32	27.5-28	138	60	4.2	32	6	M5.0/M4.0*23	2.5*240
PD05-281-XP32	28.01-28.5	142	60	4.3	32	7	M6.0/M5.0*28	3.0*265
PD05-285-XP32	28.5-29	143	60	4.4	32	7	M6.0/M5.0*28	3.0*265
PD05-290-XP32	29-29.5	145	60	4.5	32	7	M6.0/M5.0*28	3.0*265
PD05-295-XP32	29.5-30	143	60	4.5	32	7	M6.0/M5.0*28	3.0*265
PD05-301-XP32	30.01-30.5	151	60	4.6	32	8	M6.0/M5.0*28	3.0*265
PD05-305-XP32	30.5-31	152	60	4.7	32	8	M6.0/M5.0*28	3.0*265
PD05-310-XP32	31-31.5	155	60	4.8	32	8	M6.0/M5.0*28	3.0*265
PD05-315-XP32	31.5-32	158	60	4.8	32	8	M6.0/M5.0*28	3.0*265
PD05-321-XP40	32.01-33	163	70	4.9	40	9	M6.0/M6.0*32	3.0*330
PD05-330-XP40	33.0-34.0	165	70	5.1	40	9	M6.0/M6.0*32	3.0*330
PD05-340-XP40	34.0-35.0	170	70	5.2	40	9	M6.0/M6.0*32	3.0*330
PD05-350-XP40	35.0-36.0	175	70	5.4	40	9	M6.0/M6.0*32	3.0*330
PD05-361-XP40	36.01-37.0	183	70	5.5	40	10	M6.0/M6.0*32	3.0*330
PD05-370-XP40	37.0-38.0	185	70	5.7	40	10	M6.0/M6.0*32	3.0*330
PD05-380-XP40	38.0-39.0	190	70	5.8	40	10	M6.0/M6.0*32	3.0*330
PD05-390-XP40	39.0-40.0	195	70	6.0	40	10	M6.0/M6.0*32	3.0*330
PD05-400-XP40	40.0	200	70	6.2	40	10	M6.0/M6.0*32	3.0*330

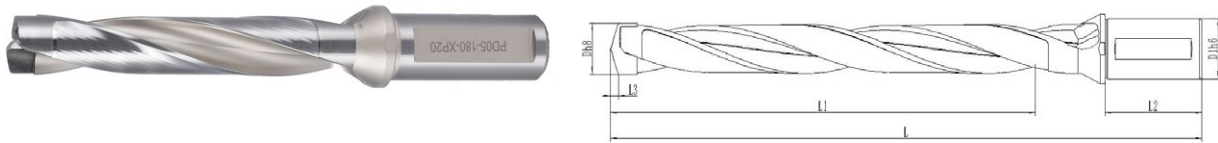
* 15.89-18.00 diameter inserts have two types of screw holes, and the drill bodies are fitted with M3.5/M3.0 or M3.5/M2.5 screws depending on the insert(M3.5/M3.0 screws are used in most cases).

For 18.01-19.99 diameter inserts, because M3.5/M2.5 screws are easily damaged, the regular stock is M4.0/M3.0 screws.

PAW DRILL BODY



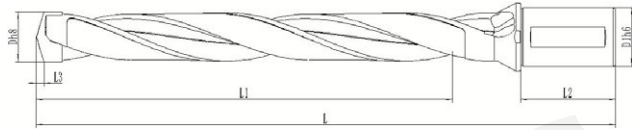
7D								
Model	Insert Diameter (D)	Effective Depth	Shank Length	Tip Height	Shank Diameter	Groove Size	Center Tightening Screws	Wrench
		L1	L2	L3	D1			
PD07-125-XP20	12.5-13.0	88	48	2.0	20	C	M3.0/M2.5*14	T6*188
PD07-130-XP20	13.0-13.5	91	48	2.1	20	C	M3.0/M2.5*14	T6*188
PD07-136-XP20	13.51-14.0	96	48	2.2	20	B	M3.0/M2.5*14	T6*188
PD07-140-XP20	14.0-14.5	98	48	2.2	20	B	M3.0/M2.5*14	T6*188
PD07-146-XP20	14.51-15.0	103	50	2.3	20	A	M3.0/M2.5*14	T6*188
PD07-150-XP20	15.0-15.5	105	50	2.4	20	A	M3.0/M2.5*14	T6*188
PD07-155-XP20	15.5-15.88	109	50	2.5	20	A	M3.0/M2.5*14	T6*188
PD07-160-XP20	15.89-16.5	112	50	2.5	20	1	*M3.5/M3.0*16	1.5*225
PD07-165-XP20	16.5-17.0	116	50	2.6	20	1	*M3.5/M3.0*16	1.5*225
PD07-170-XP20	17.0-17.5	119	50	2.7	20	1	*M3.5/M3.0*16	1.5*225
PD07-175-XP20	17.5-18.0	123	50	2.8	20	1	*M3.5/M3.0*16	1.5*225
PD07-181-XP25	18.01-18.5	128	56	2.9	25	2	M4.0/M3.0*16	2.0*260
PD07-185-XP25	18.5-19.0	130	56	2.9	25	2	M4.0/M3.0*16	2.0*260
PD07-190-XP25	19-19.5	133	56	3.0	25	2	M4.0/M3.0*16	2.0*260
PD07-195-XP25	19.5-19.99	137	56	3.1	25	2	M4.0/M3.0*16	2.0*260
PD07-200-XP25	20-20.5	140	56	3.2	25	3	M4.0/M3.0*19	2.0*260
PD07-205-XP25	20.5-21	144	56	3.3	25	3	M4.0/M3.0*19	2.0*260
PD07-210-XP25	21-21.5	147	56	3.3	25	3	M4.0/M3.0*19	2.0*260
PD07-215-XP25	21.5-22	151	56	3.4	25	3	M4.0/M3.0*19	2.0*260
PD07-221-XP25	22.01-22.5	156	56	3.5	25	4	M4.0/M3.0*19	2.0*260
PD07-225-XP25	22.5-23	158	56	3.6	25	4	M4.0/M3.0*19	2.0*260
PD07-230-XP25	23-23.5	161	56	3.7	25	4	M4.0/M3.0*19	2.0*260
PD07-235-XP25	23.5-24	165	56	3.7	25	4	M4.0/M3.0*19	2.0*260
PD07-241-XP32	24.01-24.5	170	60	3.8	32	5	M5.0/M4.0*23	2.5*295



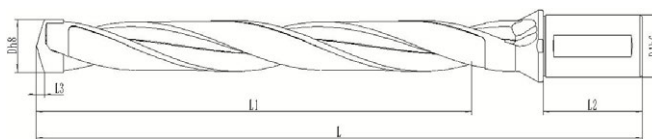
7D								
Model	Insert Diameter(D)	Effective Depth	Shank Length	Tip Height	Shank Diameter	Groove Size	Center Tightening Screws	Wrench
		L1	L2	L3	D1			
PD07-245-XP32	24.5-25	172	60	3.9	32	5	M5.0/M4.0*23	2.5*295
PD07-250-XP32	25-25.50	175	60	3.8	32	5	M5.0/M4.0*23	2.5*295
PD07-255-XP32	25.51-26.0	179	60	3.9	32	5	M5.0/M4.0*23	2.5*295
PD07-261-XP32	26.01-26.5	184	60	4.0	32	6	M5.0/M4.0*23	2.5*295
PD07-265-XP32	26.5-27.0	186	60	4.1	32	6	M5.0/M4.0*23	2.5*295
PD07-270-XP32	27-27.5	189	60	4.2	32	6	M5.0/M4.0*23	2.5*295
PD07-275-XP32	27.5-28.0	193	60	4.2	32	6	M5.0/M4.0*23	2.5*295
PD07-281-XP32	28.01-28.5	198	60	4.3	32	7	M6.0/M5.0*28	3.0*330
PD07-285-XP32	28.5-29	200	60	4.4	32	7	M6.0/M5.0*28	3.0*330
PD07-290-XP32	29-29.5	203	60	4.5	32	7	M6.0/M5.0*28	3.0*330
PD07-295-XP32	29.5-30	207	60	4.5	32	7	M6.0/M5.0*28	3.0*330
PD07-301-XP32	30.01-30.5	211	60	4.6	32	8	M6.0/M5.0*28	3.0*330
PD07-305-XP32	30.5-31	213	60	4.7	32	8	M6.0/M5.0*28	3.0*330
PD07-310-XP32	31-31.5	217	60	4.8	32	8	M6.0/M5.0*28	3.0*330
PD07-315-XP32	31.5-32	221	60	4.8	32	8	M6.0/M5.0*28	3.0*330
PD07-321-XP40	32.01-33	227	70	4.9	40	9	M6.0/M6.0*32	3.0*439
PD07-330-XP40	33.0-34.0	231	70	5.1	40	9	M6.0/M6.0*32	3.0*439
PD07-340-XP40	34.0-35.0	238	70	5.2	40	9	M6.0/M6.0*32	3.0*439
PD07-350-XP40	35.0-36.0	245	70	5.4	40	9	M6.0/M6.0*32	3.0*439
PD07-361-XP40	36.01-37.0	255	70	5.5	40	10	M6.0/M6.0*32	3.0*439
PD07-370-XP40	37.0-38.0	259	70	5.7	40	10	M6.0/M6.0*32	3.0*439
PD07-380-XP40	38.0-39.0	266	70	5.8	40	10	M6.0/M6.0*32	3.0*439
PD07-390-XP40	39.0-40.0	273	70	6.0	40	10	M6.0/M6.0*32	3.0*439
PD07-400-XP40	40.0	280	70	6.2	40	10	M6.0/M6.0*32	3.0*439

* 15.89-18.00 diameter inserts have two types of screw holes, and the drill bodies are fitted with M3.5/M3.0 or M3.5/M2.5 screws depending on the insert(M3.5/M3.0 screws are used in most cases).
For 18.01-19.99 diameter inserts, because M3.5/M2.5 screws are easily damaged, the regular stock is M4.0 /M3.0 screws.

PAW DRILL BODY



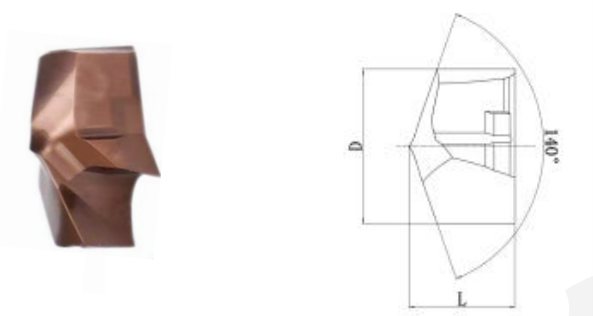
10D								
Model	Insert Diameter(D)	Effective Depth	Shank Length	Tip Height	Shank Diameter	Groove Size	Center Tightening Screws	Wrench
		L1	L2	L3	D1			
PD10-125-XP20	12.5-13.0	125	48	2.0	20	C	M3.0/M2.5*14	T6*230
PD10-130-XP20	13.0-13.5	130	48	2.1	20	C	M3.0/M2.5*14	T6*230
PD10-136-XP20	13.51-14.0	136	48	2.2	20	B	M3.0/M2.5*14	T6*230
PD10-140-XP20	14.0-14.5	140	48	2.2	20	B	M3.0/M2.5*14	T6*230
PD10-146-XP20	14.51-15.0	146	50	2.3	20	A	M3.0/M2.5*14	T6*230
PD10-150-XP20	15.0-15.5	150	50	2.4	20	A	M3.0/M2.5*14	T6*230
PD10-155-XP20	15.5-15.88	155	50	2.5	20	A	M3.0/M2.5*14	T6*230
PD10-160-XP20	15.89-16.5	160	50	2.5	20	1	*M3.5/M3.0*16	1.5*297
PD10-165-XP20	16.5-17.0	165	50	2.6	20	1	*M3.5/M3.0*16	1.5*297
PD10-170-XP20	17.0-17.5	170	50	2.7	20	1	*M3.5/M3.0*16	1.5*297
PD10-175-XP20	17.5-18.0	175	50	2.8	20	1	*M3.5/M3.0*16	1.5*297
PD10-181-XP25	18.01-18.5	182	56	2.9	25	2	M4.0/M3.0*16	2.0*343
PD10-185-XP25	18.5-19.0	185	56	2.9	25	2	M4.0/M3.0*16	2.0*343
PD10-190-XP25	19-19.5	190	56	3.0	25	2	M4.0/M3.0*16	2.0*343
PD10-195-XP25	19.5-19.99	195	56	3.1	25	2	M4.0/M3.0*16	2.0*343
PD10-200-XP25	20-20.5	200	56	3.2	25	3	M4.0/M3.0*19	2.0*343
PD10-205-XP25	20.5-21	205	56	3.3	25	3	M4.0/M3.0*19	2.0*343
PD10-210-XP25	21-21.5	210	56	3.3	25	3	M4.0/M3.0*19	2.0*343
PD10-215-XP25	21.5-22	215	56	3.4	25	3	M4.0/M3.0*19	2.0*343
PD10-221-XP25	22.01-22.5	222	56	3.5	25	4	M4.0/M3.0*19	2.0*343
PD10-225-XP25	22.5-23	225	56	3.6	25	4	M4.0/M3.0*19	2.0*343
PD10-230-XP25	23-23.5	230	56	3.7	25	4	M4.0/M3.0*19	2.0*343
PD10-235-XP25	23.5-24	235	56	3.7	25	4	M4.0/M3.0*19	2.0*343
PD10-241-XP32	24.01-24.5	242	60	3.8	32	5	M5.0/M4.0*23	2.5*393



10D								
Model	Insert Diameter(D)	Effective Depth	Shank Length	Tip Height	Shank Diameter	Groove Size	Center Tightening Screws	Wrench
		L1	L2	L3	D1			
PD10-245-XP32	24.5-25	245	60	3.9	32	5	M5.0/M4.0*23	2.5*393
PD10-250-XP32	25-25.5	250	60	3.8	32	5	M5.0/M4.0*23	2.5*393
PD10-255-XP32	25.5-26.0	255	60	3.9	32	5	M5.0/M4.0*23	2.5*393
PD10-261-XP32	26.01-26.5	262	60	4.0	32	6	M5.0/M4.0*23	2.5*393
PD10-265-XP32	26.5-27	265	60	4.1	32	6	M5.0/M4.0*23	2.5*393
PD10-270-XP32	27-27.5	270	60	4.2	32	6	M5.0/M4.0*23	2.5*393
PD10-275-XP32	27.5-28	275	60	4.2	32	6	M5.0/M4.0*23	2.5*393
PD10-281-XP32	28.01-28.5	282	60	4.3	32	7	M6.0/M5.0*28	3.0*439
PD10-285-XP32	28.5-29	285	60	4.4	32	7	M6.0/M5.0*28	3.0*439
PD10-290-XP32	29-29.5	290	60	4.5	32	7	M6.0/M5.0*28	3.0*439
PD10-295-XP32	29.5-30	295	60	4.5	32	7	M6.0/M5.0*28	3.0*439
PD10-301-XP32	30.01-30.5	302	60	4.6	32	8	M6.0/M5.0*28	3.0*439
PD10-305-XP32	30.5-31	305	60	4.7	32	8	M6.0/M5.0*28	3.0*439
PD10-310-XP32	31-31.5	310	60	4.8	32	8	M6.0/M5.0*28	3.0*439
PD10-315-XP32	31.5-32	315	60	4.8	32	8	M6.0/M5.0*28	3.0*439
PD10-321-XP40	32.01-33	323	70	4.9	40	9	M6.0/M6.0*32	3.0*530
PD10-330-XP40	33.0-34.0	330	70	5.1	40	9	M6.0/M6.0*32	3.0*530
PD10-340-XP40	34.0-35.0	340	70	5.2	40	9	M6.0/M6.0*32	3.0*530
PD10-350-XP40	35.0-36.0	350	70	5.4	40	9	M6.0/M6.0*32	3.0*530
PD10-361-XP40	36.01-37.0	363	70	5.5	40	10	M6.0/M6.0*32	3.0*530
PD10-370-XP40	37.0-38.0	370	70	5.7	40	10	M6.0/M6.0*32	3.0*530
PD10-380-XP40	38.0-39.0	380	70	5.8	40	10	M6.0/M6.0*32	3.0*530
PD10-390-XP40	39.0-40.0	390	70	6.0	40	10	M6.0/M6.0*32	3.0*530
PD10-400-XP40	40.0	400	70	6.2	40	10	M6.0/M6.0*32	3.0*530

* 15.89-18.00 diameter inserts have two types of screw holes, and the drill bodies are fitted with M3.5/M3.0 or M3.5/M2.5 screws depending on the insert(M3.5/M3.0 screws are used in most cases). For 18.01-19.99 diameter inserts, because M3.5/M2.5 screws are easily damaged, the regular stock is M4.0/M3.0 screws.

PAW DRILL INSERTS



Insert Types				
Model	Shank Size	Insert Diameter Rang(D)	L	Thread
PDPA-(1250-1350)	C	12.5-13.5	9.6	M2.5
PDPA-(1351-1450)	B	13.51-14.5	10.1	M2.5
PDPA-(1451-1588)	A	14.51-15.88	10.6	M2.5
PDPA-(1589-1800)	1	15.89-18.0	11.6	M3.0
PDPA-(1589-1800)-1F	1F	15.89-18.0	11.6	M2.5
PDPA-(1801-1999)	2	18.01-19.99	12.6	M3.0
PDPA-(1801-1999)-2F	2F	18.01-19.99	12.6	M2.5
PDPA-(2000-2200)	3	20.00-22.00	13.6	M3.0
PDPA-(2201-2400)	4	22.01-24.0	14.6	M3.0
PDPA-(2401-2600)	5	24.01-26.0	15.6	M4.0
PDPA-(2601-2800)	6	26.01-28.0	16.6	M4.0
PDPA-(2801-3000)	7	28.01-30.0	17.6	M5.0
PDPA-(3001-3200)	8	30.01-32.0	18.6	M5.0
PDPA-(3201-3600)	9	32.01-36.0	20.6	M6.0
PDPA-(3601-4000)	10	36.01-40.0	22.6	M6.0

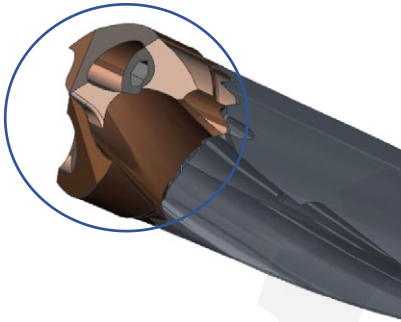
* The two diameter range, 15.89-18.00 and 18.01-19.99 have two types of thread, M3.0 and M2.5, whose matching drill bodies are 1/1F and 2/2F (We have 1 and 2, i.e. M3.0, in regular stock).

JAWS DRILL BODIES, MODELS AND SIZES



- Insert diameter range: 12-33.5mm, depth: 1.5x, 3x, 5x, 8x, 12x diameter.
- Resharpener allowance of 1.5mm-3mm is reserved for inserts to further reduce tool costs.
- Interchangeable carbide inserts and high rigidity alloy drill body greatly improve machining accuracy and efficiency.
- The radial tooth design of the insert and the drill body realizes high precision and high strength.
- Designed with internal coolant holes, it makes drilling cold enough for longer tool life and smoother chip evacuation.
- The same drill body can be assembled with different diameters of blades, saving tooling costs.
- Optimized spiral design for smooth chip evacuation control.
- Enhanced edge treatment dramatically improves machining life.
- Shank design suitable for a wide range of shank systems.
- Quick and easy insert change without removing the drill body from the machine.

Installation Status



Screws High-strength screws for stable locking of inserts from the head



Insert A wide range of different cutting edges for different workpiece materials.



High-precision mating tooth profile for a solid connection

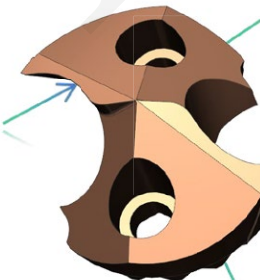
Inner Cooling Hole

Drill Body The drill body is made of high-quality alloy steel with good rigidity and toughness.



Optimized drill tips for better centering performance

Chamfered main cutting edge for enhanced insert strength and wear resistance



Reinforced cutting edge protection for better chipping resistance during the cutting process

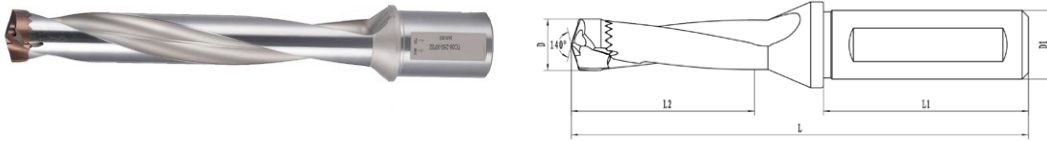
Superior coating for more wear-resistant inserts

JAWS DRILL BODIES, MODELS AND SIZES



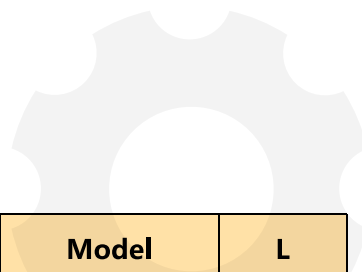
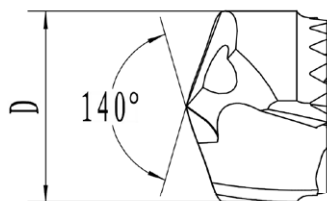
Diameter (D) (h7)	1.5D			3D			5D			universal		Screw	Wrench
	Model	Size		Model	Size		Model	Size		Size			
		L2	L		L2	L		L2	L	L1	D1		
12.0-12.49	TC1.5-120-XP16	28	91	TC03-120-XP16	46	107	TC05-120-XP16	71	132	48	16	M2.2*8	T6
12.5-13.49	TC1.5-130-XP16	30	92	TC03-130-XP16	49	112	TC05-130-XP16	76	142				
13.5-14.5	TC1.5-140-XP16	34	96	TC03-140-XP16	55	119	TC05-140-XP16	84	149				
14.51-15.5	TC1.5-150-XP20	35	100	TC03-150-XP20	58	129	TC05-150-XP20	89	159	50	20	M2.5*9	T8
15.51-16.5	TC1.5-160-XP20	38	103	TC03-160-XP20	62	134	TC05-160-XP20	95	169				
16.51-17.5	TC1.5-170-XP20	39	105	TC03-170-XP20	66	140	TC05-170-XP20	101	175				
17.51-18.5	TC1.5-180-XP20	43	107	TC03-180-XP20	70	145	TC05-180-XP20	107	180				
18.51-19.5	TC1.5-190-XP25	44	115	TC03-190-XP25	73	160	TC05-190-XP25	112	195	56	25	M3.0*11	T8
19.51-20.5	TC1.5-200-XP25	47	118	TC03-200-XP25	77	160	TC05-200-XP25	118	200				
20.51-21.5	TC1.5-210-XP25	48	119	TC03-210-XP25	80	160	TC05-210-XP25	123	200				
21.51-22.8	TC1.5-220-XP25	51	121	TC03-220-XP25	84	165	TC05-220-XP25	129	205				
22.81-23.8	TC1.5-230-XP25	51	122	TC03-230-XP25	81	165	TC05-230-XP25	134	215				
23.81-24.8	TC1.5-240-XP32	54	129	TC03-240-XP32	91	175	TC05-240-XP32	140	225	60	32	M4.0*14	T15
24.81-25.8	TC1.5-250-XP32	54	129	TC03-250-XP32	93	175	TC05-250-XP32	145	230				
25.81-26.8	TC1.5-260-XP32	57	132	TC03-260-XP32	97	180	TC05-260-XP32	151	235				
26.81-27.8	TC1.5-270-XP32	58	133	TC03-270-XP32	99	180	TC05-270-XP32	156	245				
27.81-28.8	TC1.5-280-XP32	60	135	TC03-280-XP32	102	185	TC05-280-XP32	162	245				
28.81-29.9	TC1.5-290-XP32	61	136	TC03-290-XP32	105	190	TC05-290-XP32	167	250				
29.81-30.8	TC1.5-300-XP32	64	139	TC03-300-XP32	110	191	TC05-300-XP32	173	261				
30.81-32.0	TC1.5-320-XP32	67	143	TC03-320-XP32	116	201	TC05-320-XP32	181	266				
32.01-33.5	TC1.5-330-XP32	69	146	TC03-330-XP32	121	206	TC05-330-XP32	191	276				

JAWS DRILL BODIES, MODELS AND SIZES



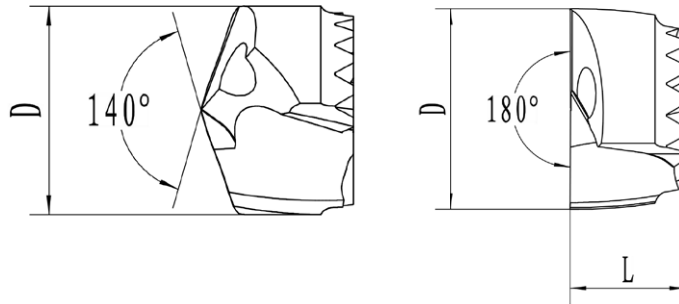
Diameter (D) (h7)	8D			10D			12D			universal		Screw	Wrench
	Model	Size		Model	Size		Model	Size		Size			
		L2	L		L2	L		L2	L	L1	D1		
12.0-12.49	TC08-120-XP16	107	168	TC10-120-XP16	-	-	-	-	-	48	16	M2.2*8	T6
12.5-13.49	TC08-130-XP16	115	182	TC10-130-XP16	-	-	-	-	-				
13.5-14.5	TC08-140-XP16	127	194	TC10-140-XP16	156.5	220.5	TC12-140-XP16	186.5	249.5				
14.51-15.5	TC08-150-XP20	136	204	TC10-150-XP20	166.7	232.7	TC12-150-XP20	198.7	263.7	50	20	M2.5*9	T8
15.51-16.5	TC08-160-XP20	144	214	TC10-160-XP20	178.5	243.5	TC12-160-XP20	211.5	276.5				
16.51-17.5	TC08-170-XP20	154	225	TC10-170-XP20	188.7	253.7	TC12-170-XP20	223.7	288.7				
17.51-18.5	TC08-180-XP20	162	230	TC10-180-XP20	198.8	264.8	TC12-180-XP20	236.8	301.8	56	25	M3.0*11	T15
18.51-19.5	TC08-190-XP25	171	255	TC10-190-XP25	209.9	280.9	TC12-190-XP25	248.9	314.8				
19.51-20.5	TC08-200-XP25	179	270	TC10-200-XP25	220.5	291.5	TC12-200-XP25	261.5	332.5				
20.51-21.5	TC08-210-XP25	188	266	TC10-210-XP25	230.6	361.6	TC12-210-XP25	273.6	344.6	60	32	M3.5*12	T15
21.51-22.8	TC08-220-XP25	196	275	TC10-220-XP25	244.1	315.1	TC12-220-XP25	289.7	360.7				
22.81-23.8	TC08-230-XP25	205	285	TC10-230-XP25	253.7	324.7	TC12-230-XP25	301.3	372.3				
23.81-24.8	TC08-240-XP32	213	300	TC10-240-XP32	264.9	339.9	TC12-240-XP32	264.9	389.5	60	32	M4.0*14	T15
24.81-25.8	TC08-250-XP32	222	305	TC10-250-XP32	270	350	TC12-250-XP32	326.6	401.6				
25.81-26.8	TC08-260-XP32	230	315	TC10-260-XP32	285.3	360.3	TC12-260-XP32	338.9	413.9				
26.81-27.8	TC08-270-XP32	239	325	TC10-270-XP32	295.3	370.3	TC12-270-XP32	350.9	425.9	60	32	M4.5*15	T15
27.81-28.8	TC08-280-XP32	247	330	TC10-280-XP32	306.2	381.2	TC12-280-XP32	363.8	438.8				
28.81-29.9	TC08-290-XP32	256	340	TC10-290-XP32	316.4	391.4	TC12-290-XP32	376	451				
29.81-30.8	TC08-300-XP32	265	351	TC10-300-XP32	327.9	402.9	TC12-300-XP32	389.5	464.5	60	32	M4.5*15	T15
30.81-32.0	TC08-320-XP32	276	361	TC10-320-XP32	345.9	424.9	- - - - -						
32.01-33.5	TC08-330-XP32	291	376	TC10-330-XP32	364	443							

JAWS DRILL BODIES, MODELS AND SIZES



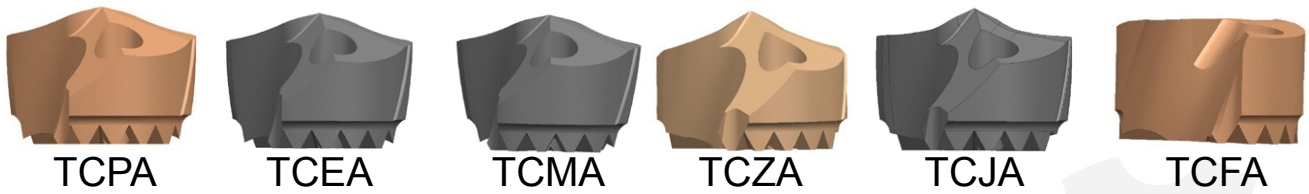
Diameter D(mm)	Model	Model	Model	L	Model	L
12.0	TCEA-1200	TCPA-1200	TCMA-1200	9.1	TCFA-1200	7.1
12.5	TCEA-1250	TCPA-1250	TCMA-1250	9.4	TCFA-1250	7.2
13.0	TCEA-1300	TCPA-1300	TCMA-1300	9.7	TCFA-1300	7.5
13.5	TCEA-1350	TCPA-1350	TCMA-1350	10.3	TCFA-1350	7.9
14.0	TCEA-1400	TCPA-1400	TCMA-1400		TCFA-1400	
14.5	TCEA-1450	TCPA-1450	TCMA-1450		TCFA-1450	
15.0	TCEA-1500	TCPA-1500	TCMA-1500	11.0	TCFA-1500	8.3
15.5	TCEA-1550	TCPA-1550	TCMA-1550		TCFA-1550	
16.0	TCEA-1600	TCPA-1600	TCMA-1600	11.6	TCFA-1600	8.8
16.5	TCEA-1650	TCPA-1650	TCMA-1650		TCFA-1650	
17.0	TCEA-1700	TCPA-1700	TCMA-1700	12.3	TCFA-1700	9.3
17.5	TCEA-1750	TCPA-1750	TCMA-1750		TCFA-1750	
18.0	TCEA-1800	TCPA-1800	TCMA-1800	12.9	TCFA-1800	9.8
18.5	TCEA-1850	TCPA-1850	TCMA-1850		TCFA-1850	
19.0	TCEA-1900	TCPA-1900	TCMA-1900	13.6	TCFA-1900	10.2
19.5	TCEA-1950	TCPA-1950	TCMA-1950		TCFA-1950	
20.0	TCEA-2000	TCPA-2000	TCMA-2000	14.1	TCFA-2000	10.7
20.5	TCEA-2050	TCPA-2050	TCMA-2050		TCFA-2050	
21.0	TCEA-2100	TCPA-2100	TCMA-2100	14.8	TCFA-2100	11.2
21.5	TCEA-2150	TCPA-2150	TCMA-2150		TCFA-2150	
22.0	TCEA-2200	TCPA-2200	TCMA-2200	15.0	TCFA-2200	
22.5	TCEA-2250	TCPA-2250	TCMA-2250		TCFA-2250	
23.0	TCEA-2300	TCPA-2300	TCMA-2300	15.2	TCFA-2300	
23.5	TCEA-2350	TCPA-2350	TCMA-2350		TCFA-2350	

JAWS DRILL BODIES, MODELS AND SIZES



Diameter D(mm)	Model	Model	Model	L	Model	L
24.0	TCEA-2400	TCPA-2400	TCMA-2400	15.4	TCFA-2400	11.3
24.5	TCEA-2450	TCPA-2450	TCMA-2450		TCFA-2450	
25.0	TCEA-2500	TCPA-2500	TCMA-2500	15.9	TCFA-2500	11.7
25.5	TCEA-2550	TCPA-2550	TCMA-2550		TCFA-2550	
26.0	TCEA-2600	TCPA-2600	TCMA-2600	16.5	TCFA-2600	12.2
26.5	TCEA-2650	TCPA-2650	TCMA-2650		TCFA-2650	
27.0	TCEA-2700	TCPA-2700	TCMA-2700	17.2	TCFA-2700	12.7
27.5	TCEA-2750	TCPA-2750	TCMA-2750		TCFA-2750	
28.0	TCEA-2800	TCPA-2800	TCMA-2800	17.8	TCFA-2800	13.2
28.5	TCEA-2850	TCPA-2850	TCMA-2850		TCFA-2850	
29.0	TCEA-2900	TCPA-2900	TCMA-2900	18.4	TCFA-2900	13.6
29.5	TCEA-2950	TCPA-2950	TCMA-2950		TCFA-2950	
30.0	TCEA-3000	TCPA-3000	TCMA-3000	19.0	TCFA-3000	14.1
30.5	TCEA-3050	TCPA-3050	TCMA-3050		TCFA-3050	
31.0	TCEA-3100	TCPA-3100	TCMA-3100			
31.5	TCEA-3150	TCPA-3150	TCMA-3150			
32.0	TCEA-3200	TCPA-3200	TCMA-3200			
32.5	TCEA-3250	TCPA-3250	TCMA-3250			
33.0	TCEA-3300	TCPA-3300	TCMA-3300			
33.5	TCEA-3350	TCPA-3350	TCMA-3350			

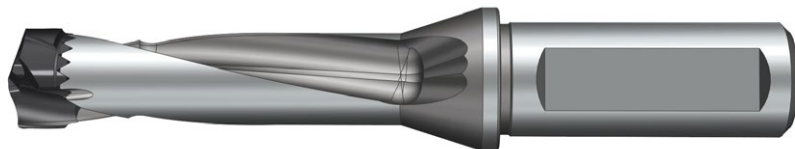
JAWS DRILL BODIES, MODELS AND SIZES



- TCPA: High tip strength for machining common steel parts, AlCr coating(P).
- TCEA: Relatively sharp tip for machining mild steel and cast iron, AlCrN coating(P/K).
- TCMA: Dedicated to machining stainless steel with a tough, chipping-resistant matrix, AlTiN coating(M/K).
- TCZA: Self-centering drill tip with double top corner design, there's no need to make a pilot hole when using 8x diameter drills, AlCr coating(P/K).
- TCJA: Double top angle design for machining structural steel, AlCrN coating.
- TCFA: Top angle design for inlet beveling or bottom flat holemaking requirements, AlCr coating(P/K/M).



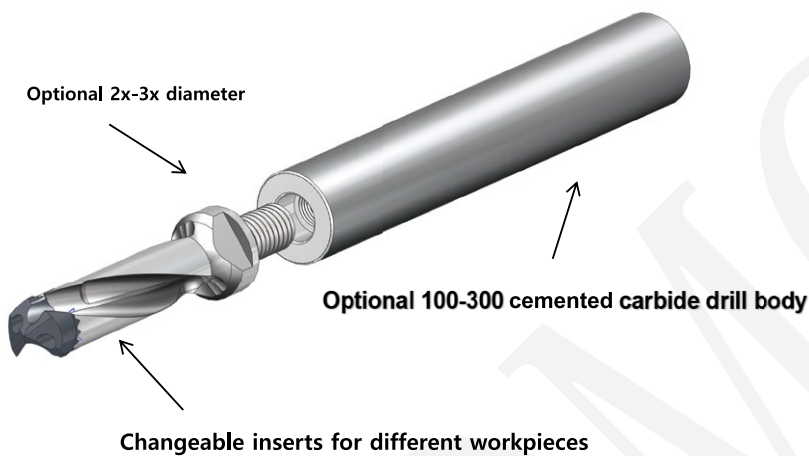
RECOMMENDED PROCESSING PARAMETER OF JAWS DRILL



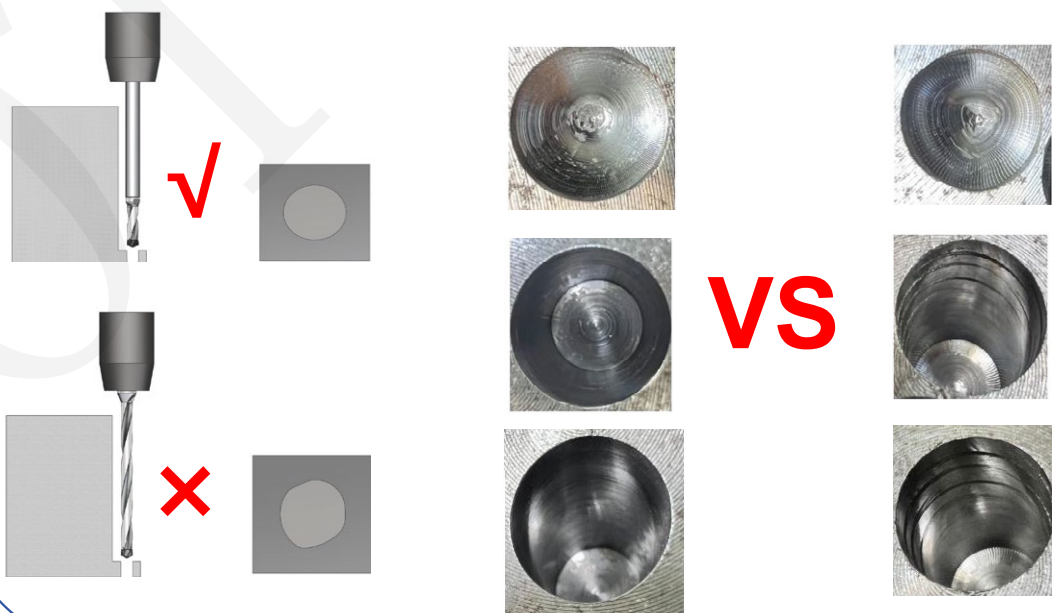
			Diameter(mm)		
Workpiece Material	Recommended Insert Models	Cutting Speed Vc (m/min)	12 ~ 16	16 ~ 20	20-30.8
Mild Steel (~ 250HB)	TCPA/TCEA	80-120 (50-80)	0.15-0.3	0.15-0.3	0.15-0.35
Plain Steel(250-320HB)	TCPA/TCEA	70-120 (50-80)	0.15-0.3	0.15-0.3	0.15-0.35
Highly Hardened Steel(45HRC)	TCPA	40-90 (30-70)	0.1-0.2	0.1-0.2	0.15-0.25
Stainless Steel(~ 200HB)	TCMA/TCEA	50-90 (40-60)	0.1-0.2	0.1-0.2	0.15-0.25
Gray Cast Iron	TCPA/TCEA	50-100 (40-80)	0.15-0.3	0.15-0.35	0.15-0.4
Ductile Iron	TCPA/TCEA	50-90 (40-70)	0.15-0.3	0.15-0.35	0.15-0.35
It needs to make a pilot hole when processing with 8x and 12x diameter drill, processing parameters refer to the parameters in parentheses					

ANTI VIBRATION JAWS DRILL

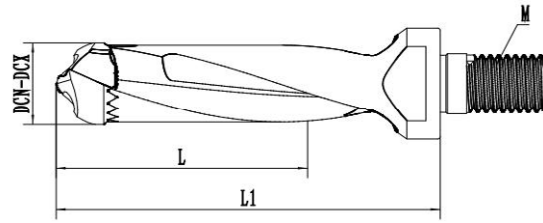
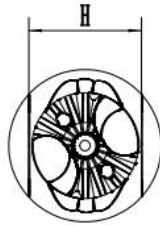
- Insert diameter range: 12-20mm, optional 100-300mm carbide drill bodies available.
- Resharpener allowance of 1.5mm-3mm is reserved for inserts to further reduce tool costs.
- When machining special workpieces, it is more rigid than conventional jaws drills with higher precision.
- Enhanced edge treatment to dramatically improve machining life.
- The use of tool bodies with integral carbide drill bodies enhances tool rigidity and chatter stability.
- Quick and easy insert change without removing the drill body from the machine.



In the processing of special workpieces, the holes produced by anti-vibration jaws drill rods with carbide rods are far superior to those produced by conventional jaws drill rod in terms of finish and size.



ANTI VIBRATION JAWS DRILL BODY



Model	DC	L	L1	H	M
TF02-12.00-M10	12.00-12.49	32	50.5	15	M10
TF02-13.00-M10	12.50-13.49	35	53.5	15	M10
TF02-14.00-M10	13.50-14.50	37	55.5	15	M10
TF02-15.00-M10	14.51-15.50	39.5	58	15	M10
TF02-16.00-M12	15.51-16.50	42	60.5	17	M12
TF02-17.00-M12	16.51-17.50	45.5	64	17	M12
TF02-18.00-M12	17.51-18.50	47	65.5	17	M12
TF02-19.00-M12	18.51-19.50	49.5	68	17	M12
TF02-20.00-M12	19.51-20.50	52	70.5	17	M12
TF03-12.00-M10	12.00-12.49	44	62.5	15	M10
TF03-13.00-M10	12.50-13.49	48	66.5	15	M10
TF03-14.00-M10	13.50-14.50	51	69.5	15	M10
TF03-15.00-M10	14.51-15.50	54.5	73	15	M10
TF03-16.00-M12	15.51-16.50	58	76.5	17	M12
TF03-17.00-M12	16.51-17.50	62.5	80	17	M12
TF03-18.00-M12	17.51-18.50	65	83.5	17	M12
TF03-19.00-M12	18.51-19.50	68.5	87	17	M12
TF03-20.00-M12	19.51-20.50	72	90.5	17	M12



	D	D1	L	M
KZ-100-M10	20	10.5	100	M10
KZ-150-M10	20	10.5	150	M10
KZ-200-M10	20	10.5	200	M10
KZ-250-M10	20	10.5	250	M10
KZ-300-M10	20	10.5	300	M10
KZ-100-M12	25	12.5	100	M12
KZ-150-M12	25	12.5	150	M12
KZ-200-M12	25	12.5	200	M12
KZ-250-M12	25	12.5	250	M12
KZ-300-M12	25	12.5	300	M12



INSTALLATION AND USE REQUIREMENTS FOR SPADE DRILL



SD



Drill Body Type	
SD	Spade Drill Body

10



Series
For example : 10、15、20、25

H



Groove Type	
H	Spiral Groove
S	Straight Groove

-168



Effective Processing Depth of Drill Body
For example : 118、168、218etc

-XP



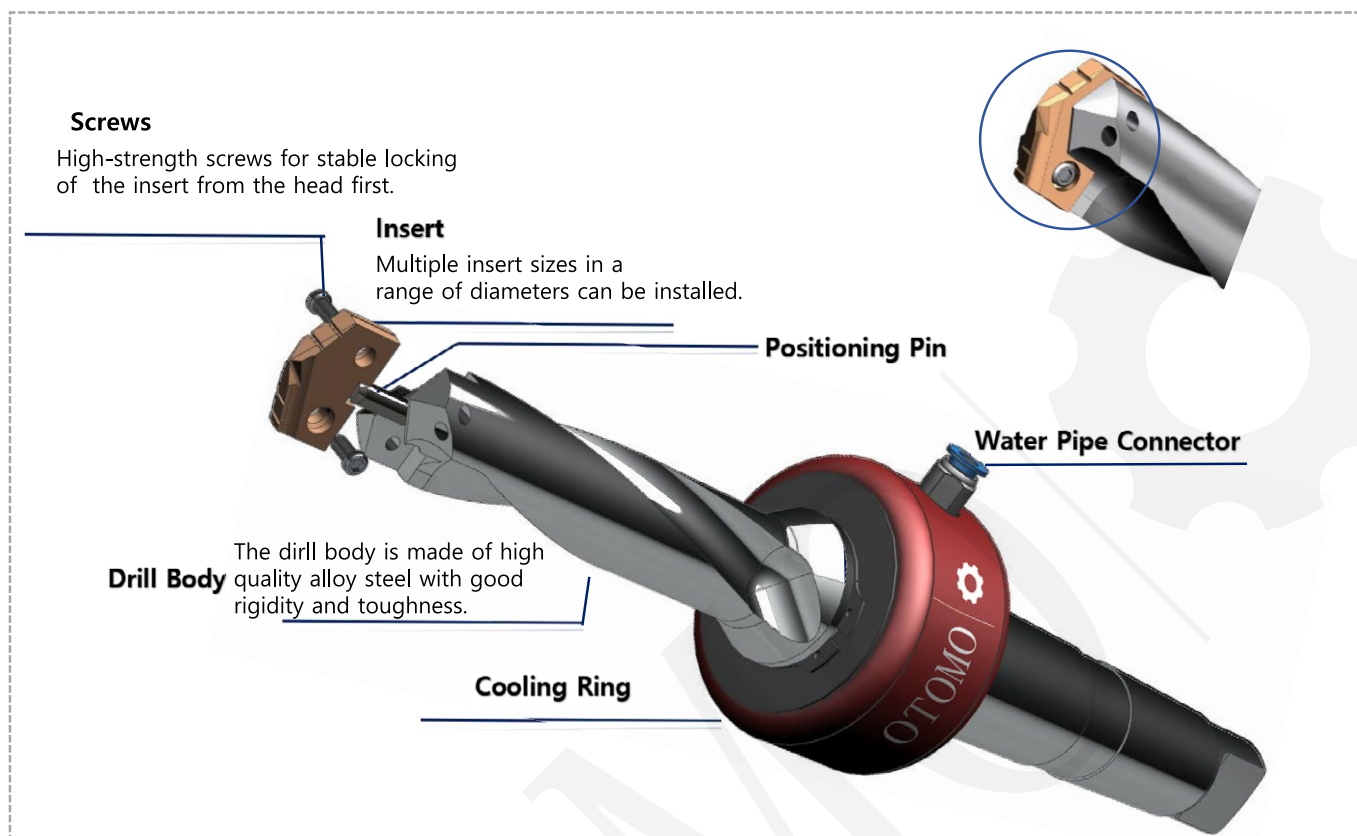
Shank Type	
XP	Side-Lock type
MT	Morse Taper Type

32

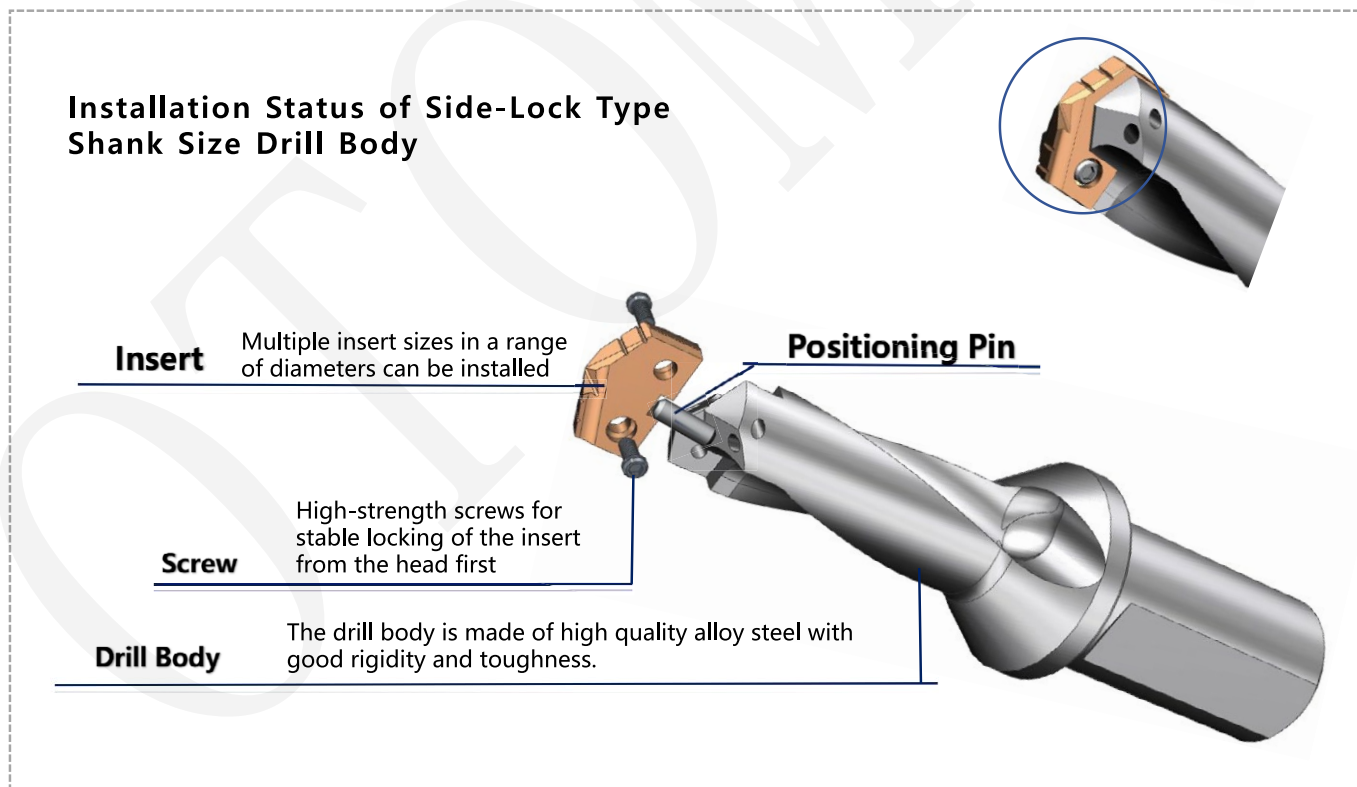


Shank Size	
XP	25、32、40、50
MT	2、3、4、5

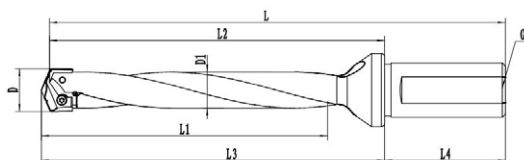
INSTALLATION STATUS OF MORSE TAPER DRILL BODY



Installation Status of Side-Lock Type Shank Size Drill Body

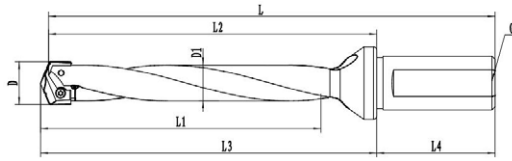


SIDE-LOCK TYPE SPADE DRILL BODY



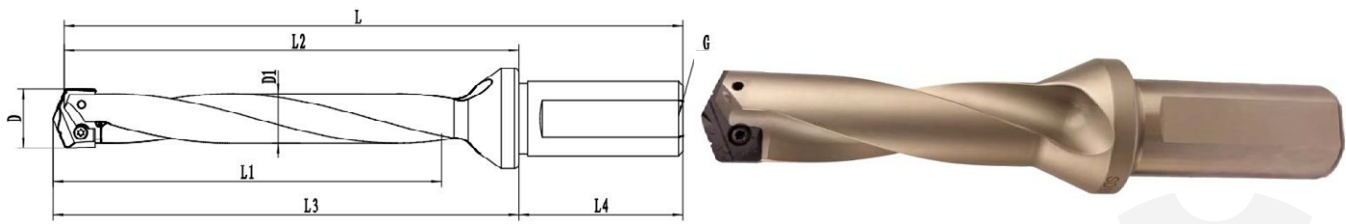
Y0 Series (φ9.5-φ11.0)						
Model	L1	L2	L3	L	D1	G
SDY0H-19-XP16	19	47.6	50	95.6	9.4	G1/16
SDY0H-32-XP20	32	61.1	63.5	111.1	9.4	G1/8
SDY0H-60-XP20	60	89.7	92.1	139.7	9.4	
SDY0H-111-XP20	111	140.5	142.9	190.5	9.4	
SDY0H-222-XP20	222	251.7	254.1	301.7	9.4	
SDY0H-290-XP20	290	319.9	322.3	369.9	9.4	
00 Series (φ13.0-φ17.5)						
Model	L1	L2	L3	L	D1	G
SD00H-23-XP20	23	47.6	50.4	97.6	12.4	G1/8
SD00H-35-XP20	35	63.5	66.3	113.5	12.4	
SD00H-64-XP20	64	92.1	94.9	142.1	12.4	
SD00H-114-XP20	114	142.9	145.7	192.9	12.4	
SD00H-178-XP20	178	206.4	209.1	256.4	12.4	
SD00H-240-XP20	240	268.6	271.3	318.6	12.4	
SD00H-295-XP20	295	323.9	326.7	373.9	12.4	
SD00H-387-XP20	387	416	418.8	466	12.4	
10 Series (φ17.6-φ24.4)						
Model	L1	L2	L3	L	D1	G
SD10H-48-XP25	48	75.8	79.4	131.8	17	G1/8
SD10H-67-XP25	67	107.2	110.7	163.1	17	
SD10H-118-XP25	118	154.8	158.4	210.8	17	
SD10H-168-XP25	168	205.6	209.2	261.6	17	
SD10H-218-XP25	218	255.3	258.9	311.3	17	
SD10H-270-XP25	270	307.2	310.8	363.2	17	
SD10H-365-XP25	365	402.2	405.8	458.2	17	
SD10H-457-XP25	457	494.5	498.1	550.5	17	
SD10H-569-XP25	569	602.5	606.1	658.5	17	
20 Series (φ24.5-φ35.0)						
Model	L1	L2	L3	L	D1	G
SD20H-57-XP32	57	88.5	92.1	148.5	23.9	G1/4
SD20H-86-XP32	86	128.6	132.2	188.6	23.9	
SD20H-137-XP32	137	179.4	183	239.4	23.9	
SD20H-187-XP32	187	230.2	233.8	290.2	23.9	
SD20H-237-XP32	237	279.9	283.5	339.9	23.9	
SD20H-289-XP32	289	331.8	335.4	391.8	23.9	
SD20H-400-XP32	400	442.8	446.4	502.8	23.9	
SD20H-511-XP32	511	554.1	557.7	614.1	23.9	
SD20H-692-XP32	692	735.1	738.7	795.1	23.9	

SIDE-LOCK TYPE SPADE DRILL BODY



Z0 Series (φ11.1-φ12.9)						
Model	L1	L 2	L3	L	D1	G
SDZ0H-19-XP16	19	47.6	50	95.6	10.4	G1/16
SDZ0H-32-XP20	32	61.1	63.5	111.1	10.4	G1/8
SDZ0H-60-XP20	60	89.7	92.1	139.7	10.4	
SDZ0H-111-XP20	111	140.5	142.9	190.5	10.4	
SDZ0H-222-XP20	222	251.7	254.1	301.7	10.4	
SDZ0H-290-XP20	290	319.9	322.3	369.9	10.4	
05 Series (φ15.5-φ17.5)						
Model	L1	L2	L3	L	D1	G
SD05H-23-XP20	23	47.6	50.4	97.6	14.7	G1/8
SD05H-35-XPZ0	35	63.5	66.3	113.5	14.7	
SD05H-64-XP20	64	92.1	94.9	142.1	14.7	
SD05H-114-XP20	114	142.9	145.7	192.9	14.7	
SD05H-178-XPZ0	178	206.4	209.1	256.4	14.7	
SD05H-240-XP20	240	268.6	271.3	318.6	14.7	
SD05H-295-XP20	295	323.9	326.7	373.9	14.7	
SD05H-387-XP20	387	416	418.8	466	14.7	
15 Series (φ22.0-φ24.4)						
Model	L1	L2	L3	L	D1	G
SD15H-57-XP25	57	88.5	92.1	144.5	21.2	G1/8
SD15H-67-XP25	67	107.2	110.7	163.1	21.2	
SD15H-118-yP25	118	154.8	158.4	210.8	21.2	
SD15H-168-XP25	168	205.6	209.2	261.6	21.2	
SD15H-218-XP25	218	255.3	258.9	311.3	21.2	
SD15H-270-XP25	270	307.2	310.8	363.2	21.2	
SD15H-365-XP25	365	400.2	405.8	458.2	21.2	
SD15H-457-XP25	457	494.5	498.1	550.5	21.2	
SD15H-569-XP25	569	602.5	606.1	658.5	21.2	
25 Series (φ30.0-φ35.0)						
Model	L1	L 2	L3	L	D1	G
SD25H-86-XP32	86	123.4	127	183.4	29.2	G1/4
SD25H-92-XP32	92	128.6	132.2	188.6	29.2	
SD25H-137-XP32	137	179.4	183	239.4	29.2	
SD25H-187-XP32	187	230.2	233.8	290.2	29.2	
SD25H-237-XP32	237	279.9	283.5	339.9	29.2	
SD25H-289-XP32	289	331.8	335.4	391.8	29.2	
SD25H-400-XP32	400	442.8	446.4	502.8	29.2	
SD25H-511-XP32	511	554.1	557.7	614.1	29.2	

SIDE-LOCK TYPE SPADE DRILL BODY



30 Series ($\phi 35.1$ - $\phi 47.9$)

Model	L1	L2	L3	L	D1	G
SD30H-76-XP40	76	125	129.8	195	34.2	G1/4
SD30H-121-XP40	121	173	177.8	243	34.2	
SD30H-165-XP40	165	217.5	222.3	287.5	34.2	
SD30H-210-XP40	210	261.9	266.7	331.9	34.2	
SD30H-260-XP40	260	312.3	317.1	382.3	34.2	
SD30H-349-XP40	349	401.6	406.4	471.6	34.2	
SD30H-450-XP40	450	502.6	507.4	518.6	34.2	
SD30H-559-XP40	559	611.1	615.9	681.1	34.2	
SD30H-787-XP40	787	839.7	844.5	909.7	34.2	

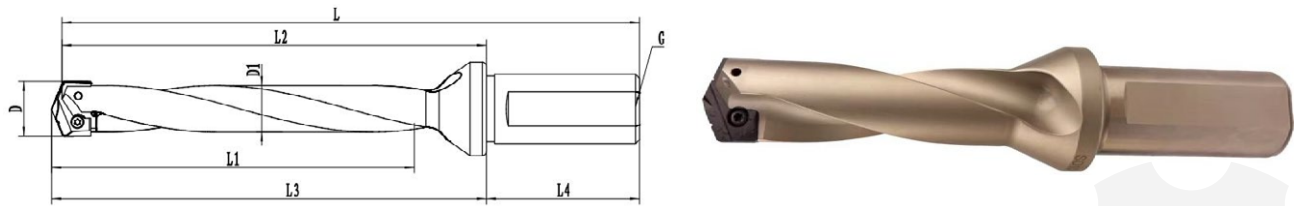
40 Series ($\phi 48.0$ - $\phi 65.28$)

Model	L1	L2	L3	L	D1	G
SD40H-130-XP40	130	179.4	184.2	249.4	47.2	G1/4
SD40H-232-XP40	232	281	285.8	351	47.2	
SD40H-350-XP40	350	399.2	404	469.2	47.2	
SD40H-422-XP40	422	471.5	476.3	541.5	47.2	
SD40H-525-XP40	525	574.2	579	644.2	47.2	
SD40H-625-XP40	625	674.7	679.5	744.7	47.2	
SD40H-879-XP40	879	928.7	933.5	998.7	47.2	

50 Series ($\phi 65.3$ - $\phi 89.08$)

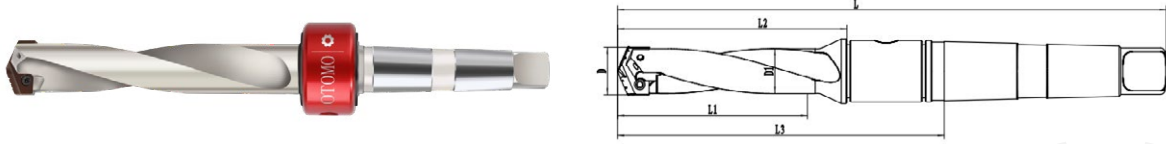
Model	L1	L2	L3	L	D1	G
SD50H-171-XP50	171	235	240	315	62.5	G1/4
SD50H-350-XP50	350	414	419	494	62.5	
SD50H-464-XP50	464	528	553	608	62.5	
SD50H-660-XP50	660	724	729	804	62.5	
SD50H-800-XP50	800	984	989	1064	62.5	

SIDE-LOCK TYPE SPADE DRILL BODY



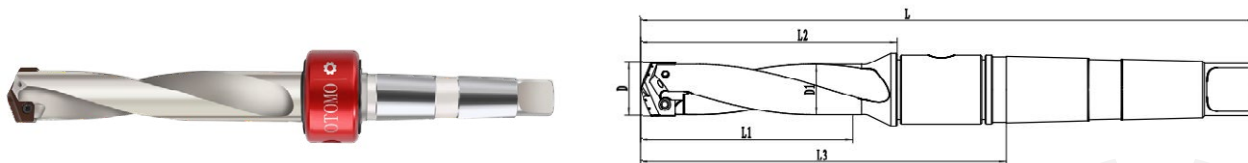
35 Series (φ42.0-φ47.9)						
Mode	L1	L2	L3	L	D1	G
SD35H-76-XP40	76	125	129.8	195	41.2	G1/4
SD35H-121-XP40	121	173	177.8	243	41.2	
SD35H-165-XP40	165	217.5	222.3	287.5	41.2	
SD35H-210-XP40	210	261.9	266.7	331.9	41.2	
SD35H-260-XP40	260	312.3	317.1	382.3	41.2	
SD35H-349-XP40	349	401.6	406.4	471.6	41.2	
SD35H-559-XP40	559	611.1	615.9	681.1	41.2	
SD35H-787-XP40	787	839.7	844.5	909.7	41.2	
45 Series (φ56.0-φ65.28)						
Mode	L1	L2	L3	L	D1	G
SD45H-130-XP40	130	179.4	184.2	249.4	54.2	G1/4
SD45H-232-XP40	232	281	285.8	351	54.2	
SD45H-350-XP40	350	399.2	404	469.2	54.2	
SD45H-422-XP40	422	471.5	476.3	541.5	54.2	
SD45H-525-XP40	525	574.2	579	644.2	54.2	
SD45H-625-XP40	625	674.7	679.5	744.7	54.2	
SD45H-879-XP40	879	928.7	933.5	998.7	54.2	
70 Series (φ89.1-φ114.48)						
Mode	L1	L2	L3	L	D1	G
SD70H-200-XP50	200	275	280	355	87	G1/4
SD70H-400-XP50	400	475	480	555	87	
SD70H-800-XP50	800	875	880	955	87	

MORSE TAPER TYPE SPADE DRILL BODY



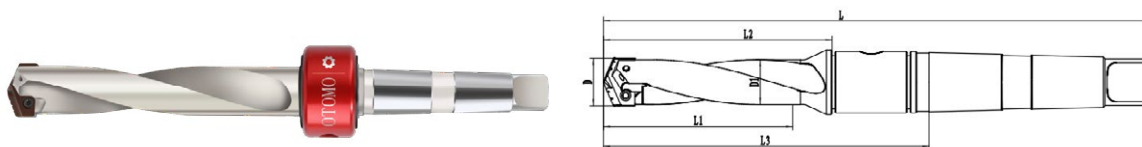
Y0 Series (φ9.5-φ11.0)					
Model	L1	L2	L3	L	D1
SDY0H-32-MT2	32	51.5	88	160.3	9.4
SDY0H-60-MT2	60	80.2	116.7	188.9	9.4
SDY0H-111-MT2	111	130.9	167.4	239.7	9.4
00 Series φ13.0-φ17.5					
Model	L1	L2	L3	L	D1
SD00H-35-MT2	35	55.5	95.4	167.3	12.4
SD00H-63-MT2	63	84.1	124	195.9	12.4
SD00H-114-MT2	114	135	174.8	246.7	12.4
SD00H-178-MT2	178	198.5	238.3	310.2	12.4
10 Series (φ17.6-φ24.4)					
Model	L1	L2	L3	L	D1
SD10H-70-MT3	70	98.4	149	239	17
SD10H-121-MT3	121	149.2	199.8	289.8	17
SD10H-171-MT3	171	200	250.6	340.7	17
SD10H-222-MT3	222	250.5	301.1	391.2	17
SD10H-273-MT3	273	301.6	352.2	442.3	17
20 Series (φ24.5-φ35.0)					
Model	L1	L2	L3	L	D1
SD20H-86-MT4	86	114.3	172.9	286.3	23.9
SD20H-137-MT4	137	165.1	223.7	337.1	23.9
SD20H-187-MT4	187	215.9	274.5	387.9	23.9
SD20H-237-MT4	237	265.6	324.2	437.6	23.9
SD20H-289-MT4	289	317.5	376.1	489.5	23.9
SD20H-400-MT4	400	428.5	487.1	600	23.9

MORSE TAPER TYPE SPADE DRILL BODY



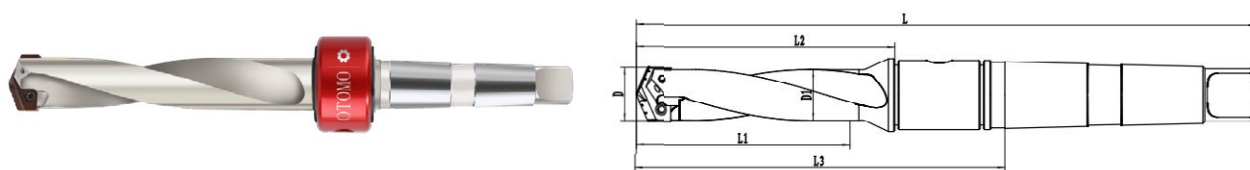
Z0 Series (φ11.1-φ12.9)					
Model	L1	L2	L3	L	D1
SDZ0H-32-MT2	32	51.5	88	160.3	10.4
SDZ0H-60-MT2	60	80.2	116.7	188.9	10.4
SDZ0H-111-MT2	111	130.9	167.4	239.7	10.4
05 Series (φ15.5-φ17.5)					
Model	L1	L2	L3	L	D1
SD05H-35-MT2	35	55.5	95.4	167.3	14.7
SD05H-63-MT2	63	84.1	124	195.9	14.7
SD05H-114-MT2	114	135	174.8	246.7	14.7
SD05H-178-MT2	178	198.5	238.3	310.2	14.7
15 Series (φ22.0-φ24.4)					
Model	L1	L2	L3	L	D1
SD15H-70-MT3	70	98.4	149	239	21.2
SD15H-121-MT3	121	149.2	199.8	289.8	21.2
SD15H-171-MT3	171	200	250.6	340.7	21.2
SD15H-222-MT3	222	250.5	301.1	391.2	21.2
SD15H-273-MT3	273	301.6	352.2	442.3	21.2
25 Series (φ30.0-φ35.0)					
Model	L1	L2	L3	L	D1
SD25H-86-MT4	86	114.3	172.9	286.3	29.2
SD25H-137-MT4	137	165.1	223.7	337.1	29.2
SD25H-187-MT4	187	215.9	274.5	387.9	29.2
SD25H-237-MT4	237	265.6	324.2	437.6	29.2
SD25H-289-MT4	289	317.5	376.1	489.5	29.2
SD25H-400-MT4	400	428.5	487.1	600	29.2

MORSE TAPER TYPE SPADE DRILL BODY



30 Series (φ35.1-φ47.9)					
Model	L1	L2	L3	L	D1
SD30H-121-MT4	121	152.4	211.7	324.4	34.2
SD30H-165-MT4	165	196.9	256.2	368.9	34.2
SD30H-209-MT4	209	241.3	300.6	413.3	34.2
SD30H-260-MT4	260	291.8	351.1	463.8	34.2
SD30H-349-MT4	349	381	440.3	553	34.2
SD30H-559-MT4	559	590.6	649.9	762.5	34.2
SD30H-787-MT4	787	819.2	878.5	991.1	34.2
40 Series (φ48.0-φ65.28)					
Model	L1	L2	L3	L	D1
SD40H-130-MT5	130	165.1	225	369.4	47.2
SD40H-232-MT5	232	266.7	326.6	471	47.2
SD40H-350-MT5	350	384.9	444.8	589.2	47.2
SD40H-422-MT5	422	457.2	517.1	661.5	47.2
SD40H-625-MT5	625	660.4	720.3	864.7	47.2
SD40H-879-MT5	879	914.4	974.3	1118.7	47.2
50 Series (φ65.3-φ89.08)					
Model	L1	L2	L3	L	D1
SD50H-171-MT5	171	215.9	287.3	430.2	62.5
SD50H-273-MT5	273	317.5	388.9	531.8	62.5
SD50H-464-MT5	464	508	579.4	722.3	62.5
SD50H-660-MT5	660	704.8	776.2	919.1	62.5
SD50H-889-MT5	889	933.4	1004.8	1147.7	62.5

MORSE TAPER TYPE SPADE DRILL BODY



35 Series (φ42.0-φ47.9)					
Model	L1	L2	L3	L	D1
SD35H-121-MT4	121	152.4	211.7	324.4	41.2
SD35H-165-MT4	165	196.9	256.2	368.9	41.2
SD35H-209-MT4	209	241.3	300.6	413.3	41.2
SD35H-260-MT4	260	291.8	351.1	463.8	41.2
SD35H-349-MT4	349	381	440.3	553	41.2
SD35H-559-MT4	559	590.6	649.9	762.5	41.2
SD35H-787-MT4	787	819.2	878.5	991.1	41.2
45 Series (φ56.0-φ65.28)					
Model	L1	L2	L3	L	D1
SD45H-130-MT5	130	165.1	225	369.4	54.2
SD45H-232-MT5	232	266.7	326.6	471	54.2
SD45H-350-MT5	350	384.9	444.8	589.2	54.2
SD45H-422-MT5	422	457.2	517.1	661.5	54.2
SD45H-625-MT5	625	660.4	720.3	864.7	54.2
SD45H-879-MT5	879	914.4	974.3	1118.7	54.2
70 Series (φ89.1-φ114.48)					
Model	L1	L2	L3	L	D1
SD70H-171-MT5	171	225.4	296.8	439.7	87
SD70H-273-MT5	273	327	398.5	541.3	87
SD70H-556-MT5	556	609.6	681.1	823.9	87
SD70H-685-MT5	685	739.7	811.2	954	87
SD70H-939-MT5	939	993.7	1065.2	1208	87



SPADE DRILL INSERT NAMING CONVENTIONS

50.00mm ----- S2 ----- ST ----- A
(External Diameter)

S2---
HSS with cobalt(HSS E)
S6---
Powder high speed steel
G2---
Cemented carbide

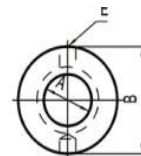
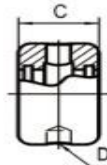
Groove Type
ST Universal Type
DT Strong Chipbreaking
Universal Groove Type

Coating
A TiAlN
H ALCrN
P ALTIN
D DLC

Spade Drill Inserts

Applicable Drill Body	Insert Diameter Range	Thickness	Top Angle	Materials								
				HSS with Cobalt(HSSE)			Powder High Speed Steel			Cemented Carbide		
SDY0-SDZ0	φ9.5-φ12.9	2.38	132°	S2STA	S2DTH	S2DTP	S6STA	S6DTH	S6DTP	G2STA	G2DTH	G2DTP
SD00-SD05	φ13.0-φ17.5	3.18										
SD10-SD15	φ17.6-φ24.4	3.97										
SD20-SD25	φ24.5-φ35.0	4.76										
SD30-SD35	φ35.1-φ47.9	6.35										
SD40-SD45	φ48.0-φ65.28	7.94										
SD50-SD55	φ65.3-φ89.08	11.11	144°									
SD70	φ89.1-φ114.48											

Cooling Ring

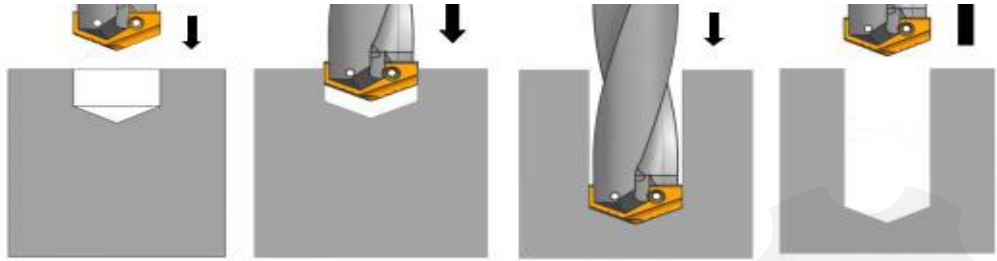
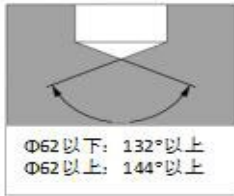


Model	Internal Diameter (A)	External Diameter(B)	Thickness (C)	Stopper Thread (D)	Cooling Nozzle Thread(E)	Applicable Drill Body Series
RK-MT2R	19.4	49	22.5	M8*1.25	1/8"	Y0、Z0、00、05
RK-MT3R	25.5	53	30	M8*1.25	1/8"	10、15
RK-MT4R	32.5	63	36	M10*1.5	1/4"	20、25、30、35
RK-MT5R	48.5	76	36	M10*1.5	1/4"	40、45
RK-MT5R2	60.1	95.3	44.5	M12*1.75	1/2"	50、70

DEEP HOLE MACHINING PROCEDURE

How to use 8x and larger diameter spade drill bodies (applicable to both vertical and horizontal machines)				
①pilot hole processing			●Use a short drill of the same diameter as the processed deep hole to drill a pilot hole to a depth of at least 2x diameter. ●Use inserts that have the same front angle as, or a larger angle than the deep hole drill inserts.	
②insertion of deep hole drills			●The rotational speed is set at a maximum of 50 RPM, the feed is fixed at F=300mm/min, the coolant is turned off, and the deep hole drill is positioned 1-3 mm from the bottom of the pilot hole with the above conditions.	
③blind hole processing			●Set the speed and feed to the recommended values of 100%, and check the chip evacuation status and machine load rate while processing deep hole. Do not use the segmented feed method.	
※If it is not possible to separate the chips in actual machining, please use the segmented feed method. Starting with 4mm feed, and gradually increase the length of the segmented feed.				
※If the machine load rate varies drastically, it may be due to chip blockage. To prevent damage to the drill, interrupt machining and review the cutting conditions and insert shape.				
④Through-hole processing(before you almost open the hole)			●Before the tip of the drill is exposed, set the speed to 50% of the recommended value and the feed to 75% of the recommended value.. ●In the case of a slanted hole, please use the same setting as above before any part of the drill tip is exposed. ●The blade of the drill insert must be exposed at least 3mm before the drill can be withdrawn.	
⑤Method of withdrawing the drill from the workpiece			●When withdrawing the drill, the maximum rotation speed is 50 RPM.	
Precautions for the Use of Spade Drills				
1. Tighten the blade fastening bolts evenly from side to side.		Do not tighten one side first		②Temporary tightening ④Processing tightening ⑥Reinforcemen of tightening
Wrong Way		Proper Way		
2. Do not touch the tip of the insert during preparation.				
3. Please refer to the machining parameter table of the spade drill to confirm the cutting speed and cutting feed.				

Pilot Hole Depth: 1D-2D



①When machining pilot holes with short drill bodies, use inserts with the same diameter as 8x diameter drill bodies and above to check chip cutting.

②Use a drill body of 8x diameter and above, the same diameter as the pilot hole drill bit, to insert into the pilot hole with low rotation, fast feed, and open cooling.

③Start cutting rotation and feed at 1~2mm from the bottom of the hole.

④Check the load table of the machine while cutting and evacuating chips.

⑤Low-speed rotation, fast feed back to home position.

※Be sure to drill 1xD-2xD pilot holes when using 8x diameter and larger spade drill bodies.

※Please use coolant as much as possible.

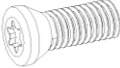
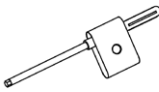
Pay attention to the processing rhythm when using the drill, i.e., slow when the inserts just touch the workpiece, and slow when punching through, at about 1/2 to 1/3 of the normal feed.

Normal machining feed should be fast.

When there is vibration in the cutting process, it may cause the bolt to loosen.

Check the tightness of the bolts at the beginning.

Spade Drill Accessories

Drill Body Series		
Y0 series - Z0 series	M2.0*5	T6
00 series - 05 series	M2.5*6	T8
10 series - 15 series	M3*8	
20 series - 25 series	M3.5*10	T15
30 series - 35 series	M5*10	T20
40 series - 45 series	M5*15	
50 series - 70 series	M6*15	T25

HIGH SPEED STILL SPADE DRILL INSERT

Workpiece Material	Hardness (HB)	Cutting Speed (m/min)		Cutting Feed (mm/rev)						
		TIALN	ALCrN	Φ9.5 ~ Φ12.9	Φ13.0 ~ Φ17.5	Φ17.6 ~ Φ24.4	Φ24.5 ~ Φ35.0	Φ35.1 ~ Φ47.9	Φ48.0 ~ Φ65.28	Φ65.3 ~ Φ114.48
Free Cutting Steel	100 ~ 150	55	64	0.12	0.16	0.21	0.26	0.33	0.38	0.46
	150 ~ 200	51	59	0.12	0.16	0.22	0.26	0.33	0.38	0.46
	200 ~ 250	47	54	0.1	0.16	0.22	0.26	0.33	0.38	0.46
Mild Steel	85 ~ 125	49	57	0.1	0.15	0.19	0.25	0.31	0.38	0.45
	125 ~ 175	47	54	0.1	0.15	0.19	0.25	0.31	0.34	0.39
	175 ~ 225	45	51	0.09	0.13	0.16	0.23	0.3	0.34	0.39
	225 ~ 275	42	48	0.09	0.13	0.16	0.23	0.3	0.31	0.36
Medium Carbon Steel	125 ~ 175	47	54	0.1	0.15	0.19	0.25	0.31	0.38	0.45
	175 ~ 225	45	51	0.09	0.13	0.16	0.23	0.3	0.34	0.39
	225 ~ 275	42	48	0.09	0.13	0.16	0.23	0.3	0.34	0.39
	275 ~ 325	38	45	0.06	0.12	0.15	0.19	0.26	0.31	0.36
Alloy Steel	125 ~ 175	42	47	0.1	0.13	0.16	0.23	0.28	0.31	0.36
	175 ~ 225	38	45	0.09	0.13	0.16	0.23	0.28	0.31	0.36
	225 ~ 275	35	42	0.09	0.12	0.16	0.23	0.28	0.31	0.36
	275 ~ 325	34	38	0.06	0.1	0.15	0.19	0.25	0.28	0.33
	325 ~ 375	30	35	0.06	0.1	0.15	0.19	0.25	0.28	0.33
High-hardness Alloy Steel	225 ~ 300	22	24	0.09	0.12	0.15	0.16	0.23	0.28	0.33
	300 ~ 350	17	19	0.06	0.12	0.15	0.16	0.23	0.28	0.33
	350 ~ 400	14	16	0.06	0.1	0.13	0.15	0.19	0.25	0.3
Structural Steel	100 ~ 150	39	46	0.1	0.16	0.19	0.23	0.3	0.34	0.42
	150 ~ 250	26	38	0.09	0.15	0.16	0.19	0.26	0.31	0.39
	250 ~ 350	28	31	0.06	0.13	0.15	0.16	0.23	0.28	0.33
High-Temperature Alloy	140 ~ 220	8	9	0.06	0.12	0.13	0.16	0.19	0.25	0.28
	220 ~ 310	7	8	0.06	0.1	0.12	0.13	0.16	0.19	0.23
Stainless Steel	135 ~ 185	21	23	0.1	0.13	0.15	0.18	0.23	0.26	0.33
	185 ~ 275	18	20	0.09	0.12	0.13	0.16	0.19	0.23	0.3
Tool Steel	150 ~ 200	22	24	0.06	0.1	0.13	0.16	0.19	0.25	0.28
	200 ~ 250	18	20	0.06	0.1	0.13	0.16	0.19	0.25	0.28
Aluminum Alloy	30	166	-	0.13	0.22	0.26	0.32	0.36	0.42	0.42
	180	89	-	0.13	0.22	0.26	0.3	0.36	0.42	0.42
Cast Iron	120 ~ 150	49	57	0.12	0.19	0.26	0.33	0.39	0.45	0.49
	150 ~ 200	45	51	0.1	0.18	0.23	0.3	0.36	0.42	0.46
	200 ~ 220	38	45	0.1	0.15	0.19	0.26	0.3	0.34	0.39
	220 ~ 260	32	38	0.09	0.12	0.15	0.19	0.23	0.28	0.33
	260 ~ 320	26	30	0.06	0.1	0.12	0.15	0.19	0.23	0.26
Recommended Cutting Parameters for Different Drill Bodies										
Insert Diameter	Multiple Diameter									
9.5-24.4	10			17			22			
24.5-65.28	7			11			18			
65.3-114.48	5			7			9			
	0.85x recommended cutting speed			recommended cutting speed			0.75x recommended cutting speed			
	0.95x recommended cutting feed			0.9x recommended cutting feed			0.9x recommended cutting feed			

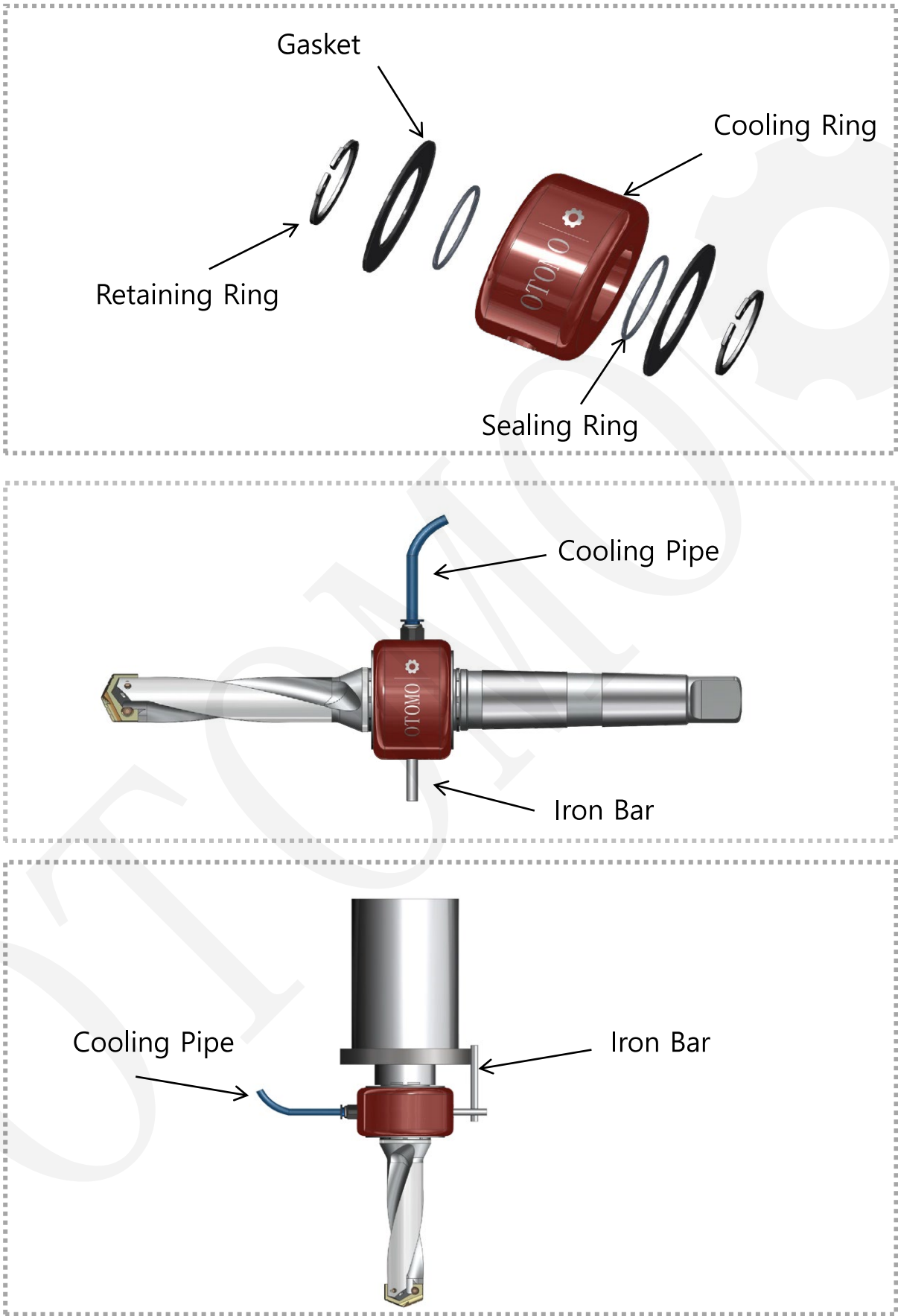
CARBIDE SPADE DRILL INSERT

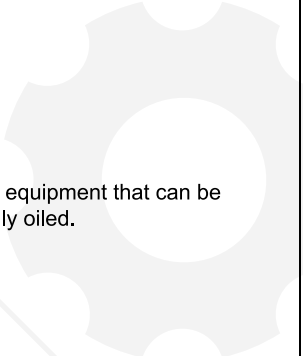
Workpiece Material	Hardness (HB)	Cutting Speed(m/min)		Cutting Feed(mm/rev)				
		TIALN	ALCrN	Φ9.5 ~ Φ12.9	Φ13.0 ~ Φ17.5	Φ17.6 ~ Φ24.4	Φ24.5 ~ Φ35.0	Φ35.1 ~ Φ47.9
Free Cutting Steel	100 ~ 150	82	93	0.13	0.19	0.24	0.29	0.34
	150 ~ 200	70	80	0.11	0.18	0.22	0.26	0.3
	200 ~ 250	67	76	0.1	0.16	0.21	0.24	0.27
Mild Steel	85 ~ 125	77	87	0.13	0.16	0.21	0.27	0.3
	125 ~ 175	67	76	0.11	0.16	0.21	0.26	0.29
	175 ~ 225	61	69	0.1	0.14	0.19	0.24	0.27
	225 ~ 275	54	60	0.08	0.14	0.19	0.24	0.27
Medium Carbon Steel	125 ~ 175	67	76	0.11	0.16	0.21	0.26	0.29
	175 ~ 225	61	69	0.1	0.14	0.19	0.24	0.27
	225 ~ 275	54	60	0.1	0.14	0.19	0.24	0.27
	275 ~ 325	45	51	0.08	0.13	0.18	0.22	0.26
Alloy Steel	125 ~ 175	64	73	0.11	0.16	0.21	0.26	0.29
	175 ~ 225	59	67	0.1	0.14	0.19	0.24	0.27
	225 ~ 275	54	60	0.1	0.14	0.19	0.24	0.27
	275 ~ 325	49	55	0.08	0.13	0.18	0.22	0.26
	325 ~ 375	43	50	0.06	0.11	0.16	0.21	0.24
High-Hardness Alloy Steel	225 ~ 300	39	46	0.1	0.13	0.16	0.19	0.24
	300 ~ 350	35	39	0.08	0.13	0.14	0.14	0.22
	350 ~ 400	32	35	0.06	0.11	0.13	0.16	0.19
Structural Steel	100 ~ 150	61	69	0.13	0.18	0.22	0.26	0.29
	150 ~ 250	49	55	0.1	0.16	0.19	0.22	0.26
	250 ~ 350	45	51	0.08	0.14	0.18	0.19	0.22
High-Temperature Alloy	140 ~ 220	21	22	0.06	0.11	0.14	0.18	0.21
	220 ~ 310	17	18	0.06	0.1	0.13	0.16	0.19
Stainless Steel	135 ~ 185	42	46	0.11	0.14	0.19	0.22	0.26
	185 ~ 275	32	35	0.1	0.13	0.18	0.19	0.22
Tool Steel	150 ~ 200	43	50	0.06	0.11	0.14	0.18	0.21
	200 ~ 250	34	38	0.06	0.11	0.14	0.18	0.21
Aluminum Alloy	30	294	-	0.16	0.24	0.29	0.32	0.35
	180	196	-	0.14	0.21	0.26	0.29	0.32
Cast Iron	120 ~ 150	90	97	0.13	0.19	0.24	0.3	0.37
	150 ~ 200	78	93	0.11	0.18	0.21	0.27	0.34
	200 ~ 220	70	83	0.1	0.14	0.19	0.24	0.29
	220 ~ 260	61	72	0.08	0.13	0.18	0.21	0.24
	260 ~ 320	54	65	0.08	0.11	0.16	0.18	0.21
Recommended Cutting Parameters for Different Drill Bodies								
Insert Diameter		Multiple Diameter						
9.5-24.4		10	17			22		
24.5-65.28		7	11			18		
65.3-114.48		5	7			9		
		0.85x recommended cutting speed		0.8x recommended cutting speed		0.75x recommended cutting speed		
		0.95x recommended cutting speed		0.9x recommended cutting speed		0.9x recommended cutting speed		

WATER PRESSURE AND FLOW

■Recommended Coolant Pressure and Flow Upper Part: Coolant Pressure(MPa) Lower Part: Coolant Flow(L/min)												
workpiece Material	Hardness (HB)	Different Insert Sizes										
		HSS Inserts							Carbide Inserts			
		Φ9.5 ~ Φ12.9	Φ13.0 ~ Φ17.5	Φ17.6 ~ Φ24.4	Φ24.5 ~ Φ35.0	Φ35.1 ~ Φ47.9	Φ48 ~ Φ65.28	Φ65.3 ~ Φ114.0	Φ9.5 ~ Φ12.9	Φ13.0 ~ Φ17.5	Φ17.6 ~ Φ24.4	Φ24.5 ~ Φ35.0
Free Cutting Steel	100 ~ 250	1.4	1.3	0.8	1	0.8	0.4	0.6	1.4	1	1.1	1
		10	10	11	20	30	125	167	10	13	21	34
Mild Steel	85 ~ 275	1.3	1.2	0.6	0.7	0.6	0.3	0.5	1.3	0.7	0.7	0.8
		10	10	10	16	27	114	114	10	11	17	30
Medium Carbon Steel	125 ~ 325	1.2	1.1	0.6	0.6	0.5	0.3	0.5	1.2	0.7	0.6	0.7
		10	9	10	16	23	114	144	10	11	16	27
Alloy Steel	125 ~ 375	1.1	1.1	0.5	0.6	0.5	0.2	0.4	1.1	0.6	0.7	0.5
		9	9	9	15	23	106	125	9	10	16	23
High-Hardness Alloy Steel	225 ~ 400	1.1	1.1	0.4	0.4	0.2	0.2	0.2	1.1	0.5	0.4	0.3
		9	9	8	12	19	87	98	9	9	12	19
Structural Steel	100 ~ 350	1.2	1.1	0.6	0.6	0.4	0.2	0.4	1.2	0.8	0.7	0.5
		10	9	10	15	23	98	125	10	11	17	23
High-Temperature Alloy	140 ~ 310	1.2	1.1	0.5	0.4	0.2	0.2	—	1.2	0.7	0.7	0.7
		10	9	9	12	19	98	—	10	11	16	27
Stainless Steel	135 ~ 275	1.5	1.2	0.6	0.5	0.4	0.2	0.3	1.5	1	1	0.9
		11	10	10	15	23	98	117	11	13	22	34
Tool Steel	150 ~ 250	1.1	1.1	0.4	0.4	0.2	0.2	0.2	1.1	0.4	0.4	0.3
		9	9	8	12	19	87	98	9	8	12	19
Aluminum Alloy	30 ~ 180	2.2	1.5	1.2	1.6	1.1	0.4	0.6	2.2	1.9	2.1	1.7
		13	10	14	23	34	125	159	13	18	29	46
Cast Iron	120 ~ 320	1.1	1.1	0.5	0.4	0.3	0.2	0.2	1.1	0.5	0.5	0.4
		9	9	9	13	19	98	106	9	9	13	19

MORSE TAPER SHANK COOLING RING INSTALLATION SCHEMATIC

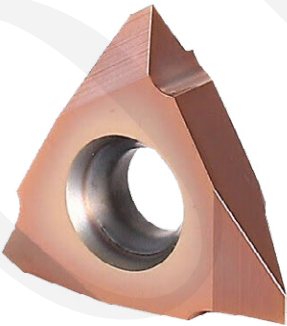
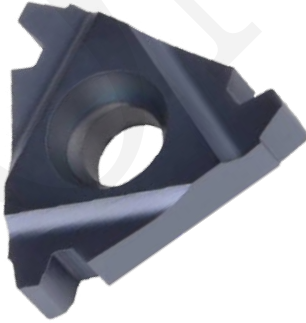
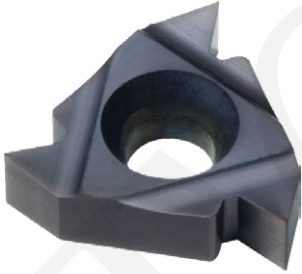
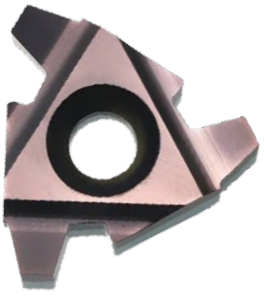


Please note that the following problems may occur in the following application cases.			
Application Cases		Problems	Methods
External Oiling	  External oiling is used for machining of longitudinal shapes of 1.5D or more and transverse shapes of 3D or more.	Machining of vertical type 1.5xD or larger and horizontal type 3xD or larger may result in cutting clogging due to the difficulty in leading the external cutting fluid in, causing the tool to break.	 Use on equipment that can be internally oiled.
Dry Processing		Clogging occurs when there is no cooling of the drill tip, incomplete chip evacuation, and abnormal wear of the insert, which may lead to drill insert broken.	
Atomization Processing			
The following application cases may be not applicable to standard hole shape processing			
Application Cases		Problems	Methods
Crosshole (including horizontal hole)	 Crosshole diameter is larger than insert edge support length.	If the edge touches the workpiece, vibration may occur. And the hole flanging tool may be broken.	It is recommended to make special spade drill bodies with guide bar.
Entrance Ramp	 The shoulder of the insert touches the workpiece before the tip.	Vibration may be generated when the edge support collides unilaterally. And hole flanging tool may be broken.	 Machining a straight part with an end mill first, then start processing.
Outlet Ramp	 Large tilt when retracting the drill, one-sided collision at the edge support area.	Vibration may be generated when the edge support collides unilaterally. And hole flanging tool may be broken.	 Machining a straight part with an end mill first, then start processing.
Holes to be widened	 When the offset from the bottom hole is more than 0.2mm.		Start machining after opening a 1xD-2xD pilot hole, and use flat-bottomed inserts in some cases.

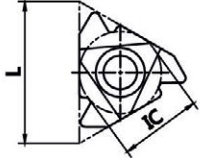
DİŞ UÇLARI

THREADING

INSERTS



DİŞ UÇLARI - THREADING INSERTS

1. Insert size		2. Insert style	3. Type of insert	4. RH/LH insert
L(mm)	IC		E External N Internal	R Right hand L Left hand
06	5/32"			
08	3/16"			
11	1/4"			
16	3/8"			
22	1/2"			
27	5/8"			
		U - 	 	 
		V - 	E N Right insert(see picture)	R L External insert (see picture)

16		E	R	1.50	ISO	-M	OT05126
1	2	3	4	5	6	7	8

5. Pitch		
Full profile pitch range		
mm	tpi	
0.6-6.0	48-4	
Partial profile pitch range		
	mm	tpi
A	0.5-1.5	48-16
AG	0.5-3.0	48-8
G	1.75-3.0	14-8
N	3.5-5.0	7-5
Q	5.5-6.0	4.5-4
V	6.0-10.0	4-2.5

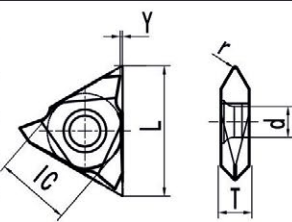
6. Standard	
60-60 Partial profile 60°	
55-55° Partial profile 55°	
ISO-ISO ISO metric	
UN-60° American UN	
W-55° Whitworth for BSW BSP	
NPT-60° NPT	
NPTF-60° NPTF	
BSPT-55° British standard pipe thread	
TR-30° Trapeze DIN103	
ACME-29° American ACME	
STACME-29° American STUB ACME	
RD-30° Round DIN403	
SAGE-DIN513	

7. Groove type	
M-	
chip breaker	
polished groove type	

8. material code	
OTO5126-	
general materiel,stainless	
steel prefered	

MTTR

PARTIAL PROFILE V-STYLE INSERT

Model	L (mm)	IC (mm)	d (mm)									Good recommendation		General recommendation				
MTTR4360**	22	12.7	5	Material Recommendation		P	☺	☺										
MTTR4355**	22	12.7	5			M	☺											
						K	☹											
												☺						
Insert	Right hand	Left hand	pitch		OTO126						Dimensions (mm)							
			mm	tp	R	L					r	Y	T					
	MTTR436001	MTTL436001	1.0-1.75	24-14	●	○					0.1	0.4	4.76					
	MTTR436002	MTTL436002	2.0-2.5	13-10	●	○					0.2	0.4	4.76					
	MTTR436003	MTTL436003	3.0-3.5	9-7	●	○					0.3	0.4	4.76					
	MTTR436004	MTTL436004	4.0-5.0	6-5	●	○					0.4	0.4	4.76					
	MTTR435501	MTTL435501	-	24-14	●	○					0.1	0.4	4.76					
	MTTR435502	MTTL435502	-	13-10	●	○					0.2	0.4	4.76					
	MTTR435503	MTTL435503	-	9-7	●	○					0.3	0.4	4.76					
	MTTR435504	MTTL435504	-	6-5	●	○					0.4	0.4	4.76					

● Standing stock ○ Extraordinary stock

TT

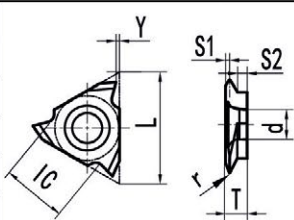
PARTIAL PROFILE V-STYLE INSERT

Model	L (mm)	IC (mm)	d (mm)	Material Recommendation	Good recommendation ☺				General recommendation ☹				
TT32R60**	16	9.525	4.5		P	☺							
TT32R55**	16	9.525	4.5		M	☺							
					K	☹							
								☺					
Insert	Right hand	Left hand	pitch		OTO5126						Dimensions (mm)		
			mm	tpi	R	L					r	T	
	TT32R6000	TT32L6000	0.5-1.0	48-32	○	○					0	3.18	
	TT32R6001	TT32L6001	1.0-2.5	28-14	●	○					0.1	3.18	
	TT32R6002	TT32L6002	1.5-2.5	16-10	●	○					0.2	3.18	
	TT32R6003	TT32L6003	2.5	11-10	○	○					0.3	3.18	
	TT32R5501	TT32L5501	-	28-10	○	○					0.1	3.18	
	TT32R5502	TT32L5502	-	14-10	○	○					0.2	3.18	

● Standing stock ○ Extraordinary stock

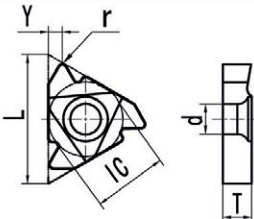
TTX

PARTIAL PROFILE V-STYLE INSERT

Model	L (mm)	IC (mm)	d (mm)	☺ Good recommendation ☹ General recommendation											
TTX32R60**	16	9.525	4.5	Material Recommendation		P	☺								
TTX32R55**	16	9.525	4.5			M	☺								
						K	☹								
								☺							
Insert	Right hand	Left hand	pitch		OTO5126					Dimensions (mm)					
			mm	tpi	R	L				r	S1	S2	T		
	TTX32R60003	TTX32L60003	0.5-1.0	48-32	●	○					0.03	0.6	1.4	3.18	
	TTX32R60005	TTX32L60005	0.5-1.0	48-32	●	○					0.05	0.6	1.4	3.18	
	TTX32R6001	TTX32L6001	1.0-2.5	28-14	●	○					0.1	1.1	0.53	3.18	
	TTX32R5501	TTX32L5501	-	28-9	●	○					0.1	1.1	0.5	3.18	

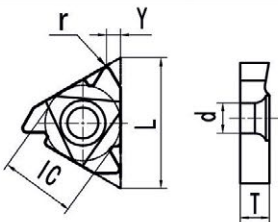
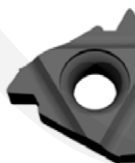
● Standing stock ○ Extraordinary stock

ISO - EXTERNAL PARTIAL PROFILE 60° THREADING INSERT

Model	L (mm)	IC (mm)	d (mm)											Good recommendation General recommendation							
08**	8	4.76	2.1	Material Recommendation		P	☺	☺	☺												
11**	11	6.35	3.0			M	☺	☺													
16**	16	9.525	4.0			K	☹	☹													
22**	22	12.7	5.1																		
27**	27	15.875	6.35										☺								
Insert		Right hand		Left hand		pitch		OTO5126						Dimensions (mm)							
						mm		R		L						r		Y		T	
	16ERAG60-M				0.5-3.0		●		○						0.07		1.7		3.65		
	16ERG60-M				1.75-3.0		●		○						0.25		1.7		3.65		
	22ERN60-M				3.5-5.0		●		○						0.4		1.7		3.65		
	11ERA60		11ELA60		0.5-1.5		●		○						0.07		0.9		3.18		
	16ERA60		16ELA60		0.5-1.5		●		○						0.07		0.9		3.65		
	16ERAG60		16ELAG60		0.5-3.0		●		○						0.07		1.7		3.65		
	16ERG60		16ELG60		1.75-3.0		●		○						0.25		1.7		3.65		
	22ERN60		22ELN60		3.5-5.0		●		○						0.4		2.5		4.9		
	27ERQ60		27ELQ60		5.5-6.0		○		○						0.79				6.4		
	16VERAG60		16VELAG60		0.5-3.0		●		○						0.07				3.65		
	27VERV60		27VELV60		6.0-9.0		○		○						0.87				8.7		

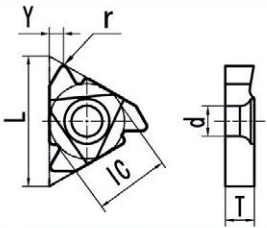
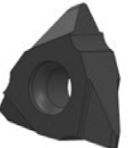
● Standing stock ○ Extraordinary stock

ISO - INTERNAL PARTIAL PROFILE 60° THREADING INSERT

Model	L (mm)	IC (mm)	d (mm)	☺ Good recommendation ☹ General recommendation												
08**	8	4.76	2.1	Material Recommendation		P	☺	☺	☺							
11**	11	6.35	3.0			M	☺	☺								
16**	16	9.525	4.0			K	☹	☹								
22**	22	12.7	5.1													
27**	27	15.875	6.35								☺					
Insert	Right hand	Left hand	pitch	OTO5126								Dimensions (mm)				
			mm	R	L								r	Y	T	
	11NRA60- M		0.5-1.5	●									0.07	0.9	3.18	
	16NRAG60-M		0.5-3.0	●									0.07	1.7	3.65	
	16NRG60-M		1.75-3.0	●									0.13	1.7	3.65	
	22NRN60-M		4.0-5.0	●									0.4	1.7	3.65	
	06NRA60	06NLA60	0.5-1.5	○	○								0.07		1.91	
	08NRA60	08NLA60	0.5-1.5	●	○								0.07	0.9	2.38	
	11NRA60	11NLA60	0.5-1.5	●	○								0.07	0.9	3.18	
	16NRA60	16NLA60	0.5-1.5	●	○								0.07	0.9	3.65	
	16NRAG60	16NLAG60	0.5-3.0	●	○								0.07	1.7	3.65	
	16NRG60	16NLG60	1.75-3.0	●	○								0.13	1.7	3.65	
	22NRN60	22NLN60	4.0-5.0	●	○								0.4	2.5	4.9	
	27NRQ60	27NLQ60	5.5-6.0	○	○								0.4		6.4	
	16VNRAG60	16VNLAG60	0.5-3.0	●	○								0.07		3.65	
27VNRV60	27VNLV60	6.0-9.0	○	○								0.43		8.7		
																

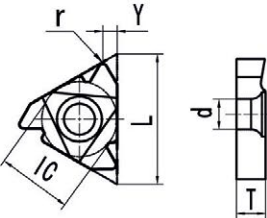
● Standing stock ○ Extraordinary stock

ISO - EXTERNAL PARTIAL PROFILE 55° THREADING INSERT

Model	L (mm)	IC (mm)	d (mm)	☺ Good recommendation ☹ General recommendation												
08**	8	4.76	2.1													
11**	11	6.35	3.0	Material Recommendation	P	☺	☺	☺								
16**	16	9.525	4.0		M	☺	☺									
22**	22	12.7	5.1		K	☹	☹									
27**	27	15.875	6.35										☺			
Insert	Right hand	Left hand	pitch		OTO5126							Dimensions (mm)				
			tpi	R	L							r	Y	T		
	16ERAG55-M		48-8	●								0.07	1.5	3.65		
	11ERA55	11ELA55	48-16	●	○							0.07	0.9	3.18		
	16ERA55	16ELA55	48-16	●	○							0.07	0.9	3.65		
	16ERAG55	16ELAG55	48-8	●	○							0.07	1.5	3.65		
	16ERG55	16ELG55	14-8	●	○							0.25	1.5	3.65		
	22ERN55	22ELN55	9-5	●	○							0.4	2.5	4.9		
	27ERQ55	27ELQ55	4.5-4	○	○							0.78		6.4		
	16VERAG55	16VELAG55	48-8	○	○							0.07		3.65		
	27VERV55	27VELV55	4-2.5	○	○							0.88		8.7		

● Standing stock ○ Extraordinary stock

ISO - INTERNAL PARTIAL PROFILE 55° THREADING INSERT

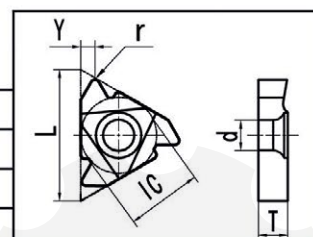
Model	L (mm)	IC (mm)	d (mm)	☺ Good recommendation ☹ General recommendation									
08**	8	4.76	2.1	Material Recommendation		P	☺	☺	☺				
11**	11	6.35	3.0			M	☺	☺					
16**	16	9.525	4.0			K	☹	☹					
22**	22	12.7	5.1									☺	
27**	27	15.875	6.35										
Insert	Right hand	Left hand	pitch	OTOS126							Dimensions (mm)		
			tpi	R	L							r	Y
	16NRAG55-M		48-8	●							0.06	1.5	3.65
	06NRA55	06NLA55	48-19	○	○						0.07		1.91
	08NRA55	08NLA55	48-16	●	○						0.07	0.9	2.38
	11NRA55	11NLA55	48-16	●	○						0.07	0.9	3.18
	16NRA55	16NLA55	48-16	●	○						0.07	1.5	3.65
	16NRAG55	16NLAG55	48-8	●	○						0.07	1.5	3.65
	16NRG55	16NLG55	28-8	●	○						0.13	1.5	3.65
	22NRN55	22NLN55	9-5	●	○						0.4	2.5	4.9
	27NRQ55	27NLQ55	4.5-4	○	○						0.79		6.4
	16VNRAG55	16VNLAG55	48-8	○	○						0.06		3.65
	27VNRV55	27VNLV55	4-2.5								0.89		8.7

● Standing stock ○ Extraordinary stock

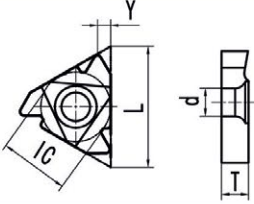
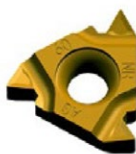
ISO
EXTERNAL METRIC
THREADING INSERT

Model	L (mm)	IC (mm)	d (mm)											
08**	8	4.76	2.1											
11**	11	6.35	3.0	Material Recommendation		P	☺	☺	☺					
16**	16	9.525	4.0			M	☺	☺						
22**	22	12.7	5.1			K	☹	☹						
27**	27	15.875	6.35								☺			
Insert	Right hand	Left hand	pitch	OTOS126								Dimensions (mm)		
			mm	R	L							Y	T	
	16ER1.00ISO-M		1.0	●								0.7	3.65	
	16ER1.50ISO-M		1.5	●								1.0	3.65	
	16ER2.00ISO-M		2.0	●								1.3	3.65	
	16ER2.50ISO-M		2.5	●								1.5	3.65	
	16ER3.00ISO-M		3.0	●								1.6	3.65	
	22ER3.50ISO-M		3.5	●								2.0	4.9	
	22ER4.00ISO-M		4.0	●								2.0	4.9	
	22ER5.00ISO-M		5.0	●								2.4	4.9	
	22ER6.00ISO-M		6.0	●								2.7	4.9	
	11ER0.50ISO	11EL0.50ISO	0.5	●	○							0.6	3.18	
	11ER0.75ISO	11EL0.75ISO	0.75	●	○							0.6	3.18	
	11ER1.00ISO	11EL1.00ISO	1.0	●	○							0.7	3.18	
	11ER1.25ISO	11EL1.25ISO	1.25	●	○							0.9	3.18	
	11ER1.50ISO	11EL1.50ISO	1.5	●	○							1.0	3.18	
	11ER1.75ISO	11EL1.75ISO	1.75	●	○							1.1	3.18	
	11ER2.00ISO	11EL2.00ISO	2.0	●	○							1.0	3.18	
	16ER0.50ISO	16EL0.50ISO	0.5	●	○							0.6	3.65	
	16ER0.75ISO	16EL0.75ISO	0.75	●	○							0.6	3.65	
	16ER1.00ISO	16EL1.00ISO	1.0	●	○							0.7	3.65	
	16ER1.25ISO	16EL1.25ISO	1.25	●	○							0.9	3.65	
	16ER1.50ISO	16EL1.50ISO	1.5	●	○							1.0	3.65	
	16ER1.75ISO	16EL1.75ISO	1.75	●	○							1.2	3.65	
	16ER2.00ISO	16EL2.00ISO	2	●	○							1.3	3.65	
	16ER2.50ISO	16EL2.50ISO	2.5	●	○							1.5	3.65	
	16ER3.00ISO	16EL3.00ISO	3.0	●	○							1.6	3.65	
	16ER3.50ISO	16EL3.50ISO	3.5	●	○							1.6	3.65	
	22ER3.00ISO	22EL3.00ISO	3.0	●	○							2.0	4.9	
	22ER3.50ISO	22EL3.50ISO	3.5	●	○							2.0	4.9	
	22ER4.00ISO	22EL4.00ISO	4.0	●	○							2.0	4.9	
	22ER4.50ISO	22EL4.50ISO	4.5	●	○							2.2	4.9	
	22ER5.00ISO	22EL5.00ISO	5.0	●	○							2.4	4.9	
	22ER5.50ISO	22EL5.50ISO	5.5	●	○							2.5	4.9	
	22ER6.00ISO	22EL6.00ISO	6.0	●	○							2.7	4.9	
	27ER5.50ISO	27EL5.50ISO	5.5	●	○								6.4	
	27ER6.00ISO	27EL6.00ISO	6.0	●	○								6.4	

● Standing stock ○ Extraordinary stock



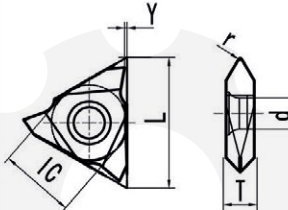
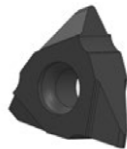
ISO - INTERNAL METRIC THREADING INSERT

Model	L (mm)	IC (mm)	d (mm)											☺ Good recommendation ☹ General recommendation			
08**	8	4.76	2.1	Material Recommendation				P	☺	☺	☺						
11**	11	6.35	3.0					M	☺	☺							
16**	16	9.525	4.0					K	☹	☹							
22**	22	12.7	5.1														
27**	27	15.875	6.35											☺			
Insert	Right hand	Left hand	pitch	OTOS126								Dimensions (mm)					
			mm	R	L							r	Y	T			
	11NR1.00ISO-M		1.0												0.07	0.7	3.18
	11NR1.50ISO-M		1.5												0.11	1.0	3.18
	11NR2.00ISO-M		2.0												0.14	1.0	3.18
	16NR1.00ISO-M		1.0	●											0.07	0.7	3.65
	16NR1.50ISO-M		1.5	●											0.11	1.0	3.65
	16NR2.00ISO-M		2.0	●											0.14	1.3	3.65
	16NR2.50ISO-M		2.5	●											0.18	1.5	3.65
	16NR3.00ISO-M		3.0	●											0.22	1.6	3.65
	22NR3.50ISO-M		3.5	●											0.25	2.0	4.9
	22NR4.00ISO-M		4.0	●											0.29	2.0	4.9
	22NR5.00ISO-M		5.0	●											0.36	2.4	4.9
	22NR6.00ISO-M		6.0	●											0.43	2.7	4.9
	06NR0.50ISO	06NL0.50ISO	0.5	●											0.04		2.38
	06NR0.75ISO	06NL0.75ISO	0.75	●											0.05		2.38
	06NR1.00ISO	06NL1.00ISO	1.0	●											0.07		2.38
	06NR1.25ISO	06NL1.25ISO	1.25	●											0.09		2.38
	06NR1.50ISO	06NL1.50ISO	1.5	●											0.11		2.38
	08NR1.75ISO	08NL1.75ISO	0.5	●	○										0.04		2.38
	08NR0.75ISO	08NL0.75ISO	0.75	●	○										0.05		2.38
	08NR1.00ISO	08NL1.00ISO	1.0	●	○										0.07		2.38
	08NR1.25ISO	08NL1.25ISO	1.25	●	○										0.09		2.38
	08NR1.50ISO	08NL1.50ISO	1.5	●	○										0.11		2.38
	08NR1.75ISO	08NL1.75ISO	1.75	●	○										0.13		2.38
	11NR0.50ISO	11NL0.50ISO	0.5	●	○										0.04	0.6	3.18
	11NR0.75ISO	11NL0.75ISO	0.75	●	○										0.05	0.6	3.18
	11NR1.00ISO	11NL1.00ISO	1.0	●	○										0.07	0.7	3.18
	11NR1.25ISO	11NL1.25ISO	1.25	●	○										0.09	0.9	3.18
	11NR1.50ISO	11NL1.50ISO	1.5	●	○										0.11	1.0	3.18
	11NR1.75ISO	11NL1.75ISO	1.75	●	○										0.13	1.1	3.18
	11NR2.00ISO	11NL2.00ISO	2.0	●	○										0.14	1.0	3.18
	11NR2.50ISO	11NL2.50ISO	2.5	●	○										0.18	1.0	3.18
	16NR0.50ISO	16NL0.50ISO	0.5	●	○										0.04	0.6	3.65
	16NR0.75ISO	16NL0.75ISO	0.75	●	○										0.05	0.6	3.65
	16NR1.00ISO	16NL1.00ISO	1	●	○										0.07	0.7	3.65
	16NR1.25ISO	16NL1.25ISO	1.25	●	○										0.09	0.9	3.65
	16NR1.50ISO	16NL1.50ISO	1.5	●	○										0.11	1.0	3.65
	16NR1.75ISO	16NL1.75ISO	1.75	●	○										0.13	1.2	3.65
	16NR2.00ISO	16NL2.00ISO	2	●	○										0.14	1.3	3.65
	16NR2.50ISO	16NL2.50ISO	2.5	●	○										0.18	1.5	3.65
	16NR3.00ISO	16NL3.00ISO	3.0	●	○										0.22	1.6	3.65
	16NR3.50ISO	16NL3.50ISO	3.5	●	○										0.25	1.6	3.65
		22NR3.00ISO	22NL3.00ISO	3.0	●	○										0.22	2.0
22NR3.50ISO		22NL3.50ISO	3.5	●	○										0.25	2.0	4.9
22NR4.00ISO		22NL4.00ISO	4.0	●	○										0.29	2.0	4.9
22NR4.50ISO		22NL4.50ISO	4.5	●	○										0.32	2.2	4.9
22NR5.00ISO		22NL5.00ISO	5.0	●	○										0.36	2.4	4.9
22NR5.50ISO		22NL5.50ISO	5.5												0.4	2.5	4.9
22NR6.00ISO		22NL6.00ISO	6.0												0.43	2.7	4.9
27NR5.50ISO		27NL5.50ISO	5.5												0.4		6.4
27NR6.00ISO	27NL6.00ISO	6.0												0.43		6.4	

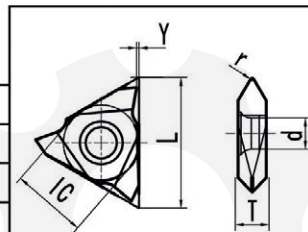
● Standing stock ○ Extraordinary stock

ISO

EXTERNAL METRIC V STYLE THREADING INSERT

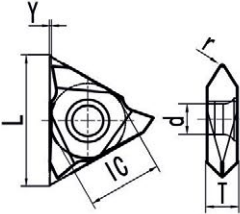
Model	L (mm)	IC (mm)	d (mm)													
08**	8	4.76	2.1	Material Recommendation		P	☺	☺	☺							
11**	11	6.35	3.0			M	☺	☺								
16**	16	9.525	4.0			K	☹	☹								
22**	22	12.7	5.1													
27**	27	15.875	6.35								☺					
Insert	Right hand	Left hand	pitch	OTOS126								Dimensions (mm)				
			mm	R	L								r	Y	T	
	16VER1.00ISO	-	1.0	●										0.07	0.7	3.65
	16VER1.50ISO	-	1.5	●										0.11	1.0	3.65
	16VER2.00ISO	-	2.0	●										0.14	1.3	3.65
	16VER2.50ISO	-	2.5	●										0.18	1.5	3.65
	16VER3.00ISO	-	3.0	●										0.22	1.6	3.65
	22VER4.00ISO	-	4.0	●										0.29	2.0	4.76
	22VER5.00ISO	-	5.0	●										0.36	2.4	4.76
	27VER6.00ISO	-	6.0	●										0.43	2.7	6.4
	27VER8.00ISO	-	8.0													8.7
	27VER10.0ISO	-	10.0													10.0

● Standing stock ○ Extraordinary stock

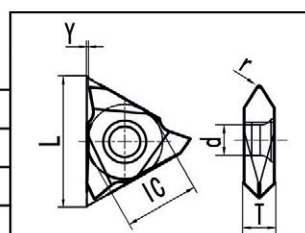


ISO

INTERNAL METRIC V STYLE THREADING INSERT

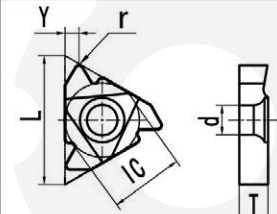
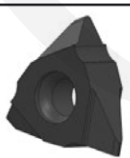
Model	L (mm)	IC (mm)	d (mm)	Material Recommendation															
16**	16	9.525	4.0																
22**	22	12.7	5.1																
27**	27	15.875	6.35																

● Standing stock ○ Extraordinary stock



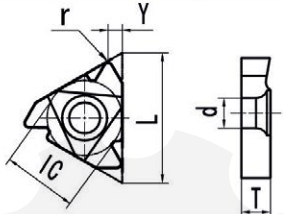
ISO

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60° THREADING INSERT

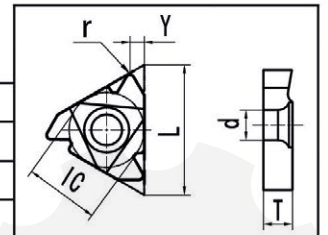
Model	L (mm)	IC (mm)	d (mm)																
11**	11	6.35	3.0	Material Recommendation		P	☺	☺	☺										
16**	16	9.525	4.0			M	☺	☺											
22**	22	12.7	5.1			K	☹	☹											
27**	27	15.875	6.35												☺				
Insert	Right hand	Left hand	pitch	OTOS126										尺寸 Dimensions (mm)					
			tpi	R	L									r	Y	T			
	11ER32UN	11EL32UN	32													0.11	0.8	3.18	
	11ER28UN	11EL28UN	28													0.13	0.8	3.18	
	11ER24UN	11EL24UN	24													0.16	0.8	3.18	
	11ER20UN	11EL20UN	20													0.18	0.8	3.18	
	11ER18UN	11EL18UN	18													0.2	0.8	3.18	
	11ER16UN	11EL16UN	16													0.23	1.0	3.18	
	11ER14UN	11EL14UN	14													0.26	1.0	3.18	
	11ER12UN	11EL12UN	12													0.3	1.1	3.18	
	16ER32UN	16EL32UN	32													0.11	0.8	3.65	
	16ER28UN	16EL28UN	28													0.13	0.8	3.65	
	16ER24UN	16EL24UN	24	●	○											0.16	0.8	3.65	
	16ER20UN	16EL20UN	20	●	○											0.18	0.8	3.65	
	16ER18UN	16EL18UN	18	●	○											0.2	0.8	3.65	
	16ER16UN	16EL16UN	16	●	○											0.23	1.0	3.65	
	16ER14UN	16EL14UN	14	●	○											0.26	1.2	3.65	
	16ER12UN	16EL12UN	12	●	○											0.3	1.2	3.65	
	16ER11UN	16EL11UN	11													0.33	1.4	3.65	
	16ER10UN	16EL10UN	10	●	○											0.36	1.4	3.65	
	16ER9UN	16EL9UN	9													0.41	1.6	3.65	
	16ER8UN	16EL8UN	8	●	○											0.46	1.6	3.65	
	22ER7UN	22EL7UN	7													0.52	2.3	4.9	
	22ER6UN	22EL6UN	6	○	○											0.61	2.3	4.9	
	22ER5UN	22EL5UN	5													0.75	2.5	4.9	
	22ER4.5UN	22EL4.5UN	4.5													0.83	2.6	4.9	
	22ER4UN	22EL4UN	4	○	○											0.93	2.9	4.9	
	27ER4.5UN	27EL4.5UN	4.5														2.6	6.4	
	27ER4UN	27EL4UN	4														2.9	6.4	
	27VER4UN	27VEL4UN	4														4.35	8.7	
	27VER3UN	27VEL3UN	3														5.0	10.0	

ISO

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60° THREADING INSERT

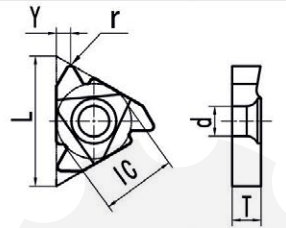
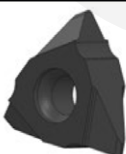
Model	L (mm)	IC (mm)	d (mm)	☺ Good recommendation ☹ General recommendation											
11**	11	6.35	3.0	Material Recommendation		P	☺	☺	☺						
16**	16	9.525	4.0			M	☺	☺							
22**	22	12.7	5.1			K	☹	☹							
27**	27	15.875	6.35							☺					
Insert	Right hand	Left hand	pitch	OT05126							Dimensions (mm)				
			tpi	R	L							r	Y	T	
	11NR32UN	11NL32UN	32	○								0.05	0.8	3.18	
	11NR28UN	11NL28UN	28	○								0.07	0.8	3.18	
	11NR24UN	11NL24UN	24	●								0.08	0.8	3.18	
	11NR20UN	11NL20UN	20	●								0.09	0.8	3.18	
	11NR18UN	11NL18UN	18	●								0.1	0.8	3.18	
	11NR16UN	11NL16UN	16	●								0.11	1.0	3.18	
	11NR14UN	11NL14UN	14	●								0.13	1.0	3.18	
	11NR12UN	11NL12UN	12	●								0.15	1.1	3.18	
	16NR32UN	16NL32UN	32									0.05	0.8	3.65	
	16NR28UN	16NL28UN	28									0.07	0.8	3.65	
	16NR24UN	16NL24UN	24	●								0.08	0.8	3.65	
	16NR20UN	16NL20UN	20	●								0.09	0.8	3.65	
	16NR18UN	16NL18UN	18	●								0.1	0.8	3.65	
	16NR16UN	16NL16UN	16	●								0.11	1.0	3.65	
	16NR14UN	16NL14UN	14	●								0.13	1.2	3.65	
	16NR12UN	16NL12UN	12	●								0.15	1.2	3.65	
	16NR11UN	16NL11UN	11									0.16	1.4	3.65	
	16NR10UN	16NL10UN	10	●								0.18	1.4	3.65	
	16NR9UN	16NL9UN	9									0.2	1.4	3.65	
	16NR8UN	16NL8UN	8	●								0.23	1.4	3.65	
	22NR7UN	22NL7UN	7									0.26	2.3	4.9	
	22NR6UN	22NL6UN	6									0.32	2.3	4.9	
	22NR5UN	22NL5UN	5									0.38	2.5	4.9	
	22NR4.5UN	22NL4.5UN	4.5									0.41	2.5	4.9	
	22NR4UN	22NL4UN	4									0.46	2.5	4.9	
	27NR4.5UN	27NL4.5UN	4.5										2.5	6.4	
	27NR4UN	27NL4UN	4										2.5	6.4	
	27VNR4UN	27VNL4UN	4										8.7		
	27VNR3UN	27VNL3UN	3										10.0		

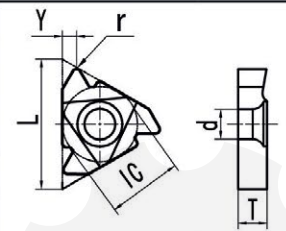
● Standing stock ○ Extraordinary stock



ISO

EXTERNAL WHITWORTH
60° THREADING INSERT

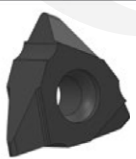
Model	L (mm)	IC (mm)	d (mm)	☺ Good recommendation ☹ General recommendation												
11**	11	6.35	3.0	Material Recommendation		P	☺	☺	☺							
16**	16	9.525	4.0			M	☺	☺								
22**	22	12.7	5.1			K	☹	☹								
27**	27	15.875	6.35							☺						
Insert		Right hand		Left hand		pitch	OTOS126						Dimensions (mm)			
						tpi	R	L						r	Y	T
	16ER14W-M			14	●						0.25	1.1	3.65			
	16ER11W-M			11	●						0.32	1.4	3.65			
	11ER28W		11EL28W	28							0.13	0.8	3.18			
	11ER26W		11EL26W	26							0.14	0.8	3.18			
	11ER24W		11EL24W	24							0.15	0.8	3.18			
	11ER20W		11EL20W	20							0.18	1.0	3.18			
	11ER19W		11EL19W	19							0.19	1.0	3.18			
	11ER18W		11EL18W	18							0.2	1.0	3.18			
	11ER16W		11EL16W	16							0.22	1.0	3.18			
	11ER14W		11EL14W	14							0.25	1.0	3.18			
	16ER28W		16EL28W	28	●						0.13	0.9	3.65			
	16ER26W		16EL26W	26							0.14	0.9	3.65			
	16ER24W		16EL24W	24	●						0.15	0.9	3.65			
	16ER20W		16EL20W	20	●						0.18	0.9	3.65			
	16ER19W		16EL19W	19	●						0.19	0.9	3.65			
	16ER18W		16EL18W	18	●						0.2	0.9	3.65			
	16ER16W		16EL16W	16	●						0.22	0.9	3.65			
	16ER14W		16EL14W	14	●						0.25	1.1	3.65			
	16ER12W		16EL12W	12	●						0.29	1.4	3.65			
	16ER11W		16EL11W	11	●						0.32	1.4	3.65			
	16ER10W		16EL10W	10	●						0.35	1.4	3.65			
	16ER9W		16EL9W	9	●						0.39	1.7	3.65			
	16ER8W		16EL8W	8	●						0.44	1.7	3.65			
	16ER7W		16EL7W	7							0.5	1.7	3.65			
	22ER7W		22EL7W	7							0.5	2.4	3.65			
	22ER6W		22EL6W	6	●						0.59	2.4	4.9			
	22ER5W		22EL5W	5	●						0.7	2.6	4.9			
	22ER4.5W		22EL4.5W	4.5							0.79	2.7	4.9			
	22ER4W		22EL4W	4	●						0.89	2.7	4.9			
	27ER4.5W		27EL4.5W	4.5							0.79		6.4			
	27ER4W		27EL4W	4							0.89		6.4			
	27VER4W		27VEL4W	4												
	27VER3W		27VEL3W	3												
	27VER2.5W		27VEL2.5W	2.5												



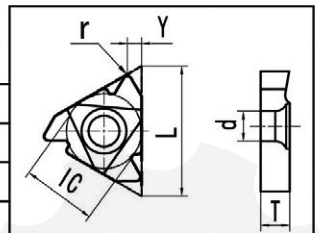
● Standing stock ○ Extraordinary stock

ISO

EXTERNAL WHITWORTH
55° THREADING INSERT

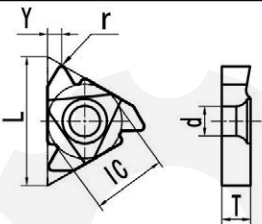
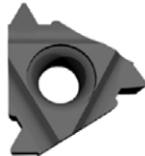
Model	L (mm)	IC (mm)	d (mm)											
11**	11	6.35	3.0	Material Recommendation										
16**	16	9.525	4.0		P	☺	☺	☺						
22**	22	12.7	5.1		M	☺	☺							
27**	27	15.875	6.35		K	☹	☹				☹			
Insert	Right hand	Left hand	pitch	OTOS126								Dimensions (mm)		
			tpi	R	L							r	Y	T
	16NR14W-M		14	●								0.25	0.9	3.65
	16NR11W-M		11	●								0.32	1.1	3.65
	11NR28W	11NL28W	28	○								0.13	0.8	3.18
	11NR26W	11NL26W	26	○								0.14	0.8	3.18
	11NR24W	11NL24W	24	○								0.15	0.8	3.18
	11NR20W	11NL20W	20	○								0.18	1.0	3.18
	11NR19W	11NL19W	19	●								0.19	1.0	3.18
	11NR18W	11NL18W	18	○								0.2	1.0	3.18
	11NR16W	11NL16W	16	○								0.22	1.0	3.18
	11NR14W	11NL14W	14	●								0.25	1.0	3.18
	16NR28W	16NL28W	28	●								0.13	0.9	3.65
	16NR26W	16NL26W	26									0.14	0.9	3.65
	16NR24W	16NL24W	24	●								0.15	0.9	3.65
	16NR20W	16NL20W	20	●								0.18	0.9	3.65
	16NR19W	16NL19W	19	●								0.19	0.9	3.65
	16NR18W	16NL18W	18	●								0.2	0.9	3.65
	16NR16W	16NL16W	16	●								0.22	0.9	3.65
	16NR14W	16NL14W	14	●								0.25	1.1	3.65
	16NR12W	16NL12W	12	●								0.29	1.4	3.65
	16NR11W	16NL11W	11	●								0.32	1.4	3.65
	16NR10W	16NL10W	10	●								0.35	1.4	3.65
	16NR9W	16NL9W	9	●								0.39	1.7	3.65
	16NR8W	16NL8W	8	●								0.44	1.7	3.65
	16NR7W	16NL7W	7									0.51	1.7	3.65
	22NR7W	22NL7W	7									0.51	2.4	3.65
	22NR6W	22NL6W	6	●								0.59	2.4	4.9
	22NR5W	22NL5W	5	●								0.71	2.6	4.9
	22NR4.5W	22NL4.5W	4.5									0.79	2.7	4.9
	22NR4W	22NL4W	4	●								0.89	2.7	4.9
	27NR4.5W	27NL4.5W	4.5									0.79		6.4
	27NR4W	27NL4W	4									0.89		6.4
	27VNR4W	27VNL4W	4											
	27VNR3W	27VNL3W	3											
	27VNR2.5W	27VNL2.5W	2.5											

☺ Good recommendation
☹ General recommendation



● Standing stock ○ Extraordinary stock

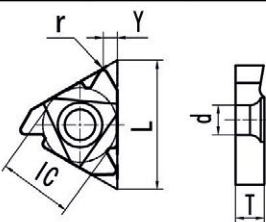
ISO
EXTERNAL NPT
60° THREADING INSERT

Model	L (mm)	IC (mm)	d (mm)	☺ Good recommendation ☹ General recommendation												
11**	11	6.35	3.0													
16**	16	9.525	4.0	Material Recommendation	P	☺	☺	☺								
			M		☺	☺										
			K		☺	☹									☺	
Insert	Right hand	Left hand	pitch	OT05126								Dimensions (mm)				
			tpi	R	L							r	Y	T		
	11ER27NPT	11EL27NPT	27	●	○								1.0	3.18		
	11ER18NPT	11EL18NPT	18	●	○							0.03	1.0	3.18		
	11ER14NPT	11EL14NPT	14	●	○							0.04	1.1	3.18		
	16ER27NPT	16EL27NPT	27	●	○								1.0	3.65		
	16ER18NPT	16EL18NPT	18	●	○							0.03	1.0	3.65		
	16ER14NPT	16EL14NPT	14	●	○							0.04	1.3	3.65		
	16ER11.5NPT	16EL11.5NPT	11.5	●	○							0.05	1.5	4.9		
	16ER8NPT	16EL8NPT	8	●	○							0.07	1.8	4.9		

● Standing stock ○ Extraordinary stock

● Standing stock ○ Extraordinary stock

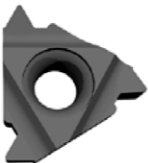
ISO
INTERNAL NPT
60° THREADING INSERT

Model	L (mm)	IC (mm)	d (mm)	☺ Good recommendation ☹ General recommendation												
11**	11	6.35	3.0	Material Recommendation		P	☺	☺	☺							
16**	16	9.525	4.0			M	☺	☺								
						K	☹	☹								
														☺		
Insert	Right hand	Left hand	pitch	OTO5126								Dimensions (mm)				
				tpi	R	L							r	Y	T	
	11NR27NPT	11NL27NPT	27	●									1.0	3.18		
	11NR18NPT	11NL18NPT	18	●	○								0.03	1.0	3.18	
	11NR14NPT	11NL14NPT	14	●	○								0.04	1.1	3.18	
	16NR27NPT	16NL27NPT	27	●	○									1.0	3.65	
	16NR18NPT	16NL18NPT	18	●	○								0.03	1.0	3.65	
	16NR14NPT	16NL14NPT	14	●	○								0.04	1.3	3.65	
	16NR11.5NPT	16NL11.5NPT	11.5	●	○								0.05	1.5	3.65	
	16NR8NPT	16NL8NPT	8	●	○								0.07	1.8	3.65	

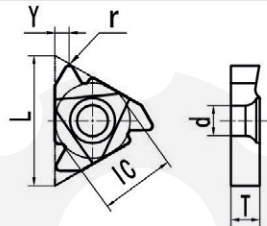
● Standing stock ○ Extraordinary stock

● Standing stock ○ Extraordinary stock

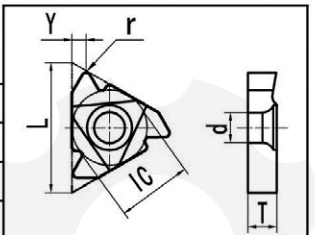
ISO
EXTERNAL BSPT
55° THREADING INSERT

Model	L (mm)	IC (mm)	d (mm)													
11**	11	6.35	3.0													
16**	16	9.525	4.0													
				Material Recommendation		P	☺	☺	☺							
						M	☺	☺								
						K	☹	☹								
													☺			
Insert		Right hand		Left hand		pitch	OT05126						Dimensions (mm)			
						tpi	R	L						r	Y	T
	11ER28BSPT		11EL28BSPT		28	●	○							0.13	0.8	3.18
	11ER19BSPT		11EL19BSPT		19	●	○							0.19	1.0	3.18
	11ER14BSPT		11EL14BSPT		14	●	○							0.25	1.0	3.18
	16ER28BSPT		16EL28BSPT		28	●	○							0.13	1.0	3.65
	16ER19BSPT		16EL19BSPT		19	●	○							0.19	1.0	3.65
	16ER14BSPT		16EL14BSPT		14	●	○							0.25	1.0	3.65
	16ER11BSPT		16EL11BSPT		11	●	○							0.32	1.0	3.65

☺ Good recommendation
☹ General recommendation

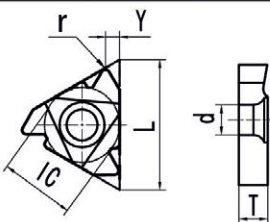


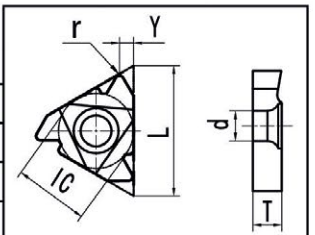
● Standing stock ○ Extraordinary stock



● Standing stock ○ Extraordinary stock

ISO
INTERNAL BSPT
55° THREADING INSERT

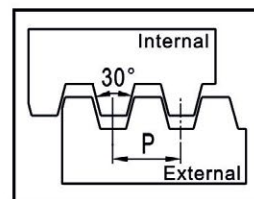
Model	L (mm)	IC (mm)	d (mm)														
11**	11	6.35	3.0														
16**	16	9.535	4.0														
				Material Recommendation		P	☺	☺	☺								
						M	☺	☺									
						K	☹	☹									
													☺				
Insert		Right hand		Left hand		pitch		OT05126						Dimensions (mm)			
						tpi		R	L						r	Y	T
	11NR28BSPT		11NL28BSPT		28		●								0.13	0.8	3.18
	11NR19BSPT		11NL19BSPT		19		●	○							0.19	1.0	3.18
	11NR14BSPT		11NL14BSPT		14		●	○							0.25	1.0	3.18
	16NR28BSPT		16NL28BSPT		28		●	○							0.13	1.0	3.65
	16NR19BSPT		16NL19BSPT		19		●	○							0.19	1.0	3.65
	16NR14BSPT		16NL14BSPT		14		●	○							0.25	1.0	3.65
	16NR11BSPT		16NL11BSPT		11		●	○							0.32	1.0	3.65
● Standing stock ○ Extraordinary stock																	



● Standing stock ○ Extraordinary stock

ISO

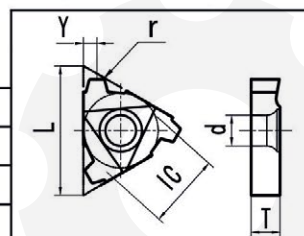
EXTERNAL TRAPEZ DIN103
60° THREADING INSERT

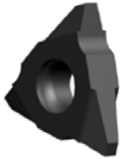


Model	L (mm)	IC (mm)	d (mm)
11**	11	6.35	3.0
16**	16	9.525	4.0
22**	22	12.7	5.1
27**	27	15.875	6.35

☺ Good recommendation
☹ General recommendation

Material Recommendation		P	☺	☺	☺	
		M	☺	☺		
		K	☹	☹		
						☺

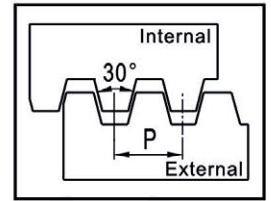


Insert	Right hand	Left hand	mm	OTO5126								Dimensions (mm)		
			mm	R	L							r	Y	T
	16ER1.5TR	16EL1.5TR	1.50	●								0.1	1.1	3.65
	16ER2.0TR	16EL2.0TR	2.00	●								0.1	1.3	3.65
	16ER3.0TR	16EL3.0TR	3.00	●								0.1	1.5	3.65
	22ER4.0TR	22EL4.0TR	4.00	●								0.1	1.9	4.9
	22ER5.0TR	22EL5.0TR	5.00	●								0.1	2.2	4.9
	22ER6.0TR	22EL6.0TR	6.00	●								0.25	2.3	4.9
	27ER6.0TR	27EL6.0TR	6.00	●								0.25	2.5	6.4
	27ER7.0TR	27EL7.0TR	7.00	●								0.3	2.7	6.4
	22VER4.0TR	22VEL4.0TR	4.00	●								0.1		4.76
	22VER5.0TR	22VEL5.0TR	5.00	●								0.1		4.76
	22VER6.0TR	22VEL6.0TR	6.00	●								0.25		4.76
	27VER6.0TR	27VEL6.0TR	6.00	●								0.25		6.4
	27VER7.0TR	27VEL7.0TR	7.00	●								0.25		6.4
	27VER8.0TR	27VEL8.0TR	8.00	●								0.25		6.4
	27VER9.0TR	27VEL9.0TR	9.00	●								0.25		6.4
	27VER10TR	27VEL10TR	10.00	●								0.3		8.7
	27VER12TR	27VEL12TR	12.00	●								0.5		8.7
	22UER7.0TR	22UEL7.0TR	7.00	○								0.3		4.9
	27UER8.0TR		8.0	●								0.25		6.4
	27UER10TR		10.0									0.3		6.4

● Standing stock ○ Extraordinary stock

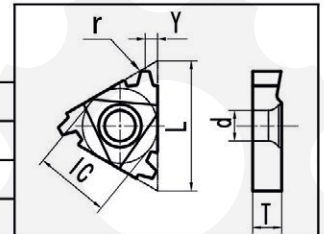
ISO

INTERNAL TRAPEZ DIN103 THREADING INSERT



Model	L (mm)	IC (mm)	d (mm)
11**	11	6.35	3.0
16**	16	9.525	4.0
22**	22	12.7	5.1
27**	27	15.875	6.35

Material Recommendation									
		P	☺	☺	☺				
		M	☺	☺					
		K	☹	☹					☺

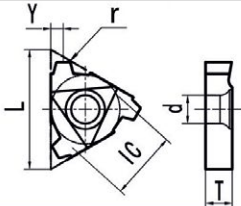
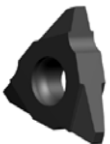


Insert	Right hand	Left hand	mm	OTOS126								Dimensions (mm)		
			mm	R	L							r	Y	T
	11NR1.5TR	11NL1.5TR	1.5	●								0.1		3.18
	11NR2.0TR	11NL2.0TR	2.0	●								0.1		3.18
	16NR1.5TR	16NL1.5TR	1.50	●								0.1	1.1	3.65
	16NR2.0TR	16NL2.0TR	2.00	●								0.1	1.3	3.65
	16NR3.0TR	16NL3.0TR	3.00	●								0.1	1.5	3.65
	22NR4.0TR	22NL4.0TR	4.00	●								0.1	1.9	4.9
	22NR5.0TR	22NL5.0TR	5.00	●								0.1	2.2	4.9
	22NR6.0TR	22NL6.0TR	6.00	●								0.25	2.3	4.9
	27NR6.0TR	27NL6.0TR	6.00	●								0.25	2.5	6.4
	27NR7.0TR	27NL7.0TR	7.00	●								0.3	2.7	6.4
	22VNR4.0TR	22VNL4.0TR	4.00	●								0.1		4.76
	22VNR5.0TR	22VNL5.0TR	5.00	●								0.1		4.76
	22VNR6.0TR	22VNL6.0TR	6.00	●								0.25		4.76
	27VNR6.0TR	27VNL6.0TR	6.00	●								0.25		6.4
	27VNR7.0TR	27VNL7.0TR	7.00	●								0.25		6.4
	27VNR8.0TR	27VNL8.0TR	8.00	●								0.25		6.4
	27VNR9.0TR	27VNL9.0TR	9.00	●								0.25		6.4
	27VNR10TR	27VNL10TR	10.00	●								0.3		8.7
	22UNR7.0TR	22UNL7.0TR	7.00	○								0.3		4.9
	27UNR8.0TR		8.0									0.25		6.4
	27UNR10.0TR		10.0									0.3		6.4

● Standing stock ○ Extraordinary stock

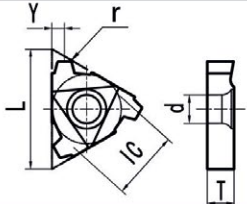
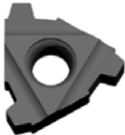
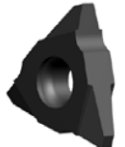
ISO

EXTERNAL AMERICAN ACME THREADING INSERT

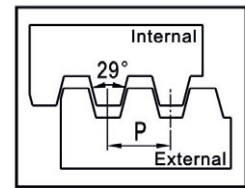
Model	L (mm)	IC (mm)	d (mm)	Good recommendation ☺ General recommendation ☹										
11**	11	6.35	3.0	Material Recommendation		P	☺	☺	☺					
16**	16	9.525	4.0			M	☺	☺						
22**	22	12.7	5.1			K	☹	☹						
27**	27	15.875	6.35									☺		
Insert	Right hand	Left hand	pitch	OTO5126								Dimensions (mm)		
			tpi	R	L								r	Y
	16ER16ACME	16EL16ACME	16	●	○							0.08	1.1	3.65
	16ER14ACME	16EL14ACME	14	●	○							0.08	1.2	3.65
	16ER12ACME	16EL12ACME	12	●	○							0.1	1.2	3.65
	16ER10ACME	16EL10ACME	10	●	○							0.12	1.4	3.65
	16ER8ACME	16EL8ACME	8	●	○							0.12	1.5	3.65
	16ER6ACME	16EL6ACME	6	●	○							0.2	1.5	3.65
	22ER6ACME	22EL6ACME	6	●	○							0.2	2.1	4.9
	22ER5ACME	22EL5ACME	5	●	○							0.25	2.1	4.9
	22ER4ACME	22EL4ACME	4	●	○							0.3	2.3	4.9
	27ER4ACME	27EL4ACME	4	●	○							0.3	2.1	6.4
	22VER6ACME	22VEL6ACME	6	●	○							0.2		4.76
	22VER5ACME	22VEL5ACME	5	●								0.25		4.76
	22VER4ACME	22VEL4ACME	4	●								0.3		4.76
	27VER3.5ACME	27VEL3.5ACME	3.5									0.3	2.4	6.4
	27VER3ACME	27VEL3ACME	3	●								0.3	2.4	6.4

ISO

EXTERNAL AMERICAN STUB ACME THREADING INSERT

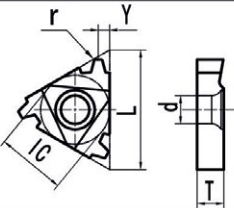
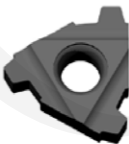
Model	L (mm)	IC (mm)	d (mm)											Good recommendation ☺		
11**	11	6.35	3.0											☹ General recommendation		
16**	16	9.525	4.0	Material Recommendation		P	☺	☺	☺							
22**	22	12.7	5.1			M	☺	☺								
27**	27	15.875	6.35			K	☹	☹								
														☺		
Insert	Right hand	Left hand	pitch	OTOS126								Dimensions (mm)				
			tpi	R	L								r	Y	T	
	16ER16STACME	16EL16STACME	16	●	○							0.08	1.0	3.65		
	16ER14STACME	16EL14STACME	14	●	○							0.08	1.1	3.65		
	16ER12STACME	16EL12STACME	12	●	○							0.1	1.2	3.65		
	16ER10STACME	16EL10STACME	10	●	○							0.1	1.3	3.65		
	16ER8STACME	16EL8STACME	8	●	○							0.16	1.5	3.65		
	16ER6STACME	16EL6STACME	6	●	○							0.2	1.5	3.65		
	22ER6STACME	22EL6STACME	6	●	○							0.2	1.8	4.9		
	22ER5STACME	22EL5STACME	5	●	○							0.25	2.3	4.9		
	22ER4STACME	22EL4STACME	4	●	○							0.3	2.3	4.9		
	27ER4STACME	27EL4STACME	4	●	○							0.3	2.5	6.4		
	27VER3STACME	27VEL3STACME	3	●	○							0.3		6.4		

● Standing stock ○ Extraordinary stock



ISO

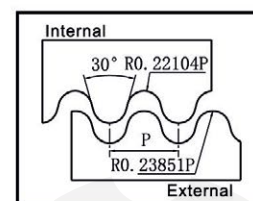
EXTERNAL AMERICAN STUB ACME THREADING INSERT

Model	L (mm)	IC (mm)	d (mm)	☺☺☺ Good recommendation ☹☹☹ General recommendation												
11**	11	6.35	3.0													
16**	16	9.525	4.0													
22**	22	12.7	5.1													
27**	27	15.875	6.35													
				Material Recommendation		P	☺	☺	☺							
					M	☺	☺									
					K	☹	☹									
											☺					
Insert	Right hand	Left hand	pitch	OTOS126								Dimensions (mm)				
			tpi	R	L								r	Y	T	
	11NR16STACME	11NL16STACME	16	●								0.06		3.18		
	11NR14STACME	11NL14STACME	14	●	○							0.08		3.18		
	16NR16STACME	16NL16STACME	16	●	○							0.06	1.0	3.65		
	16NR14STACME	16NL14STACME	14	●	○							0.08	1.1	3.65		
	16NR12STACME	16NL12STACME	12	●	○							0.1	1.2	3.65		
	16NR10STACME	16NL10STACME	10	●	○							0.1	1.3	3.65		
	16NR8STACME	16NL8STACME	8	●	○							0.16	1.5	3.65		
	16NR6STACME	16NL6STACME	6	●	○							0.2	1.5	3.65		
	22NR6STACME	22NL6STACME	6	●	○							0.2	1.8	4.9		
	22NR5STACME	22NL5STACME	5	●	○							0.25	2.3	4.9		
	22NR4STACME	22NL4STACME	4	●	○							0.3	2.3	4.9		
	27NR4STACME	27NL4STACME	4	●	○							0.3	2.5	6.4		
	27VNR3STACME	27VNL3STACME	3	●	○							0.3		6.4		

● Standing stock ○ Extraordinary stock

ISO

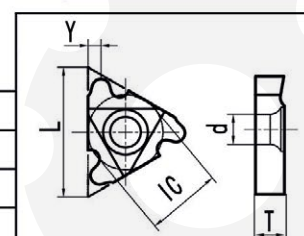
EXTERNAL RD-DIN405 THREADING INSERT



Model	L (mm)	IC (mm)	d (mm)
16**	16	9.525	4.0
22**	22	12.7	5.1

☺ Good recommendation
☹ General recommendation

			P	☺	☺	☺	
			M	☺	☺		
			K	☹	☹		
							☺

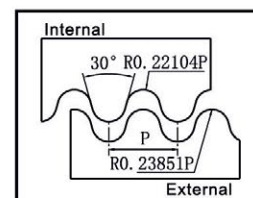


Insert	Right hand	Left hand	pitch		OT05126		Dimensions (mm)		
			tpi	R	L		r	Y	T
	16ER10RD	16EL10RD	10	●			0.61	1.2	3.65
	16ER8RD	16EL8RD	8	●			0.76	1.3	3.65
	16ER6RD	16EL6RD	6	●			1.01	1.7	3.65
	22ER6RD	22EL6RD	6	●			1.01	2.0	4.9
	22ER5RD	22EL5RD	5	●			1.21	2.0	4.9
	22ER4RD	22EL4RD	4	●			1.51	2.3	4.9

● Standing stock ○ Extraordinary stock

ISO

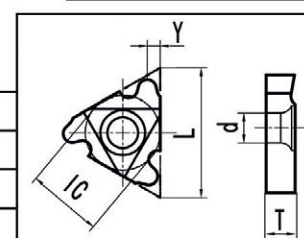
INTERNAL RD-DIN405 THREADING INSERT



Model	L (mm)	IC (mm)	d (mm)
16**	16	9.525	4.0
22**	22	12.7	5.1

☺ Good recommendation
☹ General recommendation

			P	☺	☺	☺	
			M	☺	☺		
			K	☹	☹		
							☺

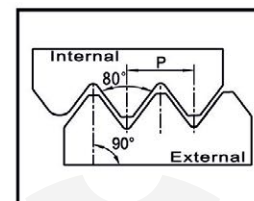


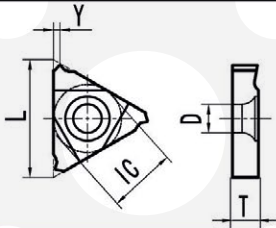
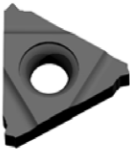
Insert	Right hand	Left hand	pitch		OT05126		尺寸 Dimensions (mm)		
			tpi	R	L		r	Y	T
	16NR10RD	16NL10RD	10	●			0.56	1.2	3.65
	16NR8RD	16NL8RD	8	●			0.7	1.3	3.65
	16NR6RD	16NL6RD	6	●			0.94	1.7	3.65
	22NR6RD	22NL6RD	6	●			0.94	2.0	4.9
	22NR5RD	22NL5RD	5	●			1.12	2.0	4.9
	22NR4RD	22NL4RD	4	●			1.4	2.3	4.9

● Standing stock ○ Extraordinary stock

ISO

EXTERNAL PG-DIN40430
THREADING INSERT

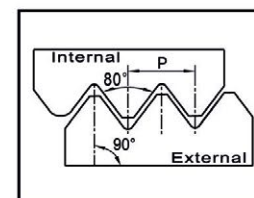


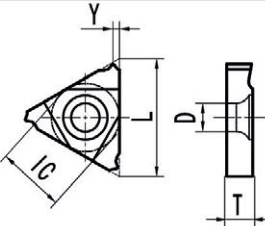
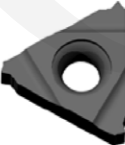
Model	L (mm)	IC (mm)	d (mm)	☺ Good recommendation ☹ General recommendation																			
16**	16	9.525	4.0	Material Recommendation		P	☺	☺	☺														
22**	22	12.7	5.1			M	☺	☺															
						K	☹	☹															
														☺									
Insert		Right hand		Left hand		pitch		OTO5126								Dimensions (mm)							
						tpi		R		L								r		Y		T	
		11ER20Pg		11EL20Pg		20		○												0.9		3.18	
		11ER18Pg		11EL18Pg		18		○												1		3.18	
		11ER16Pg		11EL16Pg		16		●												1.1		3.18	
		16ER20Pg		16EL20Pg		20		○												0.9		3.65	
		16ER18Pg		16EL18Pg		18		●												1		3.65	
		16ER16Pg		16EL16Pg		16		●												1.1		3.65	

● Standing stock ○ Extraordinary stock

ISO

INTERNAL PG-DIN40430
THREADING INSERT

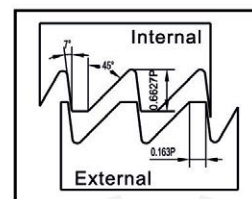


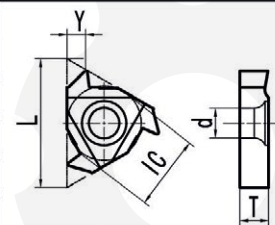
Model	L (mm)	IC (mm)	d (mm)													
16**	16	9.525	4.0													
22**	22	12.7	5.1													
				Material Recommendation		P	☺	☺	☺							
						M	☺	☺								
						K	☹	☹								
													☺			
Insert		Right hand	Left hand	pitch	OTO5126							Dimensions (mm)				
				tpi	R	L						r	Y	T		
	11NR20Pg	11NL20Pg	20	○									0.9	3.18		
	11NR18Pg	11NL18Pg	18	○									1.0	3.18		
	11NR16Pg	11NL16Pg	16	●									1.1	3.18		
	16NR20Pg	16NL20Pg	20	○									0.9	3.65		
	16NR18Pg	16NL18Pg	18	●									1.0	3.65		
	16NR16Pg	16NL16Pg	16	●									1.1	3.65		

● Standing stock ○ Extraordinary stock

ISO

EXTERNAL AMERICAN BUTTRESS THREADING INSERT

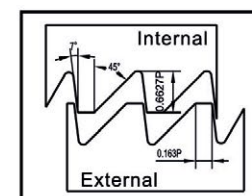


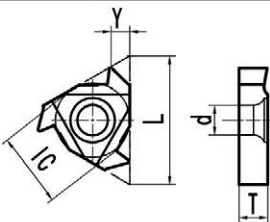
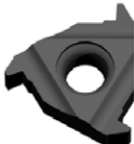
Model	L (mm)	IC (mm)	d (mm)	☺ Good recommendation ☹ General recommendation													
11**	11	6.35	3.0	Material Recommendation		P	☺	☺	☺								
16**	16	9.525	4.0			M	☺	☺									
22**	22	12.7	5.1			K	☹	☹									
														☺			
Insert		Right hand		Left hand		pitch	OTO5126								Dimensions (mm)		
						tpi	R	L							r	Y	T
	11ER20ABUT		11EL20ABUT		20	○									0.9	3.18	
	11ER16ABUT		11EL16ABUT		16	○									0.9	3.18	
	16ER20ABUT		16EL20ABUT		20	○									0.9	3.65	
	16ER16ABUT		16EL16ABUT		16	●									0.9	3.65	
	16ER12ABUT		16EL12ABUT		12	●									1.0	3.65	
	16ER10ABUT		16EL10ABUT		10	●									1.2	3.65	
	22ER8ABUT		22EL8ABUT		8	○									1.3	4.9	
	22ER6ABUT		22EL6ABUT		6	○									1.5	4.9	

● Standing stock ○ Extraordinary stock

ISO

INTERNAL AMERICAN BUTTRESS THREADING INSERT

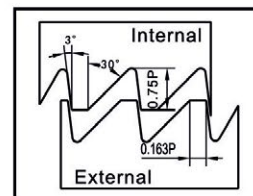


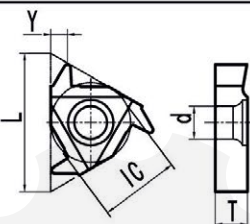
Model	L (mm)	IC (mm)	d (mm)	☺ Good recommendation ☹ General recommendation												
11**	11	6.35	3.0	Material Recommendation		P	☺	☺	☺							
16**	16	9.525	4.0			M	☺	☺								
22**	22	12.7	5.1			K	☹	☹								
														☺		
Insert	Right hand	Left hand	pitch	OTO5126									Dimensions (mm)			
				tpi	R	L								r	Y	T
	11NR20ABUT	11NL20ABUT	20	○										0.9	3.18	
	11NR16ABUT	11NL16ABUT	16	○										0.9	3.18	
	16NR20ABUT	16NL20ABUT	20	○										0.9	3.65	
	16NR16ABUT	16NL16ABUT	16	●										0.9	3.65	
	16NR12ABUT	16NL12ABUT	12	●										1.0	3.65	
	16NR10ABUT	16NL10ABUT	10	●										1.2	3.65	
	22NR8ABUT	22NL8ABUT	8	○										1.3	4.9	
	22NR6ABUT	22NL6ABUT	6	○										1.5	4.9	

● Standing stock ○ Extraordinary stock

ISO

EXTERNAL DIN513
THREADING INSERT

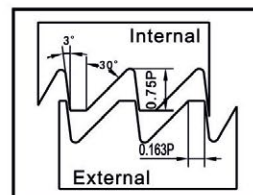


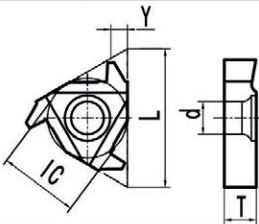
Model	L (mm)	IC (mm)	d (mm)	☺ Good recommendation ☹ General recommendation												
16**	16	9.525	4.0	Material Recommendation		P	☺	☺	☺							
22**	22	12.7	5.1			M	☺	☺								
27**	27	15.875	6.35			K	☹	☹								
															☺	
Insert	Right hand	Left hand	pitch	OTO5126										Dimensions (mm)		
				mm	R	L								r	Y	T
	16ER2.0SAGE	16EL2.0SAGE	2.0	●										0.25	1.3	3.65
	22ER3.0SAGE	22EL3.0SAGE	3.0	○										0.37	1.9	4.9
	22ER4.0SAGE	22EL4.0SAGE	4.0	●										0.5	2.4	4.9
	27ER5.0SAGE	27EL5.0SAGE	5.0	○										0.62	3.3	6.4
	22UER5.0SAGE	22UEL5.0SAGE	5.0	○										0.62	11	4.9
	22UER6.0SAGE	22UEL6.0SAGE	6.0	○										0.75	11	4.9
	22VER2.0SAGE	22VEL2.0SAGE	2.0	○										0.25	-	4.9
	22VER3.0SAGE	22VEL3.0SAGE	3.0	○										0.37	-	4.9
	22VER4.0SAGE	22VEL4.0SAGE	4.0	○										0.5	-	4.9
	27VER5.0SAGE	27VEL5.0SAGE	5.0	○										0.62	-	6.4
	27VER6.0SAGE	27VEL5.0SAGE	6.0	●										0.75	2.0	6.4
	27VER7.0SAGE	27VEL7.0SAGE	7.0	●										0.87	2.5	6.4
	27VER8.0SAGE	27VEL8.0SAGE	8.0	○										0.99	3.0	8.7

● Standing stock ○ Extraordinary stock

ISO

INTERNAL DIN513
THREADING INSERT



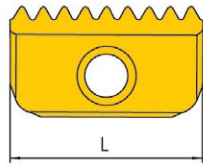
Model	L (mm)	IC (mm)	d (mm)	☺ Good recommendation ☹ General recommendation													
16**	16	9.525	4.0	Material Recommendation		P	☺	☺	☺								
22**	22	12.7	5.1			M	☺	☺									
27**	27	15.875	6.35			K	☺	☺									
														☺			
Insert		Internal	External	pitch	OTO5126										Dimensions (mm)		
				mm	R	L							r	Y	T		
	16NR2.0SAGE	16NL2.0SAGE	2.0	●									0.08	1.3	3.65		
	22NR3.0SAGE	22NL3.0SAGE	3.0	○									0.1	1.9	4.9		
	22NR4.0SAGE	22NL4.0SAGE	4.0	●									0.1	2.4	4.9		
	27NR5.0SAGE	27NL5.0SAGE	5.0	○									0.1	3.3	6.4		
	22UNR5.0SAGE	22UNL5.0SAGE	5.0	○									0.1	11	4.9		
	22UNR6.0SAGE	22UNL6.0SAGE	6.0	○									0.2	11	4.9		
	22VNR2.0SAGE	22VNL2.0SAGE	2.0	○									0.08	-	4.9		
	22VNR3.0SAGE	22VNL3.0SAGE	3.0	●									0.1	-	4.9		
	22VNR4.0SAGE	22VNL4.0SAGE	4.0	○									0.1	-	4.9		
	27VNR5.0SAGE	27VNL5.0SAGE	5.0	○									0.1	-	6.4		
	27VNR6.0SAGE	27VNL5.0SAGE	6.0	●									0.2	2.0	6.4		
	27VNR7.0SAGE	27VNL7.0SAGE	7.0	●									0.2	2.5	6.4		
	27VNR8.0SAGE	27VNL8.0SAGE	8.0	○									0.2	3.0	8.7		

● Standing stock ○ Extraordinary stock

DIŞ UÇLARI - THREADENG MILLING INSERTS

ORDERING CODE SYSTEM

1, Insert Size	
12	L=12MM
14	L=14MM
21	L=21MM
30	L=30MM
40	L=40MM



2, Type of insterts	
E	External
I	Internal
The Same Insert for External or Internal	

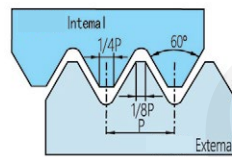
21
1

E
2

1.50
3

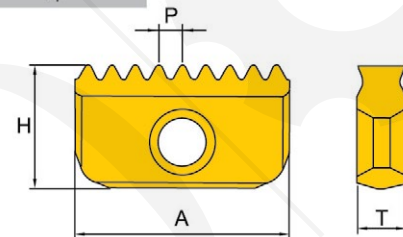
ISO
4

3, Pitch	
mm	TPI
0.5-6	48-4



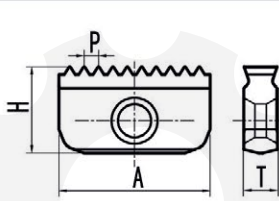
Defined by: R262

Tolerance class: 6g/6h



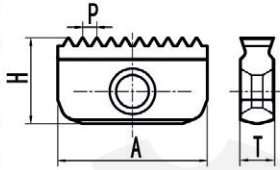
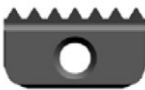
Pitch		Insert Size				
mm		A=12mm	A=14mm	A=21mm	A=30mm	A=40mm
0.50	Exit					
	Int	*12I 0.5 ISO	14I 0.5 ISO			
0.75	Exit		14E 0.75 ISO			
	Int	*12I 0.75 ISO	14I 0.75 ISO			
1.00	Exit		14E 1.0 ISO	21E 1.0 ISO		
	Int	*12I 1.0 ISO	14I 1.0 ISO	21I 1.0 ISO		
1.25	Exit		14E 1.25 ISO			
	Int	*12I 1.25 ISO	14I 1.25 ISO			
1.50	Exit		14E 1.5 ISO	21E 1.5 ISO	30E 1.5 ISO	40E 1.5 ISO
	Int	*12I 1.5 ISO	14I 1.5 ISO	21I 1.5 ISO	30I 1.5 ISO	40I 1.5 ISO
1.75	Exit		14E 1.75 ISO			
	Int		14I 1.75 ISO	21I 1.75 ISO		
2.00	Exit		14E 2.0 ISO	21E 2.0 ISO	30E 2.0 ISO	40E 2.0 ISO
	Int		14I 2.0 ISO	21I 2.0 ISO	30I 2.0 ISO	40I 2.0 ISO
2.50	Exit		14E 2.5 ISO	21E 2.5 ISO		
	Int		14I 2.5 ISO	21I 2.5 ISO		
3.00	Exit			21E 3.0 ISO	30E 3.0 ISO	40E 3.0 ISO
	Int			21I 3.0 ISO	30I 3.0 ISO	40I 3.0 ISO
3.50	Exit				30E 3.5 ISO	
	Int			21I 3.5 ISO	30I 3.5 ISO	40I 3.5 ISO
4.00	Exit				30E 4.0 ISO	40E 4.0 ISO
	Int				30I 4.0 ISO	40I 4.0 ISO
4.50	Exit					
	Int				30I 4.5 ISO	40I 4.5 ISO
5.00	Exit					40E 5.0 ISO
	Int				30I 5.0 ISO	40I 5.0 ISO
5.50	Exit					
	Int					40I 5.5 ISO
6.00	Exit					40E 6.0 ISO
	Int					40I 6.0 ISO
H		6.3	7.5	12	16	20
T		2.9	3.1	4.7	5.5	6.3

*Insert with one cutting edge.

Model	A (mm)	H (mm)	T (mm)											 Good recommendation	
12N**	12	6	2.38											 General recommendation	
14**	14	7.5	3.1												
21**	21	12	4.7	Material Recommendation	P										
30**	30	16	5.5 <th>M</th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th>		M										
40**	40	20	6.3 <th>K</th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th>		K										
				I											
Insert	Internal	External	pitch	OTO335								NOTE			
			mm	I	E										
 SINGLE SIDE USE	12I0.5ISO		0.5	●											
	12I0.75ISO		0.75	●											
	12I1.0ISO		1.0	●											
	12I1.25ISO		1.25	●											
	12I1.5ISO		1.5	●											
 DOUBLE-SIDE USE	14I0.5ISO	14E0.5ISO	0.5	●	●										
	14I0.75ISO	14E0.75ISO	0.75	●	●										
	14I1.0ISO	14E1.0ISO	1.0	●	●										
	14I1.25ISO	14E1.25ISO	1.25	●	●										
	14I1.5ISO	14E1.5ISO	1.5	●	●										
	14I2.0ISO	14E2.0ISO	2.0	●	●										
	14I2.5ISO	14E2.5ISO	2.5	●	●										
	21I1.0ISO	21E1.0ISO	1.0	●	●										
	21I1.5ISO	21E1.5ISO	1.5	●	●										
	21I1.75ISO	21E1.75ISO	1.75	●	○										
	21I2.0ISO	21E2.0ISO	2.0	●	●										
	21I2.5ISO	21E2.5ISO	2.5	●	●										
	21I3.0ISO	21E3.0ISO	3.0	●	●										
	21I3.5ISO		3.5	●											
	30I1.5ISO	30E1.5ISO	1.5	●	●										
	30I2.0ISO	30E2.0ISO	2.0	●	●										
	30I2.5ISO	30E2.5ISO	2.5	●	●										
	30I3.0ISO	30E3.0ISO	3.0	●	●										
	30I3.5ISO	30E3.5ISO	3.5	●	○										
	30I4.0ISO	30E4.0ISO	4.0	●	○										
	30I4.5ISO		4.5	●											
	30I5.0ISO		5.0	●	○										
	40I1.5ISO	40E1.5ISO	1.5	●	○										
	40I2.0ISO	40E2.0ISO	2.0	●	○										
	40I3.0ISO	40E3.0ISO	3.0	●											
	40I3.5ISO		3.5	●	○										
	40I4.0ISO	40E4.0ISO	4.0	●											
	40I4.5ISO		4.5	●	○										
	40I5.0ISO	40E5.0ISO	5.0	●											
	40I5.5ISO		5.5	●											
	40I6.0ISO		6.0	●											

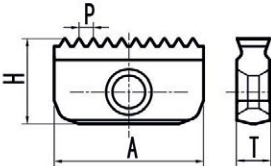
● Standing stock ○ Extraordinary stock

THREAD MILLING INSERTS

Model	A (mm)	H (mm)	T (mm)					 Good recommendation					
12**	12	6	2.38					 General recommendation					
14**	14	7.5	3.1	Material Recommendation		P							
21**	21	12	4.7			M							
30**	30	16	5.5			K							
40**	40	20	6.3			I							
Insert	Internal	External	pitc	OTO335									NOTE
			TP1										
 SINGLE SIDE USE	12I32UN		32										
	12I28UN		28										
	12I24UN		24										
	12I20UN		20										
	12I18UN		18										
	12I16UN		16										
 DOUBLE-SIDE USE	14I32UN	14E32UN	32										
	14I28UN		28										
	14I27UN		27										
	14I24UN	14E24UN	24										
	14I20UN	14E20UN	20										
	14I18UN	14E18UN	18										
	14I16UN	14E16UN	16										
	14I14UN	14E14UN	14										
	14I12UN	14E12UN	12										
	14I11UN		11										
	14I10UN		10										
	21I24UN	21E24UN	24										
	21I20UN	21E20UN	20										
	21I18UN	21E18UN	18										
	21I16UN	21E16UN	16										
	21I14UN	21E14UN	14										
	21I12UN	21E12UN	12										
	21I10UN	21E10UN	10										
	21I8UN		8										
	21I7UN		7										
	30I20UN	30E20UN	20										
	30I18UN	30E18UN	18										
	30I16UN	30E16UN	16										
	30I14UN	30E14UN	14										
	30I12UN	30E12UN	12										
	30I10UN	30E10UN	10										
	30I8UN	30E8UN	8										
	30I6UN	30E6UN	6										
	30I5UN	30E5UN	5										
	40I16UN	40E16UN	16										
	40I14UN	40E14UN	14										
	40I12UN	40E12UN	12										
	40I10UN	40E10UN	10										
	40I8UN	40E8UN	8										
	40I6UN	40E6UN	6										
	40I4.5UN		4.5										
	40I4UN		4										

● Standing stock ○ Extraordinary stock

THREAD MILLING INSERTS

Model	A (mm)	H (mm)	T (mm)	Good recommendation ☺ General recommendation ☹								
12**	12	6	2.38	Material Recommendation		P	☺					
14**	14	7.5	3.1			M	☺					
21**	21	12	4.7			K	☺					
30**	30	16	5.5					☺				
40**	40	20	6.3									
Insert				INDISCRIMINATE INTERNAL AND EXTERNAL	pitch	OTO335						NOTE
					tpi							
SINGLE SIDE USE				12-19W	19	●						
				14-24W	24	●						
				14-20W	20	●						
				14-19W	19	●						
				14-16W	16	●						
				14-14W	14	●						
				14-11W	11	●						
				21-20W	20	○						
				21-19W	19	●						
				21-16W	16	●						
				21-14W	14	●						
				21-11W	11	●						
				30-16W	16	○						
				30-14W	14	○						
				30-11W	11	●						
				40-11W	11	○						
				40-8W	8							

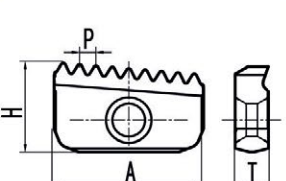


DOUBLE-SIDE USE

same insert to process external and internal thread

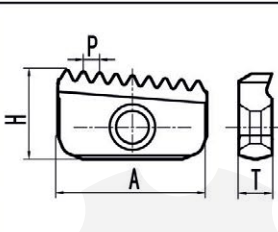
● Standing stock ○ Extraordinary stock

THREAD MILLING INSERTS

Model	A (mm)	H (mm)	T (mm)					☺ Good recommendation ☹ General recommendation				
12**	12	6	2.38	Material Recommendation		P	☺					
14**	14	7.5	3.1			M	☺					
21**	21	12	4.7			K	☺					
30**	30	16	5.5					☺				
40**	40	20	6.3									
Insert				INDISCRIMINATE INTERNAL AND EXTERNAL	pitch	OTO335				NOTE		
					tpi							
 SINGLE SIDE USE	same insert to process external and internal thread			12-19BSPT	19	○						
				14-19BSPT	19	●						
				14-14BSPT	14	●						
				21-14BSPT	14	●						
				21-11BSPT	11	●						
				30-11BSPT	11	●						
				40-11BSPT	11							

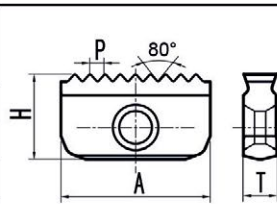
● Standing stock ○ Extraordinary stock

THREAD MILLING INSERTS

Model	A (mm)	H (mm)	T (mm)	☺ Good recommendation ☹ General recommendation							
12**	12	6	2.38	Material Recommendation	P	☺					
14**	14	7.5	3.1		M	☺					
21**	21	12	4.7		K	☺					
30**	30	16	5.5			☺					
40**	40	20	6.3				☺				
Insert				INDISCRIMINATE INTERNAL AND EXTERNAL	pitch	OTO335				NOTE	
					tpi						
 SINGLE SIDE USE	same insert to process external and internal thread			12-18NPT	18	●					
				14-18NPT	18	●					
				14-14NPT	14	●					
				21-14NPT	14	●					
				21-11.5NPT	11.5	●					
				30-11.5NPT	11.5	●					
				30-8NPT	8	●					
				40-11.5NPT	11.5						
				40-8NPT	8						

● Standing stock ○ Extraordinary stock

THREAD MILLING INSERTS

Model	A (mm)	H (mm)	T (mm)					☺ Good recommendation		
12**	12	6	2.38					☹ General recommendation		
14**	14	7.5	3.1	Material Recommendation	P	☺				
21**	21	12	4.7		M	☺				
30**	30	16	5.5		K	☺				
40**	40	20	6.3				☺			
Insert				Internal & External	pitch	OTO335				NOTE
					tpi					
 DOUBLE-SIDE USE	same insert to process external and internal thread			14-18PG	18	●				
				21-18PG	18					
				21-16PG	16	●				
				30-16PG	16					

● Standing stock ○ Extraordinary stock

AĞIR İŞ TORNALAMA UÇLARI HEAVY DUTY INSERTS



AĞIR İŞ TORNALAMA UÇLARI - HEAVY DUTY INSERTS

First
Choice



KP154C

Extra hard matrix with thick TiCN and thick Al_2O_3 coating offers excellent wear resistance on continuous heavy duty machining.



KP254C

Hard and durable matrix with thick TiCN and thick Al_2O_3 coating. Excellent wear performance on continuous and interrupted machining.



KP354C

High durable matrix with thick TiCN and thick Al_2O_3 coating. Excellent interruption resistance for high level interrupted machining.

Different solutions for
different machining
conditions



HLR

Wide chipbreaking span, fast cutting, continuous or low-level interrupted machining.



HIR

Reinforced cutting edges, suitable for continuous and interrupted machining conditions.

First
Choice



HGR

Cutting edge structure cares for durability and chip control. Suitable for low level interrupted and continuous machining.

First
Choice



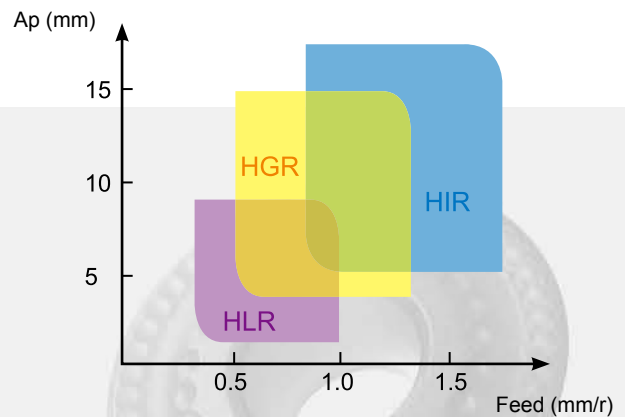
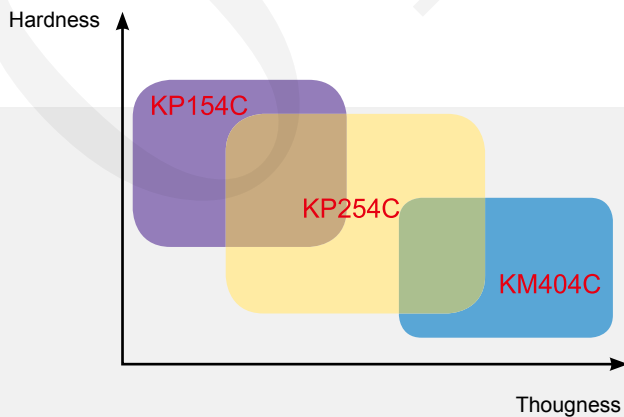
HMR

Double side heavy duty stainless steel machining insert controls chip flow. For continuous or low level interrupted machining.

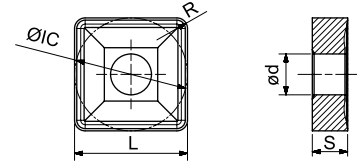


HGR

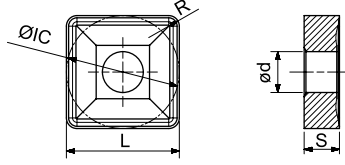
Double sided universal insert for a very economic solution for continuous machining.



AĞIR İŞ TORNALAMA UÇLARI - HEAVY DUTY INSERTS



Insert	Model	Dimensions (mm)					Grades			
		L	IC	d	S	R	KP154C	KP254C	KP354C	KM404C
	CNMM160608-HLR	16.1	15.875	6.35	6.35	0.8	★		●	○
	CNMM160612-HLR	16.1	15.875	6.35	6.35	1.2	★		●	○
	CNMM160616-HLR	16.1	15.875	6.35	6.35	1.6	★		●	○
	CNMM190612-HLR	19.3	19.05	6.35	7.94	1.2	★		●	○
	CNMM190616-HLR	19.3	19.05	6.35	7.94	1.6	★		●	○
	CNMM190624-HLR	19.3	19.05	6.35	7.94	2.4	★		●	○
	CNMM250924-HLR	25.8	25.4	9.525	9.12	2.4	★		●	○
	SNMM150608-HLR	15.875	15.875	6.35	6.35	0.8	★		●	○
	SNMM150612-HLR	15.875	15.875	6.35	6.35	1.2	★		●	○
	SNMM150616-HLR	15.875	15.875	6.35	6.35	1.6	★		●	○
	SNMM190612-HLR	19.05	19.05	6.35	7.94	1.2	★		●	○
	SNMM190616-HLR	19.05	19.05	6.35	7.94	1.6	★		●	○
	SNMM190624-HLR	19.05	19.05	6.35	7.94	2.4	★		●	○
	SNMM250724-HLR	25.4	25.4	9.12	7.94	2.4	★		●	○
	SNMM250924-HLR	25.4	25.4	9.12	9.525	2.4	★		●	○
	CNMM190612-HGR	19.3	19.05	6.35	6.35	1.2		★		○
	CNMM190616-HGR	19.3	19.05	6.35	6.35	1.6		★		○
	CNMM190624-HGR	19.3	19.05	6.35	6.35	2.4		★		○
	CNMM250724-HGR	25.8	25.4	9.12	7.94	2.4		★		○
	CNMM250924-HGR	25.8	25.4	9.12	9.525	2.4		★		○
	SNMM190612-HGR	19.05	19.05	6.35	6.35	1.2		★		○
	SNMM190616-HGR	19.05	19.05	6.35	6.35	1.6		★		○
	SNMM190624-HGR	19.05	19.05	6.35	6.35	2.4		★		○
	SNMM250724-HGR	25.4	25.4	9.12	7.94	2.4		★		○
	SNMM250924-HGR	25.4	25.4	9.12	9.525	2.4		★		○
	CNMM190624-HIR	19.3	19.05	6.35	6.35	2.4		●		★
	CNMM250724-HIR	25.8	25.4	9.12	7.94	2.4		●		★
	CNMM250924-HIR	25.8	25.4	9.12	9.525	2.4		●		★

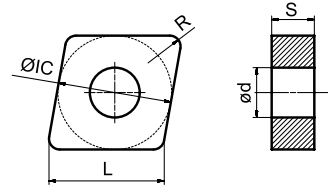


Insert	Model	Dimensions (mm)					Grades			
		L	IC	d	S	R	KP154C	KP254C	KP354C	KM404C
	SNMM190624-HIR	19.05	19.05	6.35	6.35	2.4		●		★
	SNMM250724-HIR	25.4	25.4	9.12	7.94	2.4		●		★
	SNMM250924-HIR	25.4	25.4	9.12	9.525	2.4		●		★
	SNMM250932-HIR	25.4	25.4	9.12	9.525	3.2		●		★
	CNMM190616-HPR	19.3	19.05	6.35	7.94	1.6	★		●	
	CNMM190624-HPR	19.3	19.05	6.35	7.94	2.4	★		●	
	CNMM250724-HPR	25.8	25.4	7.94	9.12	2.4	★		●	
	CNMM250924-HPR	25.8	25.4	9.525	9.12	2.4	★		●	
	SNMM190616-HPR	19.05	19.05	6.35	7.94	1.6	★		●	
	SNMM190624-HPR	19.05	19.05	6.35	7.94	2.4	★		●	
	SNMM250724-HPR	25.4	25.4	7.94	9.12	2.4	★		●	
	SNMM250924-HPR	25.4	25.4	9.525	9.12	2.4	★		●	
	CNMM190624-HZ	19.3	19.05	6.35	7.94	2.4	★		●	
	CNMM250924-HZ	25.8	25.4	9.525	9.12	2.4	★		●	
	SNMM190624-HZ	19.05	19.05	6.35	7.94	2.4	★		●	
	SNMM250924-HZ	25.4	25.4	9.525	9.12	2.4	★		●	
	SNMM250932-HZ	25.4	25.4	9.525	9.12	3.2	★		●	

★ Sürekli Stok
Continuous
Stock

● Muhtemel Stok
Possible Stock

○ Siparişe Göre
Üretim
Job Shop
Manufacturing



Insert	Model	Dimensions (mm)					Grades			
		L	IC	d	S	R	KP154C	KP254C	KP354C	KM404C
	CNMG160608-HGR	16.1	15.875	6.35	6.35	0.8	★		●	
	CNMG160612-HGR	16.1	15.875	6.35	6.35	1.2	★		●	
	CNMG160616-HGR	16.1	15.875	6.35	6.35	1.6	★		●	
	CNMG190612-HGR	19.3	19.05	6.35	6.35	1.2	★		●	
	CNMG190616-HGR	19.3	19.05	6.35	6.35	1.6	★		●	
	CNMG190624-HGR	19.3	19.05	6.35	6.35	2.4	★		●	
	CNMG250924-HGR	25.8	25.4	9.12	9.525	2.4	★		●	
	SNMG160612-HGR	15.875	15.875	6.35	6.35	1.2	★		●	
	SNMG160616-HGR	15.875	15.875	6.35	6.35	1.6	★		●	
	SNMG190612-HGR	19.05	19.05	6.35	6.35	1.2	★		●	
	SNMG190616-HGR	19.05	19.05	6.35	6.35	1.6	★		●	
	SNMG190624-HGR	19.05	19.05	6.35	6.35	2.4	★		●	
	SNMG250724-HGR	25.4	25.4	9.12	7.94	2.4	★		●	
	SNMG250924-HGR	25.4	25.4	9.12	9.525	2.4	★		●	
	CNMG160608-HMR	16.1	15.875	6.35	6.35	0.8		★		●
	CNMG160612-HMR	16.1	15.875	6.35	6.35	1.2		★		●
	CNMG160616-HMR	16.1	15.875	6.35	6.35	1.6		★		●
	CNMG190612-HMR	19.3	19.05	6.35	6.35	1.2		★		●
	CNMG190616-HMR	19.3	19.05	6.35	6.35	1.6		★		●
	CNMG190624-HMR	19.3	19.05	6.35	6.35	2.4		★		●
	CNMG250924-HMR	25.8	25.4	9.12	9.525	2.4		★		●
	SNMG160612-HMR	15.875	15.875	6.35	6.35	1.2		★		●
	SNMG160616-HMR	15.875	15.875	6.35	6.35	1.6		★		●
	SNMG190612-HMR	19.05	19.05	6.35	6.35	1.2		★		●
	SNMG190616-HMR	19.05	19.05	6.35	6.35	1.6		★		●
	SNMG190624-HMR	19.05	19.05	6.35	6.35	2.4		★		●
	SNMG250724-HMR	25.4	25.4	9.12	7.94	2.4		★		●
	SNMG250924-HMR	25.4	25.4	9.12	9.525	2.4		★		●

★ Sürekli Stok
Continuous
Stock

● Muhtemel Stok
Possible Stock

○ Siparişe Göre
Üretim
Job Shop
Manufacturing

Suggested Cutting Speed (Vc: m/min)

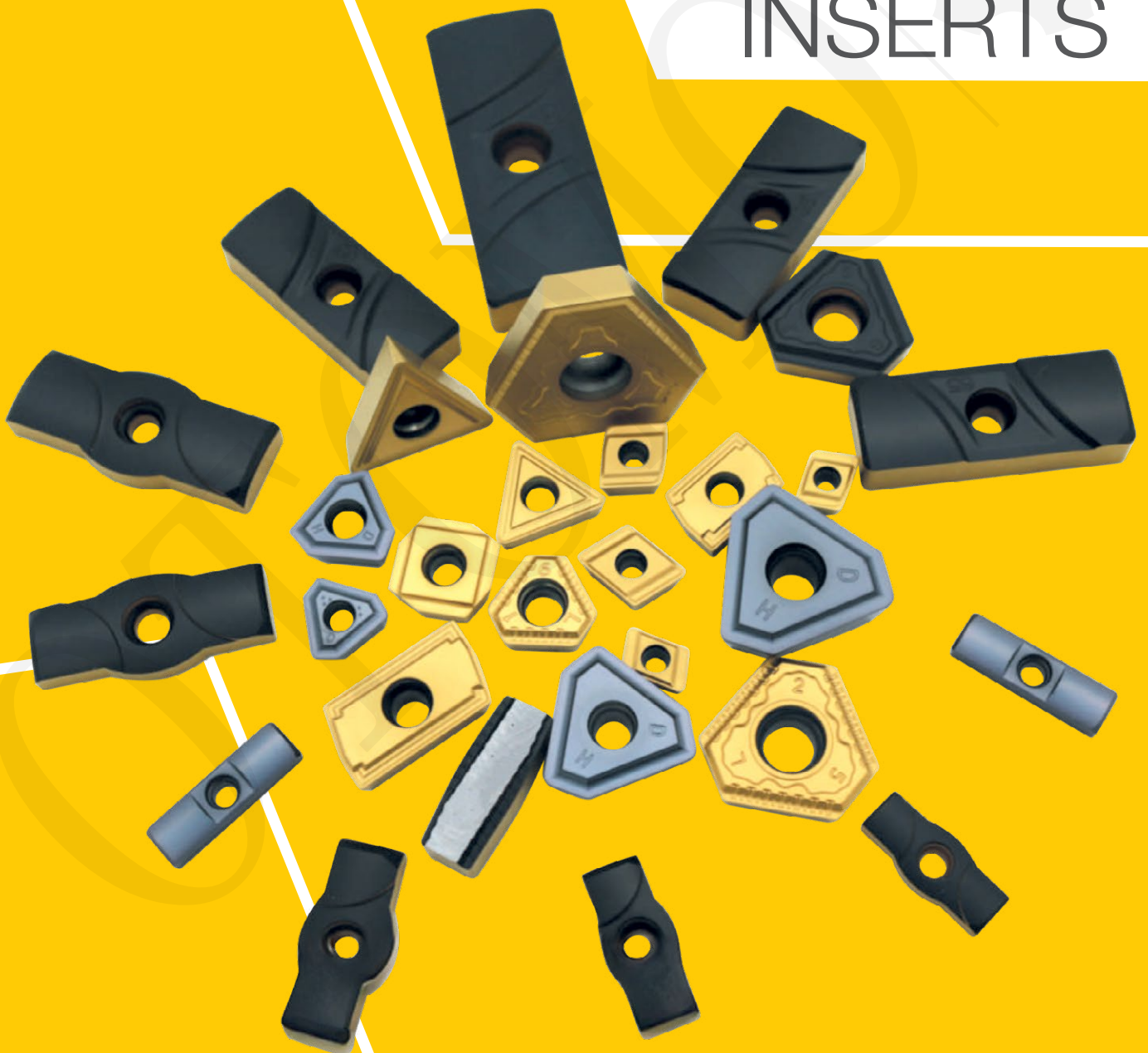
	Continuous		Interrupted
Grades	KP154C	KP254C	KM404C
Cutting Speed	160(100-220)	140(80-200)	120(70-150)

Suggested Cutting Depth (Ap: mm Fn: mm/r)

	Continuous Machining 	Light Interrupted Machining 	Interrupted Machining 	Heavy Interrupted Machining 
HLR	Ap: 2~8 Fn: 0.3~1.0	Ap: 2~8 Fn: 0.3~0.6	----	----
HGR	----	Ap: 4~15 Fn: 0.5~1.3	Ap: 4~10 Fn: 0.5~0.9	----
HIR	----	----	Ap: 5~20 Fn: 0.7~1.5	Ap: 5~15 Fn: 0.7~1.0
HPR	AP:4-12 Fn: 0.35-1.3	AP:4-12 Fn: 0.35-1.0		
HY	AP:4-15 Fn: 0.5-1.	AP:4-15 Fn: 0.5-1.1		
HGR	Ap: 4~12 Fn: 0.5~1.0	Ap: 4~8 Fn: 0.5~1.0	----	----
HMR	Ap: 2~8 Fn: 0.3~1.0	Ap: 2~8 Fn: 0.3~0.6	----	----

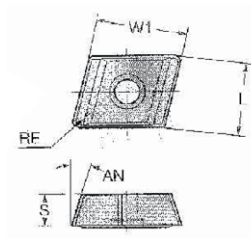
DERİN DELİK MATKAPLARI

DEEP HOLE DRILLING INSERTS



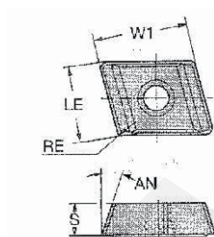
CORO 800

INSERT FOR DRILLING
CENTRAL INSERT



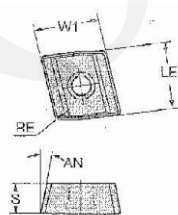
Shape		Type	PVD coating			AN
			OTO3025	OTO3225	OTO3330	
	05	800-05 03 08M-C-G	●	●	●	17°
	06	800-06 T3 08M-C-G	●	●	●	17°
	08	800-08 T3 08M-C-G	●	●	●	17°
	10	800-10 T3 08M-C-G	●	●	●	17°
	12	800-12 T3 08M-C-G	●	●	●	17°
						17°
	05	800-05 03 08M-C-L	●	●	●	
	06	800-06 T3 08M-C-L	●	●	●	17°
	08	800-08 T3 08M-C-L	●	●	●	17°
	10	800-10 T3 08M-C-L	●	●	●	17°
	12	800-12 T3 08M-C-L	●	●	●	17°

CENTRAL INSERT



Shape		Type	PVD coating			AN
			OTO3025	OTO3225	OTO3330	
	05	800-05 03 08M-I-G	●	●	●	17°
	06	800-06 T3 08M-I-G	●	●	●	17°
	08	800-08 T3 08M-I-G	●	●	●	17°
	12	800-12 T3 08M-I-G	●	●	●	17°
	05	800-05 03 08M-I-L	●	●	●	17°
	06	800-06 T3 08M-I-L	●	●	●	17°
	08	800-08 T3 08M-I-L	●	●	●	17°
	12	800-12 T3 08M-I-L	●	●	●	17°

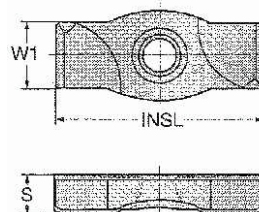
PERIPHERAL INSERT



Shape		Type	PVD coating			AN
			OTO3025	OTO3225	OTO3330	
	06	800-06 03 08H-P-G	●	●	●	11°
	06	800-06 03 08H-P-L	●	●	●	11°
	08	800-08 T3 08H-P-G	●	●	●	11°
	08	800-08 T3 08H-P-L	●	●	●	11°
	09	800-09 T3 08H-P-G	●	●	●	11°
	09	800-09 T3 08H-P-L	●	●	●	11°
	11	800-11 T3 08H-P-G	●	●	●	11°
	11	800-11 T3 08H-P-L	●	●	●	11°

CORO 800

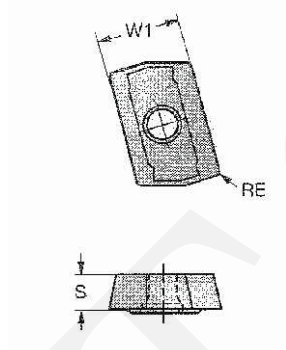
DRILL HEADS
INTERMEDIATE INSERT



Ordering code	Dimensions,mm,inch					
	W1	W1"	INSL	INSL'	S	S"
800-06A	6	.236	18	.709	3.0	.118
800-07A	7	.276	20	.787	3.5	.138
800-08A	8	.315	25	.984	4.5	.177
800-10A	10	.394	30	1.181	4.5	.177
800-12A	12	.472	35	1.378	5.5	.216

T-MAX

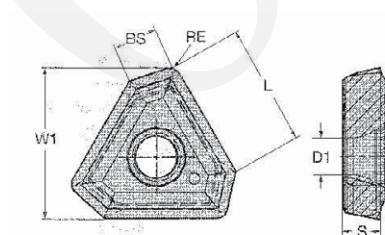
PERIPHERAL INSERT



Shape		型号 Type	PVD coating		
			OTO3025	OTO3225	OTO3330
	13	R424.9-13 T3 08-22	●	●	●
		R424.9-13 T3 08-23	●	●	●
	18	R424.9-18 06 08-22	●	●	●
		R424.9-18 06 08-22	●	●	●
	13	R424.9-13 T3 08-24	●	●	●
	18	R424.9-18 06 08-24	●	●	●

TPGX

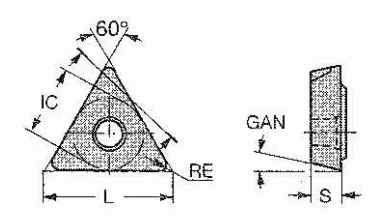
INSERT FOR DRILLING



Shape		Type	PVD coating		
			OTO3025	OTO3225	OTO3330
	14	TPGX 14 03 08R/L-G	●	●	●
		TPGX 14 03 08R/L-L	●	●	●
	17	TPGX 17 04 08R/L-G	●	●	●
		TPGX 17 04 08R/L-L	●	●	●
	24	TPGX 24 05 12R/L-G	●	●	●
		TPGX 24 05 12R/L-L	●	●	●
	28	TPGX 28 07 16R/L-G	●	●	●
		TPGX 28 07 16R/L-L	●	●	●

T-MAXR

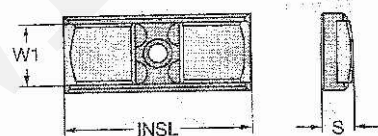
INSERT FOR DRILLING



Shape		Type	PVD coating		
			OTO3025	OTO3225	OTO3330
	16	TPMT 16 T3 12R-22	●	●	●
		TPMT 16 T3 12TR-23	●	●	●
	22	TPMT 22 06 12R-22	●	●	●
		TPMT 22 06 12TR-23	●	●	●

CORO 801, CORO 818, T-MAX 424

INSERT FOR DRILLING



Drill head dia.	Support pads	Dimensions,mm,inch					
		W1	W1"	INSL	INSL'	S	S"
63.5-71.99(2.480-2.952)	430.32-12 D65.0	14	0.551	35	1.379	7.0	0.276
	430.32-12 D70.0	14	0.551	35	1.379	7.0	0.276
75.0-84.99(2.953-3.346)	430.32-12 D75.0	14	0.551	35	1.379	7.0	0.276
	430.32-12 D80.0	14	0.551	35	1.379	7.0	0.276
85.0-99.99(3.346-3.936)	430.32-12 D85.0	14	0.551	35	1.379	7.0	0.276
	430.32-12 D90.0	14	0.551	35	1.379	7.0	0.276
	430.32-12 D95.0	14	0.551	35	1.379	7.0	0.276
100-109.99(3.937-4.330)	430.32-16 D100.0	20	0.787	50	1.969	8.5	0.335
	430.32-16 D105.0	20	0.787	50	1.969	8.5	0.335
110-119.99(4.331-4.724)	430.32-16 D110.0	20	0.787	50	1.969	8.5	0.335
	430.32-16 D115.0	20	0.787	50	1.969	8.5	0.335
120-129.99(4.724-5.118)	430.32-16 D120.0	20	0.787	50	1.969	8.5	0.335
	430.32-16 D125.0	20	0.787	50	1.969	8.5	0.335
130-139.99(5.118-5.511)	430.32-16 D130.0	20	0.787	50	1.969	8.5	0.335



(D)	(L1)	(L2)	(D)	(L1)	(L2)
3.02	0-1650mm	1651-2200mm	18.52	0-1650mm	1651-2200mm
4.02	0-1650mm	1651-2200mm	19.02	0-1650mm	1651-2200mm
5.02	0-1650mm	1651-2200mm	19.52	0-1650mm	1651-2200mm
5.52	0-1650mm	1651-2200mm	20.02	0-1650mm	1651-2200mm
6.02	0-1650mm	1651-2200mm	20.52	0-1650mm	1651-2200mm
6.37	0-1650mm	1651-2200mm	21.02	0-1650mm	1651-2200mm
6.52	0-1650mm	1651-2200mm	21.52	0-1650mm	1651-2200mm
7.02	0-1650mm	1651-2200mm	22.02	0-1650mm	1651-2200mm
7.52	0-1650mm	1651-2200mm	23.02	0-1650mm	1651-2200mm
8.02	0-1650mm	1651-2200mm	24.02	0-1650mm	1651-2200mm
8.52	0-1650mm	1651-2200mm	25.02	0-1650mm	1651-2200mm
9.02	0-1650mm	1651-2200mm	26.02	0-1650mm	1651-2200mm
9.52	0-1650mm	1651-2200mm	27.02	0-1650mm	1651-2200mm
10.02	0-1650mm	1651-2200mm	28.02	0-1650mm	1651-2200mm
10.52	0-1650mm	1651-2200mm	29.02	0-1650mm	1651-2200mm
11.02	0-1650mm	1651-2200mm	30.02	0-1650mm	1651-2200mm
11.13	0-1650mm	1651-2200mm	31.02	0-1650mm	1651-2200mm
11.52	0-1650mm	1651-2200mm	32.02	0-1650mm	1651-2200mm
12.02	0-1650mm	1651-2200mm	33.02	0-1650mm	1651-2200mm
12.52	0-1650mm	1651-2200mm	34.02	0-1650mm	1651-2200mm
13.02	0-1650mm	1651-2200mm	35.02	0-1650mm	1651-2200mm
13.52	0-1650mm	1651-2200mm	36.02	0-1650mm	1651-2200mm
14.02	0-1650mm	1651-2200mm	37.02	0-1650mm	1651-2200mm
14.3	0-1650mm	1651-2200mm	38.02	0-1650mm	1651-2200mm
14.52	0-1650mm	1651-2200mm	39.02	0-1650mm	1651-2200mm
15.02	0-1650mm	1651-2200mm	40.02	0-1650mm	1651-2200mm
15.52	0-1650mm	1651-2200mm	41.02	0-1650mm	1651-2200mm
16.02	0-1650mm	1651-2200mm	42.02	0-1650mm	1651-2200mm
16.52	0-1650mm	1651-2200mm	43.02	0-1650mm	1651-2200mm
17.02	0-1650mm	1651-2200mm	44.02	0-1650mm	1651-2200mm
17.52	0-1650mm	1651-2200mm	45.02	0-1650mm	1651-2200mm

ALÜMİNYUM JANT İŞLEME UÇLARI

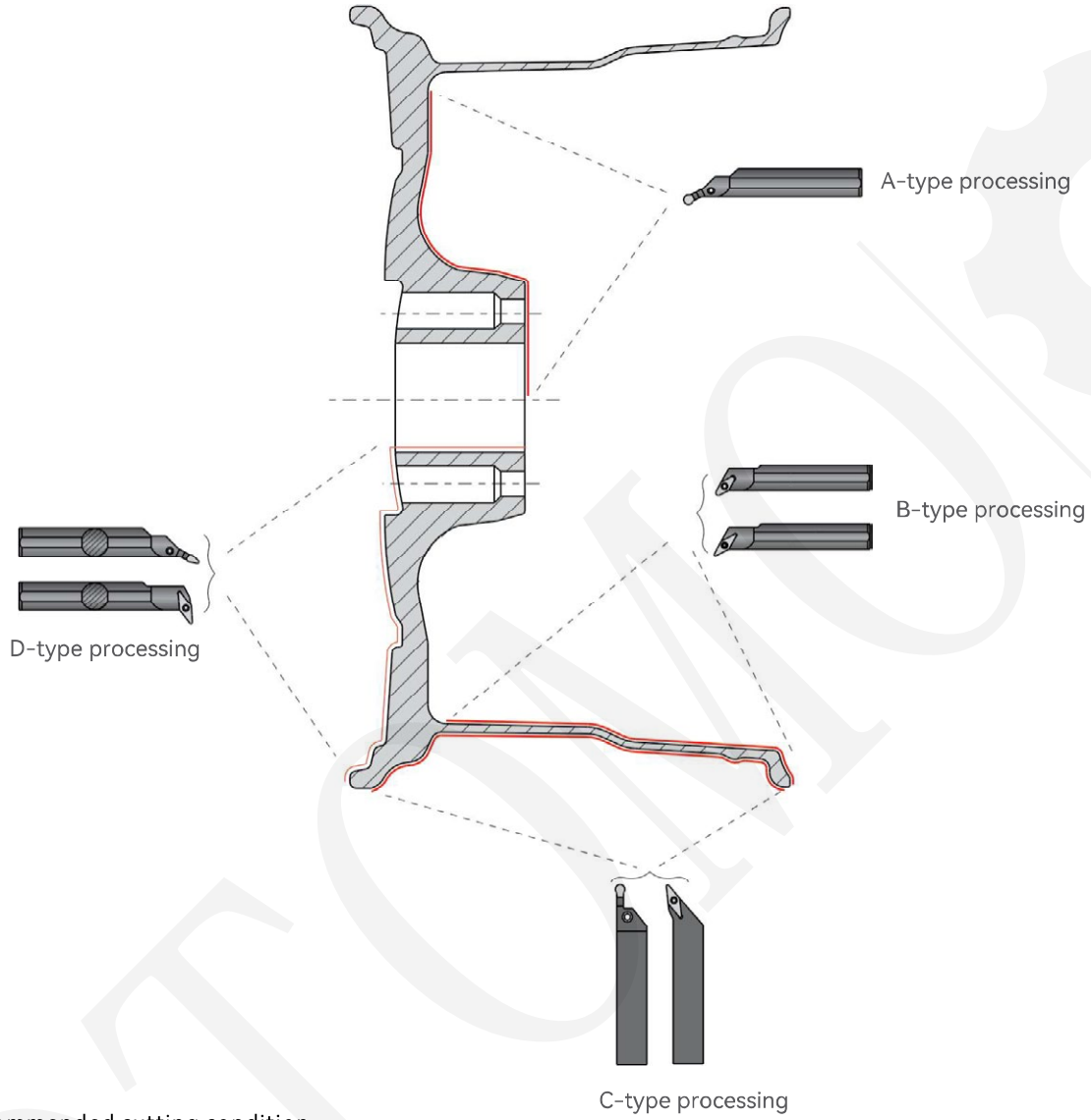
ALUMINIUM
WHEEL HUB
INSERTS



ALÜMİNYUM JANT İŞLEME UÇLARI

ALUMINIUM WHEEL HUB INSERTS

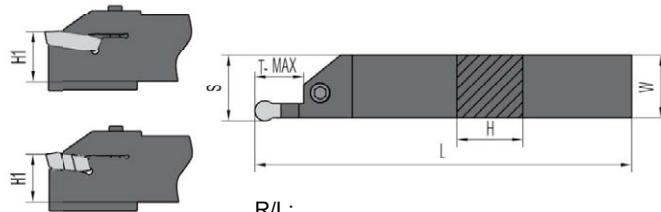
INSERT APPLICATION FOR
ALUMINIUM WHEEL HUB MACHINING



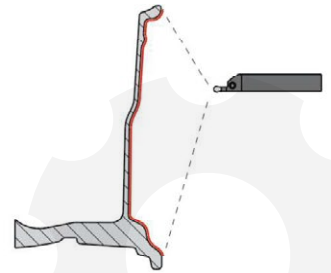
Recommended cutting condition

ISO	Material	Condition	Kc(Mpa)	Cutting speed Vc(m/min)	
				Grade	
				BP5205	BP5215
N	Aluminum alloy (casting)	Not-hardend	500-600	1000-2500	800-2200
			700-900	400-1200	400-1000
	Aluminum alloy (forging)	Hardend	700-800	1000-2500	800-2200
			800-950	400-1200	400-1000
	Coper alloy	Not-hardend	700-900	400-1000	400-1000
		Hardend	700-800	300-1000	300-1000

Application	Shape	Specification	Coated cemented carbide		Dimension (mm)							Geometry
			BP5205	BP5215	L	W	d	s	d1	r	a°	
Aluminum wheel hub machining		GDMA840E-AL	☆	★	30.00	8.00	-	6.89	-	4.00	-	
		GDMA840E-AF	☆	★	30.00	8.00	-	6.89	-	4.00	-	
		GIP600-300-AL	☆	★	18.00	6.00	-	6.50	-	3.00	-	
		GIP600-300-LH	★		18.00	6.00	-	6.50	-	3.00	-	
		GIPATYZ-35V-1.2-LH	★		30.00	6.00	-	7.00	-	1.20	-	
		VCGT160408-N3			-	-	9.525	4.76	4.40	0.80	7	
		VCGT160412-N3			-	-	9.525	4.76	4.40	1.20	7	
		VCGT220530-N3			-	-	12.70	5.56	5.50	3.00	7	
		VCGT220530E-N3			-	-	12.70	5.56	5.50	3.00	7	
		VCGT160408-N1			-	-	9.525	4.76	4.40	1.20	7	
		VCGT160412-N1					9.525	4.76	4.40	1.20	7	
		VCGT220520-N1					12.70	5.56	5.50	2.00	7	
		VCGT220530-N1					12.70	5.56	5.50	3.00	7	
		VCGT220530E-N1					12.70	5.56	5.50	3.00	7	
		VCGT160412-LHK			-	-	9.525	5.56	5.50	1.20	7	
		VCGT220530-LHK					12.70	5.56	5.50	3.00	7	
		VPGT220516-LHK					12.70	5.56	5.50	1.60	11	
		VPGT220612E-LHC			-	-	12.70	6.35	5.50	1.20	11	



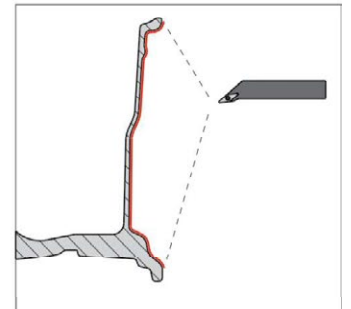
R/L:
R right hand tool
L left hand tool
Pictured: right hand tool



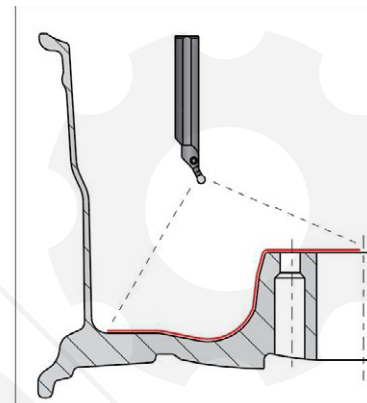
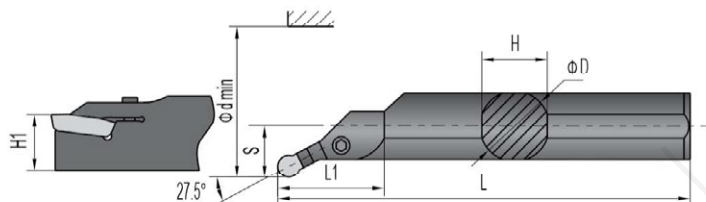
Specification	Dimension (mm)					Available inserts	Screw	Wrench
	L	B	H	T-MAX	S			
BUMPR/L 2525-R3-150	150	25	25	24	24	GIP600**	M6*30	L5.0
BUMPR/L 3232-R4-170	170	32	32	24	31.5	GDMA840**		
BUMPR/L 2525-R4-150	150	25	25	24	24			
BUMPR/L 3232-R4-170	170	32	32	24	31.5			



R/L:
R right hand tool
L left hand tool
Pictured: right hand tool



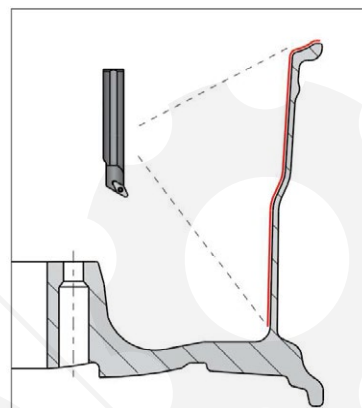
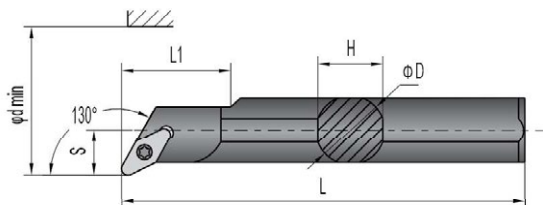
Specification	Dimension (mm)					Available inserts	Screw	Wrench
	L	B	H	T-MAX	S			
SVJCR/L-2525-M16	150	25	25	-	32	VCGT16**	S040L09	HT15
SVHCR/L-2525-M16	150	25	25	-	32			



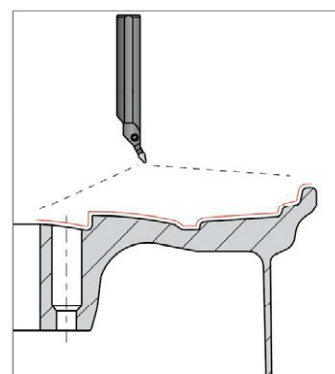
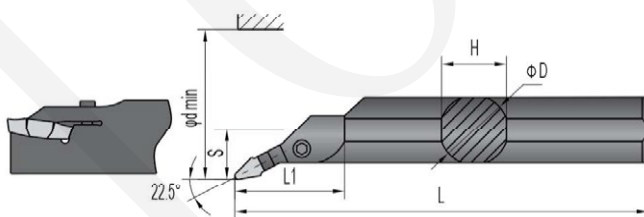
GDMA□□

R/L:
R right hand tool
L left hand tool
Pictured: right hand tool

Specification	Dimension (mm)						Available inserts	Screw	Wrench
	L	ϕD	H	L1	S	ϕdmin			
BUMPR/L 50C-05A-R4-300	300	50	47	87	27	> 65	GDMA840**	M6*30	L5.0
BUMPR/L 50C-08A-R4-300	300	50	47	87	27	> 65			
BUMPR/L 50C-15A-R4-300	300	50	47	87	27	> 65			
BUMPR/L 50C-05A-R4-350	350	50	47	87	27	> 65			
BUMPR/L 50C-08A-R4-350	350	50	47	87	27	> 65			
BUMPR/L 50C-15A-R4-350	350	50	47	87	27	> 65			
BUMPR/L 40C-05A-230	230	40	37	87	22	> 65			
BUMPR/L 40C-08A-230	230	40	37	87	22	> 65			
BUMPR/L 40C-15A-230	230	40	37	87	22	> 65			
BUMPR/L 40C-05A-250	250	40	37	87	22	> 65			
BUMPR/L 40C-08A-250	250	40	37	87	22	> 65			
BUMPR/L 40C-15A-250	250	40	37	87	22	> 65			
BUMPR/L 40C-05A-300	300	40	37	87	22	> 65			
BUMPR/L 40C-08A-300	300	40	37	87	22	> 65			
BUMPR/L 40C-15A-300	300	40	37	87	22	> 65			



Specification	Dimension (mm)						Available inserts	Screw	Wrench
	L	φD	H	L1	S	φd min			
A40T-SVQCR/L22-300	300	40	37	80	27	45	VCGT2205**	S050L12	HT20
A40S-SVQCR/L22-230	230	40	37	80	27	45			
A40S-SVQCR/L22-250	250	40	37	80	27	45			
A40T-SVQCR/L22	300	40	37	80	27	45			
A50T-SVQCR/L22	300	50	47	80	32	45			
A50U-SVQCR/L22	350	50	47	80	32	45			



Specification	Dimension (mm)					Available inserts	Screw	Wrench
	L	φD	H	L1	S			
BUMPR/L 40C-112.5A-R1.2-300	300	40	37	87	27	GIPATYZ-35V**	M6*30	L5.0
BUMPR/L 50C-112.5A-R1.2-300	300	50	47	87	27			

**DEMİRYOLU
ENDÜSTRİSİ
KARBÜR
UÇLARI
RAILWAY
INDUSTRY
CARBIDE
INSERTS**

RAILWAY INDUSRTY



RAIL MACHINING

A close-up photograph of a rail grinding wheel in contact with a steel rail, with sparks being generated from the point of contact.



RAIL WHEEL
MANUFACTURING

A detailed view of a large, heavy-duty metal wheel, likely a rail wheel, showing its central hub and outer rim.



RAIL WHEEL REPAIR

A photograph of a rail wheel being worked on, with a tool or part visible, suggesting a repair or maintenance process.



SHAFT MACHINING

A photograph of several long, cylindrical metal shafts, likely after a machining process, showing their uniform shape and texture.

According to the global railway transportation growth, the market's part manufacturing needs for railway industry, also growing. As a professional manufacturer OTOMO, manufactures high performance carbide inserts and also tools for railway industry. OTOMO wants to lead cutting tools market for railway industry, as it is other industries.

RAILROAD TOOLS

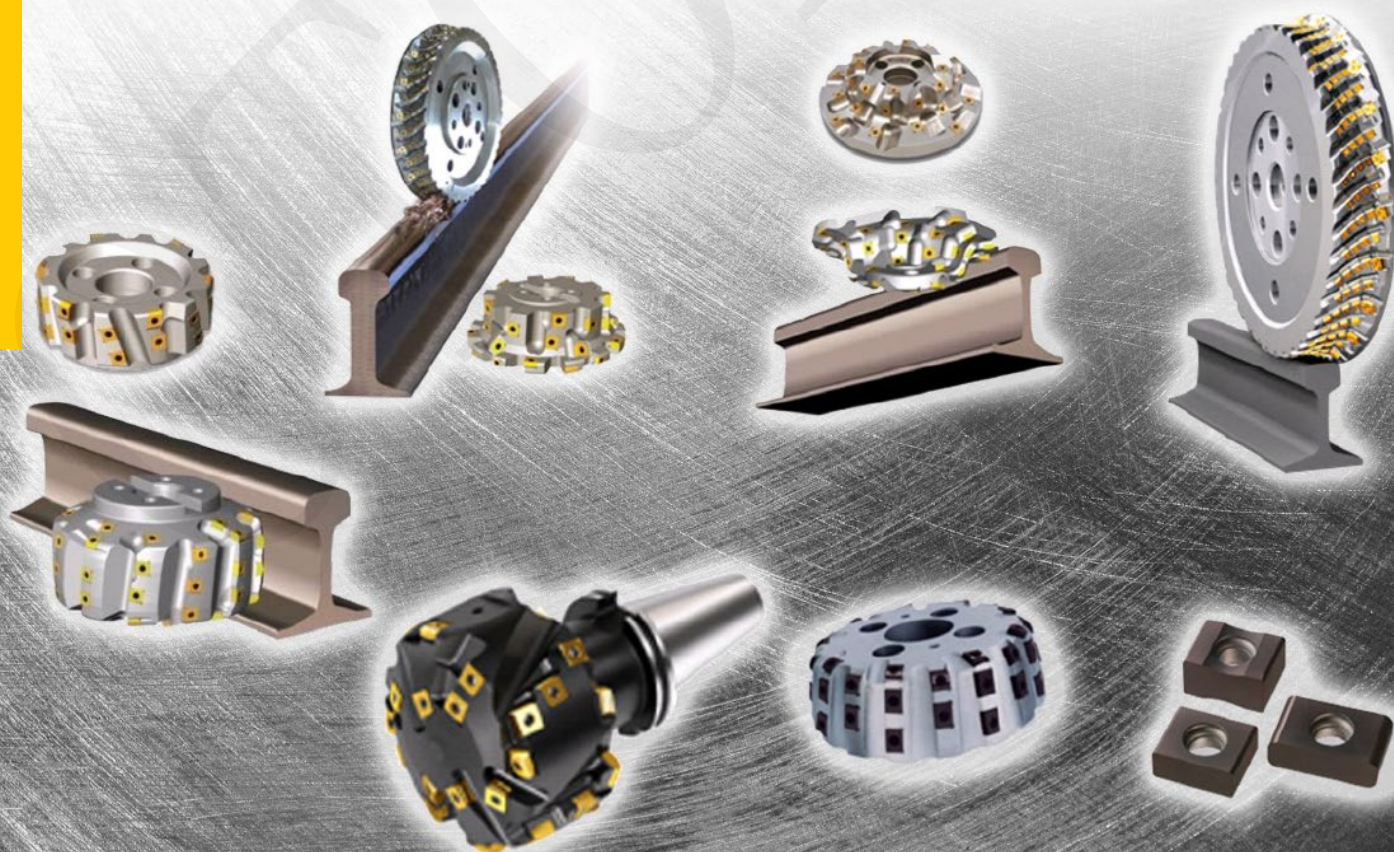
OTOMO developed a range of tools for railway industry by working together railroad components manufacturers.

Different conditions
Different grades

OTOMO has an R&D department for new tool and insert designs and for better insert grades.

KP251G
KP0402U

For better machining of rails, professional tools and inserts.



WHEEL MACHINING



Train wheels work under high speed and high pressure conditions. OTOMO gives a good service to train wheel manufacturers for a better wheel machining process for long. OTOMO offers different solutions for rough, medium and finish processes.

High strength matrix + thick Al_2O_3 coating for an outstanding wear resistance. Suitable for rough machining.

KP155U

Ultra hard matrix for very high machining temperatures. Suitable for wet and medium cutting.

RW104U

Extremely hard matrix + thick Al_2O_3 coating. Highly durable for a high wear resistance.

RW054U

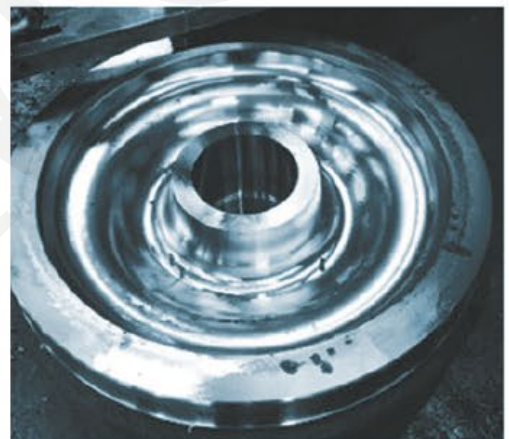
Professional Service



HIR



HGR

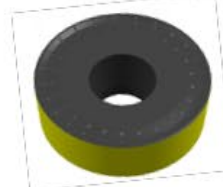


Finish
Machining



RWF

Medium
Machining



RWM

Rough
Machining

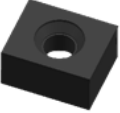
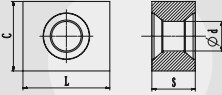
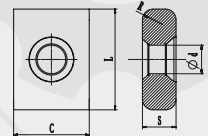
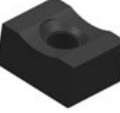
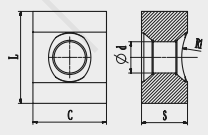
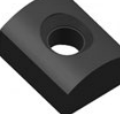
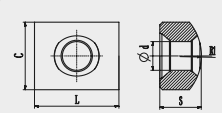


RWR



DEMİRYOLU ENDÜSTRİSİ KARBÜR UÇLARI

RAILWAY INDUSTRY CARBIDE INSERTS

		(Dimension)mm									
		LC		S	dR		KP251G	KM453S	KD201U	KP402U	
	KLNE151207	15.875	12.7	7.94	5.4~		○			●	
	KLNE191406	19.05	14.3	6.35	5.4~		○			●	
	KLNE191406-4R200	19.05	14.3	6.35	5.42	.0	○			●	
	KLNE151207-NR1000	15.875	12.7	7.94	5.41	0.0	○			●	
	KLNE151207-NR8000	15.875	12.7	7.94	5.48	0.0	○			●	
	KLNE151207-R1200	15.875	12.7	7.94	5.41	2.0	○			●	

CN

		(Dimension)mm														
		L	IC	SD		R	KP154U	KP254U	KP354U	KM152U	KM252U	KM352U	KM402U	(mm)	(mm/r)	
	CNMM190616-HGR	19.3	19.05	6.35	7.94	1.6		★					●	2.0~5.0~8.00	.3~0.5~0.8	
	CNMM190624-HGR	19.3	19.05	6.35	7.94	2.4		★					●	2.0~5.0~8.00	.4~0.6~1.0	
	CNMM250924-HGR	25.8	25.49	.525	9.12	2.4		★					●	3.0~8.0~13.00	.5~0.8~1.4	
	CNMM190616-HIR	19.3	19.05	6.35	7.94	1.6		★					●	2.0~5.0~10.00	.3~0.5~0.8	
	CNMM190624-HIR	19.3	19.05	6.35	7.94	2.4		★					●	2.0~5.0~10.00	.4~0.6~1.0	
	CNMM250924-HIR	25.8	25.49	.525	9.12	2.4		★					●	3.0~10.0~15.00	.5~0.8~1.4	

SN

		(Dimension)mm													
		L	IC	SD		R	KP154U	KP254U	KP354U	KM152U	KM252U	KM352U	KM402U	(mm)	(mm/r)
	SNMM190616-HGR	19.05	19.05	6.35	7.94	1.6	★					●		2.0~5.0~8.00	.3~0.5~0.8
	SNMM190624-HGR	19.05	19.05	6.35	7.94	2.4	★					●		2.0~5.0~8.00	.4~0.6~1.0
	SNMM250724-HGR	25.4	25.47	.949	.122	.4	★					●		3.0~8.0~15.00	.5~0.8~1.4
	SNMM250924-HGR	25.4	25.49	.525	9.12	2.4	★					●		3.0~8.0~17.00	.5~0.8~1.4
	SNMM190616-HIR	19.05	19.05	6.35	7.94	1.6	★					●		2.0~5.0~10.00	.3~0.5~0.8
	SNMM190624-HIR	19.05	19.05	6.35	7.94	2.4	★					●		2.0~5.0~10.00	.4~0.6~1.0
	SNMM250724-HIR	25.4	25.47	.949	.122	.4	★					●		3.0~10.0~18.00	.5~0.8~1.6
	SNMM250924-HIR	25.4	25.49	.525	9.12	2.4	★					●		3.0~10.0~20.00	.5~0.8~1.6

RCMX

		(Dimension)mm													
		L	IC	SD		R	RW054U	RW104U	KP155U	KP254U	KP354U	KM352U	KM402U	(mm)	(mm/r)
	RCMX2006MO-RWF	20.06	.356	.5	★		●							2.0~5.0~8.00	.20~0.45~1.20
	RCMX2507MO-RWF	25.07	.947	.5	★		●							2.5~6.0~10.00	.25~0.60~1.50
	RCMX2006MO-RWM	20.06	.356	.5		★	●							2.0~5.0~8.00	.20~0.45~1.70
	RCMX2507MO-RWM	25.07	.947	.5		★	●							2.5~6.0~10.00	.25~0.60~2.00
	RCMX3209MO-RWM	32.09	.525	9.6		★	●							3.0~8.0~12.00	.30~0.90~2.50
	RCMX2507MO-RWR	25.07	.947	.5			★		●					2.5~6.0~10.00	.25~0.80~2.50
	RCMX3209MO-RWR	32.09	.525	9.6			★		●					3.0~8.0~12.00	.30~1.00~3.00

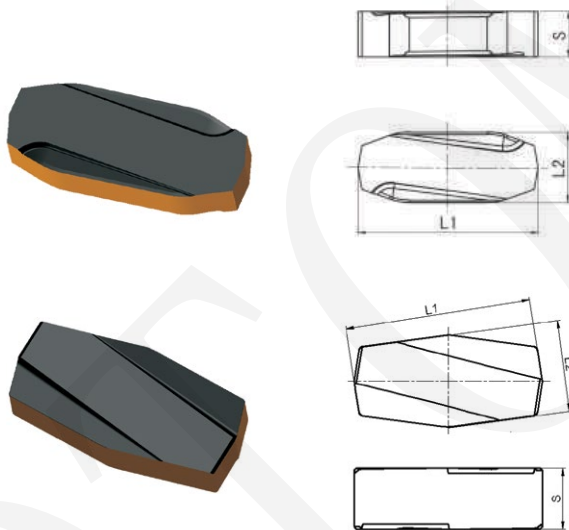
		(Dimension)mm													
		L	IC	SD		R	KP154U	KP254U	KP354U	KM152U	KM252U	KM352U	KM402U	(mm)	(mm/r)
	LNMX191940-RWF	19.05	19.05	10.06	.354	.0	★					●		0.3~2.0~5.00	.3~0.5~1.0
	LNMX191940-RWM	19.05	19.05	10.06	.354	.0		★				●		1.5~4.5~9.00	.45~0.8~1.3
	LNMX301940-RWM	30.00	19.05	12.06	.354	.0		★				●		1.5~7.0~15.00	.50~0.8~1.3
	LNMX301940-RWR	30.00	19.05	12.06	.354	.0		★				●		2.0~7.0~15.00	.70~1.0~1.5

		(Dimension)mm													
		L	IC	SD		R	KP154U	KP254U	KP354U	KM152U	KM252U	KM352U	KM402U	(mm)	(mm/r)
	SNMM250924-HGR	25.4	25.49	.525	9.12	2.4	★					●	3.0~8.0~17.00	.5~0.8~1.4	
	SNMM250924-HIR	25.4	25.49	.525	9.12	2.4	★					●	3.0~10.0~20.00	.5~0.8~1.6	

		(Dimension)mm												
		LC		SD		KP154U	KP254U	KP354U	KM152U	KM252U	KM352U	KM402U	(mm)	(mm/)
	LNMX322212-RWR	32.0	22.0	12.76	.6			★					3.0~15.0~25.00	.7~1.2~2.0

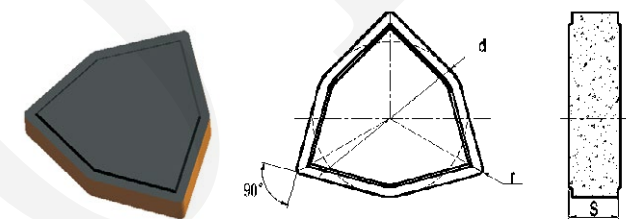
KABUK SOYMA UÇLARI

BAR PEELING INSERTS

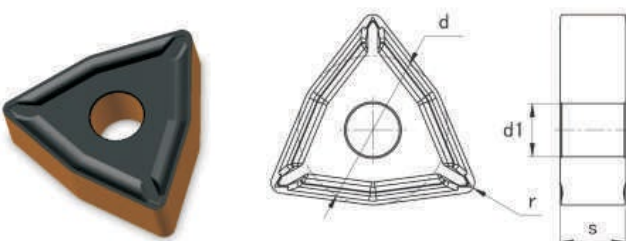


Insert	Dimensions (mm)			Grades		
	L1	L2	s	OTO1025	OTO1125	OTO3125
LNM3007	30.6	12	7.8	•	•	○
LNM3612	36.5	23.6	12.3	•	•	○

Insert	Dimensions (mm)			Grades		
	L1	L2	s	OTO1025	OTO1125	OTO3125
LNUX361215	36.7	18	12	•	•	○



Insert	Dimensions (mm)			Grades		
	d	s	r	OTO1025	OTO1125	OTO3125
TNMF96	28.5	9	1.2	•	•	○

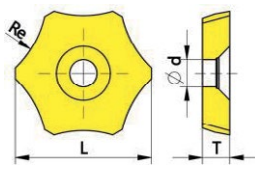
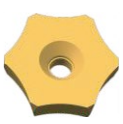


Insert	Dimensions (mm)				Grades		
	d	s	d1	r	OTO1025	OTO1125	OTO3125
TNMX110616	15.875	6.5	6.75	1.6	•	•	○
TNMX150916	22.22	9.7	7.94	1.6	•	•	○

BORU İŞLEME UÇLARI TUBE SCRAPER INSERTS

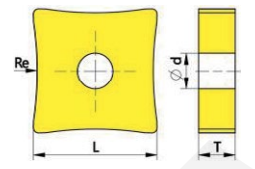


BORU İŞLEME UÇLARI - TUBE SCRAPER INSERTS

		√ Good working conditions ○ General working conditions × Unstable working conditions																							
		Workpiece Material	P	Steel	√	√	√	○	○	○	×	×	×	○	○	○				√					
Inserts Shape	Type	L	T	Φd	r	CVD												Cermet							
						M	Stainless Steel																	√	
						K	Cast Iron															√	√	√	
						N	Non-Ferrous Metals																		
						S	Spacial Alloys																		
H	Hardened Steels																								
	HDMB 20K-R12	20.7	4.76	5.2	12										▲										
	HDMB 20K-R15	20.7	4.76	5.2	15										▲										
	HDMB 20K-R20	20.7	4.76	5.2	20										▲										
	HDMB 20K-R25	20.7	4.76	5.2	25										▲										
	HDMB 20K-R40	20.7	4.76	5.2	40										▲										
	HDMB 20K-R50	20.7	4.76	5.2	50										▲										

▲ Recommended grade (Always stock available)

● Make-to-order

		√ Good working conditions ○ General working conditions × Unstable working conditions																
		Workpiece Material	P	Steel	√	√	√	○	○	○	×	×	×	○	○	○		
M	Stainless Steel																√	
K	Cast Iron														√	√	√	
N	Non-Ferrous Metals																	
S	Spacial Alloys																	
H	Hardened Steels																	
Inserts Shape	Type	Dimensions (mm)				CVD												Cermet
		L	T	Φd	r									OT08134				
	SDUB 20K-R50	22	6	6.35	50									●				
	SDUB 20K-R75	22	6	6.35	75									●				
	SDUB 20K-R100	22	6	6.35	100									●				
	SPUB 1904K-R12	19.05	4.76	5.2	12									●				
	SPUB 1904K-R15	19.05	4.76	5.2	15									●				
	SPUB 1904K-R18	19.05	4.76	5.2	18									●				
	SPUB 1904K-R20	19.05	4.76	5.2	20									●				
	SPUB 1904K-R23	19.05	4.76	5.2	23									●				
	SPUB 1904K-R25	19.05	4.76	5.2	25									●				
	SPUB 1904K-R30	19.05	4.76	5.2	30									●				

▲ Recommended grade (Always stock available)

● Make-to-order

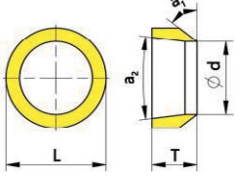
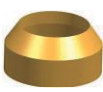
BORU İŞLEME UÇLARI - TUBE SCRAPER INSERTS

		✓ Good working conditions ○ General working conditions × Unstable working conditions																		
		Workpiece Material	P	Steel	✓	✓	✓	○	○	○	×	×	×	○	○	○				✓
			M	Stainless Steel															✓	
			K	Cast Iron													✓	✓	✓	
			N	Non-Ferrous Metals																
			S	Spacial Alloys																
			H	Hardened Steels																
Inserts Shape	Type	Dimensions (mm)				CVD														Cermet
		L	T	Φd	r													0108134		
	SNGN 12K-R10	12.70	8.00		10.00													▲		
	SNGN 12K-R16	12.70	8.00		16.00													▲		
	SNGN 12K-R20	12.70	8.00		20.00													▲		
	SNGN 12K-R25	12.70	8.00		25.00													▲		
	SNGN 12K-R30	12.70	8.00		30.00													▲		
	SNGN 12K-R40	12.70	8.00		40.00													▲		
	SNGN 12K-R50	12.70	8.00		50.00													▲		
	SNGN 12K-R60	12.70	8.00		60.00													▲		
	SNGN 12K-R70	12.70	8.00		70.00													▲		
	SNGN 12K-R80	12.70	8.00		80.00													▲		
	SNGN 12K-R90	12.70	8.00		90.00													▲		
	SNGN 12K-R12.5	12.70	8.00		12.50													▲		
	SNGN 12K-R14.5	12.70	8.00		14.50													▲		
	SNGN 12K-R18	12.70	8.00		18.00													▲		
	SNGN 12K-R23	12.70	8.00		23.00													▲		
	SNGN 12K-R28	12.70	8.00		28.00													▲		

▲ Recommended grade (Always stock available)

● Make-to-order

BORU İŞLEME UÇLARI - TUBE SCRAPER INSERTS

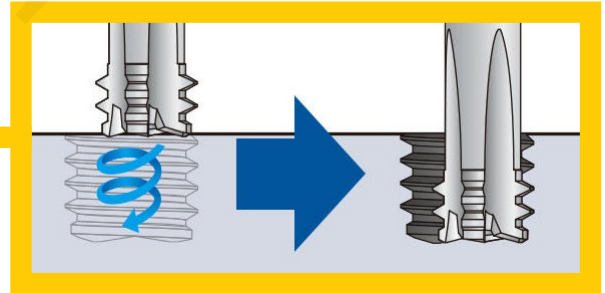
		√ Good working conditions ○ General working conditions × Unstable working conditions																				
		Workpiece Material	P	Steel		√	√	√	○	○	○	×	×	×	○	○	○					
M	Stainless Steel																					
K	Cast Iron																√	√	√			
N	Non-Ferrous Metals																					
S	Spacial Alloys																					
H	Hardened Steels																					
Inserts Shape	Type	Dimensions (mm)					CVD															
		L	T	Φd	α1	α2											σ0.134					
	RNGX1004N06-AR6.5	10	4.5	6	24	48											▲					
	RNGX1910N09-AR10	19	10	9	17	42											▲					
	RNGX2212N12-AR14	22	12	12	35	36											▲					
	RNGX3512N20-AR23	35	12	20	50.6	36											▲					

▲ Recommended grade (Always stock available)

● Make-to-order

Size	Dimensions (mm)				Grades	
	d	s	d ₁	α	OTO1025	OTO1125
Φ8×Φ4×6	8	6	4	43°	○	●
Φ15×Φ8×7.2	15	7.2	8	32.5°	○	●
Φ15×Φ9×7	15	7	9	32.5°	○	●
Φ19×Φ9×8.7	19	8.7	9	36°	○	●
Φ19×Φ10×8.45	19	8.45	10	36°	○	●
Φ19×Φ11×8.1	19	8.1	11	36°	○	●
Φ22×Φ13×10.7	22	10.7	13	36°	○	●
Φ25×Φ15×12	25	12	15	36°	○	●
Φ34×Φ20×15	34	15	20	36°	●	○
Φ35×Φ20×15	35	15	20	33°	●	○
Φ40×Φ25×15	40	15	25	33°	●	○
Φ45×Φ25×18	45	18	25	30°	●	○
Φ45×Φ28×17	45	17	28	30°	●	○
Φ45×Φ28×17(36°)	45	17	28	36°	●	○
Φ50×Φ30×15	50	15	30	36°	●	○
Φ55×Φ38×20.5	55	20.5	38	36°	●	○

DİŞ FREZELERİ THREAD MILLING





Three tooth thread milling cutters

SPECIFICATIONS	ALUMINIUM Unit Price(USD)	STEEL Unit Price(USD)
M1.0*0.25	30,00	33,00
M1.2*0.25	30,00	33,00
M1.4*0.3	30,00	33,00
M1.6*0.35	30,00	33,00
M1.8*0.35	30,00	33,00
M2.0*0.4	30,00	33,00
M2.2*0.45	30,00	33,00
M2.5*0.45	30,00	33,00
M3.0*0.5	30,00	33,00
M3.5*0.6	30,00	33,00
M4.0*0.7	30,00	33,00
M4.5*0.75	30,00	33,00
M5.0*0.5	30,00	33,00
M5.0*0.75	30,00	33,00
M5.0*0.8	30,00	33,00
M6.0*0.75	48,00	53,00
M6.0*1.0	48,00	53,00
M8.0*0.5	48,00	55,00
M8.0*0.75	48,00	55,00
M8.0*1.0	48,00	55,00

SPECIFICATIONS	ALUMINIUM Unit Price(USD)	STEEL Unit Price(USD)
M8.0*1.25	48,00	55,00
M10*0.5	70,00	96,50
M10*0.75	70,00	96,50
M10*1.0	70,00	96,50
M10*1.25	70,00	96,50
M10*1.5	70,00	96,50
M12*1.0	110,80	145,00
M12*1.25	110,80	145,00
M12*1.5	110,80	145,00
M12*1.75	110,80	145,00
M14*1.0	110,80	145,00
M14*1.25	110,80	145,00
M14*1.5	110,80	145,00
M14*2.0	110,80	145,00
M16*1.0	152,00	186,00
M16*1.25	152,00	186,00
M16*1.5	152,00	186,00
M16*2.0	152,00	186,00
M20*2.5	157,00	197,50

Full tooth thread milling cutters



SPECIFICATIONS	ALUMINIUM Unit Price(USD)	STEEL Unit Price(USD)
M3.0*0.5	42,00	52,00
M4.0*0.5	42,00	52,00
M4.0*0.7	42,00	52,00
M4.5*0.75	42,00	52,00
M5.0*0.5	42,00	52,00
M5.0*0.75	42,00	52,00
M5.0*0.8	42,00	52,00
M6.0*0.75	74,00	86,00
M6.0*1.0	74,00	86,00
M8.0*0.5	74,00	93,00
M8.0*0.75	74,00	93,00
M8.0*1.0	74,00	93,00
M8.0*1.25	74,00	93,00
M10*0.75	117,00	132,00
M10*1.0	117,00	132,00
M10*1.25	117,00	132,00
M10*1.5	117,00	132,00

SPECIFICATIONS	ALUMINIUM Unit Price(USD)	STEEL Unit Price(USD)
M12*0.5	157,00	193,00
M12*0.75	157,00	193,00
M12*1.0	157,00	193,00
M12*1.25	157,00	193,00
M12*1.5	157,00	193,00
M12*1.75	157,00	193,00
M14*1.0	157,00	193,00
M14*1.0	157,00	193,00
M14*1.5	157,00	193,00
M14*2.0	157,00	193,00
M16*1.0	195,50	252,00
M16*1.5	195,50	252,00
M16*2.0	195,50	252,00
M18*2.5		
M20*2.5		416,00
M24*3.0		455,00



Single tooth thread milling cutters

SPECIFICATIONS	ALUMINIUM Unit Price(USD)	STEEL Unit Price(USD)
M0.8*0.2	30,00	33,00
M0.9*0.25	30,00	33,00
M1.0*0.25	30,00	33,00
M1.2*0.25	30,00	33,00
M1.4*0.3	30,00	33,00
M1.6*0.35	30,00	33,00
M2.0*0.4	30,00	33,00
M2.5*0.45	30,00	33,00
M3.0*0.5	30,00	33,00
M4.0*0.7	30,00	33,00
M5.0*0.8	30,00	33,00

SPECIFICATIONS	ALUMINIUM Unit Price(USD)	STEEL Unit Price(USD)
M6.0*1.0	42,00	57,00
M8.0*1.25	42,00	60,00
M10*1.5	70,00	90,00
M12*1.5	110,50	136,00
M12*1.75	110,50	136,00
M14*2.0	110,50	136,00
M16*2.0	148,00	185,00
M18*2.5	148,00	185,00
M24*3.0		
M30*3.5		



Three tooth thread milling cutters(UNC)

SPECIFICATIONS	Unit Price(USD)
NO.1-64 UNC	52,00
NO.2-56 UNC	52,00
NO.3-48 UNC	52,00
NO.4-40 UNC	52,00
NO.5-40 UNC	52,00
NO.6-32 UNC	52,00
NO.8-32 UNC	52,00

SPECIFICATIONS	Unit Price(USD)
NO.10-24 UNC	52,00
1/4-20 UNC	67,00
5/16-18 UNC	67,00
3/8-16 UNC	117,00
7/16-14 UNC	179,00

Full tooth thread milling cutters(UNC)



SPECIFICATIONS	Unit Price(USD)
NO.10-24 UNC	58,00
1/4-20 UNC	58,00
5/16-18 UNC	89,00
3/8-16 UNC	151,00

SPECIFICATIONS	Unit Price(USD)
7/16-14 UNC	151,00
1/2-13 UNC	198,00
9/16-12 UNC	245,00
5/8-11 UNC	245,00

Three tooth thread milling cutters(UNF)



SPECIFICATIONS	Unit Price(USD)
NO.0-80 UNF	52,00
NO.1-72 UNF	52,00
NO.2-64 UNF	52,00
NO.3-56 UNF	52,00
NO.4-48 UNF	52,00
NO.6-40 UNF	52,00

SPECIFICATIONS	Unit Price(USD)
NO.8-36 UNF	52,00
NO.10-32 UNF	52,00
1/4-28 UNF	68,00
5/16-24 UNF	117,00
7/16-20UNF	186,00
1/2-20 UNF	186,00

Full tooth thread milling cutters(UNF)



SPECIFICATIONS	Unit Price(USD)
NO.8-36 UNF	57,00
NO.10-32 UNF	57,00
1/4-28 UNF	89,00
5/16-24 UNF	89,00
7/16-20UNF	198,00

SPECIFICATIONS	Unit Price(USD)
1/2-20 UNF	198,00
9/16-18 UNF	246,00
5/8-18 UNF	246,00
3/4-16 UNF	435,00



Full tooth thread milling cutters(NPT)

SPECIFICATIONS	Unit Price(USD)
NPT1/16-27	127,00
NPT1/8-27	152,00
NPT1/4-18	196,00
NPT3/8-18	196,00

SPECIFICATIONS	Unit Price(USD)
NPT1/2-14	260,00
NPT3/4-14	346,00
NPT1-11.5	458,00



Full tooth thread milling cutters(G-RP)

SPECIFICATIONS	Unit Price(USD)
G1/16-28	127,00
G1/8-28	157,00
G1/4-19	196,00
G3/8-19	196,00
G1/2-14	260,00

SPECIFICATIONS	Unit Price(USD)
G5/8-14	354,00
G3/4-14	354,00
G7/8-14	415,00
G1-11	451,00



Full tooth thread milling cutters BSPT (PT.PC)

SPECIFICATIONS	Unit Price(USD)
PT1/8-28	152,00
PT1/4-19	185,00
PT3/8-19	185,00

SPECIFICATIONS	Unit Price(USD)
PT1/2-14	260,00
PT3/4-14	354,00
PT1-11	455,00



OTOMO | 


DEMİREZER
MAKİNA

