

TurnLine

TUNG^{URN}TJET

www.tungaloy.com

Tungaloy Report No. 432-G

TUNGTURN-JET

Optimized two streams of high-pressure coolant jets to **maximize productivity**





ACCELERATED MACHINING

TurnLine

TUNG T^{URN} JET
TUNGALOY

TUNG *FORCE* **TURN**
ACCELERATED MACHINING



High pressure coolant **improves chip control**, and significantly **prolongs inserts tool life**.

High pressure coolant provides excellent chip control for difficult-to-cut materials

Short chips formed in machining of Inconel, titanium and other heat-resistant alloys



TUNGTURNJET 7 MPa

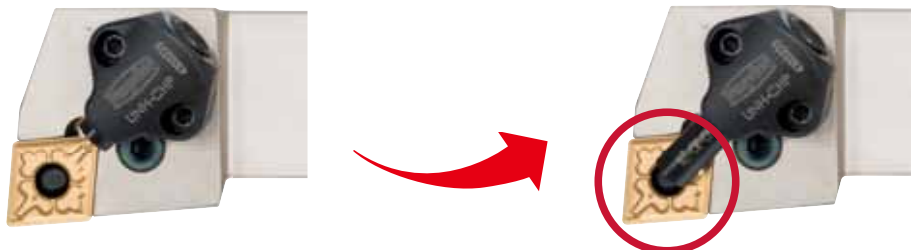
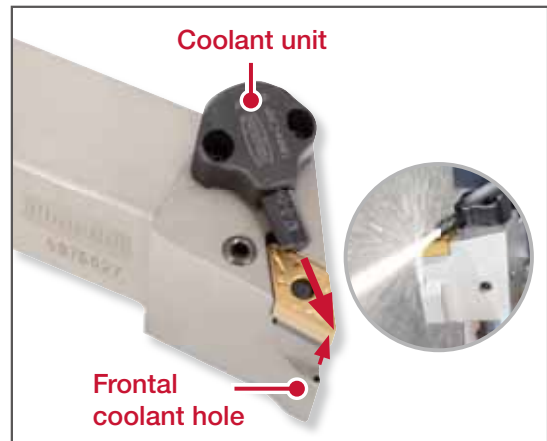


Normal pressure coolant (External supply)



Coolant from two directions maximizes productivity and drastically reduces tooling cost





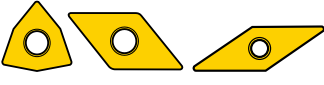


- Up to 200% increase in cutting speed when machining heat-resistant alloys
- Tool life increases even when machining alloy steel or stainless steel
- Nozzle tube delivers coolant directly to the cutting edge



High pressure coolant disperses the cutting heat during machining, which prevents damage on cutting edges

Stable machining with nozzle tubes designed for various insert geometries

Coolant flow rates

Insert type	Coolant hole	Coolant unit	Flow rate l/min.		
			7 MPa	10 MPa	14 MPa
		CU-CW-CHP	17	20	24
		CU-D-CHP	16	19	22
 Tools for small lathes		S-CU-CHP	4	4.8	5.7
Frontal coolant hole		-	1.8 - 2.6	2.1 - 3.4	2.5 - 3.6

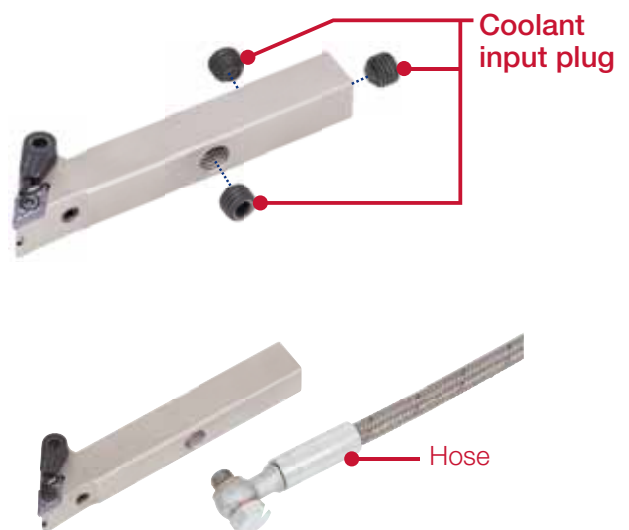
Easy connection with coolant hose for various machine

Easy set-up for high pressure internal coolant

For general lathes

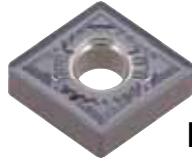


For small lathes



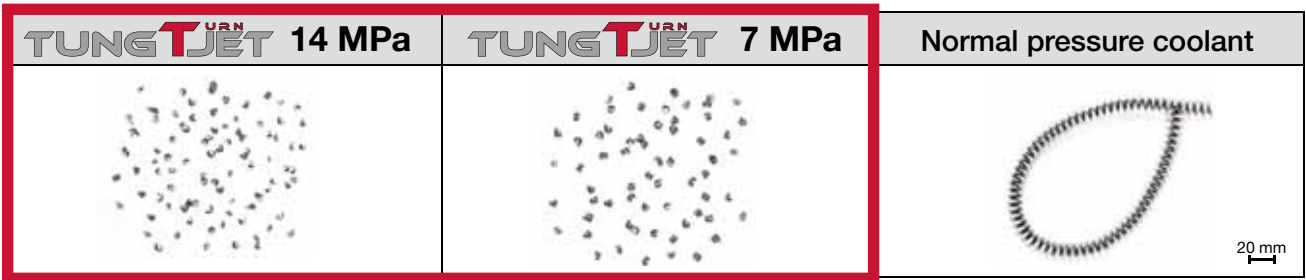
Excellent chip control with high pressure coolant

S Heat-resistant alloys
(Inconel 718)

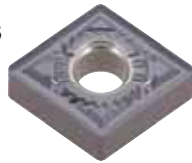


HMM

Toolholder : PCLNL2525M12-CHP
 Insert : CNMG120408-HMM AH905
 Cutting speed : $V_c = 60$ m/min
 Feed : $f = 0.2$ mm/rev
 Depth of cut : $a_p = 1$ mm



S Titanium alloys
(Ti-6Al-4V)



HMM

Toolholder : PCLNL2525M12-CHP
 Insert : CNMG120408-HMM AH905
 Cutting speed : $V_c = 60$ m/min
 Feed : $f = 0.25$ mm/rev
 Depth of cut : $a_p = 2$ mm

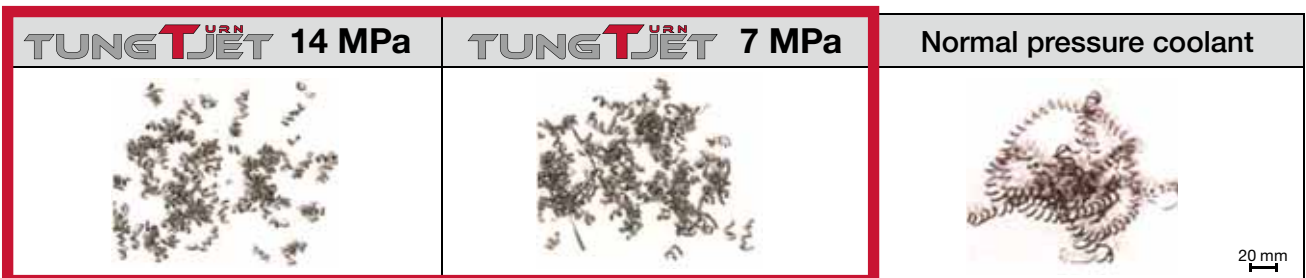


M Stainless steel
(SUS304 / X5CrNi18-9)



SM

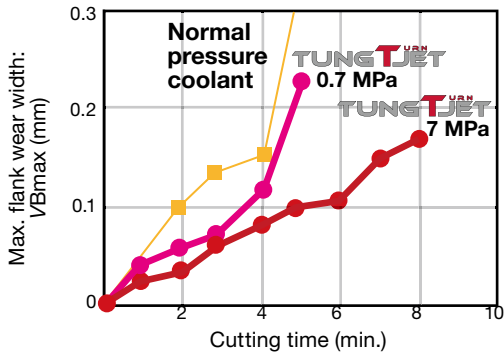
Toolholder : PCLNL2525M0904-CHP
 Insert : CNMG090408E-SM T6120
 Cutting speed : $V_c = 150$ m/min
 Feed : $f = 0.1$ mm/rev
 Depth of cut : $a_p = 1$ mm



Drastically improved tool life with high pressure coolant

S Heat-resistant alloys (Inconel 718)

Toolholder : PCLNL2525M12-CHP
 Insert : CNMG120408-HMM AH905
 Cutting speed : $V_c = 50$ m/min
 Feed : $f = 0.2$ mm/rev
 Depth of cut : $a_p = 2$ mm



TUNG TJET 7 MPa (5 min.)



TUNG TJET 0.7 MPa (5 min.)

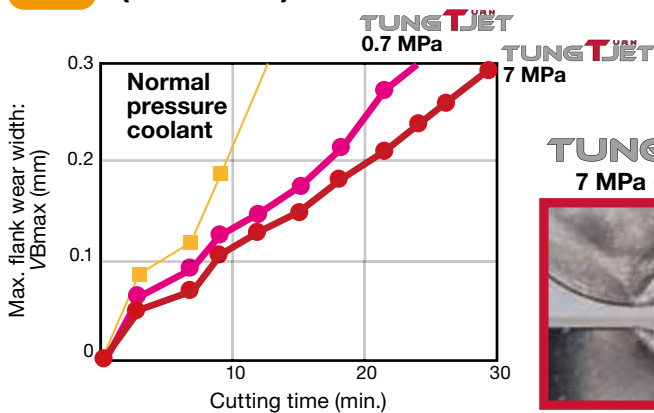


Normal pressure coolant (5 min.)



S Titanium alloys (Ti-6Al-4V)

Toolholder : PCLNL2525M12-CHP
 Insert : CNMG120408-HMM AH905
 Cutting speed : $V_c = 120$ m/min
 Feed : $f = 0.15$ mm/rev
 Depth of cut : $a_p = 0.25$ mm



TUNG TJET 7 MPa (21 min.)



TUNG TJET 0.7 MPa (21 min.)

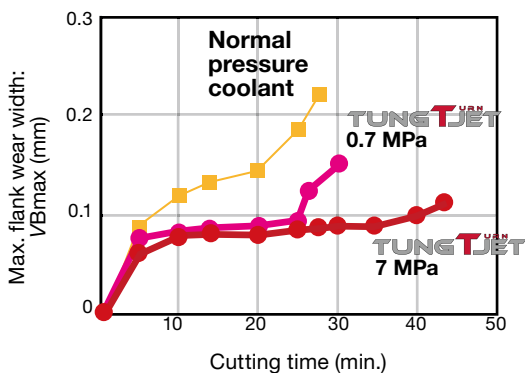


Normal pressure coolant (15 min.)



M Stainless steel (SUS304 / X5CrNi18-9)

Toolholder : PCLNL2525M0904-CHP
 Insert : CNMG090408E-SM T6120
 Cutting speed : $V_c = 200$ m/min
 Feed : $f = 0.3$ mm/rev
 Depth of cut : $a_p = 2$ mm



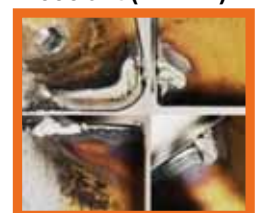
TUNG TJET 7 MPa (30 min.)



TUNG TJET 0.7 MPa (30 min.)



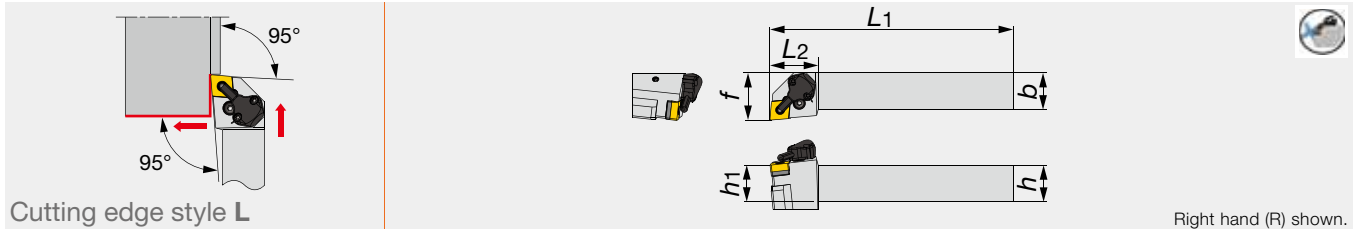
Normal pressure coolant (27 min.)



PCLNR/L-CHP

Lever lock toolholders – 95° approach angle.

For negative 80° rhombic insert. High-pressure coolant capability.



ISO TURN

Designation	<i>h</i>	<i>b</i>	<i>L1</i>	<i>L2</i>	<i>h1</i>	<i>f</i>	<i>re</i> **	Insert	Torque*
New 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: Standard corner radius






TUNGTURN

Designation	<i>h</i>	<i>b</i>	<i>L1</i>	<i>L2</i>	<i>h1</i>	<i>f</i>	<i>re</i> **	Insert	Torque*
New PCLNR/L2020K12-CHP	20	20	125	33	20	32	0.8	CN**1204...	3
PCLNR/L2525M12-CHP	25	25	150	33	25	32	0.8	CN**1204...	3







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

**re: Standard corner radius

SPARE PARTS

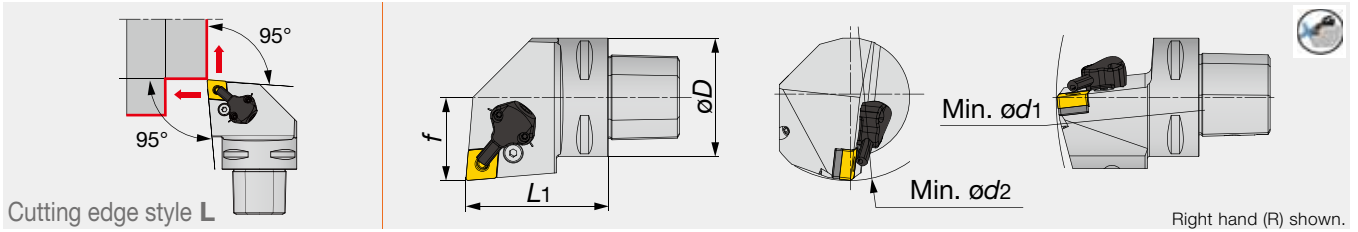
Designation					
PCLNR/L**0904-CHP	LSC317	LCS3	P-2.5	LSP3	LCL33
PCLNR/L**12-CHP	LSC42	LCS4	P-3	LSP4	LCL4

SPARE PARTS

Designation						
PCLNR/L**0904-CHP	CU-CW-CHP	SRM3	T-8F	OR6.4X0.9N	SRM4X4TL360	P-2
PCLNR/L**12-CHP	CU-CW-CHP	SRM3	T-8F	OR6.4X0.9N	SRM4X4TL360	P-2

C-PCLNR/L-CHP

Lever lock toolholders with TungCap connection – 95° approach angle.
For negative 80° rhombic insert. High-pressure coolant capability.



TUNGCAP

	Designation	øD	L1	f	ød1	ød2	re**	Insert
New	C4PCLNR/L27050-0904-CHP	40	50	27	140	110	0.8	CN**0904...
New	C4PCLNR/L27050-12-CHP	40	50	27	140	110	0.8	CN**1204...
	C5PCLNR/L35060-12-CHP	50	60	35	165	110	0.8	CN**1204...
New	C6PCLNR/L45065-0904-CHP	63	65	45	190	125	0.8	CN**0904...
	C6PCLNR/L45065-12-CHP	63	65	45	190	125	0.8	CN**1204...

Applicable for 14 MPa pressure coolant

**re: Standard corner radius

SPARE PARTS

Designation	 Shim	 Clamping screw	 Wrench 1	 Spring pin	 Lever
C*PCLNR/L**0904-CHP	LSC317	LCS3	P-2.5	LSP3	LCL33
C*PCLNR/L**-12-CHP	LSC42	LCS4	P-3	LSP4	LCL4

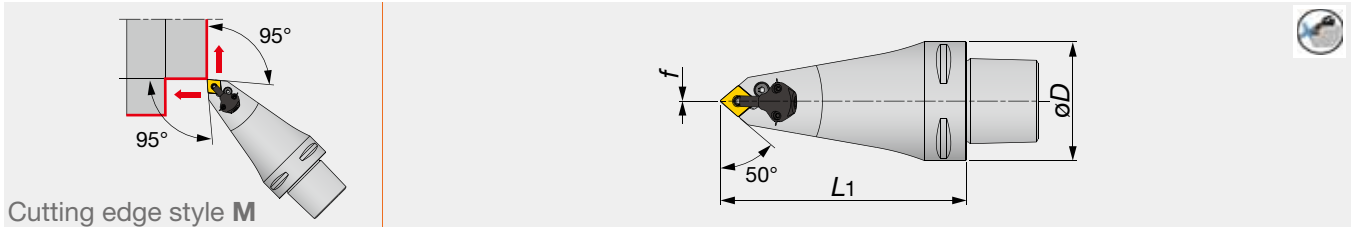
SPARE PARTS

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

New

C-PCMNN-CHP

Lever lock toolholder with TungCap connection.
For negative 80° rhombic insert. High-pressure coolant capability.



TUNGCAP

Designation	øD	L1	f	re**	Insert
C6PCMNN00130-12-CHP	63	115	0	0.8	CN**1204...

Applicable for 14 MPa pressure coolant
**re: Standard corner radius

For external turning only.

SPARE PARTS

Designation	Shim	Clamping screw	Wrench 1	Spring pin	Lever
C6PCMNN00130-12-CHP	LSC42	LCS4	P-3	LSP4	LCL4

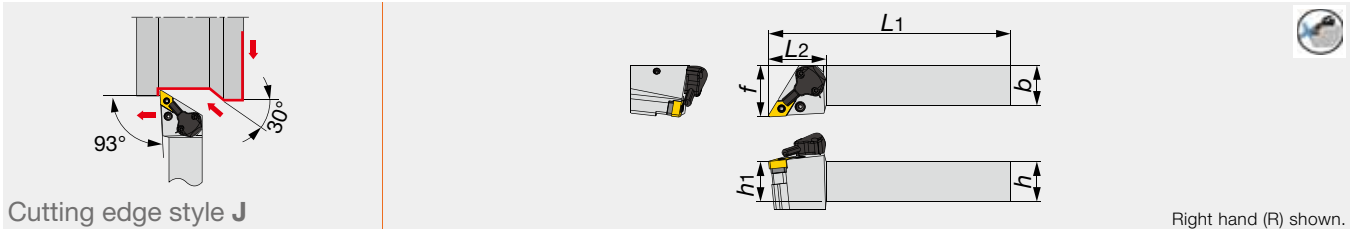
SPARE PARTS

Designation	Coolant unit	Mounting screw	Wrench 2	O-ring
C6PCMNN00130-12-CHP	CU-CW-CHP	SRM3	T-8F	OR6.4X0.9N

PDJNR/L-CHP

Lever lock toolholders – 93° approach angle.

For negative 55° rhombic insert. High-pressure coolant capability.



Right hand (R) shown.

ISO⁹⁰TURN

	Designation	<i>h</i>	<i>b</i>	<i>L</i> ₁	<i>L</i> ₂	<i>h</i> ₁	<i>f</i>	<i>r</i> _c **	Insert	Torque*
New	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

***r*_c: Standard corner radius


TUNGTURN

	Designation	<i>h</i>	<i>b</i>	<i>L</i> ₁	<i>L</i> ₂	<i>h</i> ₁	<i>f</i>	<i>r</i> _c **	Insert	Torque*
New	PDJNR/L2020K15-CHP	20	20	125	36	20	32	0.8	DN**1504...	3
	PDJNR/L2525M15-CHP	25	25	150	36	25	32	0.8	DN**1504...	3







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

***r*_c: Standard corner radius

SPARE PARTS

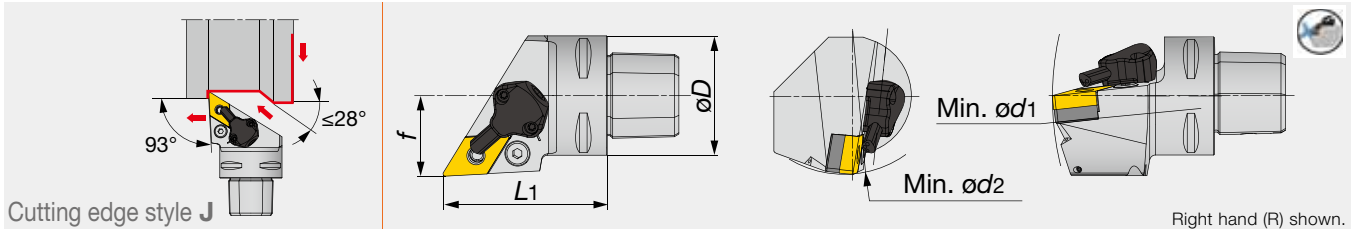
Designation					
PDJNR/L**1104-CHP	ELSD32	LCS3	P-2.5	LSP3	LCL33L
PDJNR/L**15-CHP	LSD43A	LCS4	P-3	LSP4	LCL4

SPARE PARTS

Designation						
PDJNR/L**1104-CHP	CU-D-CHP	SRM3	T-8F	OR6.4X0.9N	SRM4X4TL360	P-2
PDJNR/L**15-CHP	CU-D-CHP	SRM3	T-8F	OR6.4X0.9N	SRM4X4TL360	P-2

C-PDJNR/L-CHP

Lever lock toolholders with TungCap connection – 93° approach angle.
For negative 55° rhombic insert. High-pressure coolant capability.



TUNGCAP

	Designation	øD	L1	f	ød1	ød2	re**	Insert
New	C4PDJNR/L27050-1104-CHP	40	50	27	140	110	0.8	DN**1104...
New	C4PDJNR/L27050-15-CHP	40	50	27	140	110	0.8	DN**1504(06)...
	C5PDJNR/L35060-15-CHP	50	60	35	165	110	0.8	DN**1504(06)...
New	C6PDJNR/L45065-1104-CHP	63	65	45	190	110	0.8	DN**1104...
	C6PDJNR/L45065-15-CHP	63	65	45	190	110	0.8	DN**1504(06)...

Applicable for 14 MPa pressure coolant

**re: Standard corner radius

SPARE PARTS

Designation	Shim	Clamping screw	Wrench 1	Spring pin	Lever
C*PDJNR/L**1104-CHP	ELSD32	LCS3	P-2.5	LSP3	LCL33L
C*PDJNR/L**15-CHP	LSD43A	LCS4	P-3	LSP4	LCL4

Option: LSD42A (Shim for DN**1506...), LSP4S (Spring pin for DN**1506...)

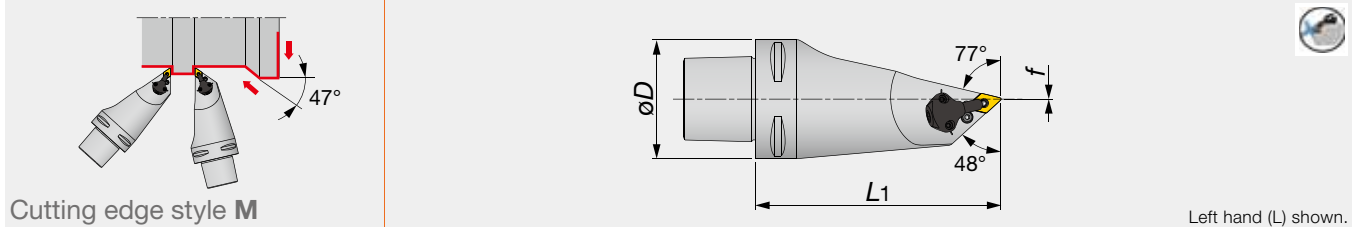
SPARE PARTS

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

New

C-PDMNL-CHP

Lever lock toolholder with TungCap connection.
For negative 55° rhombic insert. High-pressure coolant capability.



Left hand (L) shown.






TUNGCAP

Designation	$\varnothing D$	L_1	f	r_c^{**}	Insert
C6PDMNL00130-1104-CHP	63	130	0	0.8	DN**1104...

Applicable for 14 MPa pressure coolant
** r_c : Standard corner radius

For external turning only.

SPARE PARTS

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

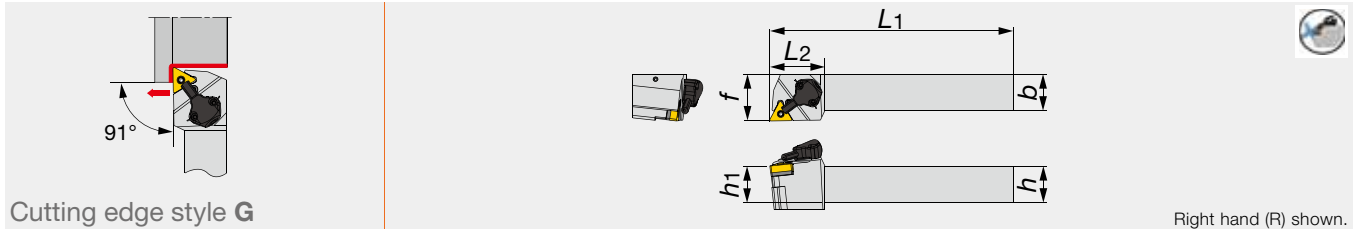
SPARE PARTS

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

New

PTGNR/L-CHP

Lever lock toolholders – 91° approach angle.
For negative triangle insert. High-pressure coolant capability.



Cutting edge style G

Right hand (R) shown.

ISO TURN

Designation	<i>h</i>	<i>b</i>	<i>L1</i>	<i>L2</i>	<i>h1</i>	<i>f</i>	<i>re</i> **	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: Standard corner radius

TUNGTURN

Designation	<i>h</i>	<i>b</i>	<i>L1</i>	<i>L2</i>	<i>h1</i>	<i>f</i>	<i>re</i> **	Insert	Torque*
PTGNR/L2020K16-CHP	20	20	125	38	20	32	0.8	TN**1604...	2
PTGNR/L2525M16-CHP	25	25	150	38	25	32	0.8	TN**1604...	2







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

**re: Standard corner radius

SPARE PARTS

Designation					
PTGNR/L**1104-CHP	-	LCS23A	P-2.5	LSP3	LCL23
PTGNR/L**16-CHP	LST317	LCS3	P-2.5	LSP3	LCL3

SPARE PARTS

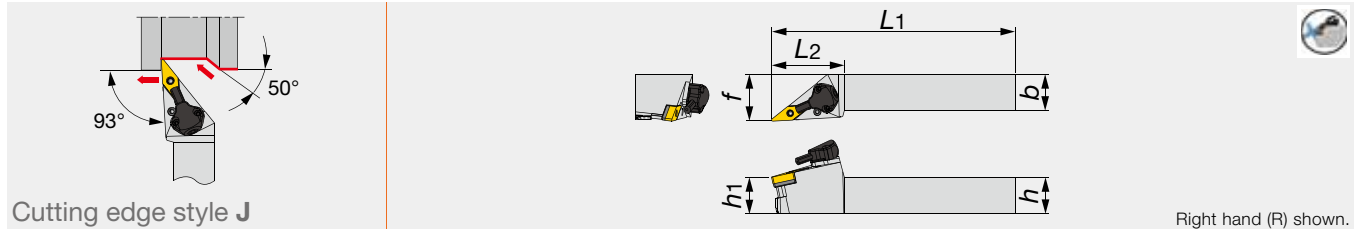
Designation						
PTGNR/L**1104-CHP	CU-CW-CHP	SRM3	T-8F	OR6.4X0.9N	SRM4X4TL360	P-2
PTGNR/L**16-CHP	CU-CW-CHP	SRM3	T-8F	OR6.4X0.9N	SRM4X4TL360	P-2

New

PVJNR/L-CHP

Lever lock toolholders – 93° approach angle.

For negative 35° or 25° rhombic insert. High-pressure coolant capability.



Right hand (R) shown.

TUNGTURN

Designation	h	b	L1	L2	h1	f	re**	Insert	Torque*
PVJNR/L2020K16-CHP	20	20	125	50	20	32	0.8	V/YN**1604...	2
PVJNR/L2525M16-CHP	25	25	150	50	25	32	0.8	V/YN**1604...	2

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

**re: Standard corner radius

SPARE PARTS

Designation	Shim	Clamping screw	Wrench 1	Spring pin	Lever
PVJNR/L**16-CHP	LSV317	LCS3V	P-2.5	LSP3	LCL3V

SPARE PARTS

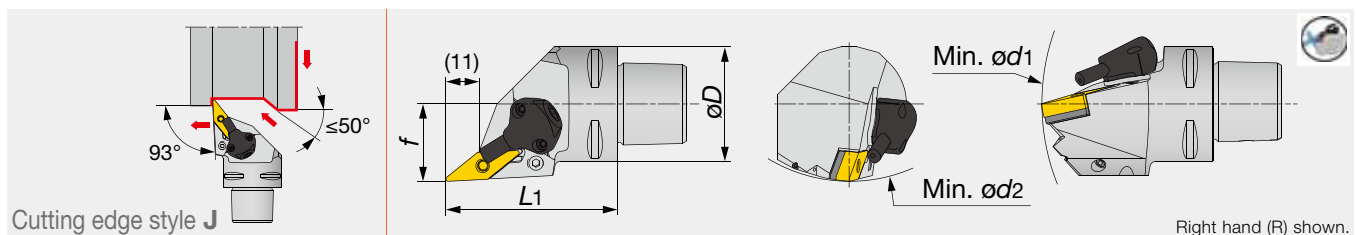
Designation	Coolant unit	Mounting screw	Wrench 2	O-ring	Coolant screw	Wrench 3
PVJNR/L**16-CHP	CU-V-CHP	SRM3	T-8F	OR6.4X0.9N	SRM4X4TL360	P-2

New

C-PVJNR/L-CHP

Lever lock toolholders with TungCap connection – 93° approach angle.

For negative 35° or 25° rhombic insert. High-pressure coolant capability.



Right hand (R) shown.

TUNGCAP

Designation	øD	L1	f	ød1	ød2	re**	Insert
C4PVJNR/L27060-16-CHP	40	60	27	140	110	0.8	V/YN**1604...
C6PVJNR/L45065-16-CHP	63	65	45	190	81	0.8	V/YN**1604...

Applicable for 14 MPa pressure coolant

**re: Standard corner radius

SPARE PARTS

Designation	Shim	Clamping screw	Wrench 1	Spring pin	Lever
C*PVJNR/L...16-CHP	LSV317	LCS3V	P-2.5	LSP3	LCL3V

SPARE PARTS

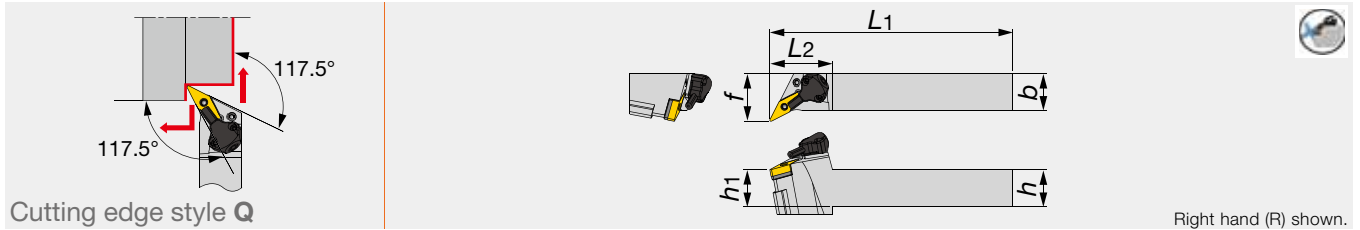
Designation	Coolant unit	Mounting screw	Wrench 2	O-ring
C*PVJNR/L...16-CHP	CU-V-CHP	SRM3	T-8F	OR6.4X0.9N

New

PVQNR/L-CHP

Lever lock toolholders – 117.5° approach angle.

For negative 35° or 25° rhombic insert. High-pressure coolant capability.








TUNGTURN

Designation	<i>h</i>	<i>b</i>	<i>L1</i>	<i>L2</i>	<i>h1</i>	<i>f</i>	<i>re</i> **	Insert	Torque*
PVQNR/L2020K16-CHP	20	20	125	42.5	20	32	0.8	V/YN**1604...	2
PVQNR/L2525M16-CHP	25	25	150	42.5	25	32	0.8	V/YN**1604...	2




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

**re: Standard corner radius

SPARE PARTS

Designation					
PVQNR/L**16-CHP	LSV317	LCS3V	P-2.5	LSP3	LCL3V

SPARE PARTS

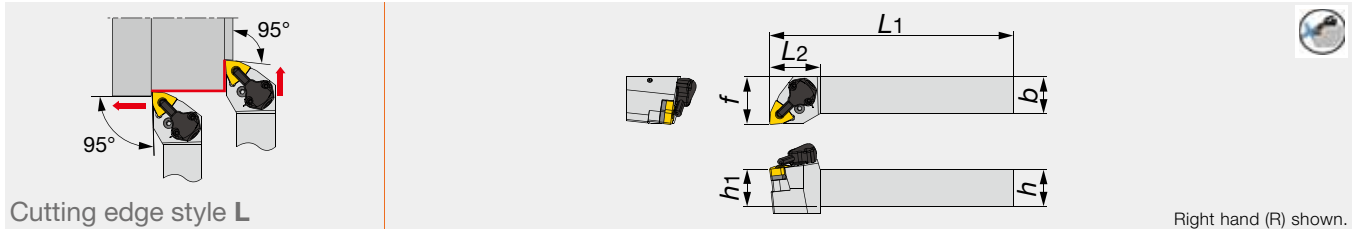
Designation						
PVQNR/L**16-CHP	CU-V-CHP	SRM3	T-8F	OR6.4X0.9N	SRM4X4TL360	P-2

New

PWLNR/L-CHP

Lever lock toolholders – 95° approach angle.

For negative 80° trigon insert. High-pressure coolant capability.



Cutting edge style L

Right hand (R) shown.

ISO TURN

Designation	<i>h</i>	<i>b</i>	<i>L1</i>	<i>L2</i>	<i>h1</i>	<i>f</i>	<i>re</i> **	Insert	Torque*
PWLNR/L2020K0604-CHP	20	20	125	34	20	32	0.8	WN**0604...	2
PWLNR/L2525M0604-CHP	25	25	150	34	25	32	0.8	WN**0604...	2

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

**re: Standard corner radius





TUNGTURN

Designation	<i>h</i>	<i>b</i>	<i>L1</i>	<i>L2</i>	<i>h1</i>	<i>f</i>	<i>re</i> **	Insert	Torque*
PWLNR/L2020K08-CHP	20	20	125	34	20	32	0.8	WN**0804...	3
PWLNR/L2525M08-CHP	25	25	150	34	25	32	0.8	WN**0804...	3







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

**re: Standard corner radius

SPARE PARTS

Designation					
PWLNR/L**0604-CHP	LSW312	LCS3	P-2.5	LSP3	LCL3
PWLNR/L**08-CHP	LSW42	LCS4	P-2.5	LSP4	LCL4

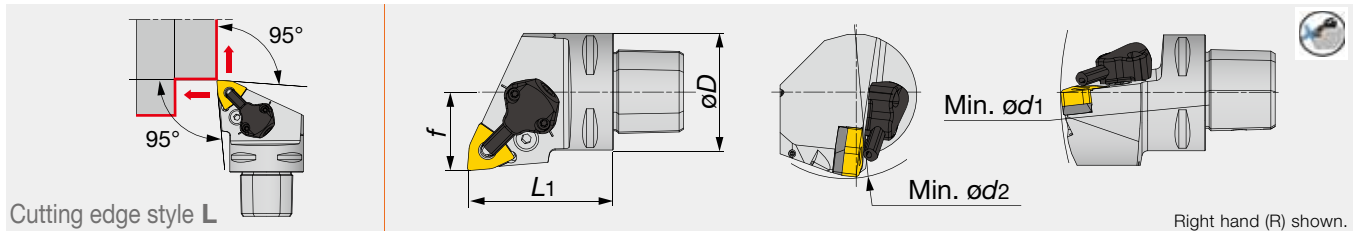
SPARE PARTS

Designation						
PWLNR/L**0604-CHP	CU-CW-CHP	SRM3	T-8F	OR6.4X0.9N	SRM4X4TL360	P-2
PWLNR/L**08-CHP	CU-CW-CHP	SRM3	T-8F	OR6.4X0.9N	SRM4X4TL360	P-2

New

C-PWLNLR/L-CHP

Lever lock toolholders with TungCap connection – 95° approach angle.
For negative 80° trigon insert. High-pressure coolant capability.








TUNGCAP

Designation	øD	L1	f	ød1	ød2	re**	Insert
C4PWLNLR/L27050-0604-CHP	40	50	27	140	110	0.8	WN**0604...
C4PWLNLR/L27050-08-CHP	40	50	27	140	110	0.8	WN**0804...
C6PWLNLR/L45065-08-CHP	63	65	45	190	125	0.8	WN**0804...

Applicable for 14 MPa pressure coolant

**re: Standard corner radius

SPARE PARTS

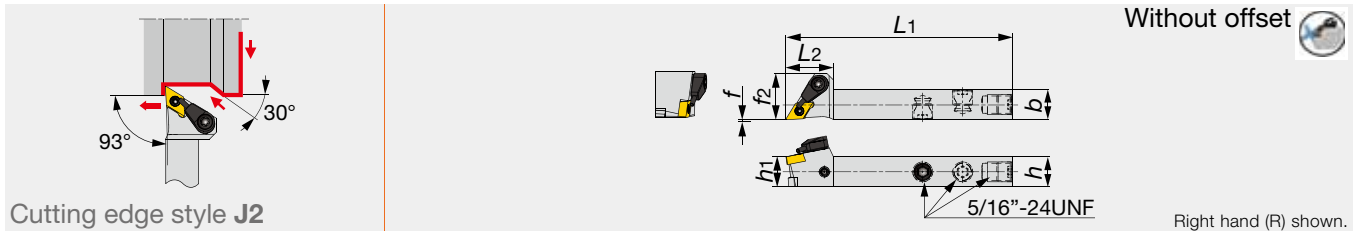
Designation					
C*PWLNLR/L**0604-CHP	Shim LSW312	Clamping screw LCS3	Wrench 1 P-2.5	Spring pin LSP3	Lever LCL3
C*PWLNLR/L*-08-CHP	LSW42BL	LCS4	P-3	LSP4	LCL4

SPARE PARTS

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

JSDJ2XR/L-CHP

Screw-on toolholder without offset – 93° approach angle.
For DXGU insert. High-pressure coolant capability.



MINIFURN

Designation	<i>h</i>	<i>b</i>	<i>L1</i>	<i>L2</i>	<i>h1</i>	<i>f</i>	<i>f2</i>	<i>r_ε**</i>	Insert	Torque*
JSDJ2XR/L1212F07-CHP	12	12	85	19	12	0	18.5	0.2	DXGU0703**/L/R...	0.9

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

***r_ε*: Standard corner radius

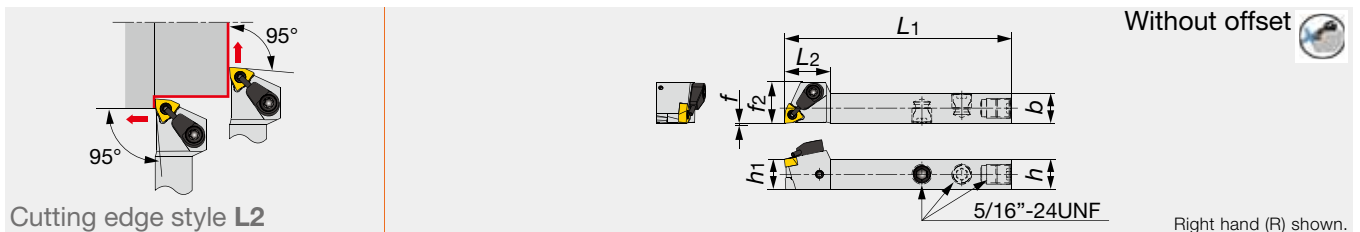
Note: Right-hand toolholders (R) are used with left-hand inserts (L). Left-hand toolholders (L) are used with right-hand inserts (R).

SPARE PARTS

Designation	Clamping screw	Coolant unit	Wrench
JSDJ2XR/L1212F07-CHP	SR34-514	S-CU-CHP	T-7F

JSWL2XR/L-CHP

Screw-on toolholder without offset – 95° approach angle.
For WXGU insert. High-pressure coolant capability.



MINIFURN

Designation	<i>h</i>	<i>b</i>	<i>L1</i>	<i>L2</i>	<i>h1</i>	<i>f</i>	<i>f2</i>	<i>r_ε**</i>	Insert	Torque*
JSWL2XR/L1212F04-CHP	12	12	85	18	12	0	16.5	0.2	WXGU0403**/L/R...	0.9

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

***r_ε*: Standard corner radius

Note: Right-hand toolholders (R) are used with left-hand inserts (L). Left-hand toolholders (L) are used with right-hand inserts (R).

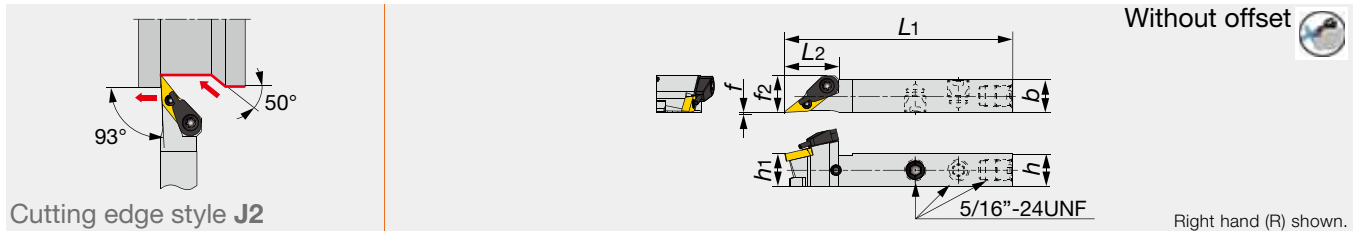
SPARE PARTS

Designation	Clamping screw	Coolant unit	Wrench
JSWL2XR/L1212F04-CHP	SR34-514	S-CU-CHP	T-7F

New

JSVJ2XR/L-CHP

Screw-on toolholder without offset – 93° approach angle.
For VXGU insert. High-pressure coolant capability.



MINIFURN




Designation	<i>h</i>	<i>b</i>	<i>L1</i>	<i>L2</i>	<i>h1</i>	<i>f</i>	<i>f2</i>	<i>re</i> **	Insert	Torque*
JSVJ2XR/L1212F09-CHP	12	12	85	20	12	0	13.5	0.2	VXGU09T2**/L/R...	0.9

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

***re*: Standard corner radius

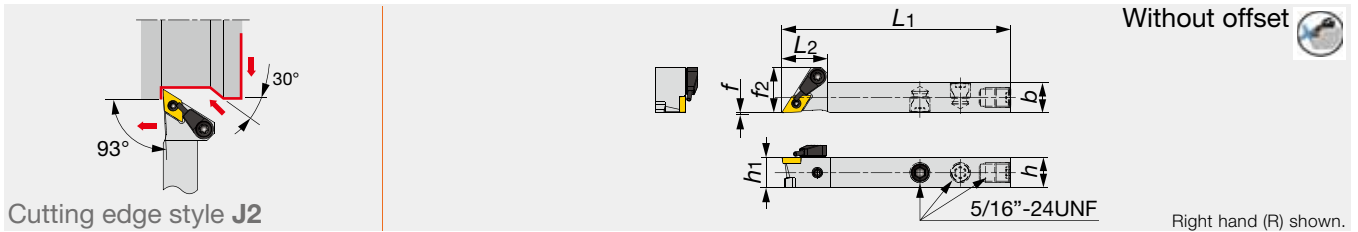
Note: Right-hand toolholders (R) are used with left-hand inserts (L). Left-hand toolholders (L) are used with right-hand inserts (R).

SPARE PARTS

Designation			
Designation	Clamping screw	Coolant unit	Wrench
JSVJ2XR/L1212F09-CHP	SR34-508	S-CU-CHP	T-7F

JSDJ2CR/L-CHP

Screw-on toolholders without offset – 93° approach angle.
For positive 55° rhombic insert. High-pressure coolant capability.



Designation	<i>h</i>	<i>b</i>	<i>L</i> ₁	<i>L</i> ₂	<i>h</i> ₁	<i>f</i>	<i>f</i> ₂	<i>r</i> _ε **	Insert	Torque*
JSDJ2CR/L1212F07-CHP	12	12	85	18	12	0	18	0.2	DC**0702...	0.9
JSDJ2CR/L1212F11-CHP	12	12	85	19	12	0	20.5	0.2	DC**11T3...	0.9

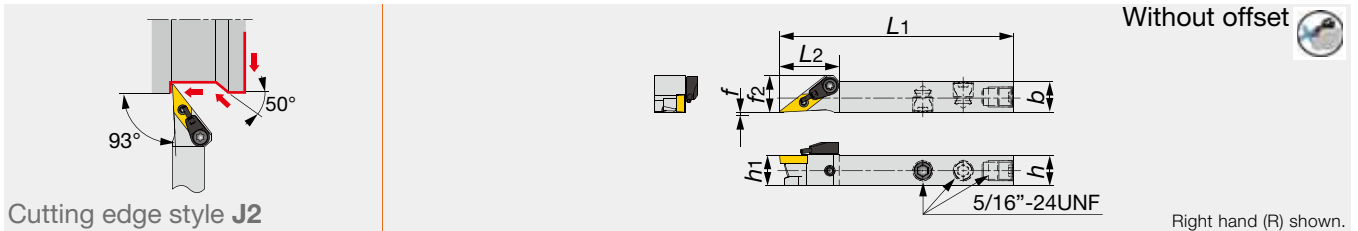
*Torque: Recommended torque (N·m) for clamping
***r*_ε: Standard corner radius

SPARE PARTS

Designation	Clamping screw	Coolant unit	Wrench
JSDJ2CR/L1212F07-CHP	CSTB-2.5	S-CU-CHP	T-8F
JSDJ2CR/L1212F11-CHP	CSTB-4SD	S-CU-CHP	T-8F

JSVJ2BR/L-CHP

Screw-on toolholder without offset – 93° approach angle.
For positive 35° rhombic insert. High-pressure coolant capability.



Designation	<i>h</i>	<i>b</i>	<i>L</i> ₁	<i>L</i> ₂	<i>h</i> ₁	<i>f</i>	<i>f</i> ₂	<i>r</i> _ε **	Insert	Torque*
JSVJ2BR/L1212F11-CHP	12	12	85	23.6	12	0	14.7	0.2	VB**1103...	1.2

*Torque: Recommended torque (N·m) for clamping
***r*_ε: Standard corner radius

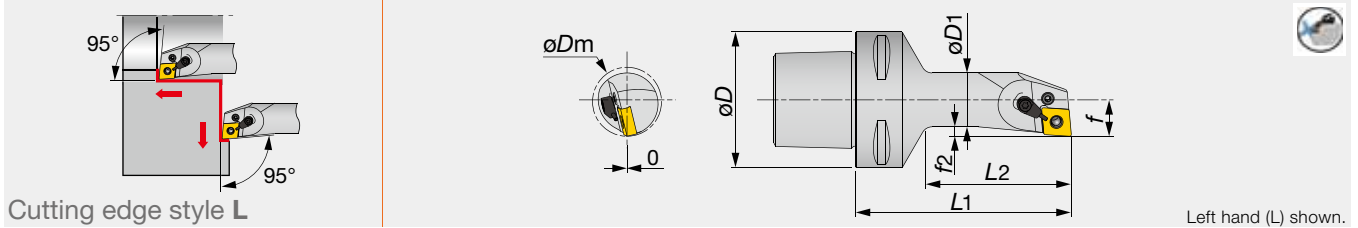
SPARE PARTS

Designation	Clamping screw	Coolant unit	Wrench
JSVJ2BR/L1212F11-CHP	CSTB-2.5	S-CU-CHP	T-8F

New

C-PCLNR/L-CHP

Lever lock internal toolholder with TungCap connection – 95° approach angle.
For negative 80° rhombic insert. High-pressure coolant capability.



Left hand (L) shown.

TUNGCAP

Designation	ϕD_m	ϕD	ϕD_1	L_1	L_2	f	f_2	r_{ϵ}^{**}	Insert
C6PCLNL17100-12-CHP	32	63	25	100	67.5	17	4.5	0.8	CN**1204...

Applicable for 14 MPa pressure coolant

**re: Standard corner radius

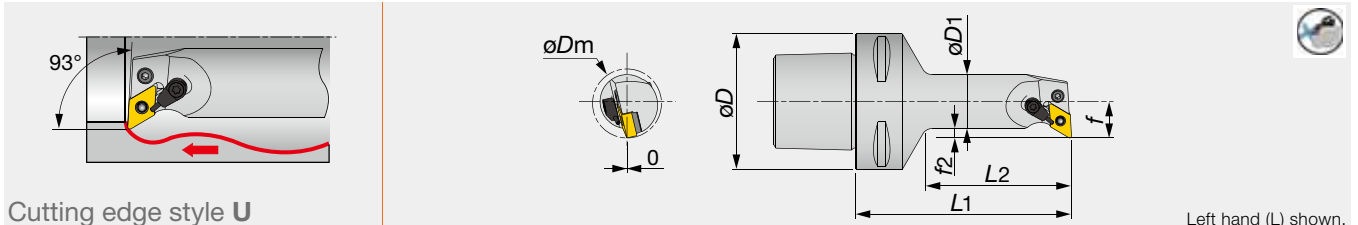
SPARE PARTS

Designation	Clamping screw	Coolant unit	Wrench	Lever
C6PCLNL17100-12-CHP	LCS43	S-CU-CHP	P-2.5F	LCL43N

New

C-PDUNR/L-CHP

Lever lock internal toolholder with TungCap connection – 93° approach angle.
For negative 55° rhombic insert. High-pressure coolant capability.



Left hand (L) shown.

TUNGCAP

Designation	ϕD_m	ϕD	ϕD_1	L_1	L_2	f	f_2	r_{ϵ}^{**}	Insert
C6PDUNL17100-1104-CHP	32	63	25	100	67.5	17	4.5	0.8	DN**1104...

Applicable for 14 MPa pressure coolant

**re: Standard corner radius

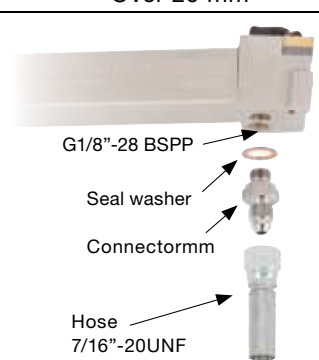
SPARE PARTS

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

CONNECTION OF TOOLHOLDER AND COOLANT HOSE

- Toolholder in the size of over 20 mm: Hose on the bottom of the head
- Toolholder in the size of less than 16 mm: Hose on the back, front, or back end side

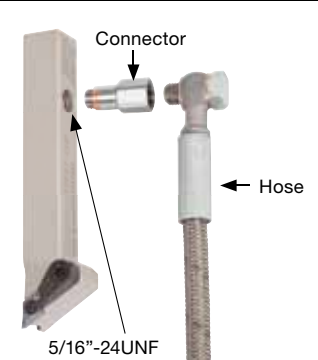
For general lathes (P-type)

Designation	PCLN... / PDJN... / PTGN... / PV*N... / PWLN...
Shank size	Over 20 mm
Example of connection	
Washer	CHP-COPPER-SEAL1/8
Connector	CHP-NIPPLE-G1/8-7/16UNF
Hose	CHP-HOSE-G1/8-7/16-200BS ⁽¹⁾
	CHP-HOSE-G1/8-7/16-250BS ⁽¹⁾
	CHP-HOSE-5/16-7/16-200BS ⁽²⁾

Thread size of hose for machine: ⁽¹⁾G1/8"-28 BSPP; ⁽²⁾5/16"-24UNF



For small lathes (J-type)

Designation	JSDJ2X... / JSWL2X... / JSVJ2X... / JSDJ2C... / JSVJ2B...		
Shank size	≤ 16 mm		
Connection	Back	Front	Back end
Example of connection			
Connector for toolholder	CHP-CONNECTOR5/16-G1/8	-	-
Hose	CHP-HOSE-G1/8-7/16-200BS ⁽³⁾	CHP-HOSE-5/16-7/16-200BS ⁽³⁾	CHP-HOSE-5/16-7/16-200BS ⁽³⁾
	CHP-HOSE-G1/8-7/16-250BS ⁽³⁾	-	-
	CHP-HOSE-G1/8-G1/8-200BB ⁽⁴⁾	-	-
	CHP-HOSE-G1/8-G1/8-250BB ⁽⁴⁾	-	-
Connector for machine	CHP-NIPPLE-G1/8-7/16UNF ⁽⁵⁾	CHP-NIPPLE-G1/8-7/16UNF ⁽⁵⁾	CHP-NIPPLE-G1/8-7/16UNF ⁽⁵⁾
Washer for machine	CHP-COPPER-SEAL1/8 ⁽⁵⁾	CHP-COPPER-SEAL1/8 ⁽⁵⁾	CHP-COPPER-SEAL1/8 ⁽⁵⁾

Thread size of hose for machine: ⁽³⁾7/16"-20UNF (G1/8 internal thread)
 Must purchase connector⁽⁵⁾ and washer⁽⁵⁾ that apply to the internal thread
⁽⁴⁾G1/8-28 BSPP (External thread)

PARTS FOR COOLANT HOSE

Connecting hose

Fig. 1

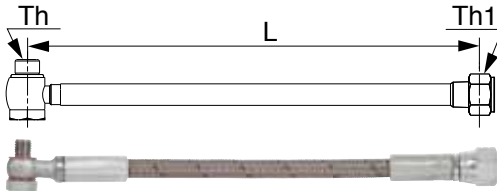
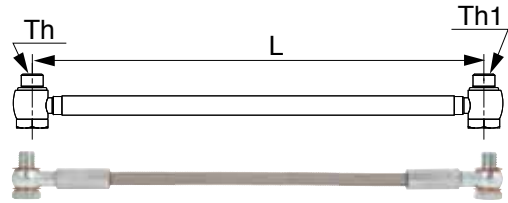
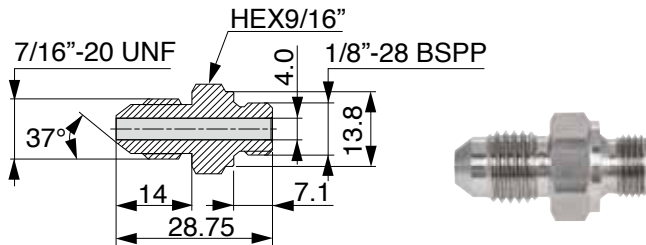


Fig. 2



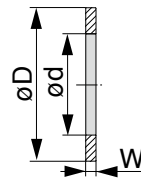
Designation	Length L	Threading size		Max. pressure (Mpa)	Fig.
		Th	Th1		
CHP-HOSE-G1/8-7/16-200BS	200	G1/8"-28 BSPP	7/16"-20 UNF	26	1
CHP-HOSE-G1/8-7/16-250BS	250	G1/8"-28 BSPP	7/16"-20 UNF	26	1
CHP-HOSE-5/16-7/16-200BS	200	5/16"-24UNF	7/16"-20 UNF	20	1
CHP-HOSE-5/16-G1/8-200BS	200	5/16"-24UNF	G1/8"-28 BSPP	20	1
CHP-HOSE-G1/8-G1/8-200BB	200	G1/8"-28 BSPP	G1/8"-28 BSPP	26	2
CHP-HOSE-G1/8-G1/8-250BB	250	G1/8"-28 BSPP	G1/8"-28 BSPP	26	2

Connector



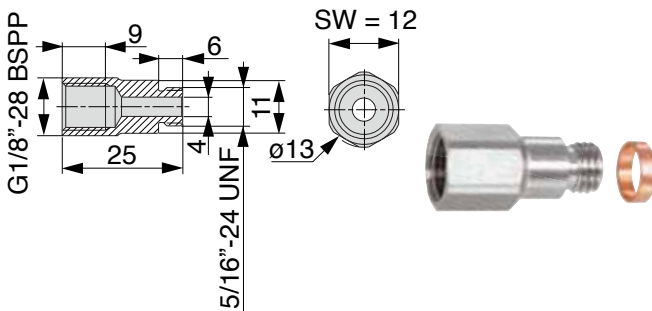
Designation
CHP-NIPPLE-G1/8-7/16UNF

Seal washer



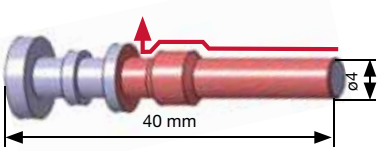
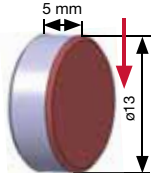
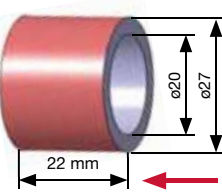

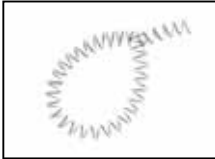
Designation	øD	ød	W
CHP-COPPER-SEAL1/8	15	8	1
CHP-COPPER-SEAL5/16	11	8	1
CHP-COPPER-SEAL5/16-2.5	11	8	2.5

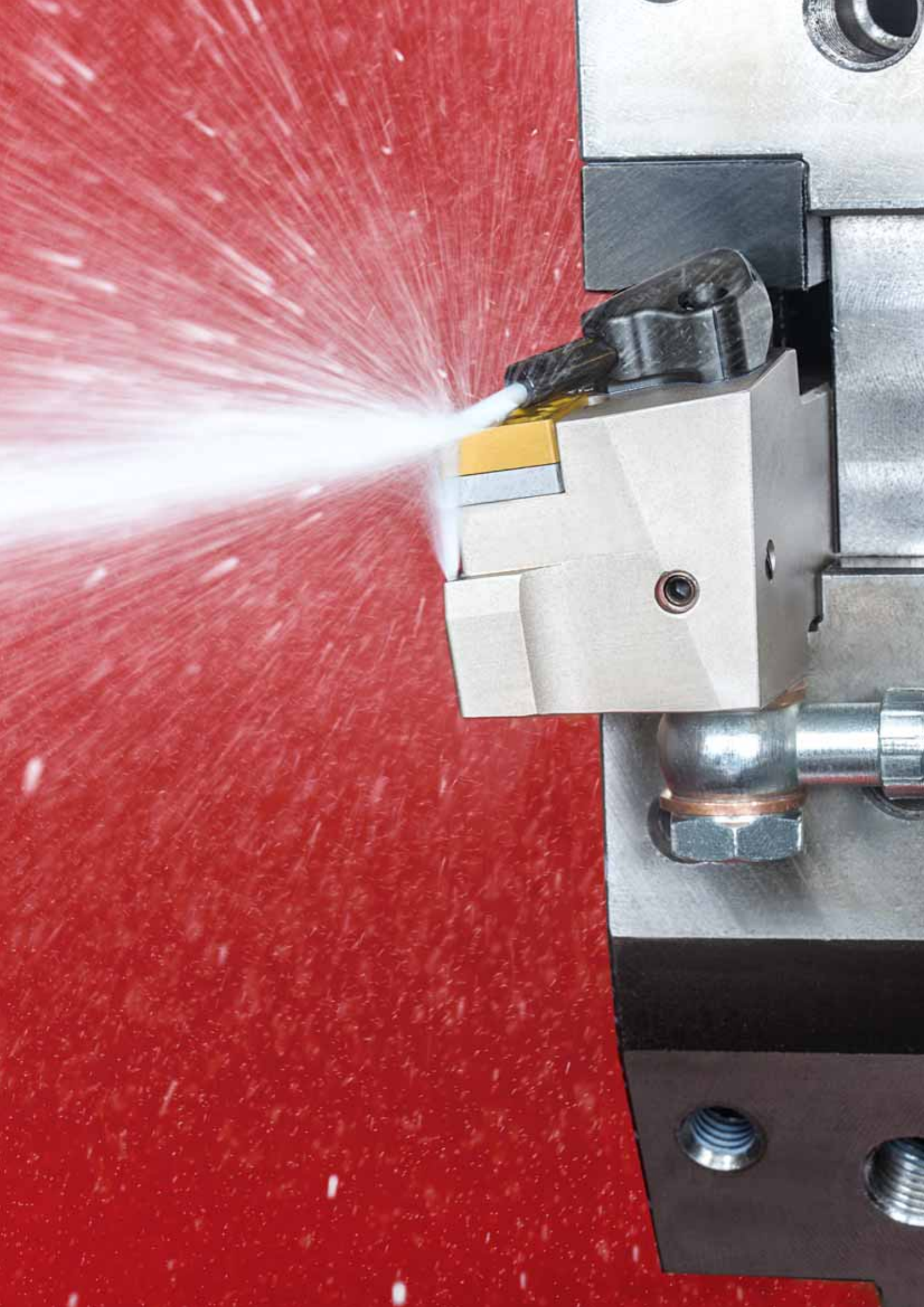
Connector for small lathe with seal washer



Designation
CHP-CONNECTOR/5/16-G1/8

PRACTICAL EXAMPLES

Workpiece type		Shaft	Valve cap parts
Toolholder		JSDJ2CR1212F11-CHP	JSDJ2CR1212F11-CHP
Insert		DCGT11T301FN-JS	DCMT11T304-PSS
Grade		SH730	AH905
Workpiece material		S45C / C45	SUH660 / Austenitic heat-resistant steel
Cutting conditions			
Cutting speed : Vc(m/min)		100	50
Feed : f (mm/rev)		0.02	0.05
Depth of cut : ap (mm)		2	0.15
Machining		External turning	Face turning
Coolant		Wet	Wet
Results		 <p>Tool life 3 times longer</p> <p>Due to cooling effect of high pressure coolant, tool life is 3 times longer than machining with normal pressure coolant.</p>	 <p>Tool life 2 times longer</p> <p>Due to its high pressure coolant system, TungTurn-Jet provides excellent chip control and tool life is 2 times longer than machining with normal pressure coolant.</p>
Workpiece type		Valve cap parts	
Toolholder		PCLNR2525M12-CHP	
Insert		CNMG120408-HMM	
Grade		AH905	
Workpiece material		Inconel 718	
Cutting conditions			
Cutting speed : Vc(m/min)		60	
Feed : f (mm/rev)		0.15	
Depth of cut : ap (mm)		0.2	
Machining		External turning	
Coolant		Wet	
Results		 <p>Excellent chip control!</p> <p>High pressure coolant system forms short chips in machining and reduces machine downtime caused by long, entangled chips.</p>	
		 <p>TUNG TJET</p>	 <p>Normal pressure coolant</p>



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