



Cutting Tools

www.walteccarbide.com

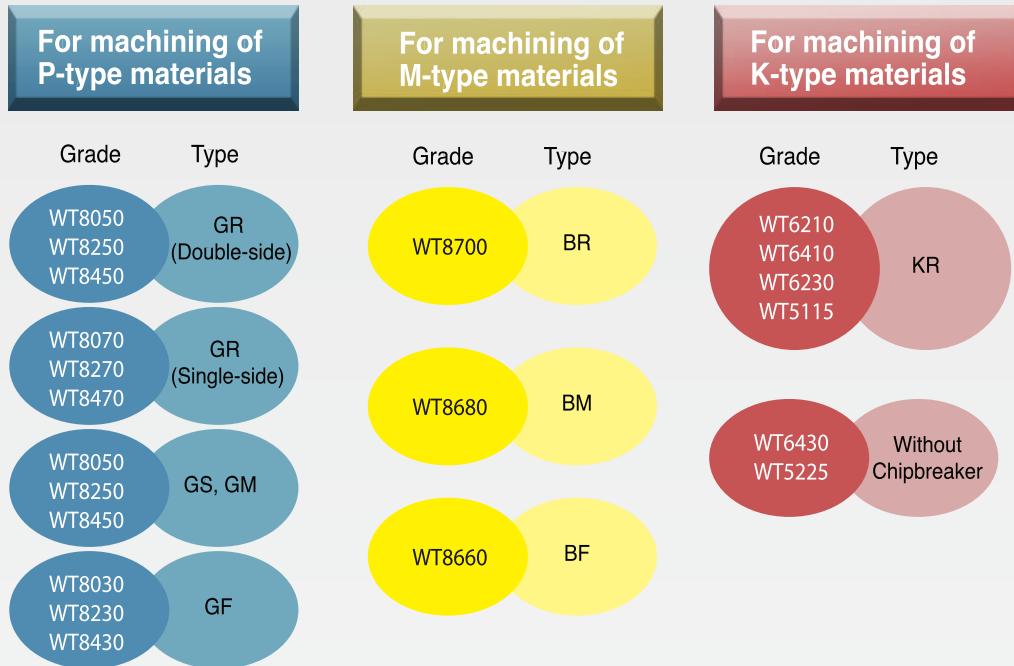
Waltec 2024 Version
Waltec 2024 Version
Waltec 2024 Version
Waltec 2024 Version



Recommended Grade Overview for mended Grades **TURNING A**

Coated Cemented Carbide CVD

◆ Recommended combination of the grade and groove

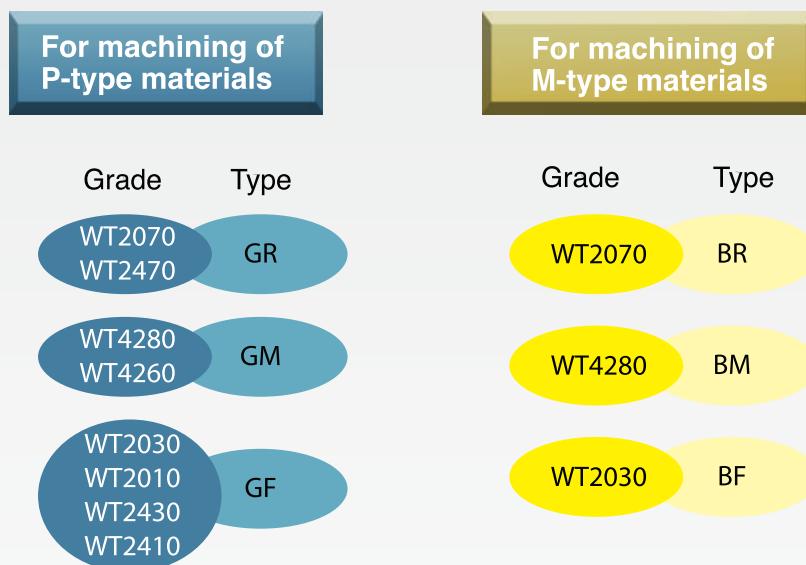


◆ Recommended cutting parameters

Workpiece material	Range of machining	Grade	Recommended cutting speed(m / min)
P	Steel	For finishing	WT8030
			WT8230 WT8430
		For semi-finishing	WT8050
			WT8250 WT8450
		For roughing	WT8070 WT8270 WT8470
M	Stainless steel	For finishing	WT8660 WT8680 WT8700
		For semi-finishing	
		For roughing	
K	Cast Iron	For finishing	WT6210
			WT6410
		For semi-finishing	WT6230
			WT5115
		For roughing	WT6430 WT5225

Coated Cemented Carbide PVD

◆ Recommended combination of the grade and groove



◆ Recommended cutting parameters

Workpiece material	Range of machining	Grade	Recommended cutting speed(m / min)
P	Steel	For semi-finishing	WT4260 160-360
		For roughing	WT3050 80-100
M	Stainless steel	For semi-finishing	WT4260 120-240
		For finishing	WT2430 150-280

CVD Coated cemented carbide

WT 8030

High wear-resistant substrates combine with MT-TiCN, thick Al_2O_3 , TiN coatings, excellent grades of steel, cast steel & stainless steel materials' finish processing at high speed cutting conditions.

WT 8430

The combination of high wear-resistant substrate with MT-TiCN, fine grained Al_2O_3 and Tin coatings, is a ideal grade of finishing processing of steel, stainless steel and cast iron in the case of high speed cutting.

WT 8050

Special strength & toughness of the blade's substrates, perfect combinations with MT-TiCN, thick Al_2O_3 coating, common grades for steel suitable for steel, cast steel & stainless steel in semi-finishing, finishing.

WT 8450

With optimized toughness and hardness substrate and MT-TiCN, fine grained Al_2O_3 and TiN coatings, as a general using grade in ISO P25 application area, is suitable for semi-finishing and finishing processing of steel, stainless steel and cast iron.

WT 8070

High-strength resistance & antiplastic deformation substrates, combining with MT-TiCN, thick Al_2O_3 coating, good toughness & anti-plastic deformation, suitable for steel, cast steel & stainless steel in light-roughing & roughing.

WT 8470

Substrate with high strength and strong resistance to plastic deformation combined with MT-TiCN, fine grained Al_2O_3 and TiN coatings, having great toughness, is suitable for light load roughing of steel, stainless steel and cast iron.

WT 8660

High hardness substrates, medium and high speed, suitable for light & heavy milling of low alloy steel & unalloyed steel, also suitable for milling at low condition.

WT 8680

Wear-resistant & good toughness substrates common coating cemented carbide grades, used, for medium and low speed milling of steel, cast iron, hardened steel.

CVD coated cemented carbide

WT 6210

Coatings & tough substrates combination,supporting high-temperature & unplastic-deformation,suitable for ductile cast-iron,forged cast iron with high strength, ferrosteel in finishing & semi-finishing.

WT 6230

High wear-resistant substrates,perfect combinations with MTTi(CN),thick Al_2O_3 coating,initial grades for ductile cast iron,forged cast iron,highly cutting speed allowance.

WT 6430

Wear-resistant & good toughness substrates,perfect combinations with MT-Ti(CN), thick Al_2O_3 coating, initial grades for ductile cast iron & forged cast iron in roughing & highly-metal.

WT 8230

High wear resistant substrates combine with MT-TiCN,thick Al_2O_3 , TiN coatings, excellent grades of steel,cast steel & stainless steel materials' finish processing at high-speed cutting conditions.

WT 8250

Special strength & toughness of the insert substrates, perfect combinations with MT-TiCN, ultra fine Al_2O_3 , TiN coatings,common grades for steel,suitable for steel,cast steel & stainless steel in semi-finishing,finishing.

WT 8270

High-strength resistance & anti-plastic deformation substrates, combining with MT-TiCN, ultra fine Al_2O_3 , TiN coatings, good toughness & anti-plastic deformation,suitable for steel,cast steel & stainless steel in light-roughing & roughing.

Black general insert

The inserts with special surface technology, greatly improved the surface roughness, effectively reduce the cutting force, reduce the adhesive between the cutter surface and the processed material, greatly improve the stability of inserts to use.

Fibrous TiCN and the perfect combination of fine grain Al_2O_3 coating significantly improved the wear resistance and resistance to collapse of insert.

Black General Insert

First choice for high-speed and efficient processing of cast iron

- ◆ Thick Al_2O_3 coating combined with strong impact resistance matrix, the insert has the stable high temperature red hardness and good impact resistance, improves the wearresistance of the insert under the requirement of high speed, high feed machining cast iron.
- ◆ All black product color shows more high-end.

Remarkable result

- ◆ Improve the production efficiency, coating and substrate are all adapted to cast iron of high speed and high feed cutting.Cutting speed can be increased by 30%-40%.
- ◆ Reduce the cost, improve the tool life of nearly 40% to 50%.
- ◆ High stability of processing.

WT5005

Coatings & tough substrates combination, supporting high temperature & unplastic deformation ,suitable for ductile cast iron, forged cast iron with high strength,ferrosteel in finishing & semi-finishing.

WT5115

High wear -resistant substrates, perfect combinations with MTTi(CN),ultra Al_2O_3 ,TiN coatings,initial grades for ductile cast iron,forged cast iron,highly cutting speed allowance.

WT5225

Wear-resistant & good toughness substrates,perfect combinations with MT-Ti(CN) ,ultra Al_2O_3 ,Tin coatings,initial grades for ductile cast iron & forged cast iron in roughing & highly-metal.

PVD coated cemented carbide

New grade of nano coated

- ◆ Special coating process lead to smooth surface, low cutting resistance force and easy chip-flow.
- ◆ Unique nano structure coating,closer integration with the substrate, towards higher touchness and hardness.
- ◆ Good thermal stabilty and chemical stabilty of cutting edges provide more effective protection.

High performance TiAlN coated of nano structure ensures that the insert has very high toughness and hardness. Unique coating technology makes the insert with smooth surface and high wear resistance, excellent thermal stability and chemical stability provide effective protection of cutting edge.

WT 4280

2-4 μm TiAlN PVD coated,combinating with ultra fine particles'substrates with high-toughness,suitable for all materials,stainless steel & high-temperature alloy in finishing, semi finishing.

WT 2030

2-4 μm TiAlN PVD coated,combinating with fine particles'substrates with high-toughness,suitable for all materials, high-temperature alloy & Ti alloy in finishing,semi-finishing.

WT 4260

2-4 μm AlCrN+AlCrSiN PVD coated,combinating with ultra fine particles'substrates with high-toughness,suitable for all materials in light & medium load milling, stainless steel & high-temperature high hardness alloy in finishing, semi-finishing.

WT 2070

PVD coated,combinating with high-resistant substrates,suitable for all materials in roughing, semi-finishing.



Wt5115

The combination of a matrix with strength and toughness, TiCN, and Al₂O₃ with ultra-fine particles is adopted to effectively lift the blade impact strength.

Wt6430

The combination of high toughness gradient matrix and TiCN, ultrafine particle Al₂O₃ is used to effectively improve the resistance of the blade Impact strength.



WT6530

Is director of the ball mill with rough machining grey cast iron, high brand of choice for metal removal rate.



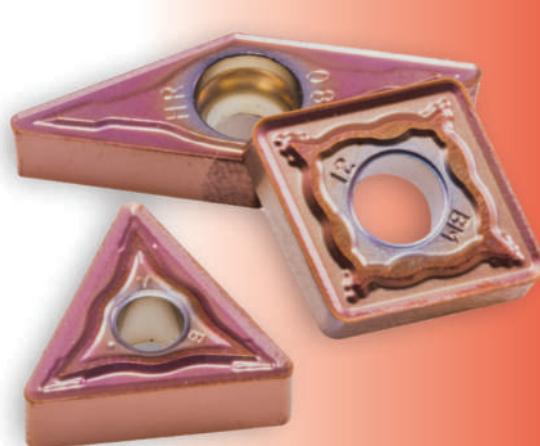
WT4260

The TIALN+ALCrSiN coating is combined with the high-toughness matrix of ultra-fine particles, which not only improves the wear resistance but also improves the wear resistance. High cutting stability, suitable for milling of stainless steel and ordinary steel. semi-finish



WT4280

TIALN PVD coated combining with ultra fine particlesis substrates with high - toughness, suitable for all materials stainless steels & high-temperature alloy in finshing, semi-finishing.



WT3050

2-4 μ m TiAlN PVD coated, combining with fine particules' substrates with high-toughness, suitable for all materials, high- temperature alloy & Ti alloy in finishing, semi-finiishing



WT2650

Using a double-layer coating structure, it can achieve maximum performance in cutting hard materials, and strengthen the substrate and coating. The bonding force increases the strength of the cutting edge, and the unique coating post-treatment optimizes the surface to improve chip removal and reduce cutting.

WT8660

The combination of high-to gradient matrix and TiCN, ultra-fine particles of Al₂O₃ can effect improve the resistance of the impact strength.



WT8250

Combination of substrate with special strength and toughness combined with MT-TiCN, ultra-fine particle Al₂O₃ coating. It is a general grade for semi-finishing steel.



WT7230

A substrate with moderate wear resistance and toughness, equipped with MT-TiCN, a combination of ultrafine particle Al₂O₃/TIN coating, Ideal grade for semi-finishing/continuous machining/high metal removal in ductile and gray irons.



WT8050

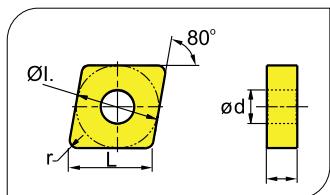
The substrate with special strength and toughness combined with MT-TiCN, Al₂O₃/TIN coating with ultrafine particles Combination, it is a general grade for semi-finishing steel.



WT K10

Aluminum process.

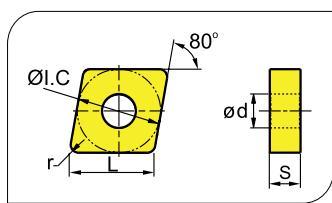
CN (Negative Angle Type)



Model	L	Φ I.C	S	Φd
CN**0903**	9.7	9.525	3.18	3.81
CN**1204**	12.9	12.7	4.76	5.16
Model	L	Φ I.C	S	Φd
CN**1606**	16.1	15.875	6.35	6.35
CN**1906**	19.3	19.05	6.35	7.94

Blade Shape	Model	Size (mm) r	Coated cemented carbide												Cemented Carbide								
			WT8030	WT8230	WT8430	WT8050	WT8250	WT8450	WT8070	WT8270	WT8470	WT4230	WT4260	WT4270	WT6210	WT6410	WT6230	WT5115	WT5225	WP302	WP402	WP002	WP102
GR 	CNMG090304-GR	0.4	★	★		★	★	○	★	○	★												
	CNMG090308-GR	0.8	★	★		★	★	○	★	○	★												
	CNMG120404-GR	0.4	★	★		★	★	○	★	○	★												
	CNMG120408-GR	0.8	★	★		★	★	○	★	○	★												
	CNMG120412-GR	1.2	★	★		★	★	○	★	○	★												
GR 	CNMM120412-GR	1.2				★	★	○	★	○	★												
	CNMM160612-GR	1.2				★	★	○	★	○	★												
	CNMM160616-GR	1.6				★	★	○	★	○	★												
	CNMM190612-GR	1.2				★	★	○	★	○	★												
	CNMM190616-GR	1.6				★	★	○	★	○	★												
	CNMM190624-GR	2.4				★	★	○	★	○	★												
	CNMM250924-GR	2.4				★	★	○	★	○	★												
BR 	CNMG120408-BR	0.8										○	★	★									
	CNMG120412-BR	1.2										○	★	★									
	CNMG120416-BR	1.6										○	★	★									
	CNMG160608-BR	0.8										○	★	★									
	CNMG160612-BR	1.2										○	★	★									
	CNMG160616-BR	1.6										○	★	★									
	CNMG190608-BR	0.8										○	★	★									
	CNMG190612-BR	1.2										○	★	★									
	CNMG190616-BR	1.6										○	★	★									
	CNMG190624-BR	2.4										○	★	★									
KR 	CNMG120404-KR	0.4	○	○		★	★	○									★	○					
	CNMG120408-KR	0.8	○	○		★	★	○								★	○						
	CNMG120412-KR	1.2	○	○		★	★	○								★	○						
	CNMG120416-KR	1.6	○	○		★	★	○								★	○						
	CNMG160612-KR	1.2	○	○		★	★	○								★	○						
	CNMG160616-KR	1.6	○	○		★	★	○								★	○						
	CNMG190608-KR	0.8	○	○		★	★	○								★	○						
	CNMG190612-KR	1.2	○	○		★	★	○								★	○						
	CNMG190616-KR	1.6	○	○		★	★	○								★	○						
Pass slots 	CNMG120404	0.4	○	○		★	★	○							○		★	○					
	CNMG120408	0.8	○	○		★	★	○								★	○						
	CNMG120412	1.2	○	○		★	★	○								★	○						
	CNMG160608	0.8	○	○		★	★	○								★	○						
	CNMG160612	1.2	○	○		★	★	○								★	○						
	CNMG160616	1.6	○	○		★	★	○								★	○						

CN (Negative Angle Type)

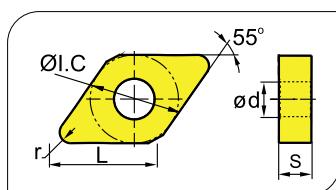


Model	L	Ø I.C	S	Ød
CN**0903**	9.7	9.525	3.18	3.81
CN**1204**	12.9	12.7	4.76	5.16

Model	L	Ø I.C	S	Ød
CN**1606**	16.1	15.875	6.35	6.35
CN**1906**	19.3	19.05	6.35	7.94

Blade Shape	Model	Size (mm) r	Coated Cemented Carbide												Cemented Carbide				
			P				M				K				WP302	WP402	WP002	WP102	WP202
Pass Slots	CNMG190608	0.8	○	○	☆	☆	○				○			○	★				
	CNMG190612	1.2	○	○	☆	☆	○				○			○	★				
	CNMG190616	1.6	○	○	☆	☆	○				○			○	★				
No slots	CNMA120404	0.4									☆	★				★			
	CNMA120408	0.8									☆	★	○			★			
	CNMA120412	1.2									★	○				★			
	CNMA120416	1.6									★	○				★			
	CNMA160608	0.8									★	○				★			
	CNMA160612	1.2									★	○				★			
	CNMA160616	1.6									★	○				★			
	CNMA160620	2.0									★	★				★			
	CNMA160630	3.0									★	★				★			
	CNMA190612	1.2									★					★			
	CNMA190616	1.6									★	★				★			
GM	CNMG090304-GM	0.4	○	☆	☆	★					☆	☆	☆						
	CNMG090308-GM	0.8	○	☆	☆	★	○				☆	☆	★						
	CNMG120404-GM	0.4	○	☆	☆	★					☆	☆	★						
	CNMG120408-GM	0.8	○	☆	☆	★	○				☆	☆	★						
	CNMG120412-GM	1.2	○	☆	☆	★	○				☆	☆	★						
GS	CNMG090304-GS	0.4	○	☆	☆	★					○			○	☆				
	CNMG090308-GS	0.8	○	☆	☆	★	○				○			○	☆				
	CNMG120404-GS	0.4	○	☆	☆	★					○			○	☆				
	CNMG120408-GS	0.8	○	☆	☆	★					○			○	☆				
	CNMG120412-GS	1.2	○	☆	☆	★	○				○			○	☆				
BM	CNMG090304-BM	0.4									○	★							
	CNMG090308-BM	0.8									○	★							
	CNMG120404-BM	0.4									○	★							
	CNMG120408-BM	0.8									○	★							
	CNMG120412-BM	1.2									○	★							
GF	CNMG090304-GF	0.4	☆	★	○						○								
	CNMG090308-GF	0.8	☆	★	○						○								
	CNMG120404-GF	0.4	☆	★	○						○								
	CNMG120408-GF	0.8	☆	★	○						○								
	CNMG120412-GF	1.2	☆	★	○						○								
BF	CNMG090304-BF	0.4									○	★							
	CNMG090308-BF	0.8									○	★							
	CNMG120404-BF	0.4									○	★							
	CNMG120408-BF	0.8									○	★							
	CNMG120412-BF	1.2									○	★							

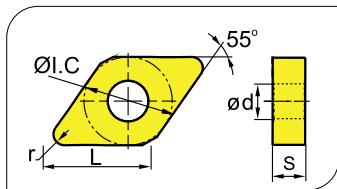
DN (Negative Angle Type)



Model	L	Φ I.C	S	Φd
DN**1504**	15.5	12.7	4.76	5.16
DN**1506**	15.5	12.7	6.35	5.16

Model	L	Φ I.C	S	Φ d
DN**1104**	11.6	9.525	4.76	3.81
DN**1906**	19.3	15.875	6.35	7.94

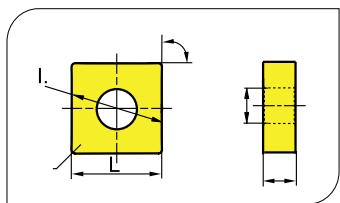
DN (Negative Angle Type)



Model	L	Φ I.C	S	Φ d
DN**1504**	15.5	12.7	4.76	5.16
DN**1506**	15.5	12.7	6.35	5.16

Model	L	Φ I.C	S	Φ d
DN**1104**	11.6	9.525	4.76	3.81
DN**1906**	19.3	15.875	6.35	7.94

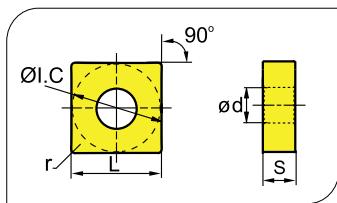
SN (Negative Angle Type)



Model	L	Φ , I.C	S	Φd
SN**0903**	9.525	9.525	3.18	3.81
SN**1204**	12.7	12.7	4.76	5.16
SN**1506**	15.875	15.875	6.35	6.35

Model	L	Φ I.C	S	Φ d
SN**1906**	19.05	19.05	6.35	7.94
SN**2507**	25.4	25.4	7.94	9.12
SN**2509**	25.4	25.4	9.525	9.12

SN (Negative Angle Type)

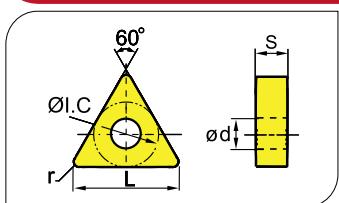


Model	L	Φ I.C	S	Φd
SN**0903**	9.525	9.525	3.18	3.81
SN**1204**	12.7	12.7	4.76	5.16
SN**1506**	15.875	15.875	6.35	6.35

Model	L	Φ I.C	S	Φd
SN**1906**	19.05	19.05	6.35	7.94
SN**2507**	25.4	25.4	7.94	9.12
SN**2509**	25.4	25.4	9.525	9.12

Blade Shape	Model	Size (mm) r	Coated Cemented Carbide												Cemented Carbide					
			P				M				K				WT5115	WT6430	WT5225	WP302	WP402	
Pass slots?	SNMG090304	0.4	○	○	☆	★									★	☆				
	SNMG090308	0.8	○	○	☆	★									★	☆				
	SNMG120404	0.4	○	○	☆	★									★	☆				
	SNMG120408	0.8	○	○	☆	★									★	☆				
	SNMG120412	1.2	○	○	☆	★									★	☆				
	SNMG120416	1.6	○	○	☆	★									★	☆				
	SNMG150608	0.8	○	○	☆	★									★	☆				
	SNMG150612	1.2			☆	★									★	☆				
	SNMG190612	1.2			☆	★										★	☆			
	SNMG190616	1.6			☆	★	○								★	☆				
No Slots?	SNMA090304	0.4													○	★	☆			○
	SNMA090308	0.8													○	★	☆			○
	SNMA120404	0.4													○	★	☆			○
	SNMA120408	0.8													○	★	☆	○		○
	SNMA120416	1.6													○	★	☆			○
	SNMA150608	0.8													★	☆	○			○
	SNMA190612	1.2													★	☆	○			○
	SNMA190616	1.6													★	☆	○			○
GM	SNMG090304-GM	0.4	○		☆	★	○								○					
	SNMG090308-GM	0.8	○		☆	★	○								○					
	SNMG120404-GM	0.4	○		☆	★	○								○					
	SNMG120408-GM	0.8			☆	★	○								○					
	SNMG120412-GM	1.2	○		☆	★	○								○					
	SNMG120416-GM	1.6			☆	★	○								○					
	SNMG150608-GM	0.8			☆	★	○								○					
	SNMG150612-GM	1.2			☆	★	○								○					
	SNMG150616-GM	1.6			☆	★	○								○					
	SNMG190612-GM	1.2			☆	★	○								○					
Semi-finishing?	SNMG190616-GM	1.6			☆	★	○								○					

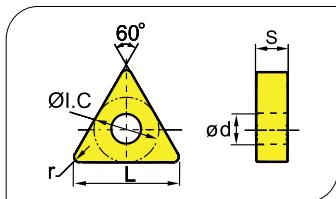
TN (Negative Angle Type)



Model	L	Φ I.C	S	Φ d
TN**1103**	11	6.35	3.18	2.26
TN**1604**	16.5	9.525	4.76	3.81
TN**2204**	22	12.7	4.76	5.16

Model	L	Φ I.C	S	Φ d
TN**2706**	27.52	15.875	6.35	6.35
TN**3309**	33	19.05	9.53	7.94

TN (Negative Angle Type)

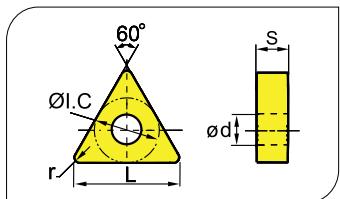


Model	L	Ø I.C	S	Ød
TN**1103**	11	6.35	3.18	2.26
TN**1604**	16.5	9.525	4.76	3.81
TN**2204**	22	12.7	4.76	5.16

Model	L	Ø I.C	S	Ød
TN**2706**	27.52	15.875	6.35	6.35
TN**3309**	33	19.05	9.53	7.94

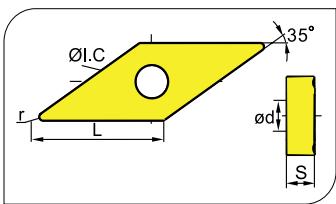
Blade Shape	Model	Size (mm)	Coated Cemented Carbide												Cemented Carbide					Pass Slots				
			r	WT8030	WT8230	WT8430	WT8050	WT8250	WT8450	WT8070	WT8270	WT8470	WT4230	WT4260	WT4270	WT6210	WT6410	WT6230	WT5115	WT6430	WT5225	WP302	WP402	WP002
	TNMG110308	0.8	○	○			☆	★											★	★				
	TNMG160404	0.4	○	○			☆	★											★	★				
	TNMG160408	0.8	○	○			☆	★											★	★				
	TNMG160412	1.2	○	○			☆	★											★	★				
	TNMG220404	0.4	○	○			☆	★											★	★				
	TNMG220408	0.8	○	○			☆	★											★	★				
	TNMG220412	1.2	○	○			☆	★											★	★				
	TNMG220416	1.6					☆	★											★	★				
	TNMG270612	1.2					☆	★		○									★	★				
	TNMG270616	1.6					☆	★		○									★	★				
	TNMG110304-GM	0.4		☆	☆	★												☆						
	TNMG110308-GM	0.8		☆	☆	★		○										☆	Lorem ipsum					
	TNMG160404-GM0.4			☆	☆	★												☆						
	TNMG160408-GM0.8			☆	☆	★												☆						
	TNMG160412-GM	1.2		☆	☆	★		○										☆						
	TNMG220408-GM0.8			☆	☆	★												☆						
	TNMG220412-GM1.2			☆	☆	★		○										☆						
	TNMG220416-GM1.6			☆	☆	★		○										☆						
	TNMG160404-GS	0.4	○	☆			☆	★																
	TNMG160408-GS	0.8	○	☆			☆	★																
	TNMG160412-GS	1.2	○	☆			☆	★										★						
	TNMG220408-GS0.8		○	☆			☆	★										★						
	TNMG220412-GS	1.2	○	☆			☆	★										★						
	TNMG220416-GS	1.6	○	☆			☆	★										★						
	TNMG160408-PBI	0.8					☆	★															0.8	
	TNMG160408-PB3						★	☆																

TN (Negative Angle Type)



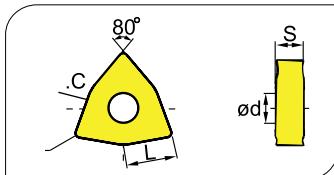
Model	L	Φ	I.C.	S	Φ d
TN**1103**	11		6.35	3.18	2.26
TN**1604**	16.5		9.525	4.76	3.81
TN**2204**	22		12.7	4.76	5.16
Model	L	Φ	I.C.	S	Φ d
TN**2706**	27.52		15.875	6.35	6.35
TN**3309**	33		19.05	9.53	7.94
TN**1106**	11.17		15.875	6.41	6.35
TN**1509**	15.784		22	9.73	7.94

VN (Negative Angle Type)



Model	L	Φ I.C	S	Φ d
VN**1604**	16.6	9.525	4.76	3.81

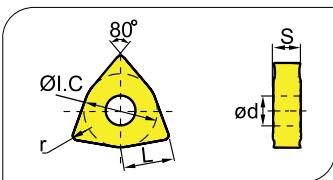
WN (Negative Angle Type)



Model	L	Φ I.C.	S	Φd
WN**06T3**	6.5	9.525	3.97	3.81
WN**0604**	6.5	9.525	4.76	3.81
WN**0804**	8.7	12.7	4.76	5.16

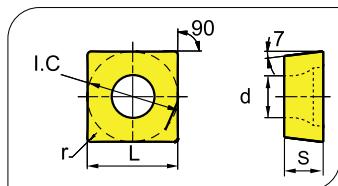
Blade Shape	Model	Size (mm) r	Coated Cemented Carbide												Cemented Carbide				
			P				M				K				WT5225	WP302	WP402	WP002	WP102
	WNMG060408-GR	0.8	○	☆	☆	★													
	WNMG060412-GR	0.8	○	☆	☆	★													
	WNMG080408-GR	0.8	○	☆	☆	★													
	WNMG080412-GR	1.2	○	☆	☆	★													
	WNMG080416-GR	1.6	○	☆	☆	★													
	WNMG060408-BR	0.8					○	★											
	WNMG060412-BR	0.8					○	★											
	WNMG080408-BR	0.8					○	★											
	WNMG080412-BR	1.2					○	★											
	WNMG080416-BR	1.6					○	★											
	WNMG060412-KR	0.8							★	☆	○								
	WNMG080408-KR	0.8							★	☆	○								
	WNMG080412-KR	1.2							★	☆	○								
	WNMG080416-KR	1.6							★	☆									
	WNMA06T308	0.8							★	☆	○							☆	
	WNMA060404	0.4							★	☆								☆	
	WNMA060408	0.8							★	☆								☆	
	WNMA060412	1.2							★	☆								☆	
	WNMA080404	0.4							★	☆								☆	
	WNMA080408	0.8							★	☆								☆	
	WNMA080412	1.2							★	☆								☆	
	WNMA080416	1.6							★	☆	○							☆	
	WNMG060408	0.8	○		☆	★					★	★							
	WNMG060412	1.2	○		☆	★	○				★	★							
	WNMG080408	0.8			☆	★					★	★							
	WNMG080412	1.2			☆	★	○				★	★			○				
	WNMG080416	1.6			☆	★	○				★	★			○				

WN (Negative Angle Type)



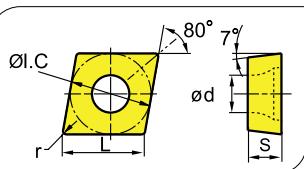
Model	L	Φ I.C	S	Φ d
WN**06T3**	6.5	9.525	3.97	3.81
WN**0604**	6.5	9.525	4.76	3.81
WN**0804**	8.7	12.7	4.76	5.16

SC (Negative Angle Type)



Model	L	Φ I.C	S	Φ d
SC**09T3**	27.52	9.525	3.97	4.4
SC**1204**	12.7	12.7	4.76	5.56

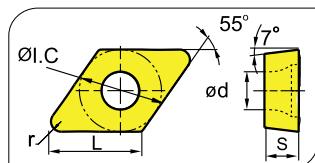
CC Positive



Model	L	Ø I.C.	S	Ød
CC**0602**	6.4	6.35	2.38	2.8
CC**09T3**	9.7	9.525	3.97	4.4
CC**1204**	12.9	12.7	4.76	5.56

Blade Shape	Model	Size (mm) r	Coated Cemented Carbide												Cemented Carbide									
			WT8030	WT8230	WT8430	WT8050	WT8250	P WT8450	WT8070	WT8270	M WT8470	WT4230	WT4260	K WT4270	WT6210	WT6410	WT6230	WT15115	WT6430	WT5225	WP302	WP402	WP02	WP102
HR Rough Machining?	CCMT09T308-HR	0.8	○	○		☆	★													☆				
	CCMT09T312-HR	1.2	○	○		☆	★													☆				
	CCMT120408-HR	0.8	○	○		☆	★													☆				
	CCMT120408-HR	1.2	○	○		☆	★													☆				
HM Semi-Finishing	CCMT060204-HM	0.4	○	○		☆	★					○			☆									
	CCMT060208-HM	0.8	○	○		☆	★					○			☆									
	CCMT09T304-HM	0.4	○	○		☆	★					○			☆									
	CCMT09T308-HM	0.8	○	○		☆	★					○			☆									
	CCMT120404-HM	0.4	○	○		☆	★					○			☆									
	CCMT120408-HM	0.8	○	○		☆	★					○			☆									
	CCMT120412-HM	1.2	○	○		☆	★					○			☆									
HF Finishing?	CCGT060202-HF	0.2	☆	★		☆																		
	CCGT060204-HF	0.4	☆	★		☆																		
	CCGT060208-HF	0.8	☆	★		☆																		
	CCGT09T302-HF	0.2	☆	★		☆																		
	CCGT09T304-HF	0.4	☆	★		☆																		
	CCGT09T308-HF	0.8	☆	★		☆																		
	CCGT120404-HF	0.4	☆	★		☆																		
	CCGT120408-HF	0.8	☆	★		☆																		
AC Aluminum Processing?	CCGX060202-AC	0.2																		☆	★			
	CCGX060204-AC	0.4																		☆	★			
	CCGX060208-AC	0.8																		☆	★			
	CCGX09T302-AC	0.2																		☆	★			
	CCGX09T304-AC	0.4																		☆	★			
	CCGX09T308-AC	0.8																		☆	★			
	CCGX120402-AC	0.2																		☆	★			
	CCGX120404-AC	0.4																		☆	★			
	CCGX120408-AC	0.8																		☆	★			
	CCGX120412-AC	1.2																		☆	★			
No slots? No slots?	CCGW060204	0.4	○	○														★	★					☆
	CCGW09T304	0.4	○	○														★	★					☆
	CCGW09T308	0.8	○	○														★	★					☆
	CCGW120404	0.4	○	○														★	★					☆
	CCGW120408	0.8	○	○														★	★					☆
	CCMT060204-HQ	0.4						★				★					★							

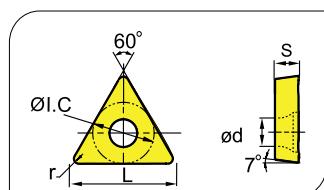
DC (Negative Angle Type)



Model	L	Ø I.C	S	ød
DC**0702**	7.8	6.35	2.38	2.8
DC**11T3**	11.6	9.525	3.97	4.4

Blade Shape	Model	Size (mm) r	Coated Cemented Carbide															Cemented Carbide						
			WT8030	WT8230	WT8430	WT8050	WT8250	WT8450	WT8070	WT8270	WT8470	WT4230	WT4260	WT4270	WT6210	WT6410	WT6230	WT5115	WT6430	WT5225	WP302	WP402	WP002	WP102
HR 	DCMT070208-HR	0.8	○			☆	★				★													
	DCMT070212-HR	1.2	○			☆	★				★													
	DCMT11T304-HR	0.4	○			☆	★				★													
	DCMT11T308-HR	0.8	○			☆	★		★	★														
	DCMT11T312-HR	1.2	○			☆	★			★														
HM 	DCMT070204-HM	0.4	○			☆	★																	
	DCMT070208-HM	0.8	○			☆	★																	
	DCMT11T304-HM	0.4	○			☆	★																	
	DCMT11T308-HM	0.8	○			☆	★																	
	DCMT11T312-HM	1.2	○			☆	★																	
HF 	DCGT070202-HF	0.2	☆	★		☆																		
	DCGT070204-HF	0.4	☆	★		☆																		
	DCGT070208-HF	0.8	☆	★		☆																		
	DCGT11T302-HF	0.2	☆	★		☆																		
	CCGT11T304-HF	0.4	☆	★		☆																		
	CCGT11T308-HF	0.8	☆	★		☆																		
AC 	DCGX070202-AC	0.2																	☆	★				
	DCGX070204-AC	0.4																	☆	★				
	DCGX11T302-AC	0.2																	☆	★				
	DCGX11T304-AC	0.4																	☆	★				
	DCGX11T308-AC	0.8																	☆	★				
No Slot 	DCGW070204	0.4										★	○								☆			
	DCGW11T304	0.4										★	○								☆			
	DCGW11T308	0.8										★	○								☆			

TC (Negative Angle Type)

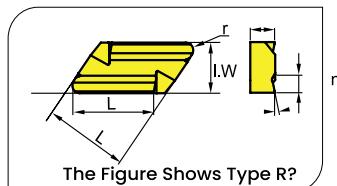


Model	L	Ø I.C.	S	Ød
TC**06T1**	6.4	3.97	1.98	2.2
TC**0902**	9.6	5.56	2.38	2.5

Model	L	Ø I.C.	S	Ød
TC**1102**	11	6.35	2.38	2.8
TC**16T3**	16.5	9.525	3.97	4.4

Blade Shape	Model	Size (mm) r	Coated Cemented Carbide												Cemented Carbide									
			WT8030	WT8230	WT8430	WT8050	WT8250	WT8450	WT8070	WT8270	WT8470	WT4230	WT4260	WT4270	WT6210	WT6230	WT5115	WT6430	WT5225	WP302	WP402	WP002	WP102	WP202
HR 	c090208-HR	0.8				○	☆		☆	★						○								
	TCMT110208-HR	0.8				○	☆		☆	★						○								
	TCMT110212-HR	1.2				○	☆		☆	★						○								
	TCMT16T308-HR	0.8				○	☆		☆	★						○								
	TCMT16T312-HR	1.2				○	☆		☆	★						○								
HM 	TCMT090204-HM	0.4	○	☆		☆	★									○								
	TCMT090208-HM	0.8	○	☆		☆	★									○								
	TCMT110204-HM	0.4	○	☆		☆	★									○								
	TCMT110208-HM	0.8	○	☆		☆	★									○								
	TCMT16T304-HM	0.4	○	☆		☆	★									○								
	TCMT16T308-HM	0.8	○	☆		☆	★									○								
	TCMT16T312-HM	1.2	○	☆		☆	★									○								
HF 	TCGT06T104-HF	0.4	☆	★		○										○	○							
	TCGT06T108-HF	0.8	☆	★		○										○	○							
	TCGT090202-HF	0.2	☆	★		○										○	○							
	TCGT090204-HF	0.4	☆	★		○										○	○							
	TCGT090208-HF	0.8	☆	★		○										○	○							
HF 	TCGT110202-HF	0.2	☆	★		○										○	○							
	TCGT110204-HF	0.4	☆	★		○										○	○							
	TCGT110208-HF	0.8	☆	★		○										○	○							
	TCGT16T302-HF	0.2	☆	★		○										○	○							
	TCGT16T304-HF	0.4	☆	★		○										○	○							
	TCGT16T308-HF	0.8	☆	★		○										○	○							
AC 	TCGX090202-AC	0.2																	☆	★				
	TCGX090204-AC	0.4																	☆	★				
	TCGX110202-AC	0.2																	☆	★				
	TCGX110204-AC	0.4																	☆	★				
	TCGX110208-AC	0.8																	☆	★				
	TCGX16T302-AC	0.2																	☆	★				
	TCGX16T304-AC	0.4																	☆	★				
Aluminum Processing? 	TCGX16T308-AC	0.8																	☆	★				
	TCGW110204	0.4																	☆	★				
	TCGW16T304	0.4																	☆	★				
	TCGW16T308	0.8																	☆	★				
No Slots?	TCGW16T312	1.2																	☆	★				

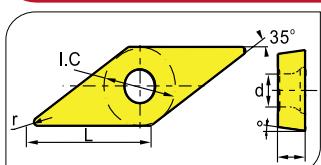
KN (Negative Angle Type)



Model	L	Φ I.C	S	Φ d
KN**1604**	16	16.15	9.525	4.76

Blade Shape	Model	Size (mm) r	Coated Cemented Carbide												Cemented Carbide					WP302	WP402	WP002	WP102	WP202
			WT8030	WT8230	WT8430	WT8050	WT8250	WT8450	WT8070	WT8270	WT8470	WT4230	WT4260	WT4270	WT6210	WT6410	WT6230	WT5115	WT6430					
Profiling Turning?	KNUX160405L12	0.5				☆			○															
	KNUX160405R12	0.5				☆			○															
	KNUX160410L12	1.0				☆			○															
	KNUX160410R12	1.0				☆			○															
	KNUX160405L11	0.5				☆			○															
	KNUX160405R11	0.5				☆			○															

VC (Negative Angle Type)



Model	L	Φ I.C	S	Φ d
VC**1102**	11	6.35	2.38	2.8
TC**1103**	11	6.35	3.18	2.8

Model	L	Φ I.C	S	Φ d
VC**1604**	16.6	9.525	4.76	4.5
VC**2205**	22	12.7	5.56	5.5

Blade Shape	Model	Size (mm) r	Coated Cemented Carbide												Cemented Carbide					WP302	WP402	WP002	WP102	WP202
			WT8030	WT8230	WT8430	WT8050	WT8250	WT8450	WT8070	WT8270	WT8470	WT4230	WT4260	WT4270	WT6210	WT6410	WT6230	WT5115	WT6430					
AC	VCGX110202-AC	0.2																		☆	★			
	VCGX110202-AC	0.2																		☆	★			
	VCGX110301-AC	0.1																		☆	★			
	VCGX110302-AC	0.2																		☆	★			
	VCGX110304-AC	0.4																		☆	★			
	VCGX110308-AC	0.8																		☆	★			
	VCGX160402-AC	0.2																		☆	★			
	VCGX160404-AC	0.4																		☆	★			
	VCGX160408-AC	0.8																		☆	★			
	VCGX160412-AC	1.2																		☆	★			
Aluminum Processing?	VCGX220530-AC	3																		☆	★			



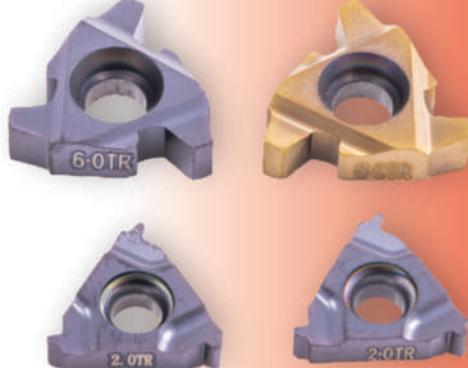
Universal Thread

06 IR
08 IR
11 IR ER
16 IR ER
22 IR ER
27 IR ER



TR Thread

16 IR ER
22 IR ER



Acme Thread

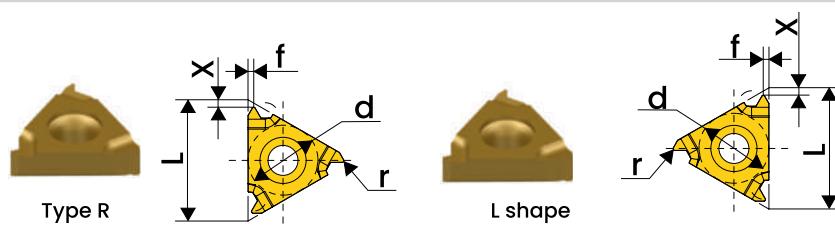
16 IR ER
22 IR ER



RD Thread

16 IR ER

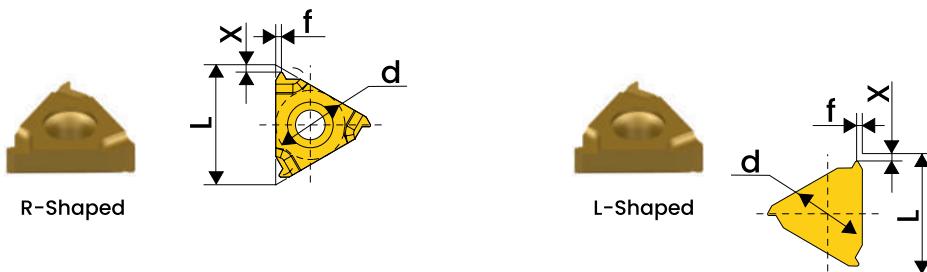
Generic Threading



Type	Designnatiion Right	Designnatiion Left	Size (mm)	TPI	Dimensions(mm)				Recommended Grades?				
									WT4280		WT4260		
					d	L	X	f	R	L	R	L	
External (Universal Thread)	11ER-A60	11EL-A60	0.5-1.5	48-61	6.35	11	0.8	0.9	★	★	★	★	★
	11ER-G60	11EL-G60	1.75-3.0	14-8	9.525	11	1.2	1.7	★	★	★	★	★
	11ER-AG60	11EL-AG60	0.5-3.0	48-8	9.525	11	1.2	1.7	★	★	★	★	★
	22ER-N60	22EL-N60	3.5-5.0	7-5	12.7	22	1.7	2.5	★	★	★	★	★
	27ER-Q60	27EL-Q60	5.5-6.0	4.5-415.875		27	2.1	3.1	★	★	★	★	★
Internal (Universal Thread)	11NR-A60	11NL-A60	0.5-1.5	48-61	6.35	11	0.8	0.9	★	★	★	★	★
	11NR-G60	11NL-G60	1.75-3.0	14-8	9.525	11	1.2	1.7	★	★	★	★	★
	11NR-AG60	11NL-AG60	0.5-3.0	48-8	9.525	11	1.2	1.7	★	★	★	★	★
	22NR-N60	22NL-N60	3.5-5.0	7-5	12.7	22	1.7	2.5	★	★	★	★	★
	27NR-Q60	27NL-Q60	5.5-6.0	4.5-415.875		27	1.8	2.7	★	★	★	★	★
External (Universal Thread)	11ER-A55	11EL-A55	0.5-1.5	48-61	6.35	11	0.8	0.9	★	★	★	★	★
	11ER-G55	11EL-G55	1.75-3.0	14-8	9.525	11	1.2	1.7	★	★	★	★	★
	11ER-AG55	11EL-AG55	0.5-3.0	48-8	9.525	11	1.2	1.7	★	★	★	★	★
	22ER-N55	22EL-N55	3.5-5.0	7-5	12.7	22	1.7	2.5	★	★	★	★	★
	27ER-Q55	27EL-Q55	5.5-6.0	4.5-415.875		27	2	2.9	★	★	★	★	★
Internal (Universal Thread)	11NR-A55	11NL-A55	0.5-1.5	48-61	6.35	11	0.8	0.9	★	★	★	★	★
	11NR-G55	11NL-G55	1.75-3.0	14-8	9.525	11	1.2	1.7	★	★	★	★	★
	11NR-AG55	11NL-AG55	0.5-3.0	48-8	9.525	11	1.2	1.7	★	★	★	★	★
	22NR-N55	22NL-N55	3.5-5.0	7-5	12.7	22	1.7	2.5	★	★	★	★	★
	27NR-Q55	27NL-Q55	5.5-6.0	4.5-415.875		27	2	2.9	★	★	★	★	★
External (Metric ISO thread)	11ER-0.35ISO	11EL-0.35ISO			0.35	6.35	11	0.8	0.4	★	★	★	★
	11ER-0.4ISO	11EL-0.4ISO			0.4	6.35	11	0.7	0.4	★	★	★	★
	11ER-0.45ISO	11EL-0.45ISO			0.45	6.35	11	0.7	0.4	★	★	★	★
	11ER-0.5ISO	11EL-0.5ISO			0.5	6.35	11	0.6	0.4	★	★	★	★
	11ER-0.6ISO	11EL-0.6ISO			0.6	6.35	11	0.6	0.6	★	★	★	★
	11ER-0.7ISO	11EL-0.7ISO			0.7	6.35	11	0.6	0.6	★	★	★	★
	11ER-0.75ISO	11EL-0.75ISO			0.75	6.35	11	0.6	0.6	★	★	★	★
	11ER-0.8ISO	11EL-0.8ISO			0.8	6.35	11	0.6	0.6	★	★	★	★
	11ER-1.0ISO	11EL-1.0ISO			1	6.35	11	0.7	0.7	★	★	★	★
	11ER-1.25ISO	11EL-1.25ISO			1.25	6.35	11	0.8	0.9	★	★	★	★
	11ER-1.5ISO	11EL-1.5ISO			1.5	6.35	11	0.8	1	★	★	★	★
	11ER-1.75ISO	11EL-1.75ISO			1.75	6.35	11	0.8	1.1	★	★	★	★
	16ER-0.35ISO	16EL-0.35ISO			0.35	9.525	16	0.8	0.4	★	★	★	★
	16ER-0.4ISO	16EL-0.4ISO			0.4	9.525	16	0.7	0.4	★	★	★	★
	16ER-0.45ISO	16EL-0.45ISO			0.45	9.525	16	0.7	0.4	★	★	★	★
	16ER-0.5ISO	16EL-0.5ISO			0.5	9.525	16	0.6	0.4	★	★	★	★
	16ER-0.6ISO	16EL-0.6ISO			0.6	9.525	16	0.6	0.6	★	★	★	★
	16ER-0.7ISO	16EL-0.7ISO			0.7	9.525	16	0.6	0.6	★	★	★	★
	16ER-0.75ISO	16EL-0.75ISO			0.75	9.525	16	0.6	0.6	★	★	★	★
	16ER-0.8ISO	16EL-0.8ISO			0.8	9.525	16	0.6	0.6	★	★	★	★

Metric ISO Threading

ISO 965-1980 DIN 13
GB/T 197-2003 Tolerance class: 6g/6H

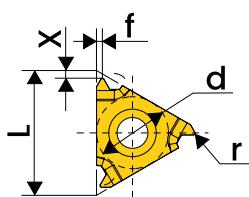


Type	Model Designnatiion Right Hand	Model Designnatiion Left H and	Size (mm)	SizeDimensions(mm)						Recommended Grades?			
				TPI	d	L	X	f	R	L	R	L	
Male thread External (Metric ISO thread)	16ER-1.0ISO	16EL-1.0ISO											WT4280 WT4260
	16ER-1.25ISO	16EL-1.25ISO											
	16ER-1.5ISO	16EL-1.5ISO		1	9.525	16	0.7	0.7	★	★	★	★	
	16ER-1.75ISO	16EL-1.75ISO		1.25	9.525	16	0.8	0.9	★	★	★	★	
	16ER-2.0ISO	16EL-2.0ISO		1.5	9.525	16	0.8	1	★	★	★	★	
	16ER-2.5ISO	16EL-2.5ISO		1.75	9.525	16	0.9	1.2	★	★	★	★	
	16ER-3.0ISO	16EL-3.0ISO		2	9.525	16	1	1.3	★	★	★	★	
	22ER-3.5ISO	22EL-3.5ISO		2.5	9.525	16	1.1	1.5	★	★	★	★	
	22ER-4.0ISO	22EL-4.0ISO		3	9.525	16	1.2	1.6	★	★	★	★	
	22ER-4.5ISO	22EL-4.5ISO		3.5	12.7	22	1.6	2.3	★	★	★	★	
	22ER-5.0ISO	22EL-5.0ISO		4	12.7	22	1.6	2.3	★	★	★	★	
Internal thread (Metric ISO thread)	11NR-0.35ISO	11NL-0.35ISO		5.5	15.875	27	1.9	2.7	★	★	★	★	
	11NR-0.4ISO	11NL-0.4ISO		6	15.875	27	2	2.9	★	★	★	★	
	11NR-0.45ISO	11NL-0.45ISO		0.35	6.35	11	0.8	0.3	★	★	★	★	
	11NR-0.5ISO	11NL-0.5ISO		0.4	6.35	11	0.8	0.4	★	★	★	★	
	11NR-0.6ISO	11NL-0.6ISO		0.45	6.35	11	0.8	0.4	★	★	★	★	
	11NR-0.7ISO	11NL-0.7ISO		0.5	6.35	11	0.6	0.4	★	★	★	★	
	11NR-0.75ISO	11NL-0.75ISO		0.6	6.35	11	0.6	0.6	★	★	★	★	
	11NR-0.8ISO	11NL-0.8ISO		0.7	6.35	11	0.6	0.6	★	★	★	★	
	11NR-1.0ISO	11NL-1.0ISO		0.75	6.35	11	0.6	0.6	★	★	★	★	
	11NR-1.25ISO	11NL-1.25ISO		0.8	6.35	11	0.6	0.6	★	★	★	★	
	11NR-1.5ISO	11NL-1.5ISO		1	6.35	11	0.6	0.7	★	★	★	★	
	11NR-1.75ISO	11NL-1.75ISO		1.25	6.35	11	0.8	0.9	★	★	★	★	
External thread (Metric ISO thread)	16NR-2.0ISO	16NL-2.0ISO		1.5	6.35	11	0.8	1	★	★	★	★	
	16NR-2.5ISO	16NL-2.5ISO		1.75	6.35	11	0.9	1.1	★	★	★	★	
				2	6.35	11	0.9	1.1	★	★	★	★	
				2.5	6.35	11	0.8	1.1	★	★	★	★	
	16NR-0.35ISO	16NL-0.35ISO		0.35	9.525	16	0.8	0.3	★	★	★	★	
	16NR-0.4ISO	16NL-0.4ISO		0.4	9.525	16	0.8	0.4	★	★	★	★	
Internal thread (Metric ISO thread)	16NR-0.45ISO	16NL-0.45ISO		0.45	9.525	16	0.8	0.4	★	★	★	★	
	16NR-0.5ISO	16NL-0.5ISO		0.5	9.525	16	0.6	0.4	★	★	★	★	
	16NR-0.6ISO	16NL-0.6ISO		0.6	9.525	16	0.6	0.6	★	★	★	★	
	16NR-0.7ISO	16NL-0.7ISO		0.7	9.525	16	0.6	0.6	★	★	★	★	

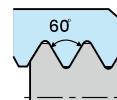
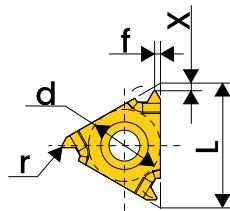
Universal threading



R-Shaped



L-Shaped

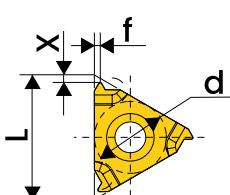


Type	Model Designnatiion Right Hand	Model Designnatiion Left Hand	Size (mm)	TPI	Dimensions(mm)				Recommended Grades?			
									WT4280		WT4260	
					d	L	x	f	R	L	R	L
Internal Thread (Metric ISO Thread)	16NR-0.75ISO	16NL-0.75ISO		0.75	9.525	16	0.6	0.6	★	★	★	★
	16NR-0.8ISO	16NL-0.8ISO		0.8	9.525	16	0.6	0.6	★	★	★	★
	16NR-1.0ISO	16NL-1.0ISO		1	9.525	16	0.6	0.7	★	★	★	★
	16NR-1.25ISO	16NL-1.25ISO		1.25	9.525	16	0.8	0.9	★	★	★	★
	16NR-1.5ISO	16NL-1.5ISO		1.5	9.525	16	0.8	1	★	★	★	★
	16NR-1.75ISO	16NL-1.75ISO		1.75	9.525	16	0.9	1.2	★	★	★	★
	16NR-2.0ISO	16NL-2.0ISO		2	9.525	16	1	1.3	★	★	★	★
	16NR-2.5ISO	16NL-2.5ISO		2.5	9.525	16	1.1	1.5	★	★	★	★
	16NR-3.0ISO	16NL-3.0ISO		3	9.525	16	1.1	1.5	★	★	★	★
	22NR-3.5ISO	22NL-3.5ISO		3.5	12.7	22	1.6	2.3	★	★	★	★
	22NR-4.0ISO	22NL-4.0ISO		4	12.7	22	1.6	2.3	★	★	★	★
	22NR-4.5ISO	22NL-4.5ISO		4.5	12.7	22	1.6	2.4	★	★	★	★
	22NR-5.0ISO	22NL-5.0ISO		5	12.7	22	1.6	2.3	★	★	★	★
	27NR-5.5ISO	27NL-5.5ISO		5.5	15.875	27	1.6	2.3	★	★	★	★
	27NR-6.0ISO	27NL-6.0ISO		6	15.875	27	1.8	2.5	★	★	★	★
Male thread External (US Thread)	11ER-72UN	11EL-72UN		72	6.35	11	0.8	0.4	★	★	★	★
	11ER-64UN	11EL-64UN		64	6.35	11	0.8	0.4	★	★	★	★
	11ER-56NU	11EL-56NU		56	6.35	11	0.7	0.4	★	★	★	★
	11ER-48U	11EL-48U		48	6.35	11	0.6	0.6	★	★	★	★
	11ER-44UN	11EL-44UN		44	6.35	11	0.6	0.6	★	★	★	★
	11ER-40UN	11EL-40UN		40	6.35	11	0.6	0.6	★	★	★	★
	11ER-36UN	11EL-36UN		36	6.35	11	0.6	0.6	★	★	★	★
	11ER-32UN	11EL-32UN		32	6.35	11	0.6	0.6	★	★	★	★
	11ER-28UN	11EL-28UN		28	6.35	11	0.6	0.7	★	★	★	★
	11ER-27UN	11EL-27UN		27	6.35	11	0.7	0.8	★	★	★	★
	11ER-24UN	11EL-24UN		24	6.35	11	0.7	0.8	★	★	★	★
	11ER-20UN	11EL-20UN		20	6.35	11	0.8	0.9	★	★	★	★
	11ER-18UN	11EL-18UN		18	6.35	11	0.8	1	★	★	★	★
	11ER-16UN	11EL-16UN		16	6.35	11	0.9	1.1	★	★	★	★
	11ER-14UN	11EL-14UN		14	6.35	11	0.9	1.1	★	★	★	★
	16ER-72UN	16EL-72UN		72	9.525	16	0.8	0.4	★	★	★	★
	16ER-64UN	16EL-64UN		64	9.525	16	0.8	0.4	★	★	★	★
	16ER-56UN	16EL-56UN		56	9.525	16	0.7	0.4	★	★	★	★
	16ER-48UN	16EL-48UN		48	9.525	16	0.6	0.6	★	★	★	★
	16ER-44UN	16EL-44UN		44	9.525	16	0.6	0.6	★	★	★	★
	16ER-40UN	16EL-40UN		40	9.525	16	0.6	0.6	★	★	★	★
Male thread External (USThread)	16ER-36UN	16EL-36UN		36	9.525	16	0.6	0.6	★	★	★	★
	16ER-32UN	16EL-32UN		32	9.525	16	0.6	0.6	★	★	★	★
	16ER-28UN	16EL-28UN		28	9.525	16	0.6	0.7	★	★	★	★
	16ER-27UN	16EL-27UN		27	9.525	16	0.7	0.8	★	★	★	★

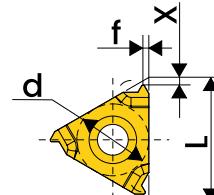
US Threading



R-Shaped

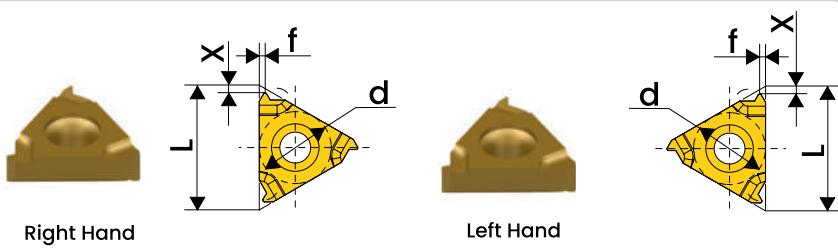


L-Shaped



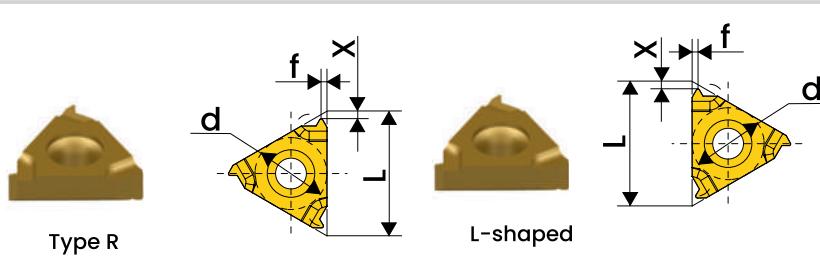
Type	Model Designnna Right Hand	Model Designnna Left Hand	Pitch (mm)	TPI	Dimensions(mm)				Recommended Grades?				
									WT4280		WT4260		
					d	L	X	f	R	L	R	L	
Male thread External (US thread)	16ER-24UN	16EL-24UN		24	9.525	16	0.7	0.8	★	★	★	★	★
	16ER-20UN	16EL-20UN		20	9.525	16	0.8	0.9	★	★	★	★	★
	16ER-18UN	16EL-18UN		18	9.525	16	0.8	1	★	★	★	★	★
	16ER-16UN	16EL-16UN		16	9.525	16	0.9	1.1	★	★	★	★	★
	16ER-14UN	16EL-14UN		14	9.525	16	1	1.2	★	★	★	★	★
	16ER-13UN	16EL-13UN		13	9.525	16	1	1.3	★	★	★	★	★
	16ER-12UN	16EL-12UN		12	9.525	16	1.1	1.4	★	★	★	★	★
	16ER-11.5UN	16EL-11.5UN		11.5	9.525	16	1.1	1.5	★	★	★	★	★
	16ER-11UN	16EL-11UN		11	9.525	16	1.1	1.5	★	★	★	★	★
	16ER-10UN	16EL-10UN		10	9.525	16	1.1	1.5	★	★	★	★	★
	16ER-9UN	16EL-9UN		9	9.525	16	1.2	1.7	★	★	★	★	★
	16ER-8UN	16EL-8UN		8	9.525	16	1.2	1.6	★	★	★	★	★
	22ER-7UN	22EL-7UN		7	12.7	22	1.6	2.3	★	★	★	★	★
	22ER-6UN	22EL-6UN		6	12.7	22	1.6	2.3	★	★	★	★	★
	22ER-5UN	22EL-5UN		5	12.7	22	1.7	2.5	★	★	★	★	★
Internal thread (US thread)	11NR-4.5UN	11NL-4.5UN		4.5	15.875	27	1.9	2.7	★	★	★	★	★
	27ER-4UN	27EL-4UN		4	15.875	27	2.1	3	★	★	★	★	★
	11NR-72W	11NL-72W		72	6.35	11	0.7	0.4	★	★	★	★	★
	11NR-64W	11NL-64W		64	6.35	11	0.7	0.4	★	★	★	★	★
	11NR-56UN	11NL-56UN		56	6.35	11	0.7	0.4	★	★	★	★	★
	11NR-48U	11NL-48U		48	6.35	11	0.6	0.6	★	★	★	★	★
	11NR-44UN	11NL-44UN		44	6.35	11	0.6	0.6	★	★	★	★	★
	11NR-40UN	11NL-40UN		40	6.35	11	0.6	0.6	★	★	★	★	★
	11NR-36UN	11NL-36UN		36	6.35	11	0.6	0.6	★	★	★	★	★
	11NR-32UN	11NL-32UN		32	6.35	11	0.6	0.6	★	★	★	★	★
	11NR-28UN	11NL-28UN		28	6.35	11	0.6	0.7	★	★	★	★	★
	11NR-27UN	11NL-27UN		27	6.35	11	0.7	0.8	★	★	★	★	★
	11NR-24UN	11NL-24UN		24	6.35	11	0.7	0.8	★	★	★	★	★
	11NR-20UN	11NL-20UN		20	6.35	11	0.8	0.9	★	★	★	★	★
	11NR-18UN	11NL-18UN		18	6.35	11	0.8	1	★	★	★	★	★
	11NR-16UN	11NL-16UN		16	6.35	11	0.9	1.1	★	★	★	★	★
	11NR-14UN	11NL-14UN		14	6.35	11	0.9	1.1	★	★	★	★	★
	11NR-12UN	11NL-12UN		12	6.35	11	0.8	1.1	★	★	★	★	★
	11NR-11UN	11NL-11UN		11	6.35	11	0.8	1.1	★	★	★	★	★

US Threading



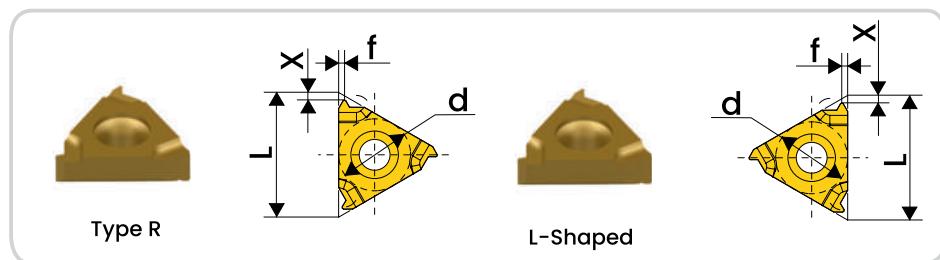
Type	Model Designnati Right Hand	Model Designnati Left Hand	Size (mm)	TPI	Dimensions(mm)				Recommended Grades?				
					d	L	X	f	WT4280		WT4260		
									R	L	R	L	
Internal thread (US thread)	11NR-11UN	11NL-11UN	11	6.35	11	0.8	1.1	★	★	★	★	★	
	16NR-72UN	16NL-72UN			72	9.525	16	0.8	0.4	★	★	★	★
	16NR-64UN	16NL-64UN			64	9.525	16	0.8	0.4	★	★	★	★
	16NR-56NU	16NL-56NU			56	9.525	16	0.7	0.4	★	★	★	★
	16NR-48NU	16NL-48NU			48	9.525	16	0.6	0.6	★	★	★	★
	16NR-44UN	16NL-44UN			44	9.525	16	0.6	0.6	★	★	★	★
	16NR-40UN	16NL-40UN			40	9.525	16	0.6	0.6	★	★	★	★
	16NR-36NU	16NL-36NU			36	9.525	16	0.6	0.6	★	★	★	★
	16NR-32UN	16NL-32UN			32	9.525	16	0.6	0.6	★	★	★	★
	16NR-28UN	16NL-28UN			28	9.525	16	0.6	0.7	★	★	★	★
	16NR-27UN	16NL-27UN			27	9.525	16	0.7	0.8	★	★	★	★
	16NR-24UN	16NL-24UN			24	9.525	16	0.7	0.8	★	★	★	★
	16NR-20UN	16NL-20UN			20	9.525	16	0.8	0.9	★	★	★	★
	16NR-18UN	16NL-18UN			18	9.525	16	0.8	1	★	★	★	★
	16NR-16UN	16NL-16UN			16	9.525	16	0.9	1.1	★	★	★	★
	16NR-14UN	16NL-14UN			14	9.525	16	1	1.2	★	★	★	★
	16NR-13UN	16NL-13UN			13	9.525	16	1	1.3	★	★	★	★
	16NR-12UN	16NL-12UN			12	9.525	16	1.1	1.4	★	★	★	★
	16NR-11.5UN	16NL-11.5UN			11.5	9.525	16	1.1	1.5	★	★	★	★
	16NR-11UN	16NL-11UN			11	9.525	16	1.1	1.5	★	★	★	★
	16NR-10UN	16NL-10UN			10	9.525	16	1.1	1.5	★	★	★	★
	16NR-9UN	16NL-9UN			9	9.525		1.2	1.7	★	★	★	★
	16NR-8UN	16NL-8UN			8	9.525	16	1.2	1.5	★	★	★	★
	16NR-7UN	16NL-7UN			7	12.7	22	1.6	2.3	★	★	★	★
	22NR-6UN	22NL-6UN			6	12.7	22	1.6	2.3	★	★	★	★
	22NR-5UN	22NL-5UN			5	12.7	22	1.7	2.3	★	★	★	★
	27NR-4.5UN	27NL-4.5UN			4.5	15.875	27	1.9	2.4	★	★	★	★
	27NR-4UN	27NL-4UN			4	15.875	27	2.1	2.7	★	★	★	★

Threading inserts



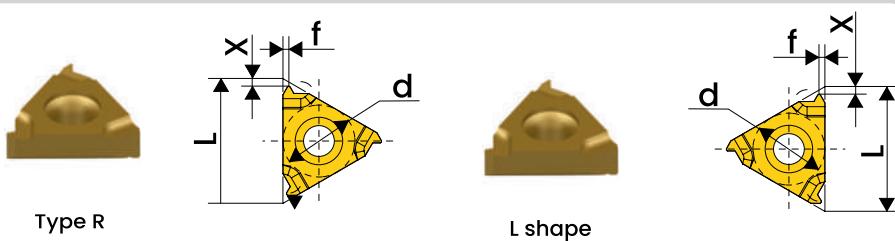
Type	Model Designation Right Hand	Model Designation Left Hand	Pitch (mm)	TPI	Size Dimensions(mm)				Recommended Grades?			
					d	L	X	f	WT4280		WT4260	
									R	L	R	L
External Thread	11ER-72W	11EL-72W		72	6.35	11	0.7	0.4	★	★	★	★
	11ER-64W	11EL-64W		64	6.35	11	0.7	0.4	★	★	★	★
	11ER-56W	11EL-56W		56	6.35	11	0.7	0.4	★	★	★	★
	11ER-48W	11EL-48W		48	6.35	11	0.6	0.6	★	★	★	★
	11ER-44W	11EL-44W		44	6.35	11	0.6	0.6	★	★	★	★
	11ER-40W	11EL-40W		40	6.35	11	0.6	0.6	★	★	★	★
	11ER-36W	11EL-36W		36	6.35	11	0.6	0.6	★	★	★	★
	11ER-32W	11EL-32W		32	6.35	11	0.6	0.6	★	★	★	★
	11ER-28W	11EL-28W		28	6.35	11	0.6	0.7	★	★	★	★
	11ER-26W	11EL-26W		27	6.35	11	0.7	0.8	★	★	★	★
	11ER-24W	11EL-24W		24	6.35	11	0.7	0.8	★	★	★	★
	11ER-22W	11EL-22W		24	6.35	11	0.8	0.9	★	★	★	★
	11ER-20W	11EL-20W		20	6.35	11	0.8	0.9	★	★	★	★
	11ER-19W	11EL-19W		19	6.35	11	0.8	1	★	★	★	★
	11ER-18W	11EL-18W		18	6.35	11	0.8	1	★	★	★	★
	11ER-16W	11EL-16W		16	6.35	11	0.9	1.1	★	★	★	★
	11ER-14W	11EL-14W		14	6.35	11	1	1.2	★	★	★	★
	16ER-72W	16EL-72W		72	9.525	16	0.7	0.4	★	★	★	★
	16ER-60W	16EL-60W		60	9.525	16	0.7	0.4	★	★	★	★
	16ER-56W	16EL-56W		56	9.525	16	0.7	0.4	★	★	★	★
	16ER-48W	16EL-48W		48	9.525	16	0.6	0.6	★	★	★	★
	16ER-44W	16EL-44W		44	9.525	16	0.6	0.6	★	★	★	★
External Thread	16ER-40W	16EL-40W		40	9.525	16	0.6	0.6	★	★	★	★
	16ER-36W	16EL-36W		36	9.525	16	0.6	0.6	★	★	★	★
	16ER-32W	16EL-32W		32	9.525	16	0.6	0.6	★	★	★	★
	16ER-28W	16EL-28W		28	9.525	16	0.6	0.7	★	★	★	★
	16ER-26W	16EL-26W		26	9.525	16	0.7	0.8	★	★	★	★
	16ER-24W	16EL-24W		24	9.525	16	0.7	0.8	★	★	★	★
	16ER-22W	16EL-22W		22	9.525	16	0.7	0.8	★	★	★	★
	16ER-20W	16EL-20W		20	9.525	16	0.8	0.9	★	★	★	★
	16ER-18W	16EL-18W		18	9.525	16	0.8	1	★	★	★	★
	16ER-16W	16EL-16W		16	9.525	16	0.9	1.1	★	★	★	★
	16ER-14W	16EL-14W		14	9.525	16	1	1.2	★	★	★	★
	16ER-12W	16EL-12W		12	9.525	16	1.1	1.4	★	★	★	★

Threading Inserts



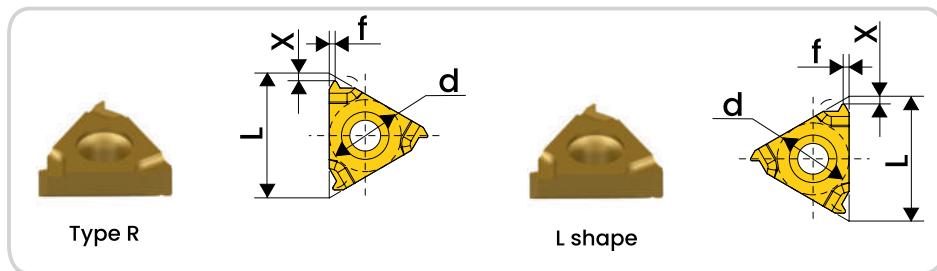
Type	Model Designation Right Hand	Model Designation Left Hand	Pitch (mm)	TPI	Size Dimensions(mm)				Recommended Grades?			
					d	L	X	f	WT4280		WT4260	
									R	L	R	L
External Thread	16ER-11W	16EL-11W		11	9.525	16	1.1	1.5	★	★	★	★
	16ER-10W	16EL-10W		10	9.525	16	1.1	1.5	★	★	★	★
	16ER-9W	16EL-9W		9	9.525	16	1.2	1.7	★	★	★	★
	16ER-8W	16EL-8W		8	9.525	16	1.2	1.5	★	★	★	★
	22ER-7W	22EL-7W		7	12.7	22	1.6	2.3	★	★	★	★
	22ER-6W	22EL-6W		6	12.7	22	1.6	2.3	★	★	★	★
	22ER-5W	22EL-5W		5	12.7	22	1.7	2.4	★	★	★	★
	27ER-4.5W	27EL-4.5W		4.5	15.875	27	1.8	2.6	★	★	★	★
	27ER-4UN	27EL-4UN		4	15.875	27	2.1	2.9	★	★	★	★
Internal Thread	11NR-72W	11NL-72W		72	6.35	11	0.7	0.4	★	★	★	★
	11NR-64W	11NL-64W		64	6.35	11	0.7	0.4	★	★	★	★
	11NR-56W	11NL-56W		56	6.35	11	0.7	0.4	★	★	★	★
	11NR-48W	11NL-48W		48	6.35	11	0.6	0.6	★	★	★	★
	11NR-40W	11NL-40W		40	6.35	11	0.6	0.6	★	★	★	★
	11NR-36W	11NL-36W		36	6.35	11	0.6	0.6	★	★	★	★
	11NR-32W	11NL-32W		32	6.35	11	0.6	0.6	★	★	★	★
	11NR-28W	11NL-28W		28	6.35	11	0.6	0.7	★	★	★	★
	11NR-26W	11NL-26W		27	6.35	11	0.7	0.8	★	★	★	★
	11NR-24W	11NL-24W		24	6.35	11	0.7	0.8	★	★	★	★
	11NR-22W	11NL-22W		24	6.35	11	0.8	0.9	★	★	★	★
	11NR-20W	11NL-20W		20	6.35	11	0.8	0.9	★	★	★	★
	11NR-19W	11NL-19W		19	6.35	11	0.8	1	★	★	★	★
	11NR-18W	11NL-18W		18	6.35	11	0.8	1	★	★	★	★
	11NR-16W	11NL-16W		16	6.35	11	0.9	1.1	★	★	★	★
	11NR-14W	11NL-14W		14	6.35	11	0.9	1.1	★	★	★	★
	11NR-12W	11NL-12W		12	6.35	11	0.9	1.2	★	★	★	★
	16NR-72W	16NL-72W		72	9.525	16	0.7	0.4	★	★	★	★
Internal Thread	16NR-60W	16NL-60W		60	9.525	16	0.7	0.4	★	★	★	★
	16NR-56W	16NL-56W		56	9.525	16	0.7	0.4	★	★	★	★
	16NR-48W	16NL-48W		48	9.525	16	0.6	0.6	★	★	★	★
	16NR-40W	16NL-40W		40	9.525	16	0.6	0.6	★	★	★	★
	16NR-36W	16NL-36W		36	9.525	16	0.6	0.6	★	★	★	★
	16NR-32W	16NL-32W		32	9.525	16	0.6	0.6	★	★	★	★
Internal Thread	16NR-30W	16NL-30W		30	9.525	16	0.6	0.7	★	★	★	★
	16NR-28W	16NL-28W		28	9.525	16	0.6	0.7	★	★	★	★
	16NR-26W	16NL-26W		26	9.525	16	0.7	0.8	★	★	★	★
	16NR-24W	16NL-24W		24	9.525	16	0.7	0.8	★	★	★	★

Threading Inserts



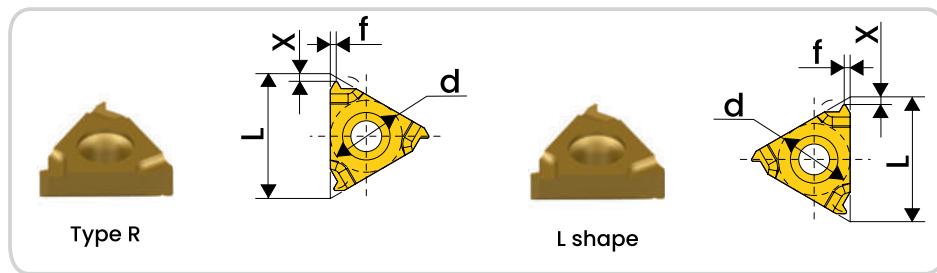
Type	Model Designnattion Right Hand	Model Designnattion Left Hand	Pitch (mm)	TPI	Dimensions(mm)				Recommended Grades?			
					d	L	X	f	WT4280		WT4260	
									R	L	R	L
Internal thread	16NR-22W	16NL-22W		22	9.525	16	0.8	0.9	★	★	★	★
	16NR-20W	16NL-20W		20	9.525	16	0.8	0.9	★	★	★	★
	16NR-19W	16NL-19W		20	9.525	16	0.8	1	★	★	★	★
	16NR-18W	16NL-18W		18	9.525	16	0.8	1	★	★	★	★
	16NR-16W	16NL-16W		16	9.525	16	0.9	1.1	★	★	★	★
	16NR-14W	16NL-14W		14	9.525	16	1	1.2	★	★	★	★
	16NR-12W	16NL-12W		12	9.525	16	1.1	1.4	★	★	★	★
	16NR-11W	16NL-11W		11	9.525	16	1.1	1.5	★	★	★	★
	16NR-10W	16NL-10W		10	9.525	16	1.1	1.5	★	★	★	★
	16NR-9W	16NL-9W		9	9.525	16	1.2	1.7	★	★	★	★
	16NR-8W	16NL-8W		8	9.525	16	1.2	1.5	★	★	★	★
	22NR-7W	22NL-7W		7	12.7	22	1.6	2.3	★	★	★	★
	22NR-6W	22NL-6W		6	12.7	22	1.6	2.3	★	★	★	★
	22NR-5W	22NL-5W		5	12.7	22	1.7	2.4	★	★	★	★
	27NR-4.5W	27NL-4.5W		4.5	15.875	27	1.8	2.6	★	★	★	★
	27NR-4W	27NL-4W		4	15.875	27	2.1	2.9	★	★	★	★

BSP inch threading



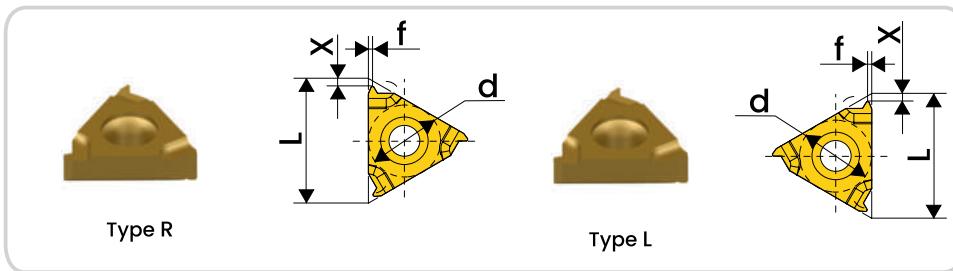
Type	Model Designnatiion Right Hand	Model Designnatiion Left Hand	Pitch (mm)	TPI	Size Dimensions(mm)				Recommended Grades?			
					d	L	X	f	WT4280		WT4260	
									R	L	R	L
External thread (BSP inch thread)	11NR-28BSPT	11NL-28BSPT	28	6.35	11	0.6	0.6	0.6	★	★	★	★
	11NR-19BSPT	11NL-19BSPT			19	6.35	11	0.8	0.9	★	★	★
	11NR-14BSPT	11NL-14BSPT			14	6.35	11	0.9	1	★	★	★
	16NR-28BSPT	16NL-28BSPT			28	9.525	16	0.6	0.6	★	★	★
	16NR-19BSPT	16NL-19BSPT			19	9.525	16	0.8	0.9	★	★	★
	16NR-14BSPT	16NL-14BSPT			14	9.525	16	1	1.2	★	★	★
	16NR-11BSPT	16NL-11BSPT			11	9.525	16	1.1	1.5	★	★	★
External thread (BSP inch thread)	11ER-28BSPT	11EL-28BSPT	28	6.35	11	0.6	0.6	0.6	★	★	★	★
	11ER-19BSPT	11EL-19BSPT			19	6.35	11	0.8	0.9	★	★	★
	11ER-14BSPT	11EL-14BSPT			14	6.35	11	0.9	1	★	★	★
	16ER-28BSPT	16EL-28BSPT			28	9.525	16	0.6	0.6	★	★	★
	16ER-19BSPT	16EL-19BSPT			19	9.525	16	0.8	0.9	★	★	★
	16ER-14BSPT	16EL-14BSPT			14	9.525	16	1	1.2	★	★	★
	16ER-11BSPT	16EL-11BSPT			11	9.525	16	1.1	1.5	★	★	★

BSP inch threading



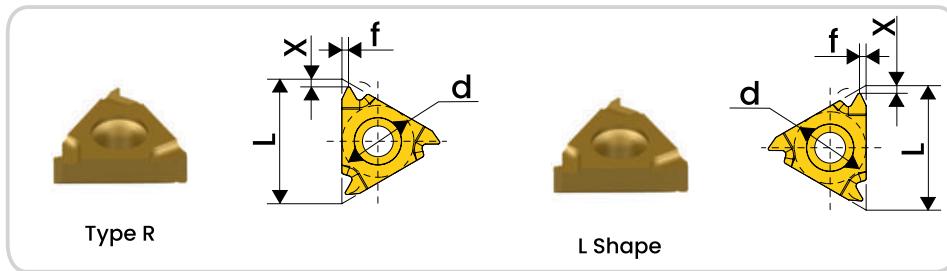
Type	Model Designnatiion Right Hand	Model Designnatiion Left Hand	Pitch (mm)	TPI	Size Dimensions(mm)				Recommended Grades?			
					d	L	X	f	WT4280		WT4260	
									R	L	R	L
External thread (BSP inch thread)	11NR-28BSPT	11NL-28BSPT	28	6.35	11	0.6	0.6	★	★	★	★	★
	11NR-19BSPT	11NL-19BSPT			19	0.635	11	0.8	0.9	★	★	★
	11NR-14BSPT	11NL-14BSPT			14	0.635	11	0.9	1	★	★	★
	16NR-28BSPT	16NL-28BSPT			28	9.525	16	0.6	0.6	★	★	★
	16NR-19BSPT	16NL-19BSPT			19	9.525	16	0.8	0.9	★	★	★
	16NR-14BSPT	16NL-14BSPT			14	9.525	16	1	1.2	★	★	★
	16NR-11BSPT	16NL-11BSPT			11	9.525	16	1.1	1.5	★	★	★
External thread (BSP inch thread)	11ER-28BSPT	11EL-28BSPT	28	6.35	11	0.6	0.6	★	★	★	★	★
	11ER-19BSPT	11EL-19BSPT			19	0.635	11	0.8	0.9	★	★	★
	11ER-14BSPT	11EL-14BSPT			14	0.635	11	0.9	1	★	★	★
	16ER-28BSPT	16EL-28BSPT			28	9.525	16	0.6	0.6	★	★	★
	16ER-19BSPT	16EL-19BSPT			19	9.525	16	0.8	0.9	★	★	★
	16ER-14BSPT	16EL-14BSPT			14	9.525	16	1	1.2	★	★	★
	16ER-11BSPT	16EL-11BSPT			11	9.525	16	1.1	1.5	★	★	★

American Dry Seal Straight Pipe Thread NPTF?



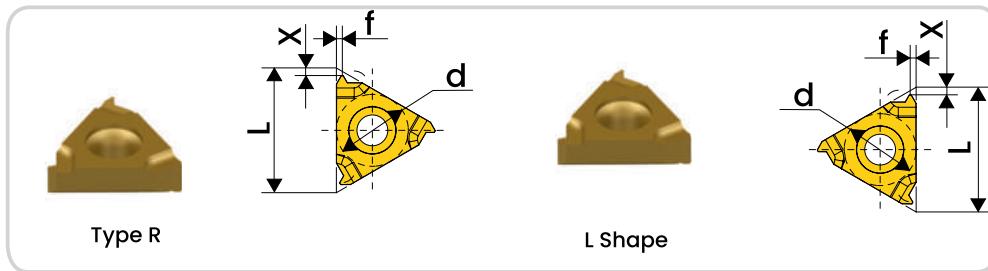
Type	Model Designnatiion Right Hand	Model Designnatiion Left Hand	Pitch (mm)	TPI	Dimensions(mm)				Recommended Grades?			
					d	L	X	f	Wt4280		Wt4260	
									R	L	R	L
External thread (American dry seal straight pipe thread NPTF)	11ER-27NPTF	11EL-27NPTF		27	6.35	11	0.7	0.8	★	★	★	★
	11ER-18NPTF	11EL-18NPTF		18	6.35	11	0.8	1	★	★	★	★
	11ER-14NPTF	11EL-14NPTF		14	6.35	11	0.8	1	★	★	★	★
	16ER-28NPTF	16EL-28NPTF		28	9.525	16	0.7	0.8	★	★	★	★
	16ER-18NPTF	16EL-18NPTF		18	9.525	16	0.8	1	★	★	★	★
	16ER-14NPTF	16EL-14NPTF		14	9.525	16	0.9	1.2	★	★	★	★
	16ER-11.5NPTF	16EL-11.5NPTF		11.5	9.525	16	1.1	1.5	★	★	★	★
	16ER-8NPTF	16EL-8NPTF		8	9.525	16	1.3	1.8	★	★	★	★
Internal thread (American dry seal straight pipe thread NPTF)	11ER-27NPTF	11EL-27NPTF		27	6.35	11	0.7	0.8	★	★	★	★
	11ER-18NPTF	11EL-18NPTF		18	6.35	11	0.8	1	★	★	★	★
	11ER-14NPTF	11EL-14NPTF		14	6.35	11	0.8	1	★	★	★	★
	16ER-28NPTF	16EL-28NPTF		28	9.525	16	0.7	0.8	★	★	★	★
	16ER-18NPTF	16EL-18NPTF		18	9.525	16	0.8	1	★	★	★	★
	16ER-14NPTF	16EL-14NPTF		14	9.525	16	0.9	1.2	★	★	★	★
	16ER-11.5NPTF	16EL-11.5NPTF		11.5	9.525	16	1.1	1.5	★	★	★	★
	16ER-8NPTF	16EL-8NPTF		8	9.525	16	1.3	1.8	★	★	★	★

DIN405 round tooth thread?



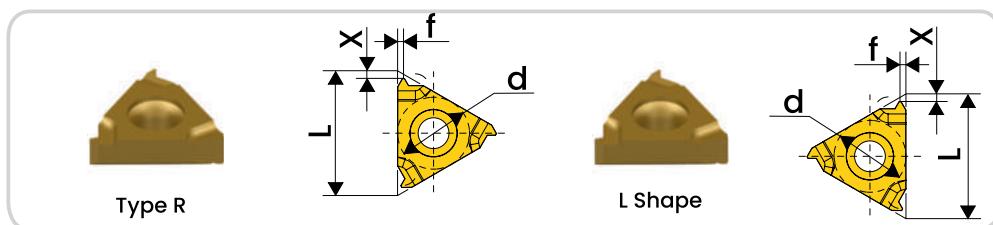
Type	Model Designnatiion Right Hand	Model Designnatiion Left Hand	Pitch(mm)	TPI	Size Dimensions(mm)				Recommended Grades?			
					d	L	X	f	WT4280		WT4260	
									R	L	R	L
External Thread (DIN405 circular tooth thread)	16ER-10RD	16EL-10RD		10	9.525	16	1.1	1.2	★	★	★	★
	16ER-8RD	16EL-8RD		8	9.525	16	1.4	1.3	★	★	★	★
	16ER-6RD	16EL-6RD		6	9.525	16	1.5	1.7	★	★	★	★
	22ER-6RD	22EL-6RD		6	12.7	22	1.5	1.7	★	★	★	★
	22ER-4RD	22EL-4RD		4	12.7	22	2.2	2.3	★	★	★	★
	27ER-4RD	27EL-4RD		4	15.875	27	2.2	2.3	★	★	★	★
Internal Thread (American dry seal straight pipe thread NPTF)	16NR-10RD	16NL-10RD		10	9.525	16	1.1	1.2	★	★	★	★
	16NR-8RD	16NL-8RD		8	9.525	16	1.4	1.3	★	★	★	★
	16NR-6RD	16NL-6RD		6	9.525	16	1.5	1.7	★	★	★	★
	22NR-6RD	22NL-6RD		6	12.7	22	1.5	1.7	★	★	★	★
	22NR-4RD	22NL-4RD		4	12.7	22	2.2	2.3	★	★	★	★
	27NR-4RD	27NL-4RD		4	15.875	27	2.2	2.3	★	★	★	★

DIN103 trapezoidal thread



Type	Model Designnatiion Right Hand	Model Designnatiion Left Hand	Pitch(mm)	TPI	Size Dimensions(mm)				Recommended Grades?			
					d	L	X	f	WT4280		WT4260	
									R	L	R	L
External Thread (DIN103 Trapezoidal Thread) ?	11ER-1.5TR	11EL-1.5TR		1.5	6.35	11	0.8	0.9	★	★	★	★
	16ER-1.5TR	16EL-1.5TR		1.5	9.525	16	1	1.1	★	★	★	★
	16ER-2.0TR	16EL-2.0TR		2	9.525	16	1.1	1.3	★	★	★	★
	16ER-3.0TR	16EL-3.0TR		3	9.525	16	1.3	1.5	★	★	★	★
	22ER-4.0TR	22EL-4.0TR		4	12.7	22	1.7	1.9	★	★	★	★
	22ER-5.0TR	22EL-5.0TR		5	12.7	22	2.1	2.5	★	★	★	★
	27ER-6.0TR	27EL-6.0TR		6	15.875	27	2.3	2.7	★	★	★	★
Internal Thread (DIN103 Trapezoidal Thread)	11NR-1.5TR	11NL-1.5TR		1.5	6.35	11	0.8	0.9	★	★	★	★
	16NR-1.5TR	16NL-1.5TR		1.5	9.525	16	1	1.1	★	★	★	★
	16NR-2.0TR	16NL-2.0TR		2	9.525	16	1.1	1.3	★	★	★	★
	16NR-3.0TR	16NL-3.0TR		3	9.525	16	1.3	1.5	★	★	★	★
	22NR-4.0TR	22NL-4.0TR		4	12.7	22	1.7	1.9	★	★	★	★
	22NR-5.0TR	22NL-5.0TR		5	12.7	22	2.1	2.5	★	★	★	★
	27NR-6.0TR	27NL-6.0TR		6	15.875	27	2.3	2.7	★	★	★	★

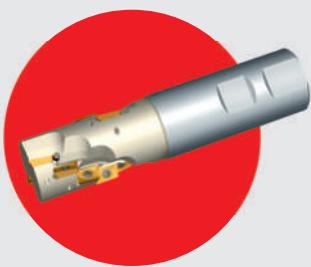
ACME (American trapezoidal 29° thread)



Type	Model Designation Right Hand	Model Designation Left Hand	Pitch(mm)	TPI	Size Dimensions(mm)				Recommended Grades?				
					d	L	X	f	WT4280		WT4260		
									R	L	R	L	
External Thread (US Trapezoidal 29° Thread)	11ER-16ACME	11EL-16ACME			16	6.35	11	1	1.1	★	★	★	★
	16ER-16ACME	16EL-16ACME			16	9.525	16	1	1.1	★	★	★	★
	16ER-14ACME	16EL-14ACME			14	9.525	16	1	1.2	★	★	★	★
	16ER-12ACME	16EL-12ACME			12	9.525	16	1.1	1.2	★	★	★	★
	16ER-10ACME	16EL-10ACME			10	9.525	16	1.3	1.4	★	★	★	★
	16ER-8ACME	16EL-8ACME			8	9.525	16	1.4	1.5	★	★	★	★
	16ER-6ACME	16EL-6ACME			6	9.525	16	1.7	1.9	★	★	★	★
	22ER-6ACME	22EL-6ACME			6	12.7	22	1.8	2.1	★	★	★	★
	22ER-5ACME	22EL-5ACME			5	12.7	22	2	2.3	★	★	★	★
	22ER-4ACME	22EL-4ACME			4	15.875	27	2.3	2.7	★	★	★	★
External Thread (US Trapezoidal 29° Thread)	11NR-16ACME	11NL-16ACME			16	6.35	11	1	1.1	★	★	★	★
	16NR-16ACME	16NL-16ACME			16	9.525	16	1	1.1	★	★	★	★
	16NR-14ACME	16NL-14ACME			14	9.525	16	1	1.2	★	★	★	★
	16NR-12ACME	16NL-12ACME			12	9.525	16	1.1	1.2	★	★	★	★
	16NR-10ACME	16NL-10ACME			10	9.525	16	1.3	1.4	★	★	★	★
	16NR-8ACME	16NL-8ACME			8	9.525	16	1.4	1.5	★	★	★	★
	16NR-6ACME	16NL-6ACME			6	9.525	16	1.7	1.9	★	★	★	★
	22NR-6ACME	22NL-6ACME			6	12.7	22	1.8	2.1	★	★	★	★
	22NR-5ACME	22NL-5ACME			5	12.7	22	2	2.3	★	★	★	★
	22NR-4ACME	22NL-4ACME			4	15.875	27	2.3	2.7	★	★	★	★

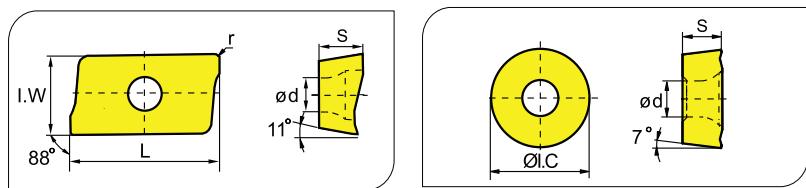


Milling



Indexable Milling Inserts

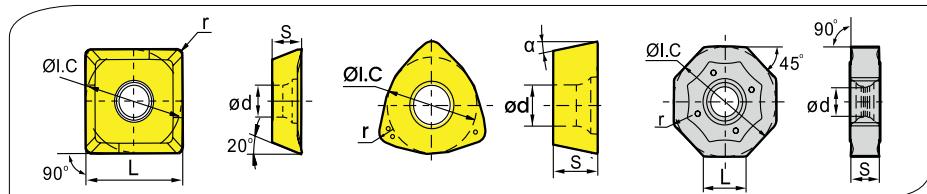
Blade Selection



Blade Shape	Model	Basic size (mm)					CVD Coating		PVD Coating				Metal Ceramic ?	Carbide			
		L	Øl.C	S	be	bs	WT8660	WT8680	WT8700	WT6210	WT6430	WT2030	WT4280	WT4270	WT2430	WT4260	WT2470
	APKT11T304-GM	12.24	6.5	3.6	2.8	0.4	○	★				☆	○	★			
	APKT11T308-GM	12.24	6.5	3.6	2.8	0.8	○	★				☆	○	★			
	APKT160408-GM	17.877	9.33	5.76	4.4	0.8	○	★				☆	○	★			
	APKT160408-AC	17.877	9.33	5.76	4.4	0.8									○	★	
	APMT1135PDER-H2	11.387	6.2	3.5	2.8	0.8						★	☆				
	APMT1604PDER-H2	17.247	9.25	4.76	4.4	0.8						★	☆				
	APMT1135PDER-M2	11.387	6.2	3.5	2.8	0.8						★	☆				
	APMT160408PDER-M2	17.26	9.24	4.76	4.4	0.8						★	☆				
	RPMT08T2MOE-JS		8	2.58	3.4							★	☆				
	RPMT10T3MOE-JS		10	3.97	4.4							★	☆				
	RPMT1204MOE-JS		12	4.76	4.34							★	☆				
	RDMT0802MOTN		8	2.38	3.4							★	☆				
	RDMT10T3MOTN		10	3.97	4.4							★	☆				
	RDMT1204MOTN		12	4.76	4.4							★	☆				
	RDMT1604MOTN		16	4.76	5.5							★	☆				
	RCMT1606MOTN		16	6.35	5.5							★	☆				
	RPGT10T3MO		10	3.97	4.1							★	☆				
	RPGT1204MO		12	4.76	4.4							★	☆				
	RPMW0802MO		8	2.38	3.4							★	☆				
	RPMW08T2MO		8	2.78	3.2							★	☆				
	RPMWI10T3MO		10	3.97	4.4							★	☆				
	RPMWI204MO		12	4.76	4.34							★	☆				
	RCGX0803MO-AC		8	3.18	3.4							★	☆				
	RCGX1003MO-AC		10	3.18	4							★	☆				
	RCGX1204MO-AC		12	4.76	4.4							★	☆				
	RCKTI10T3MO		10	3.97	4.4							★	☆				
	RCKTI204MO		12	4.76	4.4							★	☆				
	APMT160420PDER-DR	11.387	6.2	3.5	2.8	2.0	☆					★	★				
	APMT1135PDER-AM	11.387	6.2	3.5	2.8	0.8	☆					★	★				
	APMT1604PDER-AM	11.387	6.2	3.5	2.8	0.8	☆					★	★				

Indexable Milling Inserts

Blade Selection

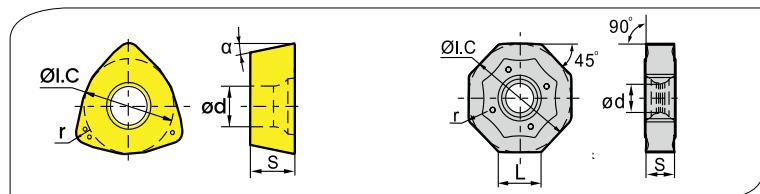


★ Main Grade Inventory
☆ Optional Grades in Stock
○ Made to order

Blade Shape	Model	Basic size (mm)					CVD Coating		PVD Coating				Metal Ceramic ?	Carbide				
		L	φI.C	S	be	bs	WT8060	WT8680	WT8700	WT6210	WT6430	WT2030	WT4280	WT2070	WT2430	WT2460	WT2470	WT2020
	SNMX160650A	16.7	16.7	6.9	5.46	5							☆	★				
	SNMX1205ANN	12.7	12.7	6.2	6	0.8							☆	★				
	SNMX1306ENTN-M	13.5	6.05	4.95	0.8								☆	★				13.5
	PNER110512R-CR	15.875	5.46	4.64	1.2		★											15.875
	ONHU050408-F57	12.7	4.76	4.4	0.8								☆	★				12.7
	ONMU090520ANTN	22	22	5.6	5.55	2.1							☆	★				
	SDMT120412-SM						1.2	☆				★	★					
	WPGT080620-ZSR						2	☆				★						
	WPGT080615-ZSR						1.5	☆				★	★					

Indexable Milling Inserts

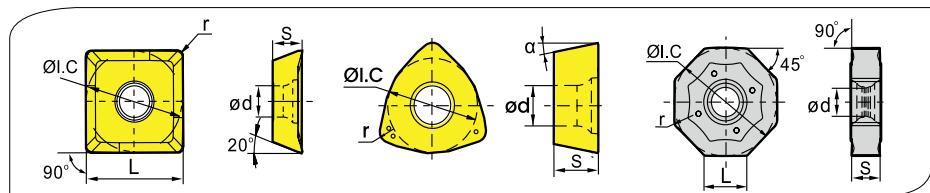
Blade Selection



Blade Shape	Model	Basic size (mm)					CVD Coating	PVD Coating					Metal Ceramic ?	Carbide				
		L	ØI.C	S	be	bs		WT8060	WT8680	WT8700	WT6210	WT6430	WT2030	WT4280	WT2070	WT2430	WT4260	WT2470
	XNHF070508-D6720.5	14.5	5.76	2.8	0.8								★	★				
	SNMX-120412	9.525	3.97	3.4	1.2								★	★	★			
	XNEX080604TR-M13	12.48	6.45	4.7	0.4								★	★	★			
	XNEX080608TR-M13	12.48	6.45	4.7	0.8								★	★	★			
	XNEX080612TR-M13	12.48	6.45	4.7	1.2								★	★	★			
	XNEX080616TR-M13	12.48	6.45	4.7	1.6								★	★	★			
	LOGU030310ER-GM2.05	6.2	4.91	3.45	1								★	★				
	HNMG0907ANSN-R	16.5	7.13	4.95	1								★	★	★			
		16.5	7.1	4.9	1								★	★	★			6.58
	ONHU060408-GF	15.875	4.76	4.4	0.83	★							★	★	★			
	ONHU08T508-GF8.37	20.2	5.77	5.3	0.83	★							★	★	★			
	ONHU060408-GM6.58	15.875	4.76	4.4	0.83	★							★	★	★			
	ONGU08T508-GM8.37	20.2	5.79	5.3	0.83	★							★	★	★			
	ONHU08T508-W	6.9	20.5	6	5.3	0.8	★						★	★	★			
	R390-11T308				0.4		★		★				★	★	★			
	R390-170408																	
	APHW060308				0.8	☆			★				★	★				
	SDMT120512-GM				1.2	☆			★				★	★				

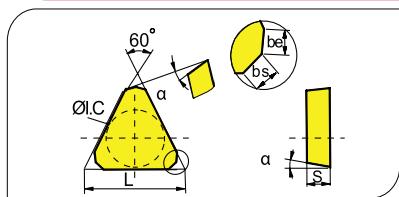
Indexable Milling Inserts

Blade Selection



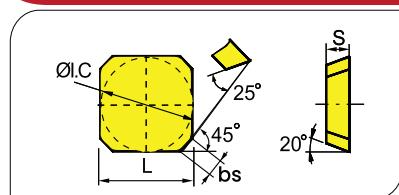
Indexable Milling Inserts

Blade Selection



Blade Shape	Model	Basic Size (mm)					CVD Coating			PVD Coating					Metal Ceramic	Carbide	
		L	φI.C	S	be	bs	WT8660	WT8680	WT8700	WT2030	WT4280	WT2070	WT2430	WT4260	WT2470		
	TPKNI1603PDFR 16.5	9.525	3.175	1.4	0.7		★							★	○	○	★
	TPKNI1603PDFL 16.5	9.525	3.175	1.4	0.7		★							★	○	○	★
	TPKNI1603PDR 16.5	9.525	3.175	1.4	0.7		★							★	○	○	★
	TPKNI1603PDL 16.5	9.525	3.175	1.4	0.7		★							★	○	○	★
	TPKN2204PDFR 22	12.7	4.76	1.4	0.7		★							★	○	○	★
	TPKN2204PDFL 22	12.7	4.76	1.4	0.7		★							★	○	○	★
	TPKN2204PDR 22	12.7	4.76	1.4	0.7		★							★	○	○	★
	TPKN2204PDL 22	12.7	4.76	1.4	0.7		★							★	○	○	★
	TPKN2204PDTR 22	12.7	4.76	1.4	0.7		★							★	○	○	★
	TPKN2204PDTL 22	12.7	4.76	1.4	0.7		★							★	○	○	★

Blade Selection

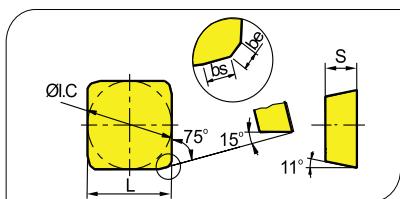


★ Main Grade Inventory
 ☆ Optional Grades in Stock
 ○ Made to order

Blade Shape	Model	Basic size (mm)					CVD Coating			PVD Coating					Metal Ceramic	Carbide	
		L	φI.C	S	be	bs	WT8660	WT8680	WT8700	WT2030	WT4280	WT2070	WT2430	WT4260	WT2470		
	SEE(K)NI203AFTN 12.7	12.7	3.18		1.8		☆				☆	★					☆
	SEE(K)NI203AFFN 12.7	12.7	3.18		1.8		☆				☆	★					☆
	SEE(K)NI203AFN 12.7	12.7	3.18		1.8		☆			☆	★						☆
	SEE(K)NI203AFTN 12.7	12.7	3.18		1.8		☆			☆	★						☆
	SEE(K)NI504AFTN15.875	15.875	4.76		1.6		☆				☆	★					☆
	SEE(K)NI504AFFN15.875	15.875	4.76		1.6		☆				☆	★					☆
	SEE(K)NI504AFN 15.875	15.875	4.76		1.6		☆			☆	★						☆
	SEE(K)NI504AFTN15.875	15.875	4.76		1.6		☆			☆	★						☆

Indexable Milling Inserts

Blade Selection



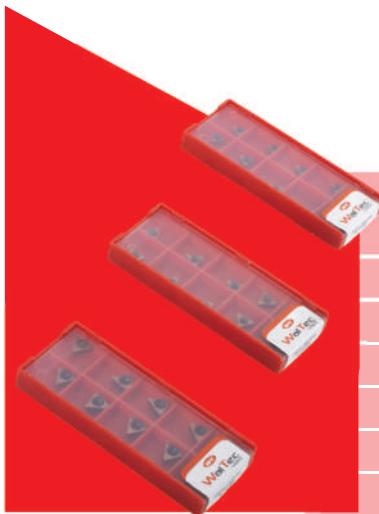
Blade Shape	Model	Basic Size (mm)					CVD Coating			PVD Coating					Metal Ceramic ?	Carbide
		L	φI.C	S	be	bs	WT8660	WT8680	WT8700	WT230	WT4280	WT2070	WT2430	WT4260	WT2470	
	SPKNI1504EDER	15.875	15.875	4.76	1.00	1.4	★							☆	○	☆
	SPKNI1504EDEL	15.875	15.875	4.76	1.00	1.4	★							☆	○	☆
	SPKNI1504EDFR	15.875	15.875	4.76	1.00	1.4	★							☆	○	☆
	SPKNI1504EDFL	15.875	15.875	4.76	1.00	1.4	★							☆	○	☆
	SPKNI1504EDSKR	15.875	15.875	4.76	1.00	1.4	★						○	☆	○	☆
	SPKNI1504EDSKL	15.875	15.875	4.76	1.00	1.4	★					○	☆	○	○	☆
	SPKNI1504EDTKR	15.875	15.875	4.76	1.00	1.4	★					○	☆	○	○	☆
	SPKNI1504EDTKL	15.875	15.875	4.76	1.00	1.4	★					○	☆	○	○	☆
	SPKNI1504EDS32R	15.875	15.875	4.76	1.00	1.4	★					○	☆	○	○	☆
	SPKNI1504EDS32L	15.875	15.875	4.76	1.00	1.4	★					○	☆	○	○	☆
	SPKNI1504EDT32R	15.875	15.875	4.76	1.00	1.4	★					○	☆	○	○	☆
	SPKNI1504EDT32L	15.875	15.875	4.76	1.00	1.4	★					○	☆	○	○	☆
	SPKNI203EDER	12.7	12.7	3.18	1.00	1.4	★						☆		○	☆
	SPKNI203EDEL	12.7	12.7	3.18	1.00	1.4	★						☆		○	☆
	SPKNI203EDFR	12.7	12.7	3.18	1.00	1.4	★						☆		○	☆
	SPKNI203EDFL	12.7	12.7	3.18	1.00	1.4	★						☆		○	☆
	SPKNI203EDSKR	12.7	12.7	3.18	1.00	1.4	★						☆		○	☆
	SPKNI203EDSKL	12.7	12.7	3.18	1.00	1.4	★						☆		○	☆
	SPKNI203EDTKR	12.7	12.7	3.18	1.00	1.4	★						☆		○	☆
	SPKNI203EDTKL	12.7	12.7	3.18	1.00	1.4	★						☆		○	☆
	SPKNI203EDS31R	12.7	12.7	3.18	1.00	1.4	★						☆		○	☆
	SPKNI203EDS31L	12.7	12.7	3.18	1.00	1.4	★						☆		○	☆
	SPKNI203EDT31R	12.7	12.7	3.18	1.00	1.4	★						☆		○	☆
	SPKNI203EDT31L	12.7	12.7	3.18	1.00	1.4	★						☆		○	☆

Boring Inserts

CCGT-030102-L
CCGT-030104-L
CCGT-040102-L
CCGT-040104-L
WBGT-060102-L
WBGT-060104-L



Boring Inserts



TPGT-060102-L
TPGT-060104-L
TPGH-080202-L
TPGH-080204-L
TPGH-090202-L
TPGH-090204-L
TPGH-110302-L
TPGH-110304-L



Indexable U drill Inserts

DRILLING

- SPMG - 040204 -DG
- SPMG - 050204 -DG
- SPMG - 060204 -DG
- SPMG - 07T308 -DG
- SPMG - 090408 -DG
- SPMG - 110408-DG
- SPMG - 140512 -DG



- WCMX - 030208
- WCMX - 040208
- WCMX - 050308
- WCMX - 06T308
- WCMX - 080412



A TURNING

Parting and grooving tools

Parting and Grooving inserts

MGMN- 1.5	MRMN- 200
MGMN- 2.0	MRMN- 300
MGMN- 2.5	MRMN- 400
MGMN- 3.0	MRMN- 500
MGMN- 4.0	MRMN- 600
MGMN- 5.0	
MGMN- 6.0	



TDT - 3
TDT - 4
TDT - 5
TDT - 6

TDC - 2
TDC - 3
TDC - 4
TDC - 5
TDC - 6



A TURNING

TDT 2- 1.0-RU

TDT 3- 1.5-RU

TDT 4- 2.0-RU

TDT 5- 2.5-RU

TDT 6- 3.0-RU



Parting and grooving tools



TDJ-2

TDJ-3

TDJ-4



TDXU- 2

TDXU- 3

TDXU- 4

Parting and Grooving Inserts

PENTA - 24N 0.8 1.0 1.1 1.2 1.3 1.4

PENTA - 24N 1.5 1.6 1.7 1.8 1.9

PENTA - 24N 2.0 2.1 2.2 2.3 2.4

PENTA - 24N 2.5 2.6 2.7 2.8 2.9

PENTA - 24N 3.0



11IR-ER CUT - 1.0 1.1 1.2 1.3 1.4 1.5

1.6 1.7 1.8 1.9 2.0

16IR-ER CUT - 1.0 1.1 1.2 1.3 1.4 1.5

-1.6 1.7 1.8 1.9 2.0

-2.1 2.2 2.3 2.4 2.5

- 3.0 3.5

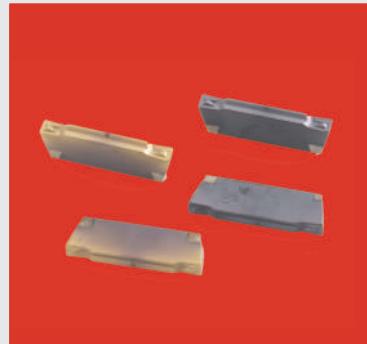
6GR - 1.0, 1.5, 2.0.
7GR - 1.0, 1.5, 2.0.
8GR - 1.0, 1.5, 2.0, 2.5, 3.0
9GR - 1.0, 1.5, 2.0, 2.5, 3.0





A TURNING

Parting and Grooving Inserts

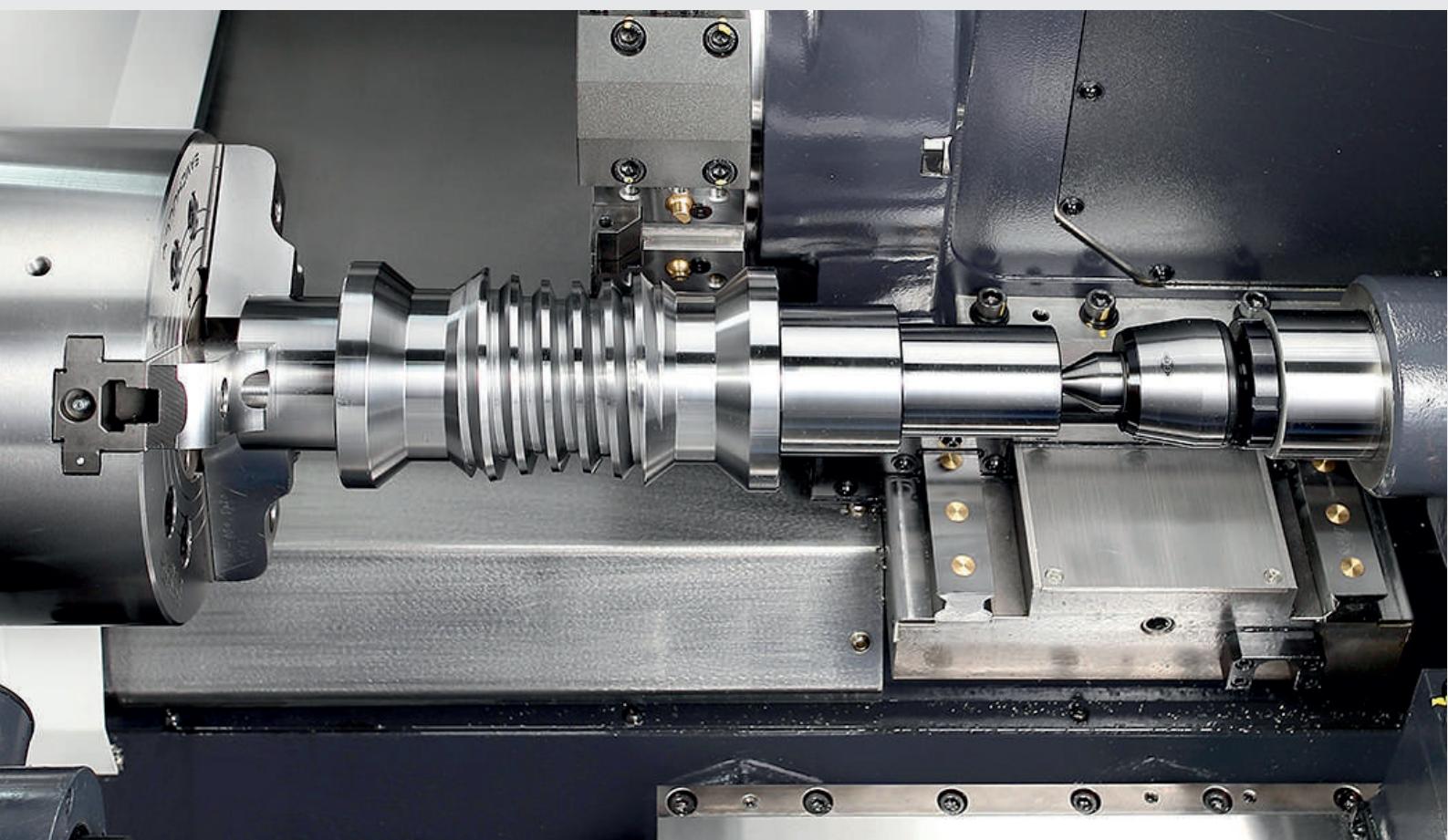




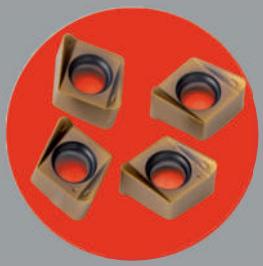
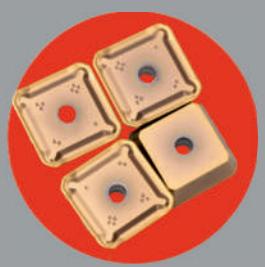
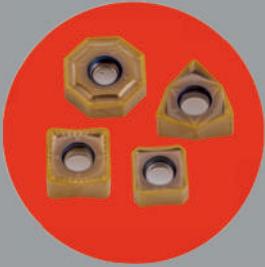
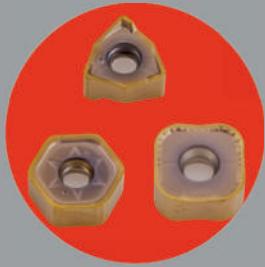
Precision in Every Particle, Excellence in Every Product


WalTec
CARBIDE





Indexable Milling Inserts






WalTec
CARBIDE

www.walteccarbide.com