

ISO^ETURN

Tungaloy Report No. 426-G

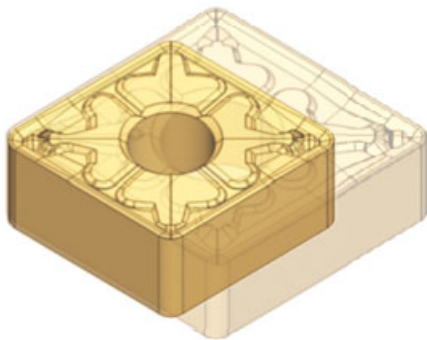
Cartridge Set allowing the use of ISO-EcoTurn insert with **no need to swap** the toolholder



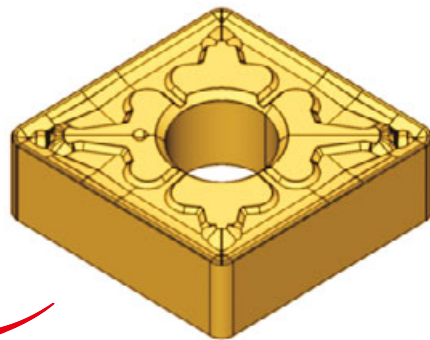




ISO^{co}TURN



ISO^{co}TURN
CNMG090408E type



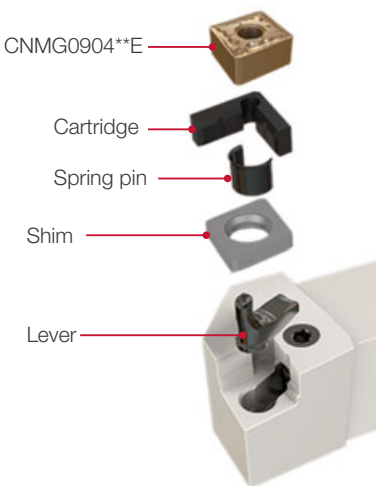
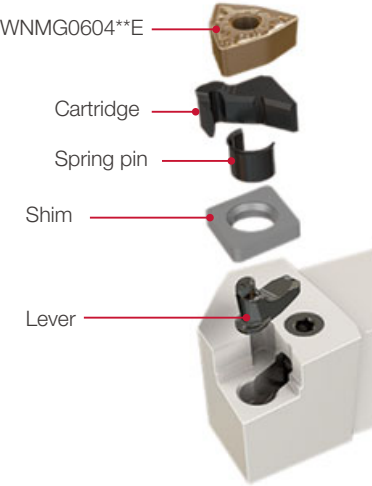
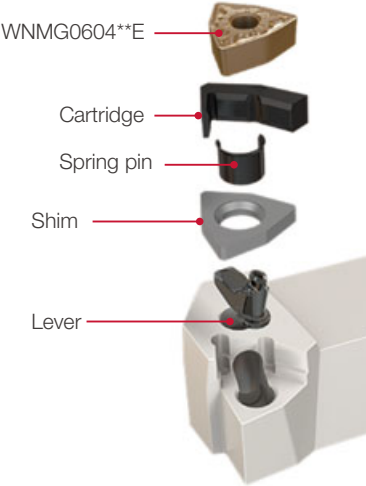
Regular size inserts
CNMG120408 type



Cost effective:
Identical cutting performance, only smaller

ISO-EcoTurn Small size inserts, for an economical advantage

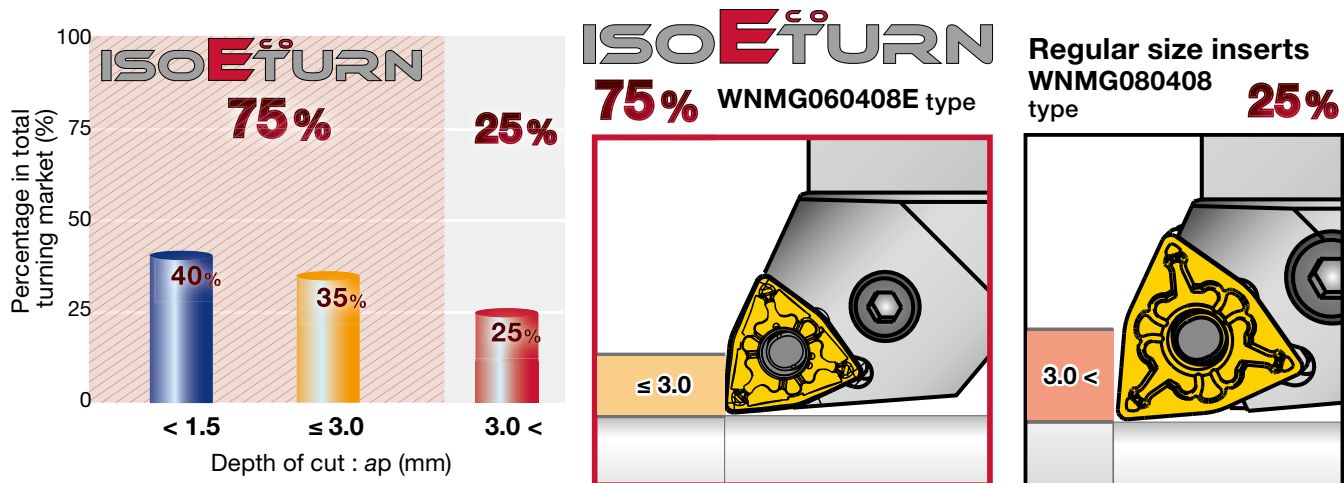
Cartridge Set allows more flexible use of ISO-EcoTurn inserts and the ability to use them to the full potential of cost efficiency and productivity

Applicable combination	CNMG1204... ↓ ISO-EcoTurn CNMG0904**E	CNMG1204... ↓ ISO-EcoTurn WNMG0604**E	WNMG0804... ↓ ISO-EcoTurn WNMG0604**E
Cartridge Set + ISO-EcoTurn Insert	 New	 New	 New
Detail of Cartridge Set			
Cartridge Set	AD-CL-4/3-SET AD-CL-4/3-SET-S	AD-CL-4/3-W-SET	AD-WL-4/3-SET
Applicable Tool holder	PCLNR/L**12	PCLNR/L**12	PWLNRL/L**08

Note: How to install the cartridge set page 11. Cartridge set cannot be assembled on Tungaloy's P-style holders.
This product might correspond to the Export Trade Control Order.
When you export this product, you might need apply for export licenses to the authorities in your country.

Over 75%* of the turning market only uses a depth of cut at or less than 3 mm

* Based on Tungaloy market research.



Chip control

ISO-EcoTURN inserts incorporate an identical chipbreaker geometry as regular size inserts providing the same chip removal at a depth of cut up to 3 mm.

Workpiece : S45C / C45
Cutting speed : $V_c = 200$ m/min
Coolant : Wet

ISO-EcoTURN
CNMG090408E-TM

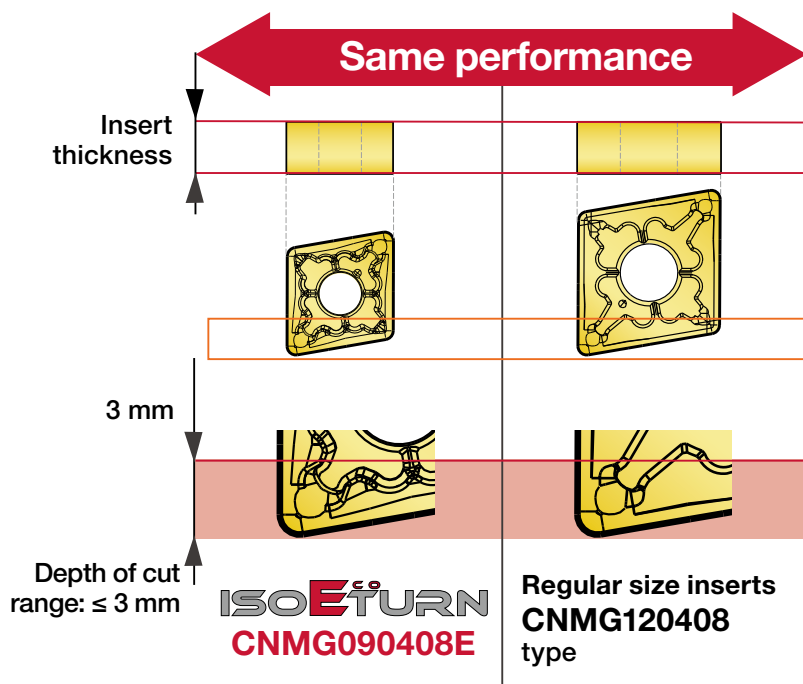
Depth of cut : ap (mm)	3.0					
	2.0					
	1.5					
	1.0					
	0.5					
Condition		0.10	0.15	0.20	0.30	0.40
		Feed : f (mm/rev)				

Regular size inserts
CNMG120408-TM

Depth of cut : ap (mm)	3.0					
	2.0					
	1.5					
	1.0					
	0.5					
Condition		0.10	0.15	0.20	0.30	0.40
		Feed : f (mm/rev)				

Uncompromising insert performance

- Comparison of ISO-EcoTurn and regular size inserts

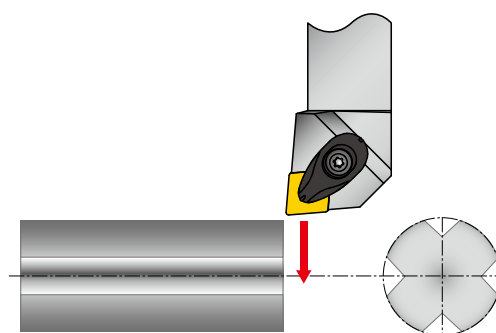
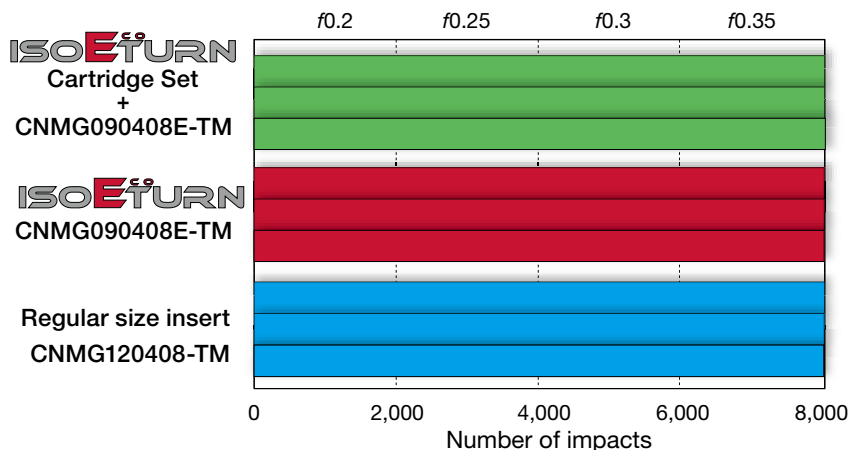


ISO-EcoTurn inserts feature the identical thickness and chipbreaker geometry as Tungaloy's regular size inserts.

These properties provide cutting performance equal to that of the regular size inserts, including chip control at a depth of cut up to 3 mm.

Fracture resistance

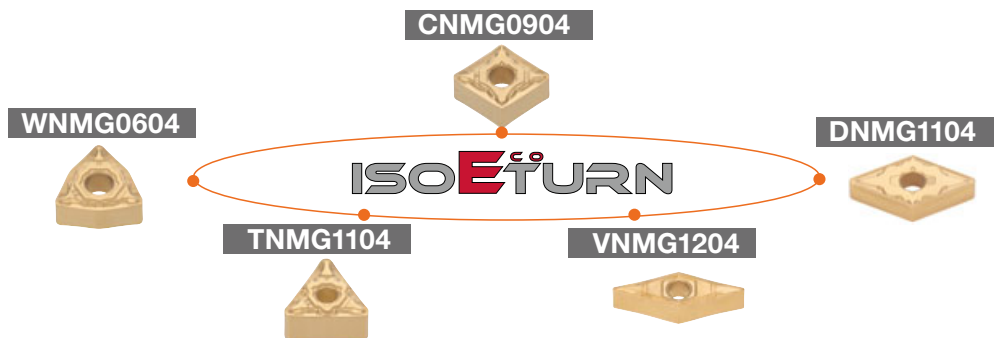
- Even used Cartridge Set ISO-Eco Turn insert preserves the thickness of standard inserts in order to maintain fracture resistance.



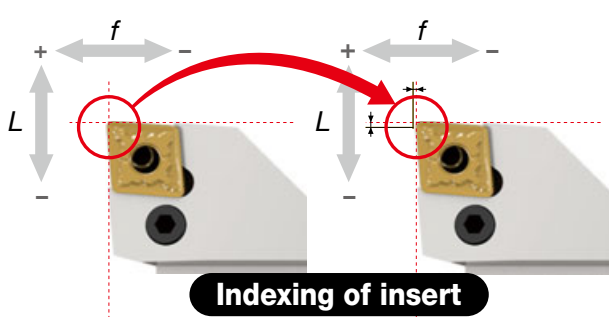
Workpiece : S45C / C45
 Cutting speed : $V_c = 150$ m/min
 Feed : $f = 0.2 - 0.35$ mm/rev
 Depth of cut : $a_p = 3.0$ mm
 Work process : Face turning (Interrupted)
 Coolant : Wet

A complete tooling solution now available with ISO-EcoTurn

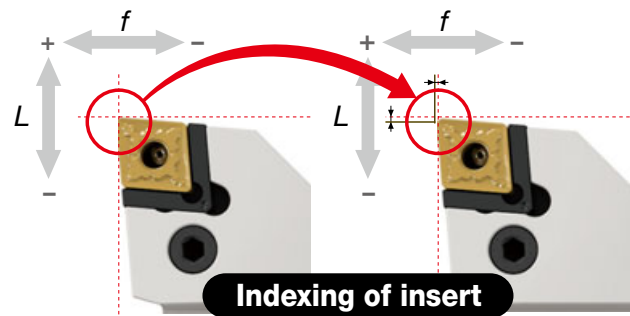
For a wide range of turning applications.



Indexing accuracy



Type A



Type B

Type	Tool holder	Insert	Cartridge Set	f direction (μm)	L direction (μm)
A: ISO ETURN	PCLNR**09	CNMG090412E-TM	-	1	2
B: ISO ETURN + Cartridge Set	PCLNR**12	CNMG090412E-TM	AD-CL-4/3-SET	1.7	2.5
C: Competitor P-type tool holder	PCLNR**12	CNMG120412-TM	-	2	4

GRADES & CHIPBREAKERS

T9200 SERIES (CVD)

PREMIUMTEC

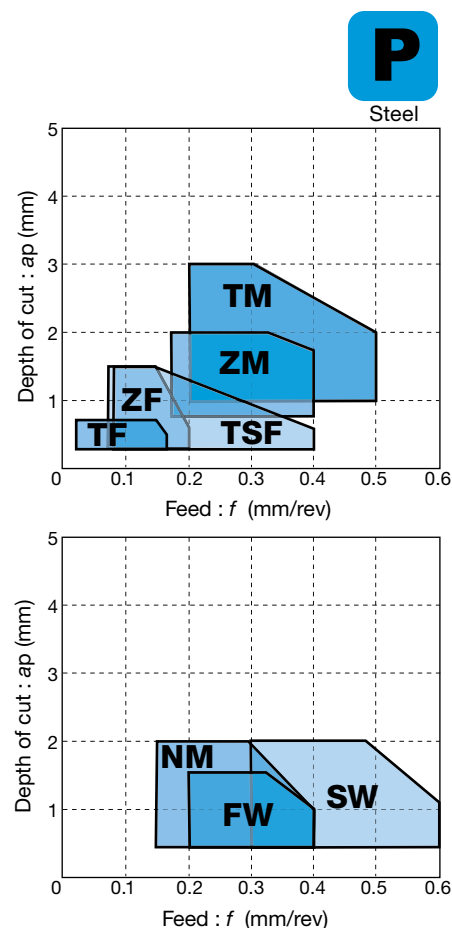
- T9205** : Good wear resistance
T9215 : First choice for machining steel
T9225 : Grade with a good balance of wear resistance and fracture toughness

NS9530 & GT9530

(Cermet) (Coated cermet)

PREMIUMTEC

- NS9530** : Suitable for finishing to medium cutting of steel
GT9530 : Ideal for finishing with high surface quality



AH600 SERIES (PVD)

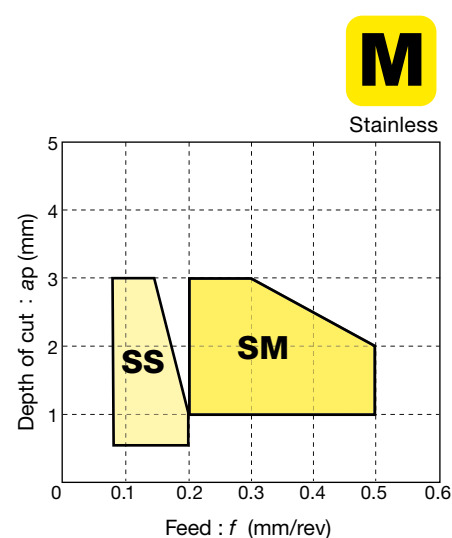
PREMIUMTEC

- AH630** : Good resistance to wear and fracture in machining stainless steel at low to medium cutting speed
AH645 : High fracture resistance in machining stainless steel

T6100 SERIES (CVD)

PREMIUMTEC

- T6120** : Good wear resistance in continuous cutting at high speed
T6130 : High wear resistance in cutting at medium to high speed



GRADES & CHIPBREAKERS

T5100 SERIES (CVD)

PREMIUMTEC
TUNGALOY

T5115 : Stable machining in a wide range of applications from continuous to interrupted cutting

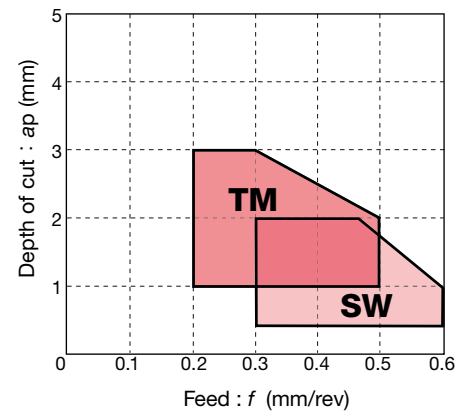
T515 (CVD)

PREMIUMTEC
TUNGALOY

T515 : Good wear resistance even in high speed machining



Cast Iron



AH8000 SERIES (PVD)

PREMIUMTEC
TUNGALOY

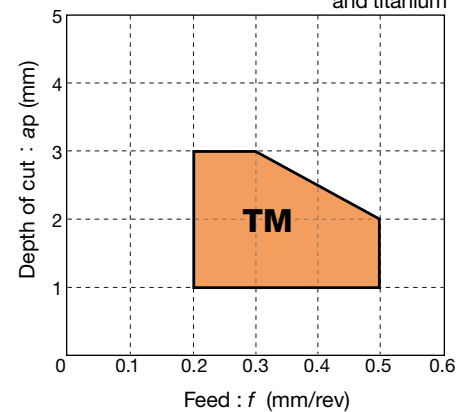
AH8015 : Strong resistance to wear and built up edge



Stainless



Superalloys and titanium



AH120 (PVD)

PREMIUMTEC
TUNGALOY

AH120 : Suitable for machining steel, stainless steel, cast iron and heat resistant alloys under general cutting conditions



Steel



Stainless



Cast Iron



Superalloys and titanium

AD-*L-4/3-*SET

Cartridge Set for ISO-Eco Turn insert

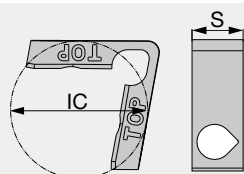


Fig.1 AD-CL-4/3-(-S) CartridgeSet

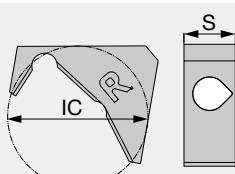


Fig.2 AD-CL-4/3-W-CartridgeSet

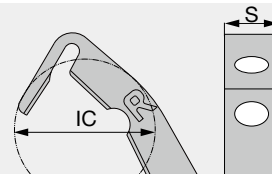


Fig.3 AD-WL-4/3-CartridgeSet

Designation	IC	S	Insert	Fig.
AD-CL-4/3-SET	12.7	4.72	CNM**0904**E	1
AD-CL-4/3-SET-S	12.7	4.72	CNM**0904**E	1
AD-CL-4/3-W-SET	12.7	5	WNM**0604**E	2
AD-WL-4/3-SET	12.7	5	WNM**0604**E	3

Cartridge set cannot be assembled on Tungaloy's P-style holders.

SPARE PARTS



Designation	Cartridge	Lever	Wrench
AD-CL-4/3-SET	AD-CL-4/3	LR4/3	HW3.0/5
AD-CL-4/3-SET-S	AD-CL-4/3	LR4/3-T	HW3.0/5
AD-WL-4/3-SET	AD-WL-4/3	LR4/3	HW3.0/5
AD-CL-4/3-W-SET	AD-CL-4/3-W	LR4/3	HW3.0/5



Shim	Spring pin
TCN423	-
TWN423	-
LSC42-ECO D30	LSP4

Shim and spring are not included

How to install the Cartridge Set

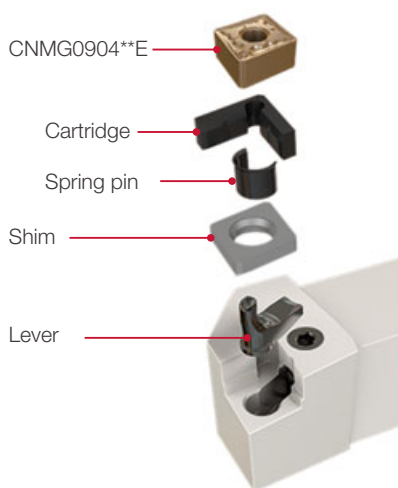
① Remove the Shim sheet and Lever from the using toolholder (P type : Lever lock style).

② Install the Lever → Shim sheet → Spring Pin → Cartridge.

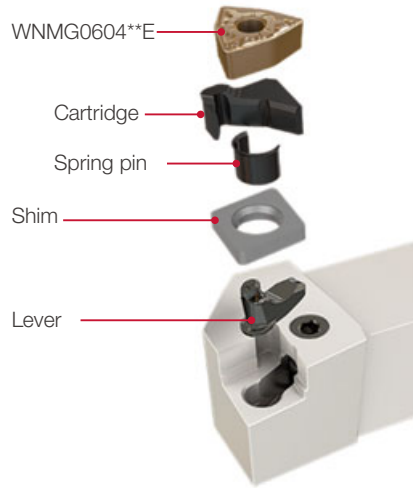
Note: Use the key for easy assembly of the spring pin.

③ Offset the cutting edge position.

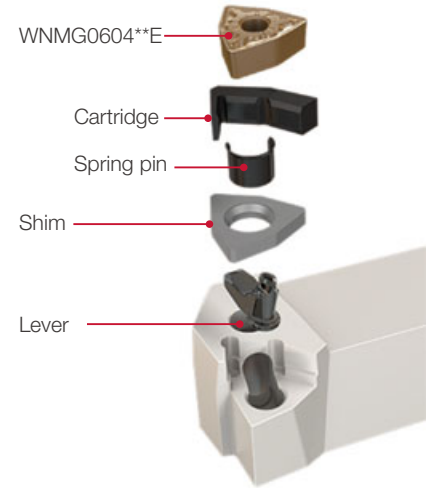
④ OK to machining.



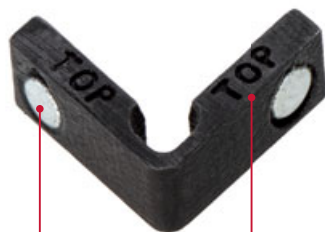
Cartridge for
CNMG12 ⇒ Eco CNMG09



Cartridge for
CNMG12 ⇒ Eco WNMG06

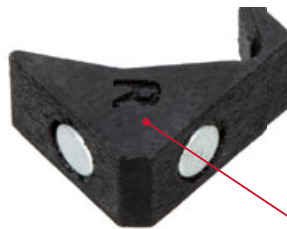


Cartridge for
WNMG08 ⇒ Eco WNMG06



Magnet

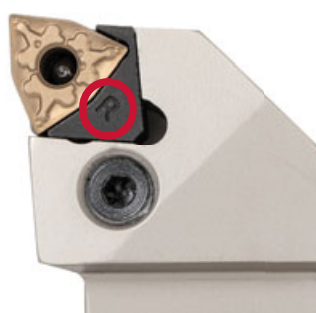
ID marking



Make sure to place the "R" side face up when using the right-hand insert



◆ Ensures TOP side is placed face up for both right- and left-hand inserts



Note: Cartridge set cannot be assembled on Tungaloy's P-style holders.

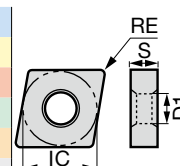
This product might correspond to the Export Trade Control Order.

When you export this product, you might need apply for export licenses to the authorities in your country.

- : Continuous cutting
- ◐ : Light interrupted cutting
- ⊕ : Heavy interrupted cutting



**Rhombic, 80°
with hole**

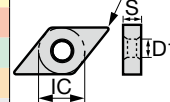
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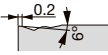
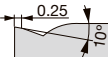
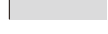
●: Line up
▲: To be discontinued

- : Continuous cutting
- ◐ : Light interrupted cutting
- ⌘ : Heavy interrupted cutting



P	Steel
M	Stainless
K	Cast iron
N	Non-ferrous
S	Superalloys
H	Hard materials



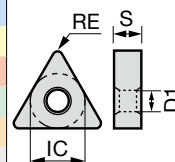
Application	Chipbreaker		Designation	Coated												Coated cermet		Cermet		Dimension (mm)						
				T9205	T9215	T9225	T9105	T9115	T9125	T6120	T6130	AH630	AH645	AH120	AH8015	T515	T5115	GT9530	AT9530		NS9530			RE	IC	S
Finishing	SS	DNMG110404E-SS									●	●											0.4	9.525	4.76	3.81
		DNMG110408E-SS									●	●											0.8	9.525	4.76	3.81
	 																									
Medium cutting	TM	DNMG110404E-TM		●	●		▲	▲						●	●								0.4	9.525	4.76	3.81
		DNMG110408E-TM		●	●		▲	▲						●	●								0.8	9.525	4.76	3.81
	 													●	●								1.2	9.525	4.76	3.81
Finishing to medium cutting	ZM	DNMG110408E-ZM		●	●		▲	▲															0.8	9.525	4.76	3.81
	 																									
Medium cutting	SM	DNMG110404E-SM							●	●	●												0.4	9.525	4.76	3.81
	 								●	●	●												0.8	9.525	4.76	3.81
Finishing to medium cutting	-	DNMA110404E												●									0.4	9.525	4.76	3.81
		DNMA110408E												●									0.8	9.525	4.76	3.81
	 													●									1.2	9.525	4.76	3.81

- : New
- : Line up
- ▲: To be discontinued

- : Continuous cutting
- ◐ : Light interrupted cutting
- ⌘ : Heavy interrupted cutting



**Triangular, 60°
with hole**



Application	Chipbreaker	Designation	Coated												Coated cermet		Cermet		Dimension (mm)			
			T9205	T9215	T9225	T9105	T9115	T9125	T6120	T6130	AH630	AH645	AH120	AH8015	T515	T5115	GT9530	AT9530	NS9530	RE	IC	S
Finishing	SS	TNMG110404E-SS								●	●								0.4	6.35	4.76	2.26
		TNMG110408E-SS								●	●								0.8	6.35	4.76	2.26
																						
Medium cutting	TM	TNMG110404E-TM		●	●		▲	▲											0.4	6.35	4.76	2.26
		TNMG110408E-TM		●	●		▲	▲											0.8	6.35	4.76	2.26
		TNMG110412E-TM		●	●		▲	▲											1.2	6.35	4.76	2.26
	SM	TNMG110404E-SM						●	●	●									0.4	6.35	4.76	2.26
Finishing to medium cutting		TNMG110408E-SM						●	●	●									0.8	6.35	4.76	2.26
																						
	-	TNMA110404E											●						0.4	6.35	4.76	2.26
		TNMA110408E											●						0.8	6.35	4.76	2.26
		TNMA110412E											●						1.2	6.35	4.76	2.26

●: Line up
▲: To be discontinued

Insert

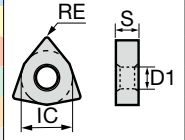
NEGATIVE TYPE

- : Continuous cutting
- ◐ : Light interrupted cutting
- ✱ : Heavy interrupted cutting

WN



**Trigon, 80°
with hole**

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* Please contact our sales representative for your inquiries about the program adjustment when using SW/FW for machining of radius shape or taper machining.

●: New
●: Line up
▲: To be discontinued

Insert NEGATIVE TYPE

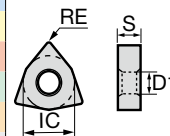
● : Continuous cutting
● : Light interrupted cutting
✱ : Heavy interrupted cutting

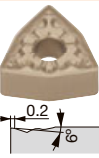
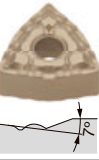
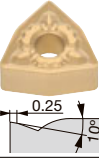
WN



Trigon, 80°
with hole

P	Steel
M	Stainless
K	Cast iron
N	Non-ferrous
S	Superalloys
H	Hard materials



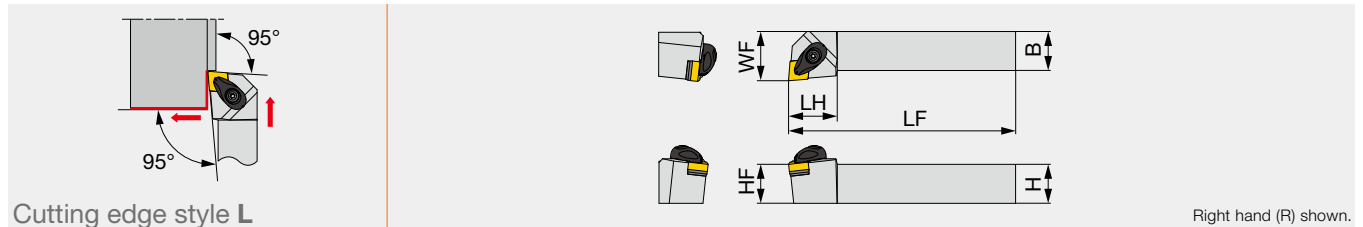
Application	Chipbreaker Designation		Coated												Coated cermet		Cermet		Dimension (mm)					
			T9205	T9215	T9225	T9105	T9115	T9125	T6120	T6130	AH630	AH645	AH120	AH8015	T515	T5115	GT9530	AT9530	NS9530	RE	IC	S	D1	
Finishing		SS WNMG060404E-SS									●	●								0.4	9.525	4.76	3.81	
		WNMG060408E-SS									●	●								0.8	9.525	4.76	3.81	
		WNMG060412E-SS									●	●								1.2	9.525	4.76	3.81	
Medium cutting		TM WNMG060404E-TM		●	●		▲	▲					●	●						0.4	9.525	4.76	3.81	
		WNMG060408E-TM		●	●		▲	▲					●	●						0.8	9.525	4.76	3.81	
		WNMG060412E-TM		●	●		▲	▲					●	●						1.2	9.525	4.76	3.81	
Finishing to medium cutting		NM WNMG060412E-NM			●			▲												1.2	9.525	4.76	3.81	
		ZM WNMG060408E-ZM		●	●		▲	▲													0.8	9.525	4.76	3.81
Medium cutting		SM WNMG060404E-SM							●	●	●									0.4	9.525	4.76	3.81	
		WNMG060408E-SM								●	●	●								0.8	9.525	4.76	3.81	
		WNMG060412E-SM								●	●	●								1.2	9.525	4.76	3.81	
Finishing to medium cutting		- WNMA060404E												●						0.4	9.525	4.76	3.81	
		WNMA060408E												●						0.8	9.525	4.76	3.81	
		WNMA060412E												●						1.2	9.525	4.76	3.81	
		WNMA060416E												●						1.6	9.525	4.76	3.81	

● : New
● : Line up
▲ : To be discontinued

External toolholders

ACLNR/L-Eco

Double-clamp toolholder with 95° approach angle, for negative 80° rhombic inserts



Designation	H	B	LF	LH	HF	WF	RE**	Insert	Torque*
ACLNR/L2020K0904-A	20	20	125	25	20	25	0.8	CN**0904...	3
ACLNR/L2525M0904-A	25	25	150	25	25	32	0.8	CN**0904...	3

*Torque: Recommended torque (N·m) for clamping

**RE: The holder measurements are true with this insert radius

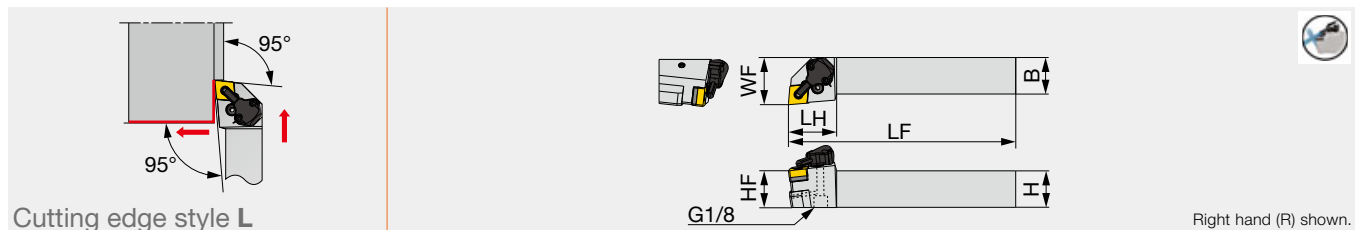
SPARE PARTS

Designation	Clamp	Clamp screw	Spring	Spring pin	Shim	Shim screw	Wrench
ACLNR/L**0904-A	ACP3S-E	ACS-5W	BP-7	SP-2.5	ASC322	CSTB-3.5	T-15F

TUNG T^{URN}JET

PCLNR/L-CHP-Eco

Lever-lock toolholder with 95° approach angle, for negative 80° rhombic inserts, with high pressure coolant capability



Designation	H	B	LF	LH	HF	WF	RE**	Insert	Torque*
PCLNR/L2020K0904-CHP	20	20	125	33	20	32	0.8	CN**0904...	2
PCLNR/L2525M0904-CHP	25	25	150	33	25	32	0.8	CN**0904...	2

*Torque: Recommended torque (N·m) for clamping

**RE: The holder measurements are true with this insert radius

SPARE PARTS

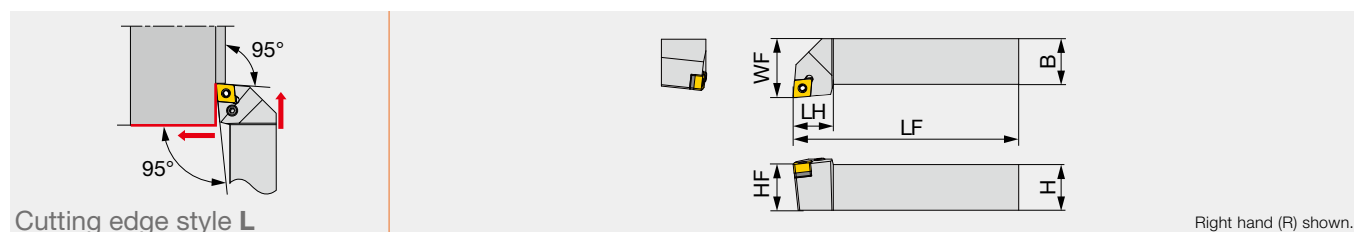
Designation	Shim	Clamping screw	Wrench 1	Spring pin	Lever
PCLNR/L**0904-CHP	LSC317	LCS3	P-2.5	LSP3	LCL33

SPARE PARTS

Designation	Coolant unit	Mounting screw	Wrench 2	O-ring	Coolant screw	Wrench 3
PCLNR/L**0904-CHP	CU-CW-CHP	SRM3	T-8F	OR6.4X0.9N	SRM4X4TL360	P-2

PCLNR/L-Eco

Lever-lock toolholder with 95° approach angle, for negative 80° rhombic inserts



Designation	H	B	LF	LH	HF	WF	RE**	Insert	Torque*
PCLNR/L2020K0904	20	20	125	20	20	25	0.8	CN**0904...	2
PCLNR/L2525M0904	25	25	150	25	25	32	0.8	CN**0904...	2

*Torque: Recommended torque (N·m) for clamping

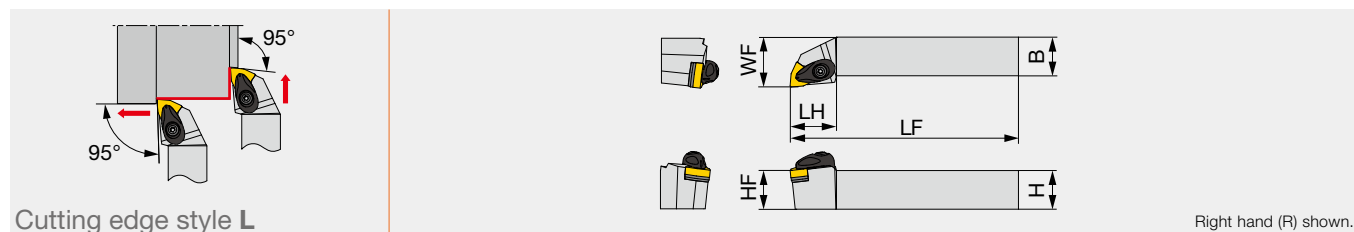
**RE: The holder measurements are true with this insert radius

SPARE PARTS

Designation	Shim	Clamping screw	Wrench	Spring pin	Lever
PCLNR/L**0904	LSC317	LCS3	P-2.5	LSP3	LCL33

AWLNR/L-Eco

Double-clamp toolholder with 95° approach angle, for negative 80° trigon inserts



Designation	H	B	LF	LH	HF	WF	RE**	Insert	Torque*
AWLNR/L2020K0604-A	20	20	125	27	20	25	0.8	WN**0604...	3
AWLNR/L2525M0604-A	25	25	150	27	25	32	0.8	WN**0604...	3

*Torque: Recommended torque (N·m) for clamping

**RE: The holder measurements are true with this insert radius

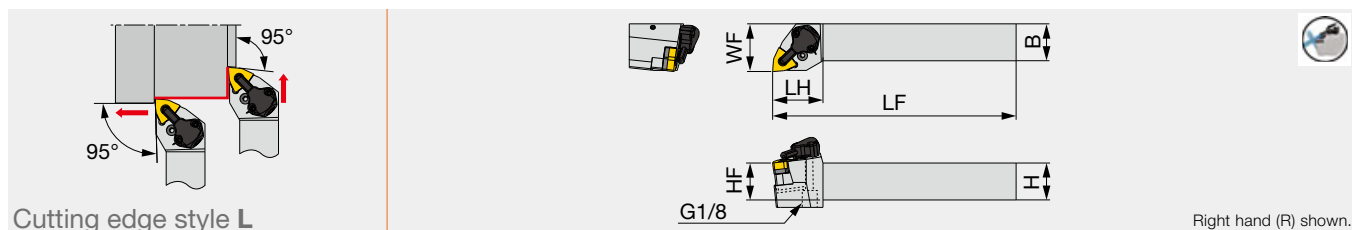
SPARE PARTS

Designation	Clamp	Clamp screw	Spring	Spring pin	Shim	Shim screw	Wrench
AWLNR/L**0604-A	ACP3S-E	ACS-5W	BP-7	SP-2.5	ASW322	CSTB-3.5	T-15F

TUNG T^{URN}JET

PWLNLR/L-CHP

Lever-lock toolholder with 95° approach angle, for negative 80° trigon inserts, with high pressure coolant capability



Designation	H	B	LF	LH	HF	WF	RE**	Insert	Torque*
PWLNLR/L2020K0604-CHP	20	20	125	34	20	32	0.8	WN**0604...	2
PWLNLR/L2525M0604-CHP	25	25	150	34	25	32	0.8	WN**0604...	2

*Torque: Recommended torque (N-m) for clamping

**RE: The holder measurements are true with this insert radius

SPARE PARTS

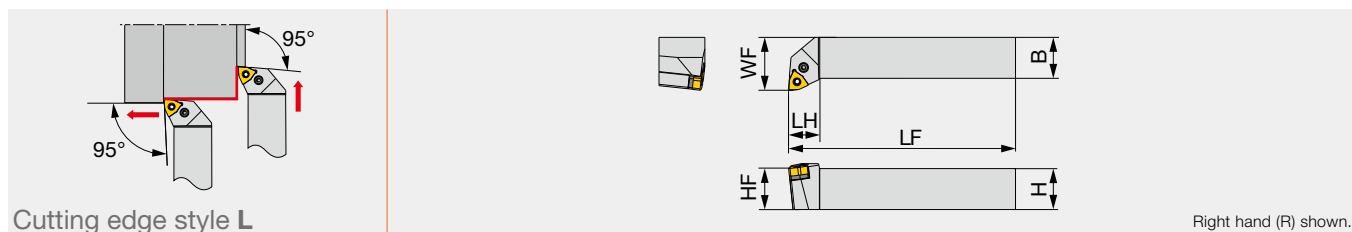
Designation	Shim	Clamping screw	Wrench 1	Spring pin	Lever
PWLNLR/L**0604-CHP	LSW312	LCS3	P-2.5	LSP3	LCL3

SPARE PARTS

Designation	Coolant unit	Mounting screw	Wrench 2	O-ring	Coolant screw	Wrench 3
PWLNLR/L**0604-CHP	CU-CW-CHP	SRM3	T-8F	OR6.4X0.9N	SRM4X4TL360	P-2

PWLNLR/L-Eco

Lever-lock toolholder with 95° approach angle, for negative 80° trigon inserts



Designation	H	B	LF	LH	HF	WF	RE**	Insert	Torque*
PWLNLR/L2020K0604	20	20	125	15	20	25	0.8	WN**0604...	2
PWLNLR/L2525M0604	25	25	150	19	25	32	0.8	WN**0604...	2

*Torque: Recommended torque (N-m) for clamping

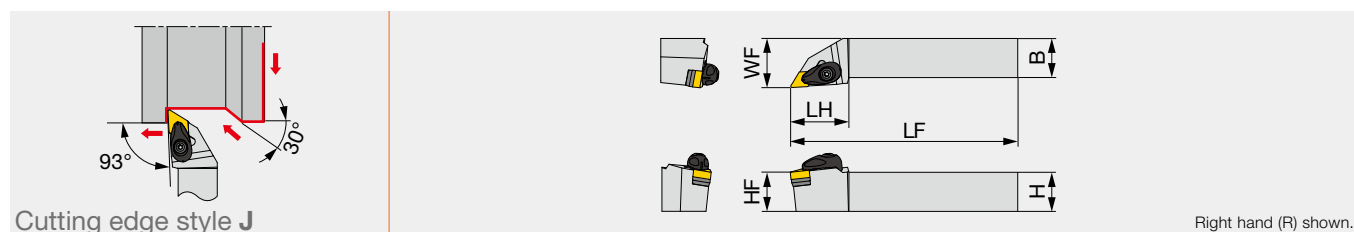
**RE: The holder measurements are true with this insert radius

SPARE PARTS

Designation	Shim	Clamping screw	Wrench	Spring pin	Lever
PWLNLR/L**0604	LSW312	LCS3	P-2.5	LSP3	LCL3

ADJNR/L-Eco

Double-clamp toolholder with 93° approach angle, for negative 55° rhombic inserts



Designation	H	B	LF	LH	HF	WF	RE**	Insert	Torque*
ADJNR/L2020K1104-A	20	20	125	30	20	25	0.8	DN**1104...	3
ADJNR/L2525M1104-A	25	25	150	30	25	32	0.8	DN**1104...	3

*Torque: Recommended torque (N·m) for clamping

**RE: The holder measurements are true with this insert radius

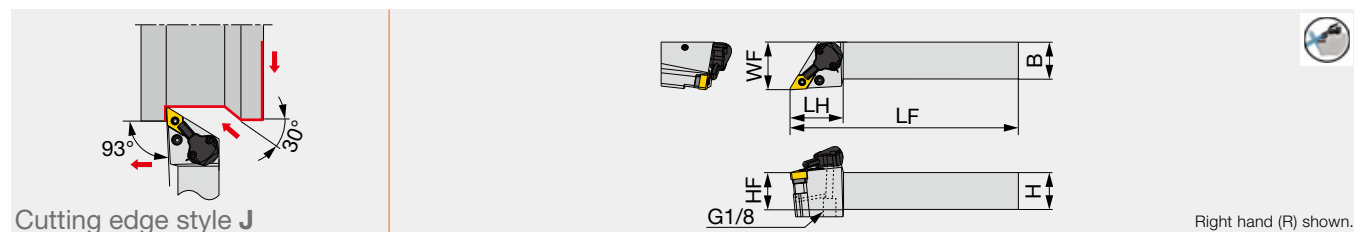
SPARE PARTS

Designation	Clamp	Clamp screw	Spring	Spring pin	Shim	Shim screw	Wrench
ADJNR/L**1104-A	ACP3S-E	ACS-5W	BP-7	SP-2.5	ASD322	CSTB-3.5	T-15F

TUNG^{TURN}TJET

PDJNR/L-CHP-Eco

Lever-lock toolholder with 93° approach angle, for negative 55° rhombic inserts, with high pressure coolant capability



Designation	H	B	LF	LH	HF	WF	RE**	Insert	Torque*
PDJNR/L2020K1104-CHP	20	20	125	36	20	32	0.8	DN**1104...	2
PDJNR/L2525M1104-CHP	25	25	150	36	25	32	0.8	DN**1104...	2

*Torque: Recommended torque (N·m) for clamping

**RE: The holder measurements are true with this insert radius

SPARE PARTS

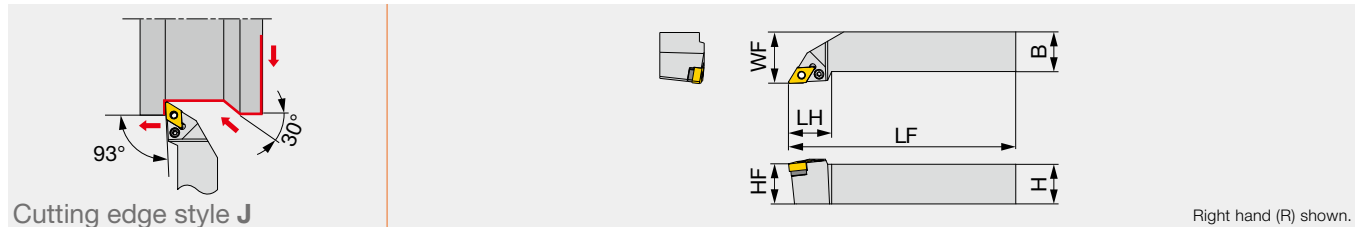
Designation	Shim	Clamping screw	Wrench 1	Spring pin	Lever
PDJNR/L**1104-CHP	ELSD32	LCS3	P-2.5	LSP3	LCL33L

SPARE PARTS

Designation	Coolant unit	Mounting screw	Wrench 2	O-ring	Coolant screw	Wrench 3
PDJNR/L**1104-CHP	CU-D-CHP	SRM3	T-8F	OR6.4X0.9N	SRM4X4TL360	P-2

PDJNR/L-Eco

Lever-lock toolholder with 93° approach angle, for negative 55° rhombic inserts



Designation	H	B	LF	LH	HF	WF	RE**	Insert	Torque*
PDJNR/L1616H1104	16	16	100	27	16	20	0.8	DN**1104...	2
PDJNR/L2020K1104	20	20	125	27	20	25	0.8	DN**1104...	2
PDJNR/L2525M1104	25	25	150	27	25	32	0.8	DN**1104...	2

*Torque: Recommended torque (N-m) for clamping

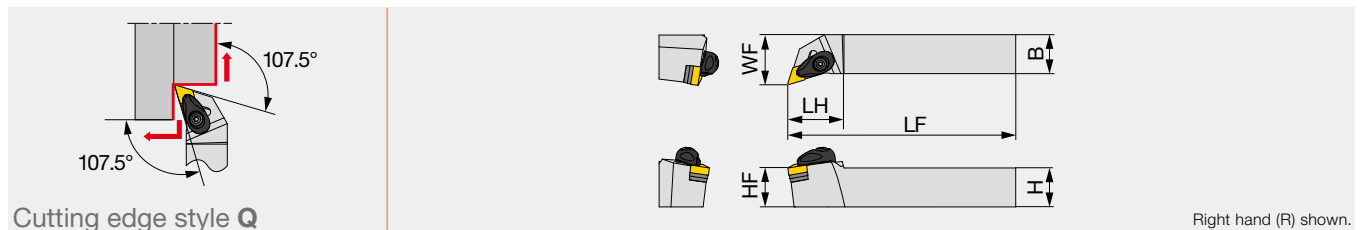
**RE: The holder measurements are true with this insert radius

SPARE PARTS

Designation	Shim	Clamping screw	Wrench	Spring pin	Lever
PDJNR/L**1104	ELSD32	LCS3	P-2.5	LSP3	LCL33L

ADQNR/L-Eco

Double-clamp toolholder with 107.5° approach angle, for negative 55° rhombic inserts



Designation	H	B	LF	LH	HF	WF	RE**	Insert	Torque*
ADQNR/L2020K1104-A	20	20	125	30	20	25	0.8	DN**1104...	3
ADQNR/L2525M1104-A	25	25	150	30	25	32	0.8	DN**1104...	3

*Torque: Recommended torque (N-m) for clamping

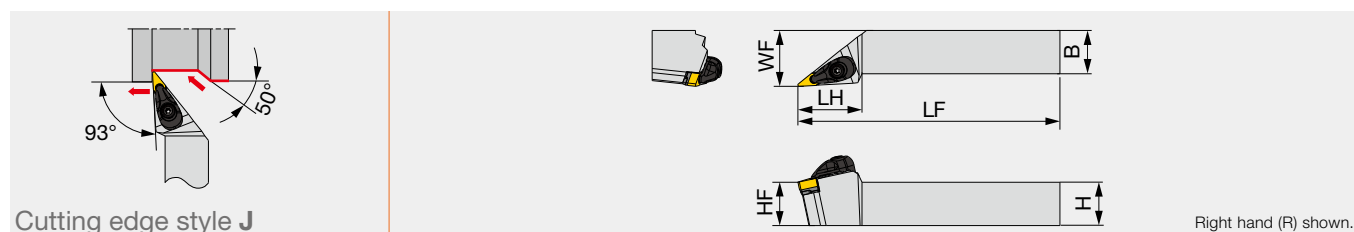
**RE: The holder measurements are true with this insert radius

SPARE PARTS

Designation	Clamp	Clamp screw	Spring	Spring pin	Shim	Shim screw	Wrench
ADQNR/L**1104-A	ACP3S-E	ACS-5W	BP-7	SP-2.5	ASD322	CSTB-3.5	T-15F

AVJNR/L-Eco

Double-clamp toolholder with 93° approach angle, for negative 35° rhombic inserts



Designation	H	B	LF	LH	HF	WF	RE**	Insert	Torque*
AVJNR/L2020K1204-A	20	20	125	37	20	25	0.8	VN**1204...	3
AVJNR/L2525M1204-A	25	25	150	37	25	32	0.8	VN**1204...	3

*Torque: Recommended torque (N-m) for clamping

**RE: The holder measurements are true with this insert radius

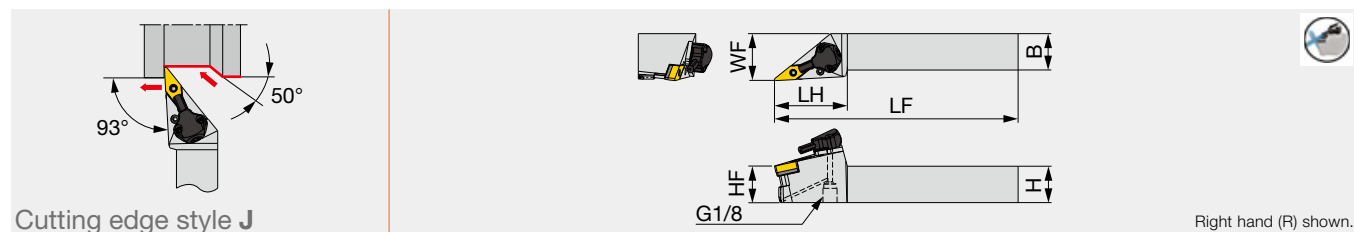
SPARE PARTS

Designation	Clamp	Clamp screw	Spring	Spring pin	Shim	Shim screw	Wrench
AVJNR/L**-A	ACP3L-E	ACS-5W	BP-7	SP-2.5	ASV222	CSTB-3.0	T-15F

TUNG^{TURN}TJET

PVJNR/L-CHP

Lever-lock toolholder with 93° approach angle, for negative 35° rhombic inserts, with high pressure coolant capability



Designation	H	B	LF	LH	HF	WF	RE**	Insert	Torque*
PVJNR/L2020K1204-CHP	20	20	125	50	20	32	0.8	VN**1204...	2
PVJNR/L2525M1204-CHP	25	25	150	50	25	32	0.8	VN**1204...	2

*Torque: Recommended torque (N-m) for clamping

**RE: The holder measurements are true with this insert radius

SPARE PARTS

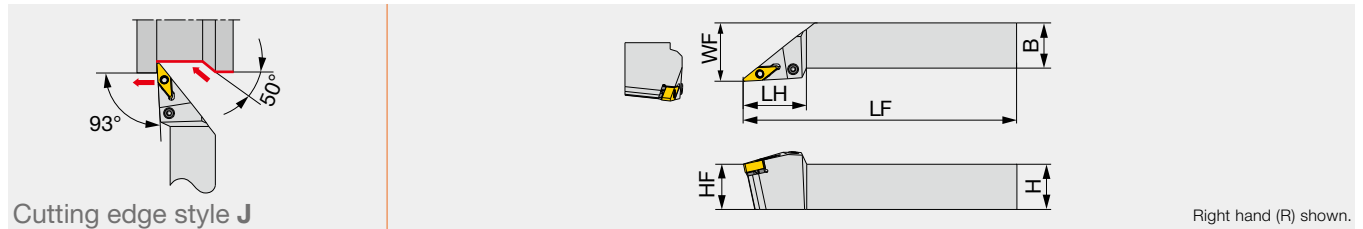
Designation	Shim	Clamping screw	Wrench 1	Spring pin	Lever
PVJNR/L**1204-CHP	LSV212	LCS3V	P-2.5	LSP3	LCL3V

SPARE PARTS

Designation	Coolant unit	Mounting screw	Wrench 2	O-ring	Coolant screw	Wrench 3
PVJNR/L**1204-CHP	CU-V-CHP	SRM3	T-8F	OR6.4X0.9N	SRM4X4TL360	P-2

PVJNR/L-Eco

Lever-lock toolholder with 93° approach angle, for negative 35° rhombic inserts



Designation	H	B	LF	LH	HF	WF	RE**	Insert	Torque*
PVJNR/L2020K1204	20	20	125	35	20	25	0.8	VN**1204...	2
PVJNR/L2525M1204	25	25	150	35	25	32	0.8	VN**1204...	2

*Torque: Recommended torque (N·m) for clamping

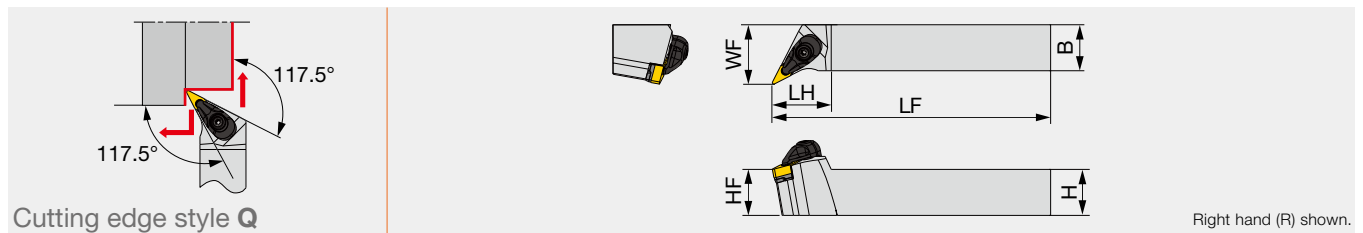
**RE: The holder measurements are true with this insert radius

SPARE PARTS

Designation	Shim	Clamping screw	Wrench	Spring pin	Lever
PVJNR/L**1204	LSV212	LCS3V	P-2.5	LSP3	LCL3V

AVQNR/L-Eco

Double-clamp toolholder with 117.5° approach angle, for negative 35° rhombic inserts



Designation	H	B	LF	LH	HF	WF	RE**	Insert	Torque*
AVQNR/L2020K1204-A	20	20	125	32	20	25	0.8	VN**1204...	3
AVQNR/L2525M1204-A	25	25	150	32	25	32	0.8	VN**1204...	3

*Torque: Recommended torque (N·m) for clamping

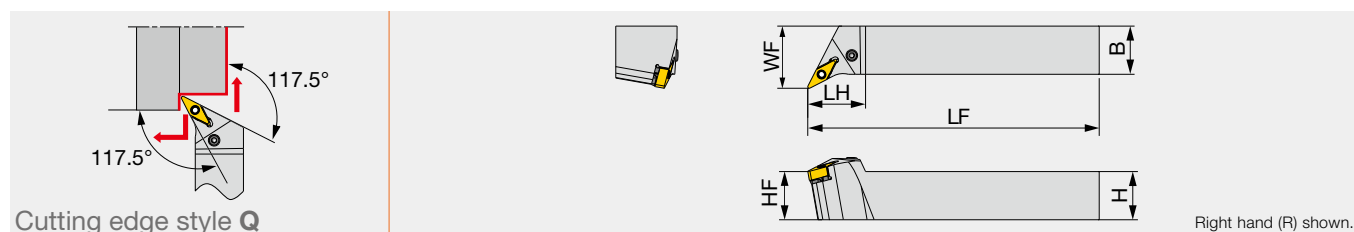
**RE: The holder measurements are true with this insert radius

SPARE PARTS

Designation	Clamp	Clamp screw	Spring	Spring pin	Shim	Shim screw	Wrench
AVQNR/L**-A	ACP3L-E	ACS-5W	BP-7	SP-2.5	ASV222	CSTB-3.0	T-15F

PVQNR/L-Eco

Lever-lock toolholder with 117.5° approach angle, for negative 35° rhombic inserts



Designation	H	B	LF	LH	HF	WF	RE**	Insert	Torque*
PVQNR/L2020K1204	20	20	125	30	20	25	0.8	VN**1204...	2
PVQNR/L2525M1204	25	25	150	30	25	32	0.8	VN**1204...	2

*Torque: Recommended torque (N·m) for clamping

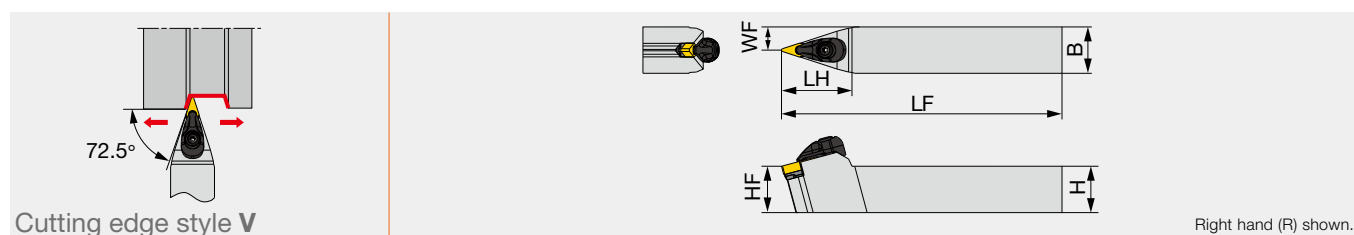
**RE: The holder measurements are true with this insert radius

SPARE PARTS

Designation	Shim	Clamping screw	Wrench	Spring pin	Lever
PVQNR/L**1204	LSV212	LCS3V	P-2.5	LSP3	LCL3V

AVVNN-Eco

Double-clamp toolholder with 72.5° approach angle, for negative 35° rhombic inserts



Designation	H	B	LF	LH	HF	WF	RE**	Insert	Torque*
AVVNN2020K1204-A	20	20	125	38	20	10	0.8	VN**1204...	3
AVVNN2525M1204-A	25	25	150	38	25	12.5	0.8	VN**1204...	3

*Torque: Recommended torque (N·m) for clamping

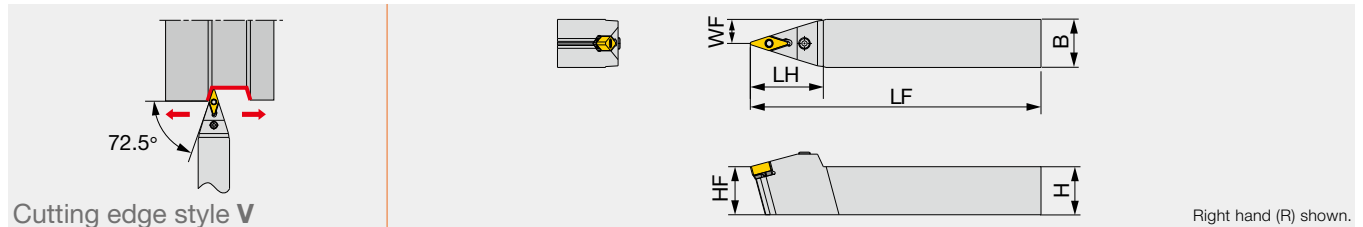
**RE: The holder measurements are true with this insert radius

SPARE PARTS

Designation	Clamp	Clamp screw	Spring	Spring pin	Shim	Shim screw	Wrench
AVVNN**-A	ACP3L-E	ACS-5W	BP-7	SP-2.5	ASV222	CSTB-3.0	T-15F

PVVNN-Eco

Lever-lock toolholder with 72.5° approach angle, for negative 35° rhombic inserts



Designation	H	B	LF	LH	HF	WF	RE**	Insert	Torque*
PVVNN2020K1204	20	20	125	38	20	10	0.8	VN**1204...	2
PVVNN2525M1204	25	25	150	38	25	12.5	0.8	VN**1204...	2

*Torque: Recommended torque (N-m) for clamping

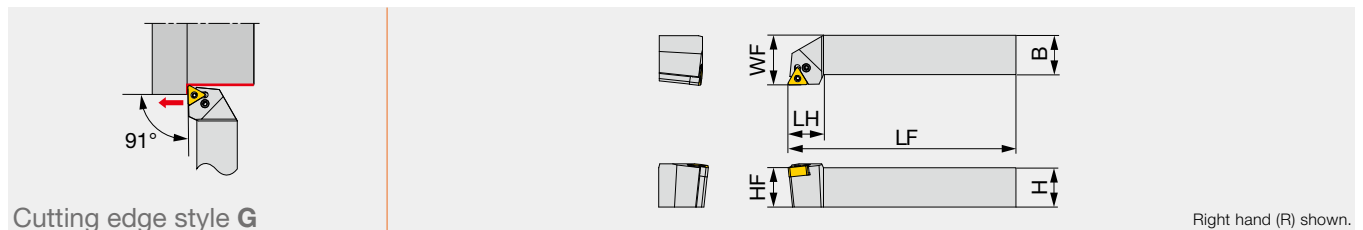
**RE: The holder measurements are true with this insert radius

SPARE PARTS

Designation	Shim	Clamping screw	Wrench	Spring pin	Lever
PVVNN**1204	LSV212	LCS3V	P-2.5	LSP3	LCL3V

PTGNR/L-Eco

Lever-lock toolholder with 91° approach angle, for negative triangular inserts



Designation	H	B	LF	LH	HF	WF	RE**	Insert	Torque*
PTGNR/L2020K1104	20	20	125	20	20	25	0.8	TN**1104...	2
PTGNR/L2525M1104	25	25	150	20	25	32	0.8	TN**1104...	2

*Torque: Recommended torque (N-m) for clamping

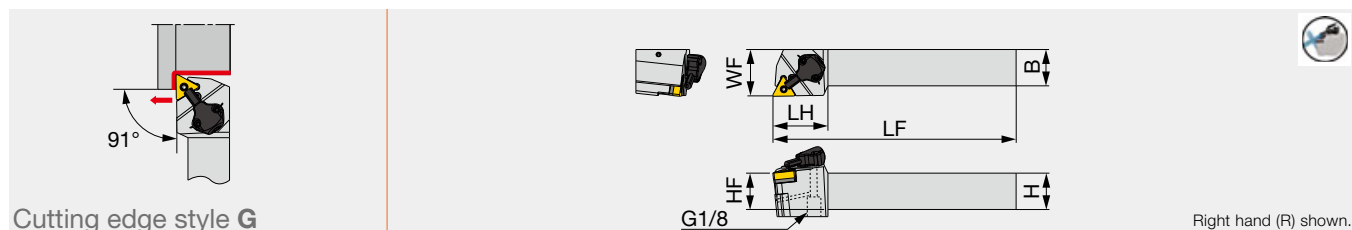
**RE: The holder measurements are true with this insert radius

SPARE PARTS

Designation	Clamping screw	Wrench	Lever
PTGNR/L**1104	LCS23A	P-2.5	LCL23

TUNG^{TURN}TJET PTGNR/L-CHP

Lever-lock toolholders with 91° approach angle, for negative 60° triangular inserts, with high pressure coolant capability



Designation	H	B	LF	LH	HF	WF	RE**	Insert	Torque*
PTGNR/L2020K1104-CHP	20	20	125	38	20	32	0.8	TN**1104...	2
PTGNR/L2525M1104-CHP	25	25	150	38	25	32	0.8	TN**1104...	2

*Torque: Recommended torque (N·m) for clamping

**RE: The holder measurements are true with this insert radius

SPARE PARTS

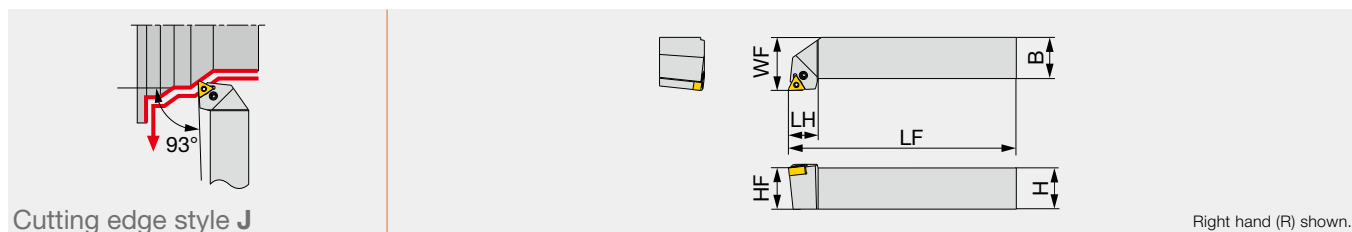
Designation	Shim	Clamping screw	Wrench 1	Spring pin	Lever
PTGNR/L**1104-CHP	-	LCS23A	P-2.5	LSP3	LCL23

SPARE PARTS

Designation	Coolant unit	Mounting screw	Wrench 2	O-ring	Coolant screw	Wrench 3
PTGNR/L**1104-CHP	CU-CW-CHP	SRM3	T-8F	OR6.4X0.9N	SRM4X4TL360	P-2

PTJNR/L-Eco

Lever-lock toolholder with 93° approach angle, for negative triangular inserts



Designation	H	B	LF	LH	HF	WF	RE**	Insert	Torque*
PTJNR/L2525M1104	25	25	150	18	25	32	0.8	TN**1104...	2

*Torque: Recommended torque (N·m) for clamping

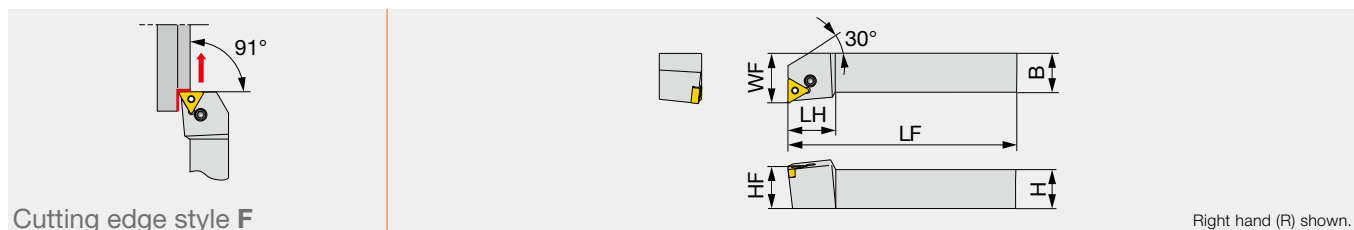
**RE: The holder measurements are true with this insert radius

SPARE PARTS

Designation	Clamping screw	Wrench	Lever
PTJNR/L2525M1104	LCS23A	P-2.5	LCL23

PTFNR/L-Eco

Lever-lock toolholder with 91° approach angle, for negative triangular inserts



Designation	H	B	LF	LH	HF	WF	RE**	Insert	Torque*
PTFNR/L2020K1104	20	20	125	16	20	25	0.8	TN**1104...	2
PTFNR/L2525M1104	25	25	150	22	25	32	0.8	TN**1104...	2

*Torque: Recommended torque (N·m) for clamping

**RE: The holder measurements are true with this insert radius

SPARE PARTS

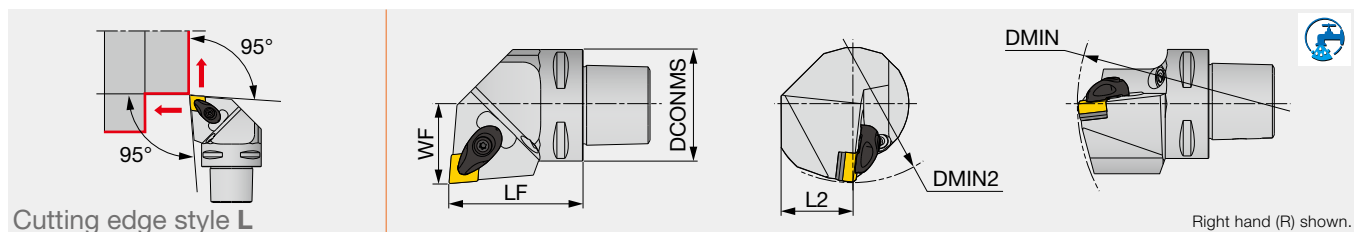
Designation	Clamping screw	Wrench	Lever
PTFNR/L**1104	LCS23A	P-2.5	LCL23

TURNINGA

C-ACLNR/L

TUNGCAP

Double-clamp toolholder, with 95° approach angle, for negative 80° rhombic inserts (TurningA)



Designation	DCONMS	LF	L2	WF	DMIN	DMIN2	RE**	Insert
C3ACLNR/L22040-0904N	32	40	20	22	110	121	0.8	CN**0904**E
C4ACLNR/L27050-0904N	40	50	25	27	140	110	0.8	CN**0904**E
C6ACLNR/L45065-0904N	63	65	35	45	190	110	0.8	CN**0904**E

**RE: The holder measurements are true with this insert radius

Applicable for 7 MPa coolant

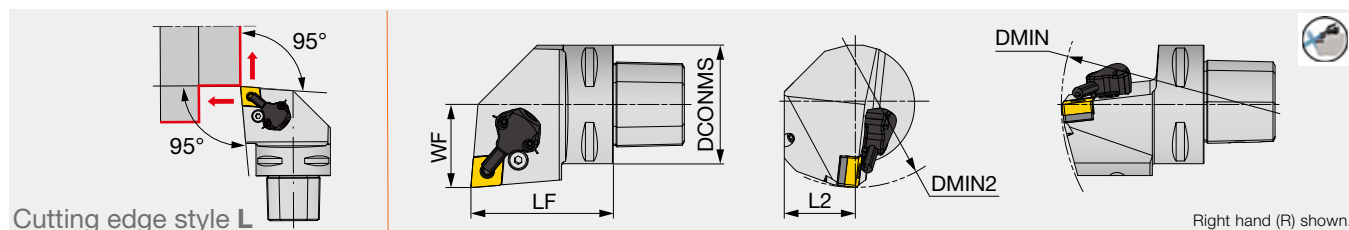
SPARE PARTS

Designation	Clamp	Clamp screw	Coolant parts	Shim	Shim screw	Spring	Spring pin	Wrench
C*ACLN***-0904N	ACP3S-E	ACS-5W	SATZ-M10X1-5	ASC322	CSTB-3.5	BP-7	SP-2.5	T-15F

TUNG^{TURN}TJET C-PCLNR/L-CHP

Lever-lock toolholder with TungCap connection, for negative 80° rhombic inserts, with high pressure coolant capability

TUNG^{TURN}CAP



Designation	DCONMS	LF	L2	WF	DMIN	DMIN2	RE**	Insert
C4PCLNR/L27050-0904-CHP	40	50	25	27	140	110	0.8	CN**0904...
C6PCLNR/L45065-0904-CHP	63	65	41	45	190	125	0.8	CN**0904...

**RE: The holder measurements are true with this insert radius
Applicable for 14 MPa coolant

SPARE PARTS

Designation	Shim	Clamping screw	Wrench 1	Spring pin	Lever
C*PCLNR/L**0904-CHP	LSC317	LCS3	P-2.5	LSP3	LCL33

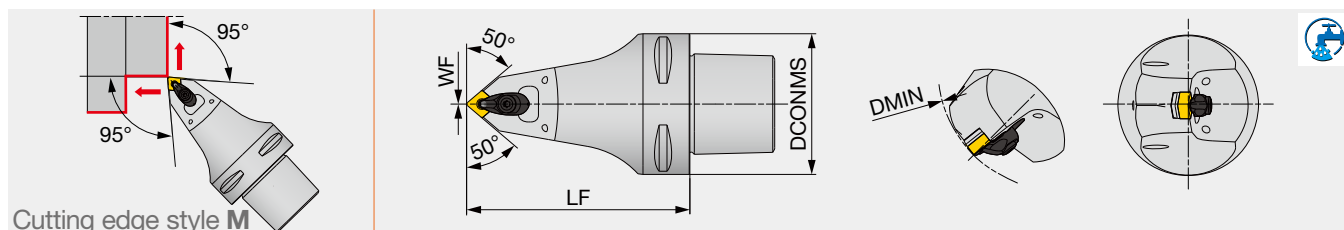
SPARE PARTS

Designation	Coolant unit	Mounting screw	Wrench 2	O-ring
C*PCLNR/L*-CHP	CU-CW-CHP	SRM3	T-8F	OR6.4X0.9N

TURNING^A C-ACMNN

Double-clamp toolholder, with 50° approach angle, for negative 80° rhombic inserts

TUNG^{TURN}CAP



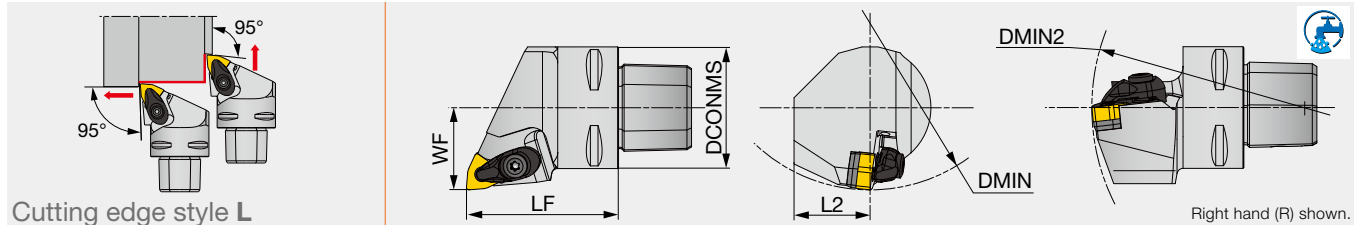
Designation	DCONMS	LF	WF	DMIN	RE**	Insert
C6ACMNN00100-0904N	63	100	0	110	0.8	CN**0904**E
C6ACMNN00140-0904N	63	140	0	110	0.8	CN**0904**E

**RE: The holder measurements are true with this insert radius
Applicable for 7 MPa coolant

SPARE PARTS

Designation	Clamp	Clamp screw	Shim	Shim screw	Spring	Spring pin	Wrench
C6ACMNN001**0904N	ACP3S-E	ACS-5W	ACS322	CSTB-3.5	BP-7	SP-2.5	T-15F

Double-clamp toolholder, with 95° approach angle, for negative 80° trigon inserts (TurningA)



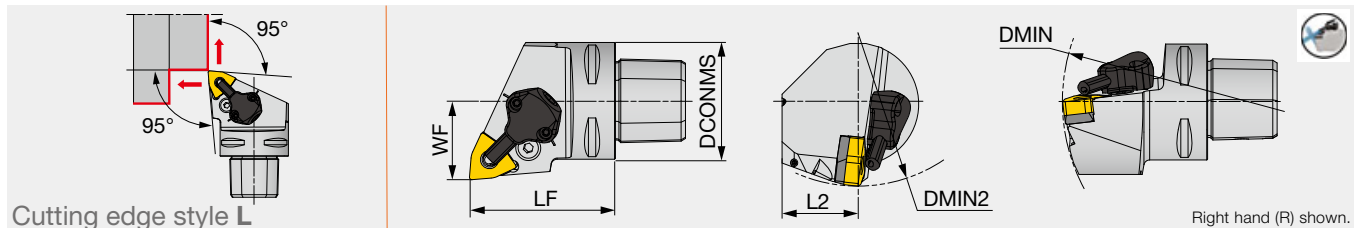
Designation	DCONMS	LF	L2	WF	DMIN	DMIN2	RE**	Insert
C4AWLNR/L27050-0604N	40	50	25	27	140	110	0.8	WN**0604...

**RE: The holder measurements are true with this insert radius
Applicable for 7 MPa coolant

SPARE PARTS

Designation	Clamp	Clamp screw	Shim	Shim screw	Spring	Spring pin	Wrench
C4AWLNR/L27050-0604N	ACP4S	ACS-5W	ASW422	CSTB-3.5	BP-7	SP-2.5	T-15F

Lever-lock toolholder with TungCap connection, for negative 80° trigon inserts, with high pressure coolant capability



Designation	DCONMS	LF	L2	WF	DMIN	DMIN2	RE**	Insert
C4PWLNR/L27050-0604-CHP	40	50	25	27	140	110	0.8	WN**0604...

**RE: The holder measurements are true with this insert radius
Applicable for 14 MPa coolant

SPARE PARTS

Designation	Shim	Clamping screw	Wrench 1	Spring pin	Lever
C*PWLNR/L**0604-CHP	LSW312	LCS3	P-2.5	LSP3	LCL3

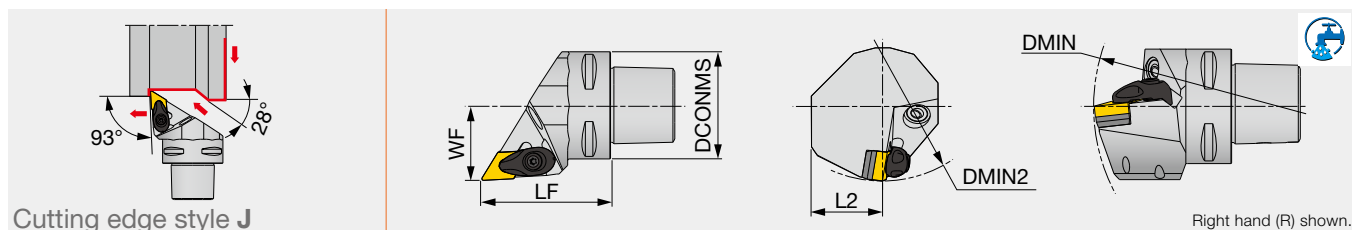
SPARE PARTS

Designation	Coolant unit	Mounting screw	Wrench 2	O-ring
C*PWLNR/L**0604-CHP	CU-CW-CHP	SRM3	T-8F	OR6.4X0.9N

TURNINGA

C-ADJNR/L

Double-clamp toolholder, with 93° approach angle, for negative 55° rhombic inserts (TurningA)



Designation	DCONMS	LF	L2	WF	DMIN	DMIN2	RE**	Insert
C3ADJNR/L22050-1104N	32	50	20	22	121	85	0.8	DN**1104...
C4ADJNR/L27050-1104N	40	50	25	27	145	110	0.8	DN**1104...
C6ADJNR/L45065-1104N	63	65	35	45	190	110	0.8	DN**1104...

**RE: The holder measurements are true with this insert radius
Applicable for 7 MPa coolant

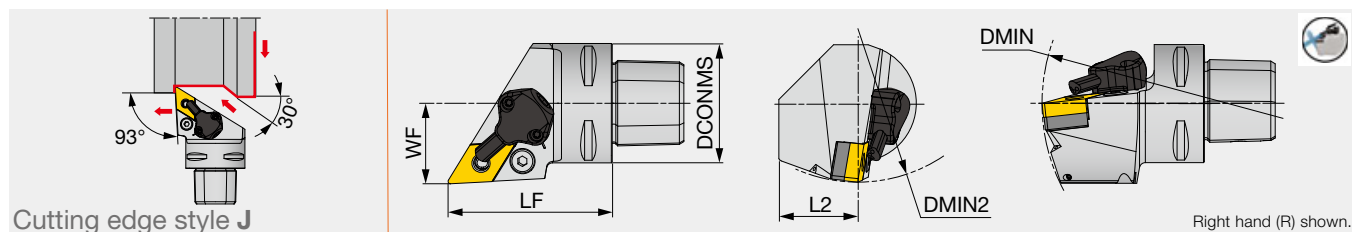
SPARE PARTS

Designation	Clamp	Clamp screw	Coolant parts	Shim	Shim screw	Spring	Spring pin	Wrench
C*ADJNR/L*-1104N	ACP3S-E	ACS-5W	SATZ-M10X1-M5	ASD322	CSTB-3.5	BP-7	SP-2.5	T-15F

TUNG^{TURN}TJET

C-PDJNR/L-CHP

Lever-lock toolholder with TungCap connection, for negative 55° rhombic inserts, with high pressure coolant capability



Designation	DCONMS	LF	L2	WF	DMIN	DMIN2	RE**	Insert
C4PDJNR/L27055-1104-CHP	40	55	25	27	140	110	0.8	DN**1104...
C6PDJNR/L45065-1104-CHP	63	65	41	45	190	110	0.8	DN**1104...

**RE: The holder measurements are true with this insert radius
Applicable for 14 MPa coolant

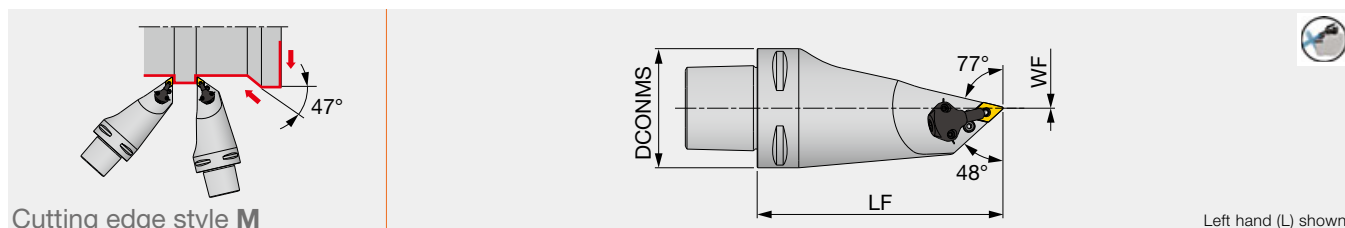
SPARE PARTS

Designation	Shim	Clamping screw	Wrench 1	Spring pin	Lever
C*PDJNR/L*-1104-CHP	ELSD32	LCS3	P-2.5	LSP3	LCL33L

SPARE PARTS

Designation	Coolant unit	Mounting screw	Wrench 2	O-ring
C*PDJNR/L*-CHP	CU-D-CHP	SRM3	T-8F	OR6.4X0.9N

Lever-lock toolholder with TungCap connection, for negative 55° rhombic inserts, with high pressure coolant capability



Designation	DCONMS	LF	WF	RE**	Insert
C6PDMNL00130-1104-CHP	63	130	0	0.8	DN**1104...

**RE: The holder measurements are true with this insert radius
Applicable for 14 MPa coolant

Cannot be used for boring.

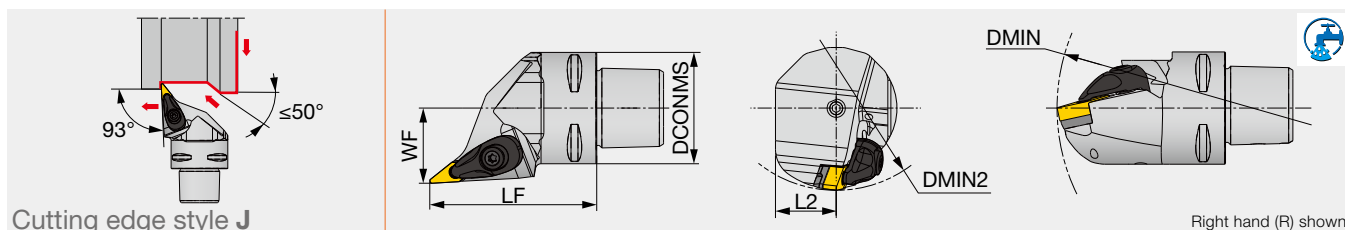
SPARE PARTS

Designation	Shim	Clamping screw	Wrench 1	Spring pin	Lever
C6PDMNL00130-1104-CHP	ELSD32	LCS3	P-2.5	LSP3	LCL33L

SPARE PARTS

Designation	Coolant unit	Mounting screw	Wrench 2	O-ring
C6PDMNL00130-1104-CHP	CU-D-CHP	SRM3	T-8F	OR6.4X0.9N

Double-clamp toolholder, with 93° approach angle, for negative 35° rhombic inserts (TurningA)



Designation	DCONMS	LF	L2	WF	DMIN	DMIN2	RE**	Insert
C4AVJNR/L27060-1204N	40	60	20	27	140	55	0.8	VN**1204...
C6AVJNR/L45065-1204N	63	65	31.5	45	190	81	0.8	VN**1204...

**RE: The holder measurements are true with this insert radius
Applicable for 7 MPa coolant

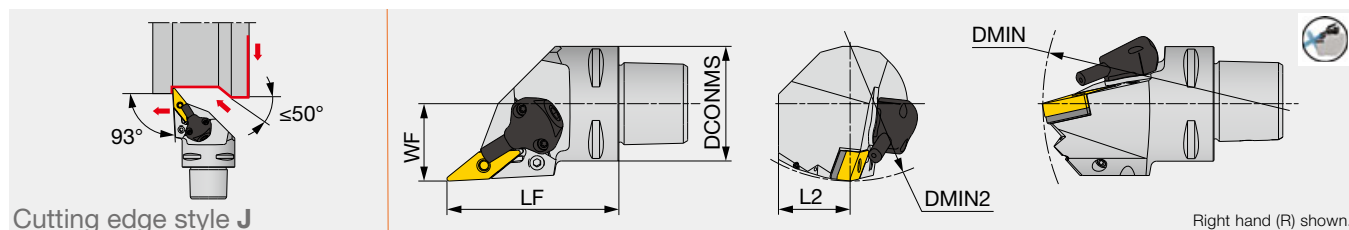
SPARE PARTS

Designation	Clamp	Clamp screw	Coolant parts	Shim	Shim screw	Spring	Spring pin	Wrench 1	Wrench 2
C4AVJNR/L...	ACP3L-E	ACS-5W	-	ASV222	CSTB-3	BP-7	SP-2.5	T-9F	T-15F
C6AVJNR/L...	ACP3L-E	ACS-5W	SATZ-M10X1-M5	ASV222	CSTB-3	BP-7	SP-2.5	T-9F	T-15F

TUNG^{TURN}TJET C-PVJNR/L-CHP

TUNG^{TURN}CAP

Lever-lock toolholder with TungCap connection, with 93° approach angle, for negative 35° rhombic inserts, with high pressure coolant capability



Designation	DCONMS	LF	L2	WF	DMIN	DMIN2	RE**	Insert
C4PVJNR/L27060-1204-CHP	40	60	20	27	140	90	0.8	VN**1204...
C6PVJNR/L45065-1204-CHP	63	65	31.5	45	190	81	0.8	VN**1204...

**RE: The holder measurements are true with this insert radius
Applicable for 14 MPa coolant

SPARE PARTS

Designation	Shim	Clamping screw	Wrench 1	Wrench 2	Spring pin	Lever
C*PVJNR/L*-1204-CHP	LSV212	LCS3V	P-2.5	P-3	LSP3	LCL3V

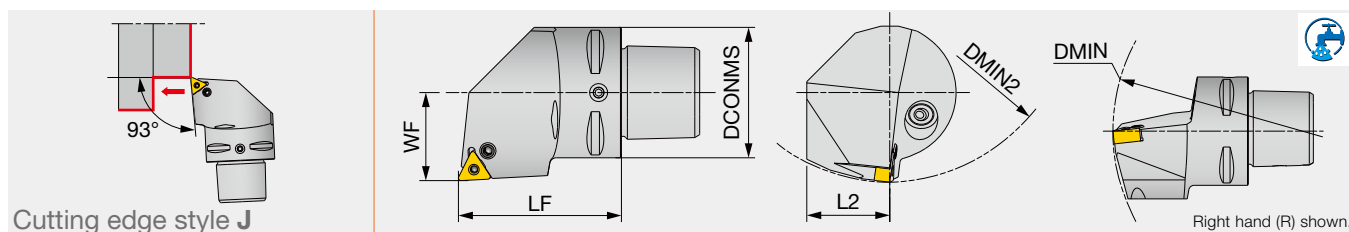
SPARE PARTS

Designation	Coolant unit	Mounting screw	Wrench 2	O-ring
C*PVJNR/L*-CHP	CU-V-CHP	SRM3	T-8F	OR6.4X0.9N

TUNG^{TURN}CAP

C-PTJNR/L

Lever-lock external turning toolholder (P type)



Designation	DCONMS	LF	L2	WF	DMIN	DMIN2	RE**	Insert
C4PTJNR/L27050-1104N	40	50	25	27	140	110	0.8	TN**1104**E

**RE: The holder measurements are true with this insert radius
Applicable for 7 MPa coolant

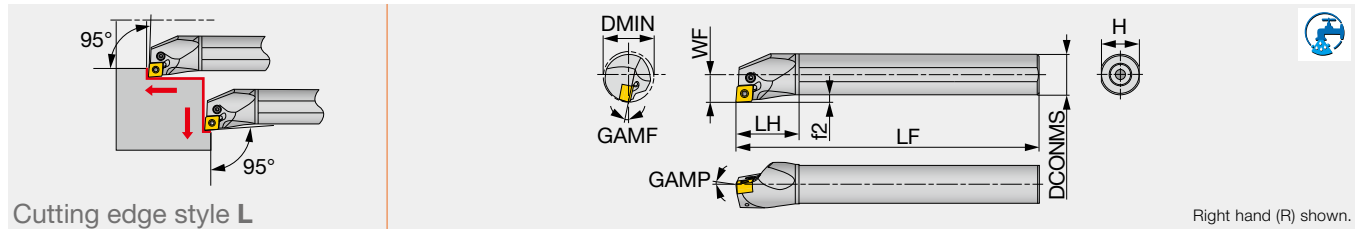
SPARE PARTS

Designation	Coolant parts	Lever	Clamping screw	Wrench
C4PTJNR/L27050-1104N	SATZ-M8X1-M3	LCL23	LCS23A	P-2.5

Internal toolholders

A-PCLNR/L-Eco

Lever-lock boring bar, for negative 80° rhombic inserts



Designation	Material	DMIN	DCONMS	WF	LF	LH	H	f2	GAMP	GAMF	RE**	Insert	Torque*
A16M-PCLNR/L0904-D200	Steel	20	16	11	150	32	15	3	-6°	-16°	0.8	CN**0904...	1.7
A20Q-PCLNR/L0904-D250	Steel	25	20	13	180	36	18	3	-6°	-12°	0.8	CN**0904...	1.7

*Torque: Recommended torque (N·m) for clamping

**RE: The holder measurements are true with this insert radius

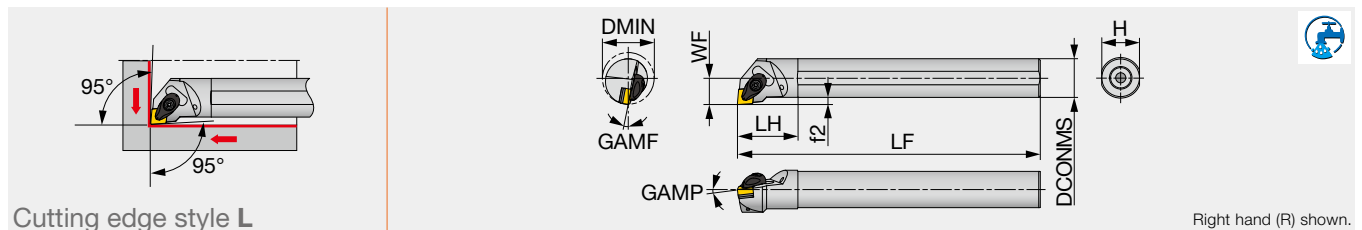
SPARE PARTS

Designation	Clamping screw	Wrench	Lever	Oil supply attachment*	Screw for oil hole*
A16M-PCLNR/L0904-D200	LCS33	P-2F	LCL33N	-	SSHM3-4
A20Q-PCLNR/L0904-D250	LCS33	P-2F	LCL33N	EA-20	SSHM3-4

*Optional

A-ACLNR/L-Eco

Double-clamp boring bar, for negative 80° rhombic inserts



Designation	Material	DMIN	DCONMS	WF	LF	LH	H	f2	GAMP	GAMF	RE**	Insert	Torque*
A25R-ACLNR/L0904-D320	Steel	32	25	17	200	45	23	4.5	-6°	-13°	0.8	CN**0904...	3
A32S-ACLNR/L0904-D400	Steel	40	32	22	250	50	30	6	-6°	-10°	0.8	CN**0904...	3

*Torque: Recommended torque (N·m) for clamping

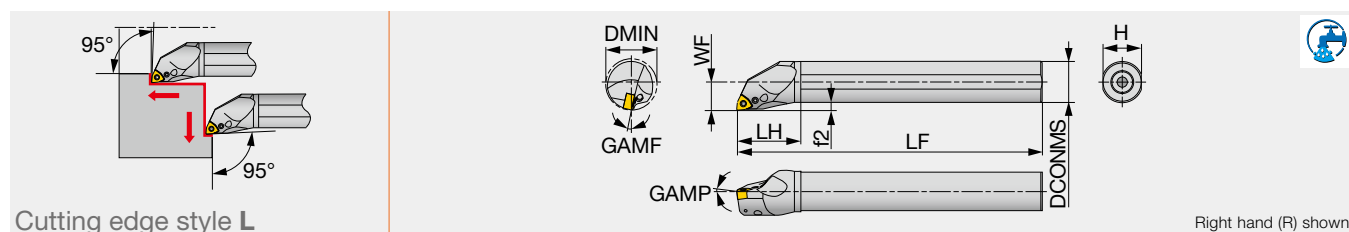
**RE: The holder measurements are true with this insert radius

SPARE PARTS

Designation	Clamp	Clamp screw	Spring	Spring pin	Shim	Shim screw	Wrench
A**-ACLNR/L0904...	ACP3S-E	ACS-5W	BP-7	SP-2.5	ASC322	CSTB-3.5	T-15F

A-PWLNLR/L-Eco

Lever-lock boring bar, for negative 80° trigon inserts



Designation	Material	DMIN	DCONMS	WF	LF	LH	H	f2	GAMP	GAMF	RE**	Insert	Torque*
A16M-PWLNLR/L0604-D200	Steel	20	16	11	150	32	15	3	-8°	-17°	0.8	WN**0604...	1.7
A20Q-PWLNLR/L0604-D250	Steel	25	20	13	180	36	18	3	-6°	-14°	0.8	WN**0604...	1.7

*Torque: Recommended torque (N-m) for clamping

**RE: The holder measurements are true with this insert radius

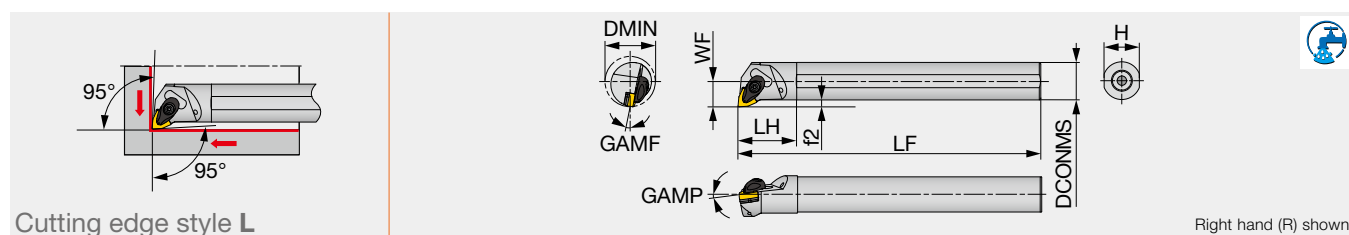
SPARE PARTS

Designation	Clamping screw	Wrench	Lever	Oil supply attachment*	Screw for oil hole*
A16M-PWLNLR/L0604-D200	LCS33	P-2F	LCL33N	-	SSHM3-4
A20Q-PWLNLR/L0604-D250	LCS33	P-2F	LCL33N	EA-20	SSHM3-4

*Optional

A-AWLNLR/L-Eco

Double-clamp boring bar, for negative 80° trigon inserts



Designation	Material	DMIN	DCONMS	WF	LF	LH	H	f2	GAMP	GAMF	RE**	Insert	Torque*
A25R-AWLNLR/L0604-D320	Steel	32	25	17	200	45	23	4.5	-6°	-13°	0.8	WN**0604...	3
A32S-AWLNLR/L0604-D400	Steel	40	32	22	250	50	30	6	-6°	-10°	0.8	WN**0604...	3

*Torque: Recommended torque (N-m) for clamping

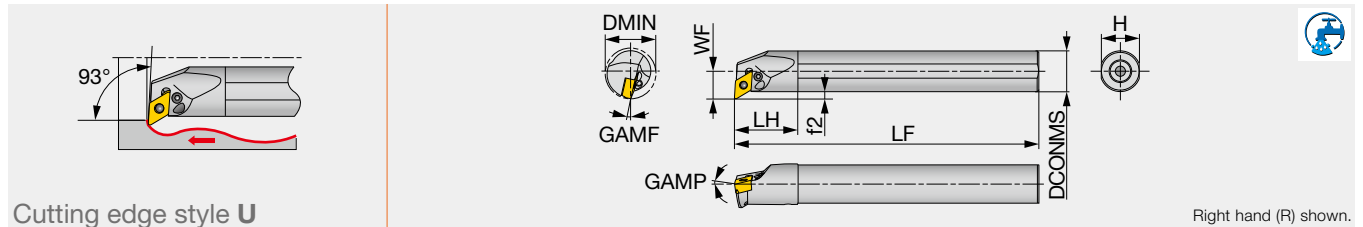
**RE: The holder measurements are true with this insert radius

SPARE PARTS

Designation	Clamp	Clamp screw	Spring	Spring pin	Shim	Shim screw	Wrench
A**-AWLNLR/L...	ACP3S-E	ACS-5W	BP-7	SP-2.5	ASW322	CSTB-3.5	T-15F

A-PDUNR/L-Eco

Lever-lock boring bar, for negative 55° rhombic inserts



Designation	Material	DMIN	DCONMS	WF	LF	LH	H	f2	GAMP	GAMF	RE**	Insert	Torque*
A20Q-PDUNR/L1104-D250	Steel	25	20	13	180	36	18	3	-6°	-14°	0.8	DN**1104...	1.7

*Torque: Recommended torque (N-m) for clamping

**RE: The holder measurements are true with this insert radius

Note: Use right-hand toolholders (R) with left-hand inserts (L); and left-hand toolholders (L) with right-hand inserts (R).

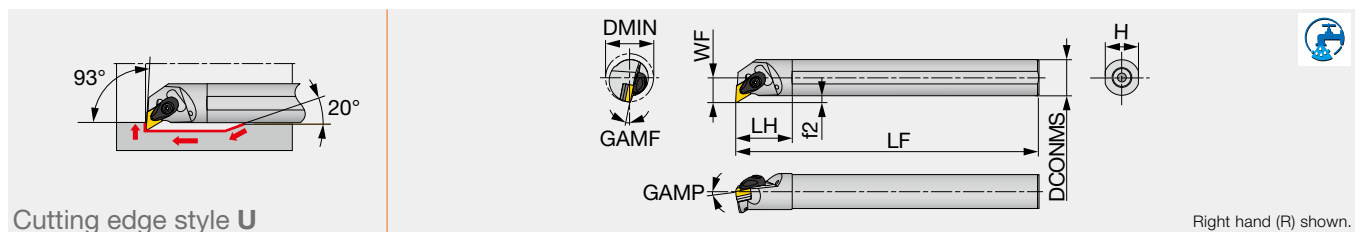
SPARE PARTS

Designation	Clamping screw	Wrench	Lever	Oil supply attachment*	Screw for oil hole*
A20Q-PDUNR/L1104-D250	LCS22A	P-2F	LCL33NL	EA-20	SSH2.5-3

*Optional

A-ADUNR/L-Eco

Double-clamp boring bar, for negative 55° rhombic inserts



Designation	Material	DMIN	DCONMS	WF	LF	LH	H	f2	GAMP	GAMF	RE**	Insert	Torque*
A25R-ADUNR/L1104-D320	Steel	32	25	17	200	45	23	4.5	-6°	-13°	0.8	DN**1104...	3
A32S-ADUNR/L1104-D400	Steel	40	32	22	250	50	30	6	-6°	-11°	0.8	DN**1104...	3

*Torque: Recommended torque (N-m) for clamping

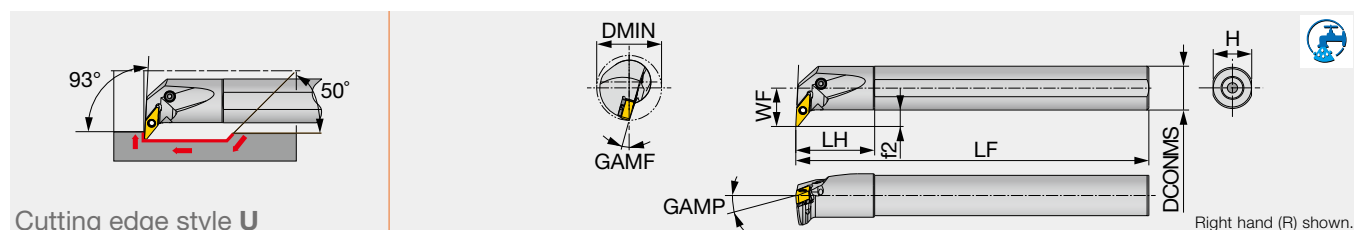
**RE: The holder measurements are true with this insert radius

SPARE PARTS

Designation	Clamp	Clamp screw	Spring	Spring pin	Shim	Shim screw	Wrench
A*-ADUNR/L...	ACP3S-E	ACS-5W	BP-7	SP-2.5	ASD322	CSTB-3.5	T-15F

A-PVUNR/L-Eco

Lever-lock boring bar, for negative 35° rhombic inserts



Designation	Material	DMIN	DCONMS	WF	LF	LH	H	f2	GAMP	GAMF	RE**	Insert	Torque*
A25R-PVUNR/L1204-D320	Steel	32	25	18	200	45	23	5.0	-5°	-15°	0.8	VN**1204...	3
A25R-PVUNR/L1204-D370	Steel	37	25	22	200	45	23	8.0	-4°	-15°	0.8	VN**1204...	3
A32S-PVUNR/L1204-D400	Steel	40	32	22	250	50	30	5.5	-6°	-12°	0.8	VN**1204...	3

*Torque: Recommended torque (N·m) for clamping

**RE: The holder measurements are true with this insert radius

SPARE PARTS

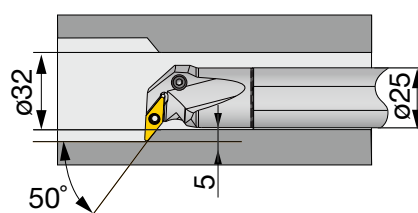
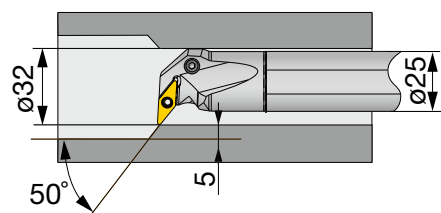
Designation	Clamping screw	Wrench	Lever	Shim	Spring pin	Oil supply attachment*	Screw for oil hole*
A25R-PVUNR/L1204-D...	LCS3V	P-2.5	LCL3V	LSV212	LSP3	EA-25	SSHM4-5
A32S-PVUNR/L1204-D400	LCS3V	P-2.5	LCL3V	LSV212	LSP3	EA-32	SSHM4-5

*Optional

Economical sized insert bring benefits in small diameter ID Turning

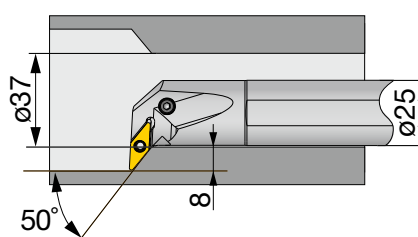
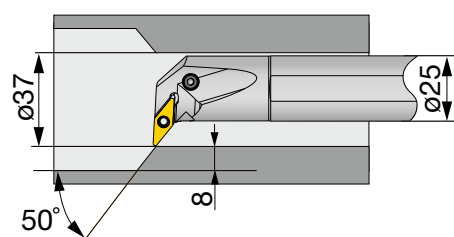
- The new VNMG1204 insert combined with a P-type holder can turn and profile an inner diameter as small as $\varnothing 32$ mm.

A25R-PVUNR/L1204-D320



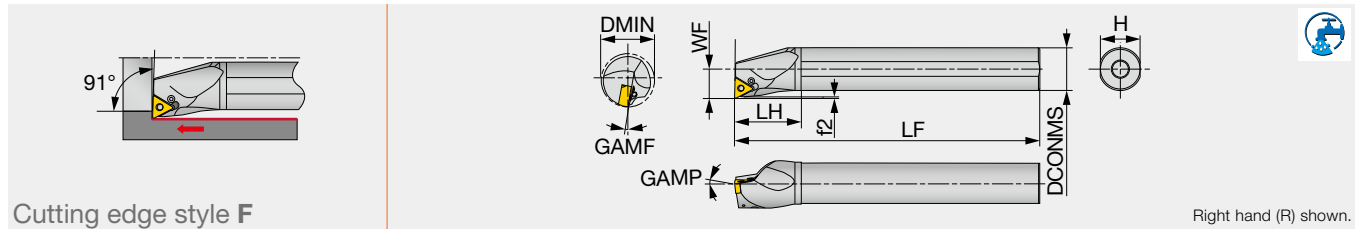
- ISO-EcoTurn also offers a holder line for a minimum working diameter of $\varnothing 37$ mm with VNMG1204 insert. This holder makes an excellent alternative to a standard holder with VNMG1604 insert, whose minimum working diameter is also $\varnothing 37$ mm.

A25R-PVUNR/L1204-D370



A-PTFNR/L-Eco

Lever-lock boring bar, for negative triangular inserts



Designation	Material	DMIN	DCONMS	WF	LF	LH	H	f2	GAMP	GAMF	RE**	Insert	Torque*
A25R-PTFNR/L1104-D320	Steel	32	25	17	200	45	23	1.31	-6°	-12°	0.8	TN**1104...	2
A32S-PTFNR/L1104-D400	Steel	40	32	22	250	50	30	1.25	-6°	-10°	0.8	TN**1104...	2

*Torque: Recommended torque (N·m) for clamping

**RE: The holder measurements are true with this insert radius

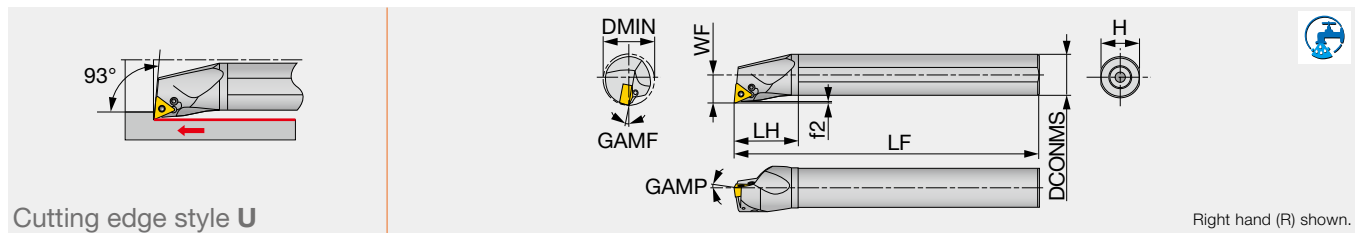
SPARE PARTS

Designation	Clamping screw	Wrench	Lever	Oil supply attachment*	Screw for oil hole*
A25R-PTFNR/L...	LCS23A	P-2.5	LCL23	EA-25	SSHM4-5
A32S-PTFNR/L...	LCS23A	P-2.5	LCL23	EA-32	SSHM4-5

*Optional

A-PTUNR/L-Eco

Lever-lock boring bar, for negative triangular inserts



Designation	Material	DMIN	DCONMS	WF	LF	LH	H	f2	GAMP	GAMF	RE**	Insert	Torque*
A25R-PTUNR/L1104-D320	Steel	32	25	17	200	45	23	1.22	-6°	-12°	0.8	TN**1104...	2
A32S-PTUNR/L1104-D400	Steel	40	32	22	250	50	30	1.16	-6°	-10°	0.8	TN**1104...	2

*Torque: Recommended torque (N·m) for clamping

**RE: The holder measurements are true with this insert radius

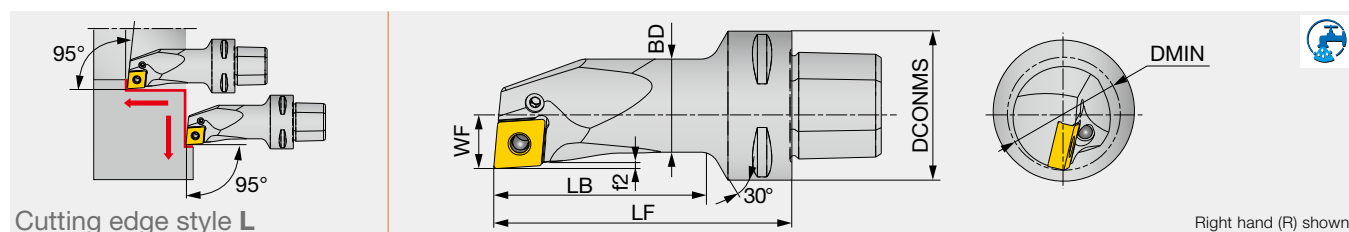
SPARE PARTS

Designation	Clamping screw	Wrench	Lever	Oil supply attachment*	Screw for oil hole*
A25R-PTUNR/L1104-D320	LCS23A	P-2.5	LCL23	EA-25	SSHM4-5
A32S-PTUNR/L1104-D400	LCS23A	P-2.5	LCL23	EA-32	SSHM4-5

*Optional

C-PCLNR/L-IN

Lever-lock boring bar, for negative 80° rhombic inserts



Designation	DMIN	DCONMS	BD	LB	LF	WF	f2	RE**	Insert
C4PCLNR17090-0904	32	40	25	90	63	17	1.3	0.8	CN**0904**E
C4PCLNR22110-0904	40	40	32	110	86.5	22	1.3	0.8	CN**0904**E
C4PCLNR27120-0904	50	40	39.5	120	100	27	1.7	0.8	CN**0904**E

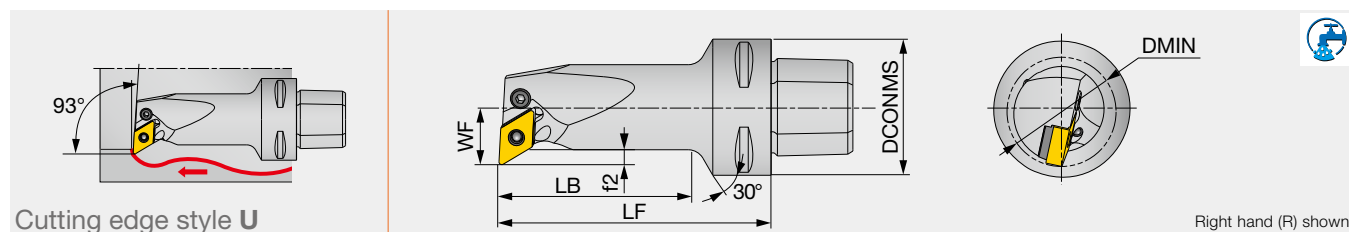
**RE: The holder measurements are true with this insert radius
Applicable for 10 MPa coolant

SPARE PARTS

Designation	Lever	Clamping screw	Wrench
C*PCLNR/L...	LCL43N	LCS43	P-2.5

C-PDUNR/L

Lever-lock boring bar, for negative 55° rhombic inserts



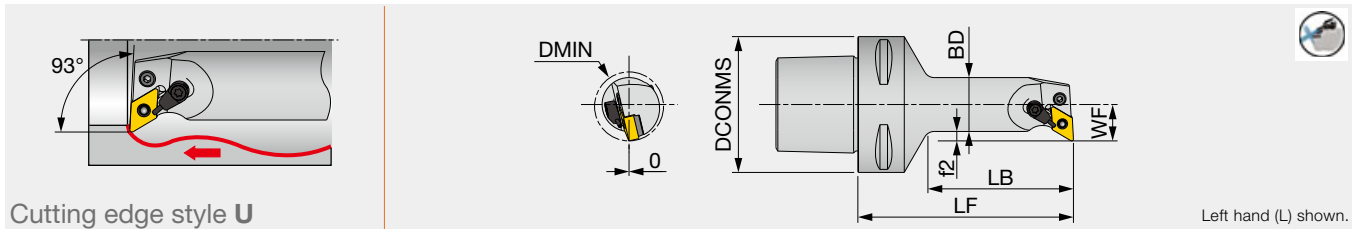
Designation	DMIN	DCONMS	LF	LB	WF	f2	RE**	Insert
C4PDUNR/L17080-11	32	40	80	58.5	17	4.4	0.8	DN**1104...

**RE: The holder measurements are true with this insert radius
Applicable for 10 MPa coolant

SPARE PARTS

Designation	Lever	Clamping screw	Shim	Spring pin	Wrench
C4PDUNR17080-11	LCL33L	LCS3	ELSD317BR	LSP3	P-2.5
C4PDUNL17080-11	LCL33L	LCS3	ELSD317BL	LSP3	P-2.5

Lever-lock boring bar with TungCap connection, with 93° approach angle, for negative 55° rhombic inserts, with high pressure coolant capability



Designation	DMIN	DCONMS	BD	LF	LB	WF	f2	RE**	Insert
C6PDUNL17100-1104-CHP	32	63	25	100	67.5	17	4.5	0.8	DN**1104...

**RE: The holder measurements are true with this insert radius
Applicable for 14 MPa coolant

SPARE PARTS

Designation	Shim	Clamping screw	Coolant unit	Wrench	Spring pin	Lever
C6PDUNL17100-1104-CHP	ELSD317BL	LCS43	S-CU-CHP	P-2.5	LSP3	LCL33L

STANDARD CUTTING CONDITIONS



Steel

Application	Chipbreaker	Grades	Cutting speed Vc (m/min)			Depth of cut ap (mm)	Feed f (mm/rev)
			Low carbon steels Alloy steels	Medium carbon steels Alloy steels	High carbon steels Alloy steels		
Precision finishing	TF	T9215	150 - 400	150 - 400	120 - 300	0.1 - 0.5	0.03 - 0.15
		T9225	120 - 300	120 - 300	100 - 250		
Finishing	TSF	NS9530	150 - 250	80 - 220	80 - 180	0.2 - 1.5	0.08 - 0.4
		GT9530	150 - 300	80 - 250	80 - 200		
		AT9530	150 - 300	80 - 250	80 - 200		
		T9215	150 - 400	150 - 400	120 - 300		
		T9225	120 - 300	120 - 300	100 - 250		
	ZF	T9215	150 - 400	150 - 400	120 - 300	0.2 - 1.5	0.07 - 0.2
Finishing (Wiper)	FW	T9205	180 - 400	180 - 400	150 - 350	0.2 - 1.5	0.08 - 0.4
		T9215	150 - 400	150 - 400	120 - 300		
		T9225	120 - 300	120 - 300	100 - 250		
		NS9530	150 - 250	80 - 220	80 - 180	0.5 - 1.5	0.2 - 0.4
		GT9530	150 - 300	80 - 250	80 - 200		
Finishing to medium cutting	ZM	T9215	150 - 400	150 - 400	120 - 300	0.7 - 2.0	0.15 - 0.4
		T9225	120 - 300	120 - 300	100 - 250		
Finishing to medium cutting (Wiper)	SW	T9205	180 - 400	180 - 400	150 - 350	0.5 - 2.0	0.3 - 0.6
		T9215	150 - 400	150 - 400	120 - 300		
		T9225	120 - 300	120 - 300	100 - 250		
Finishing to medium cutting	NM	T9225	120 - 300	120 - 300	100 - 250	0.5 - 2.0	0.15 - 0.4
Medium cutting	TM	T9215	150 - 400	150 - 400	120 - 300	1.0 - 3.0	0.2 - 0.5
		T9225	120 - 300	120 - 300	100 - 250		



Stainless

Application	Chipbreaker	Grades	Cutting speed Vc (m/min)			Depth of cut ap (mm)	Feed f (mm/rev)
			Austenitic	Ferritic / Martensitic	Precipitation hardened		
Finishing	SS	AH630	90 - 190	110 - 210	60 - 90	0.5 - 3.0	0.08 - 0.2
		AH645	70 - 150	90 - 170	-		
Medium cutting	SM	T6120	140 - 240	160 - 280	80 - 150	1.0 - 3.0	0.2 - 0.5
		T6130	100 - 200	120 - 240	70 - 110		
		AH630	90 - 190	110 - 210	60 - 90		



Cast Iron

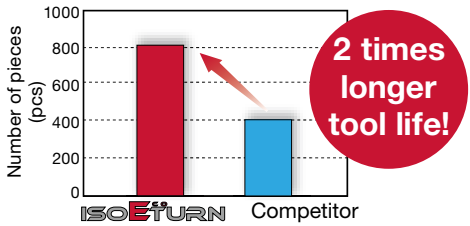
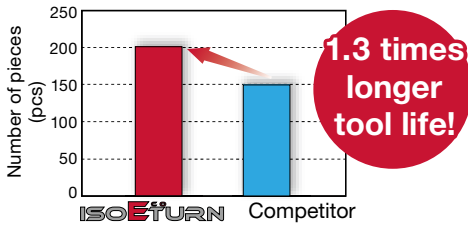
Application	Chipbreaker	Grades	Cutting speed Vc (m/min)		Depth of cut ap (mm)	Feed f (mm/rev)
			Grey cast irons	Ductile cast irons		
Finishing to medium cutting (Wiper)	SW	T5115	140 - 400	140 - 370	0.5 - 2.0	0.3 - 0.6
Medium cutting	TM	T515	150 - 700	140 - 370	1.0 - 3.0	0.2 - 0.5



Superalloys
and titanium

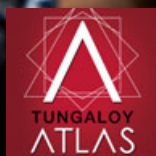
Application	Chipbreaker	Grades	Cutting speed Vc (m/min)		Depth of cut ap (mm)	Feed f (mm/rev)
			Titanium alloys	Ni-base alloys		
Medium cutting	TM	AH8015	20 - 150	20 - 100	1.0 - 3.0	0.2 - 0.5

PRACTICAL EXAMPLES

Workpiece type		Machine part	Shaft
Toolholder		AWLNR2525M0604-A	ADJNR2525M1104-A
Insert		WNMG060408E-TM	DNMG110408E-TSF
Grade		T9215	T9215
Workpiece material		SCM415	S45C / C45
		 P	 P
Cutting conditions	Cutting speed: V_c (m/min)	240	260
	Feed : f (mm/rev)	0.1 - 0.25	0.2
	Depth of cut : a_p (mm)	1	1
	Machining	External face turning	External turning
	Coolant	Wet	Wet
Results		 ISO-EcoTurn insert has demonstrated excellent chip control at 1 mm depth of cut. With T9215 grade, tool life has been doubled over the competitor's regular sized CNMG1204 insert.	 ISO-EcoTurn insert in T9215 grade has increased tool life by 1.3 time over the competitor's regular sized DNMG1504 insert with added machining stability.



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Tungaloy Corporation (Head office)

11-1 Yoshima-Kogyodanchi
Iwaki-city, Fukushima 970-1144 Japan
Phone: +81-246-36-8501
Fax: +81-246-36-8542
www.tungaloy.co.jp

Tungaloy-NTK America Inc.

3726 N Ventura Drive
Arlington Heights, IL 60004, U.S.A.
Phone: +1-888-554-8394
Fax: +1-888-554-8392
www.tungaloy.com/us

Tungaloy Canada

432 Elgin St. Unit 3
Brantford, Ontario N3S 7P7, Canada
Phone: +1-519-758-5799
Fax: +1-519-758-5791
www.tungaloy.com/ca

Tungaloy-NTK De Mexico S.A.

C. Los Arellano 113,
Parque Industrial Siglo XXI
Aguascalientes, AGS, Mexico 20290
Phone: +52-449-929-5410
Fax: +52-449-929-5411
www.tungaloy.com/mx

Tungaloy-NTK do Brasil Ltda.

Avd. Independência N4158 Residencial Flora
13280-000 Vinhedo, São Paulo, Brasil
Phone: +55-19-38262757
Fax: +55-19-38262757
www.tungaloy.com/br

Tungaloy-NTK Germany GmbH.

Katzbergstr. 3a
D-40764 Langenfeld, Germany
Phone: +49-2173-90420-0
Fax: +49-2173-90420-19
www.tungaloy.com/de

Tungaloy France s.a.s

Les Fjords
19 avenue de Norvège
91140 Villebon Sur Yvette, France
Phone: +33-1-6486-4300
Fax: +33-1-6907-7817
www.tungaloy.com/fr

Tungaloy Italia S.r.l.

Via E. Andolfato 10
I-20126 Milano, Italy
Phone: +39-02-252012-1
Fax: +39-02-252012-65
www.tungaloy.com/it

Tungaloy Czech s.r.o.

Turanka 115
CZ-627 00 Brno, Czech Republic
Phone: +420-532 123 391
Fax: +420-532 123 392
www.tungaloy.com/cz

Tungaloy Ibérica S.L.

C/Miquel Servet, 43B, Nau 7
Pol. Ind. Bufalvent
ES-08243 Manresa (BCN), Spain
Phone: +34 93 113 1360
www.tungaloy.com/es

Tungaloy Scandinavia AB

Bultgatan 38
442 40 Kungälv, Sweden
Phone: +46-462119200
Fax: +46-462119207
www.tungaloy.com/se

Tungaloy Rus, LLC

Andropova avenue, h.18/7,
11 floor, office 3, 115432,
Moscow, Russia
Phone: +7-499-683-01-80
Fax: +7-499-683-01-81
www.tungaloy.com/ru

Tungaloy Polska Sp. z o.o.

Ul. Irysowa 1, 55-040 Bielany
Wroclawskie, Poland
Phone: +48 607 907 237
www.tungaloy.com/pl

Tungaloy-NTK UK Ltd.

Suite 3, Pioneer House, Mill Street,
Cannock, WS11 0EF, UK
Phone: +44 121 4000 231
Fax: +44 121 270 9694
www.tungaloy.com/uk

Tungaloy Hungary Kft

Erzsébet királyné útja 125
H-1142 Budapest, Hungary
Phone: +36 1 781-6846
Fax: +36 1 781-6866
www.tungaloy.com/hu

Tungaloy Turkey

Serifali Mah.bayraktar Bulvari Kule Sk. No:26
34775 Umraniye / Istanbul / Turkey
Phone: +90 216 540 04 67
Fax: +90 216 540 04 87
www.tungaloy.com/tr

Tungaloy Benelux b.v.

Tjalk 70
NL-2411 NZ Bodegraven, Netherlands
Phone: +31 172 630 420
Fax: +31 172 630 429
www.tungaloy.com/nl

Tungaloy Croatia

Ulica bana Josipa Jelačića 87,
10430, Samobor, Croatia
Phone: +385 1 3326 604
Fax: +385 1 3327 683
www.tungaloy.com/hr

Tungaloy Cutting Tool (Shanghai) Co. Ltd.

Rm No 401 No.88 Zhabei
Jiangchang No.3 Rd
Shanghai 200436, China
Phone: +86-21-3632-1880
Fax: +86-21-3621-1918
www.tungaloy.com/cn

Tungaloy Cutting Tools Taiwan Co. Ltd.

9F, No.293, Zhongyang Rd,
Xinzhuan Dist, New Taipei City,
24251 Taiwan
Phone: +886-2-8521-9986
Fax: +886-2-8521-8935
www.tungaloy.com/tw

Tungaloy-NTK Cutting Tool (Thailand) Co.,Ltd.

Interlink tower 4th Fl.
1858/5-7 Bangna-Trad Road
km.5 Bangna, Bangna, Bangkok 10260
Thailand
Phone: +66-2-751-5711
Fax: +66-2-751-5715
www.tungaloy.com/th

Tungaloy Singapore (Pte.), Ltd.

62 Ubi Road 1, #06-11 Oxley BizHub 2
Singapore 408734
Phone: +65-6391-1833
Fax: +65-6299-4557
www.tungaloy.com/sg

Tungaloy Vietnam

LE04.38, Lexington Residence
67 Mai Chi Tho St., Dist. 2,
Ho Chi Minh City, Vietnam
Phone: +84-2837406660
www.tungaloy.com/sg

Tungaloy India Pvt. Ltd.

One International Center,
Unit # 902-A, 9th Floor,
Tower 1, Senapati Bapat Marg,
Elphinstone Road (West),
Mumbai 400013, India
Phone: +91-22-6124-8803
Fax: +91-22-6124-8899
www.tungaloy.com/in

Tungaloy Korea Co., Ltd

#1312, Byucksan Digital Valley 5-cha
Beotkkot-ro 244, Geumcheon-gu
153-788 Seoul, Korea
Phone: +82-2-2621-6161
Fax: +82-2-6393-8952
www.tungaloy.com/kr

Tungaloy Malaysia Sdn Bhd

50 K-2, Kelana Mall, Jalan SS6/14
Kelana Jaya, 47301
Petaling Jaya, Selangor Darul Ehsan
Malaysia
Phone: +603-7805-3222
Fax: +603-7804-8563
www.tungaloy.com/my

Tungaloy Australia Pty Ltd

Unit 68 1470 Ferntree Gully Road
Knoxfield 3180 Victoria, Australia
Phone: +61-3-9755-8147
Fax: +61-3-9755-6070
www.tungaloy.com/au

PT. Tungaloy Indonesia

Ruko Blok AA.10 No3&5, Grand Wisata,
Lembangjaya, Tambun Selatan, Bekasi,
17510 Indonesia
Phone: +62-21-8261-5808
Fax: +62-21-8261-5809
www.tungaloy.com/id



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