



TurnLine



Insert with 25° corner angle for profiling For more information

Y-PRO SERIES

Tungaloy Report No. 369-US

COMPLETE METALWORKING SOLUTIONS

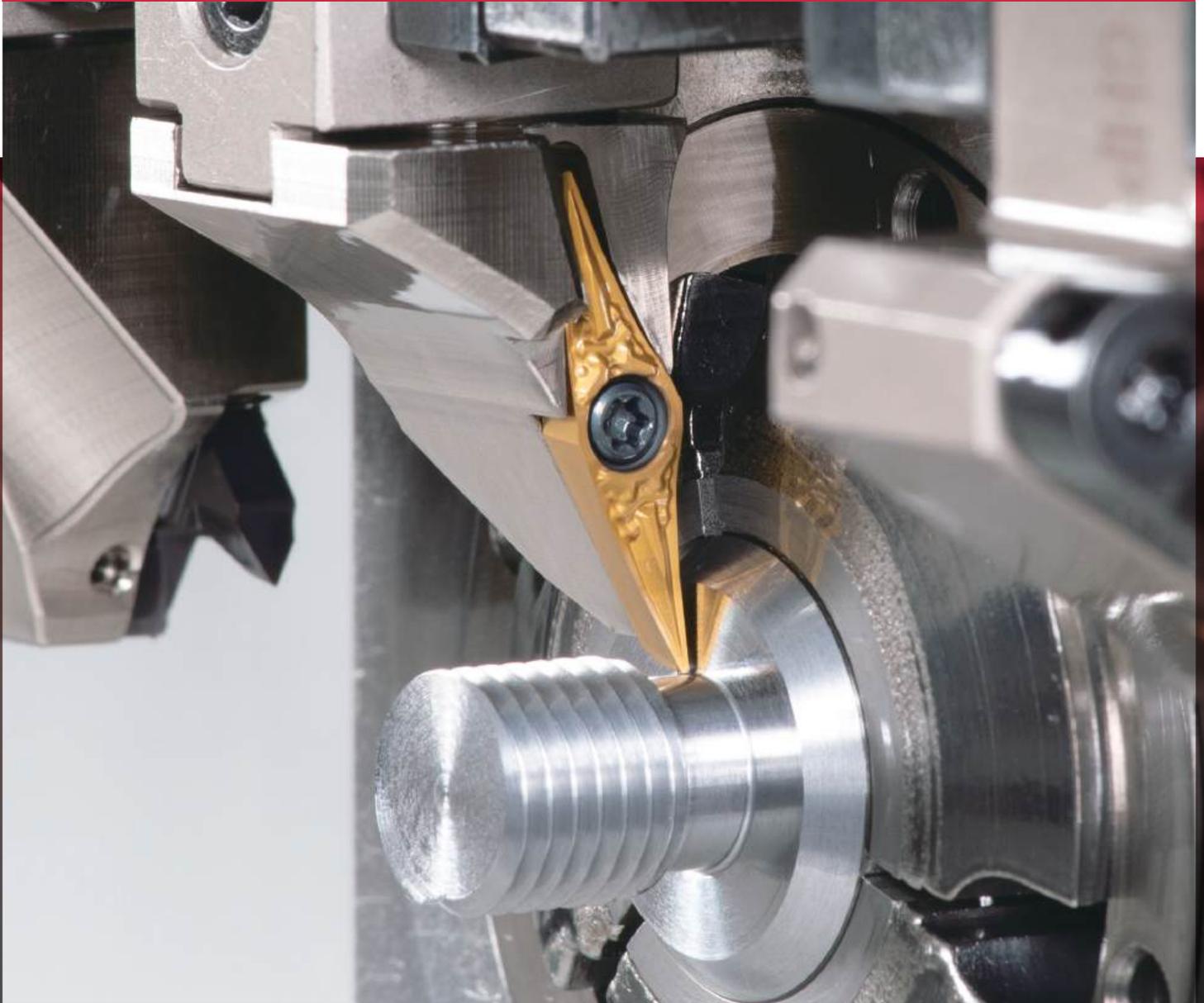
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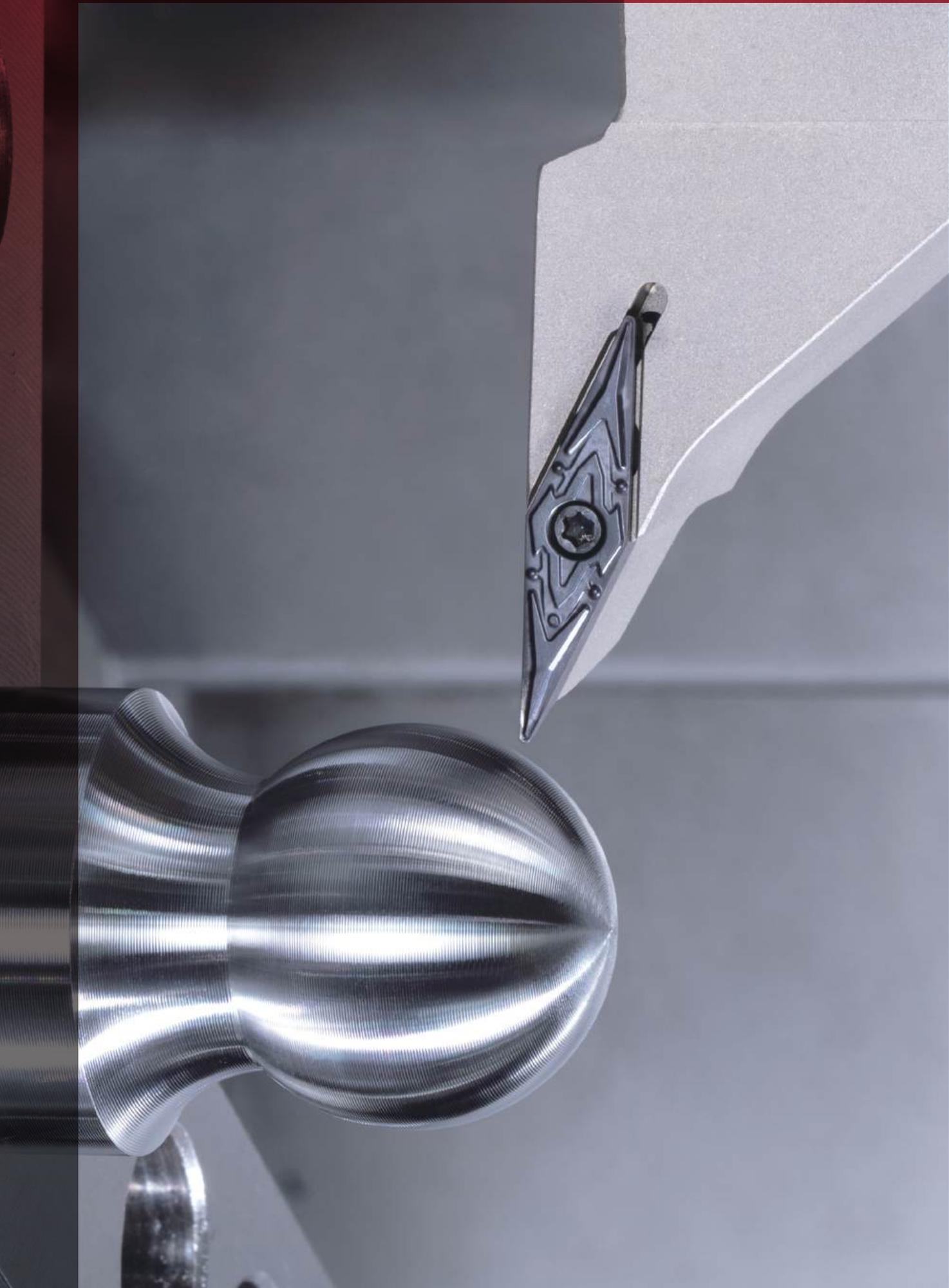
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Expansion of ground type YCGT inserts!







Y-PRO SERIES



A new narrow corner angle insert that expands machining possibilities.

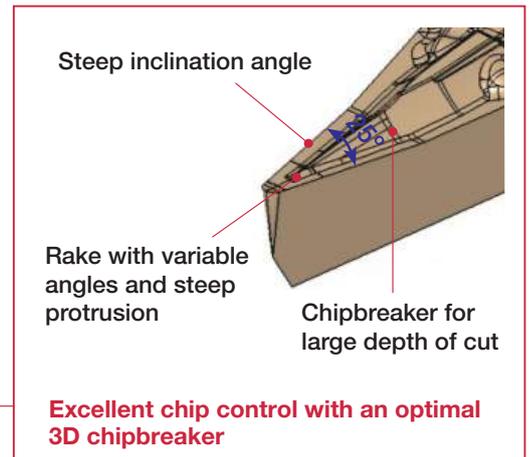
Y-PRO SERIES

Expansion of ground type YCGT insert with 25° corner angle!

New

JS chipbreaker

For finish turning



■ Chip control



P S45C / C45

Insert : YCGT100202MF-JS
SH7025
Cutting speed : $V_c = 262$ sfm
Feed : $f = 0.001$ ipr
Depth of cut : $a_p = 0.020$ "
Coolant : Wet



P S45C / C45

Insert : YCGT100202MF-JS
SH7025
Cutting speed : $V_c = 262$ sfm
Feed : $f = 0.001$ ipr
Depth of cut : $a_p = 0.118$ "
Coolant : Wet

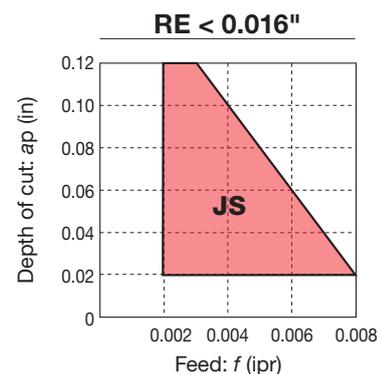
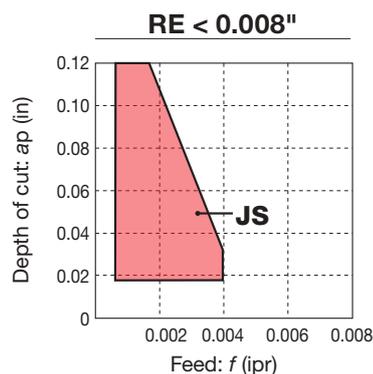
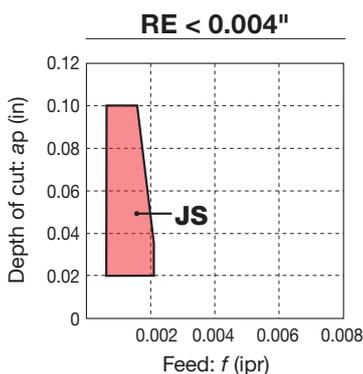


M SUS304 / X5CrNi18-9

Insert : YCGT100202MF-JS
SH7025
Cutting speed : $V_c = 262$ sfm
Feed : $f = 0.001$ ipr
Depth of cut : $a_p = 0.079$ "
Coolant : Wet

■ Chip control range

Single JS chipbreaker handles from roughing to finishing operations



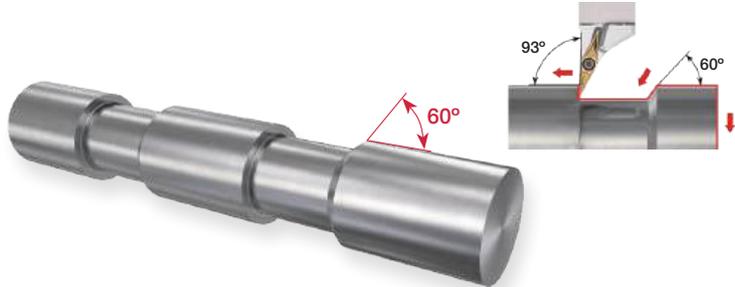
■ YCGT further expands the machining possibilities

■ Application examples

YCGT offers a new method for the turning process



Adapter



Shaft

■ New insert grade for high surface quality

SH7025



- The latest grade with a sharp cutting edge, designed for small part machining.
- A combination of a columnar-structured TiCN coating and multilayered TiAlN coating provides superior surface quality and process security.

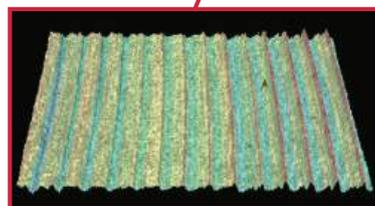
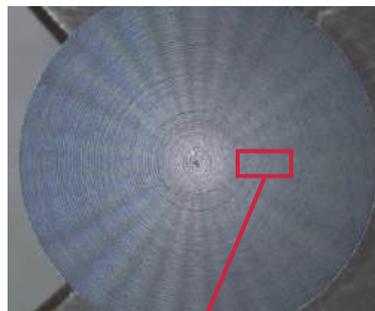
Designed to prevent built-up edge, wear, and edge chipping, SH7025 provides long, predictable tool life and superior surface quality

■ Cutting performance

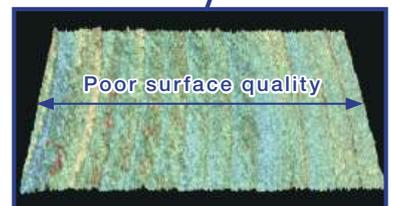
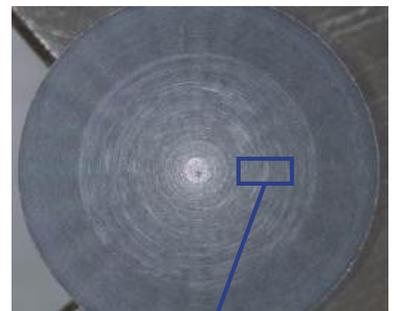
Face turning



SH7025



Conventional



P SUJ2 / 100Cr6

Insert : DCGT11T302 type
 Cutting speed : $V_c = 492$ sfm
 Feed : $f = 0.002$ ipr
 Depth of cut : $a_p = 0.012$ "
 Coolant : Wet

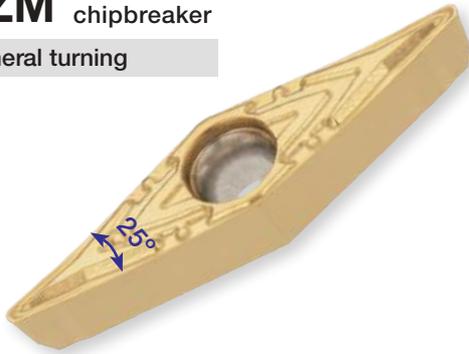
Provides high quality surface finish

Y-PRO SERIES

■ M-class insert

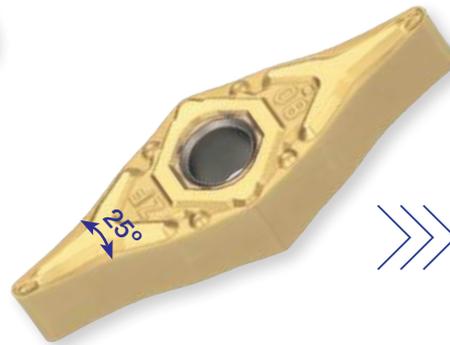
ZF/ZM chipbreaker

For General turning



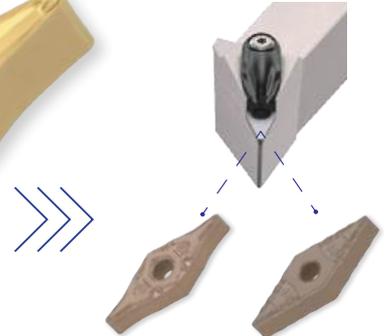
Positive type

YWMT11T2**
YWMT16T3**



Negative type

YNMG1604**



YNMG1604** **VNMG1604****

YNMG inserts fit existing standard turning toolholders for VNMG insert

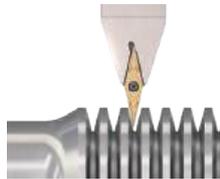
■ Suitable for a wide range of machining applications



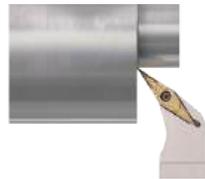
Spherical profiling



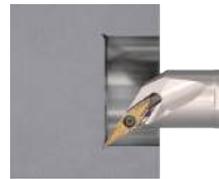
Face profiling



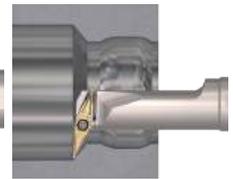
"V" grooving



External undercutting



Internal undercutting



Internal profiling



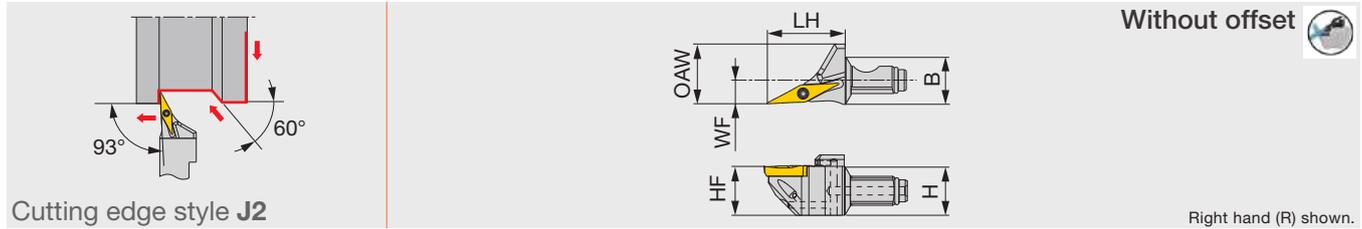
Y-PRO SERIES

MODULAR HEADS

New

QC-JSVJ2CR-CHP

Screw-on modular head with 93° approach angle, for positive 25° rhombic inserts, with high pressure coolant capability



Designation	H	B	LH	HF	WF	OAW	RE**	Insert	Torque	Coupling size
QC12-JSYJ2CR10-CHP	12	12	19.5	12	6	15	0.1	YCGT1002...	0.7	QC12
QC16-JSYJ2CR10-CHP	16	16	21	16	8	20	0.1	YCGT1002...	0.7	QC16

Torque: Recommended clamping torque (N·m)

RE**: Standard corner radius

Assembled dimensions with shank are shown on page 19, 20.

(Unit: mm)

SPARE PARTS



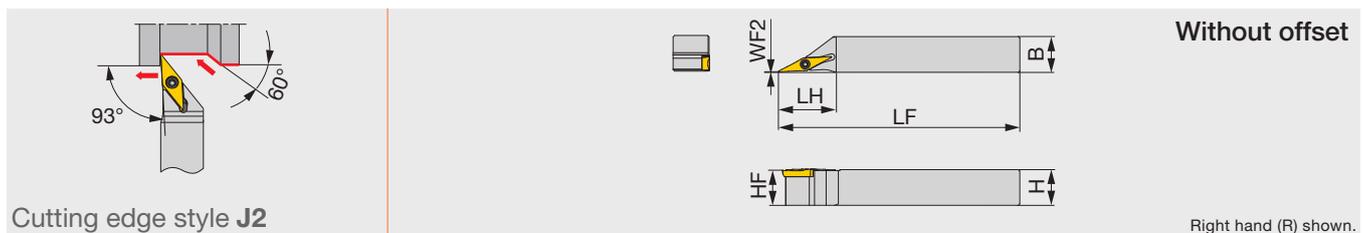
Designation	Clamping screw	Wrench 1	O-ring
QC12-JSYJ2CR10-CHP	CSTB-2L	T-6F	ORSS-0454.5X1.0NBR70
QC16-JSYJ2CR10-CHP	CSTB-2L	T-6F	ORSS-0757.5X1.0NBR70

TOOLHOLDER

New

JSYJ2CR

Screw-on toolholder with 93° approach angle, for YCGT inserts



Inch Designation	H	B	LF	LH	HF	WF2	RE**	Insert	Torque
JSYJ2CR081	0.500	0.500	5.000	0.768	0.500	0	0.0039	YCGT1002...	0.52
JSYJ2CR101	0.625	0.625	5.000	0.827	0.625	0	0.0039	YCGT1002...	0.52

(Unit: Inch)

Metric Designation	H	B	LF	LH	HF	WF2	RE**	Insert	Torque*
JSYJ2CR1212X10	12	12	120	19.5	12	0	0.1	YCGT1002...	0.7
JSYJ2CR1616X10	16	16	120	21	16	0	0.1	YCGT1002...	0.7

(Unit: mm)

Torque: Recommended clamping torque: lbs-ft (*N·m)

RE**: Standard corner radius

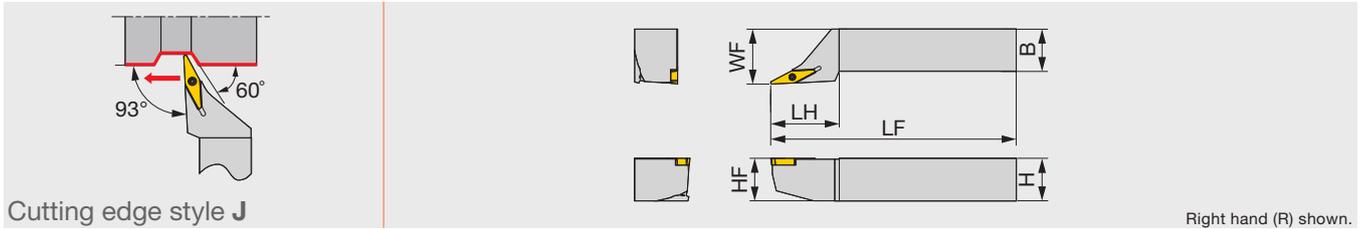
SPARE PARTS



Designation	Clamping screw	Wrench
JSYJ2CR...	CSTB-2L	T-6F

SYJBR/L

Screw-on toolholder with 93° approach angle, for positive 25° rhombic inserts



Right hand (R) shown.

Inch Designation	H	B	LF	LH	HF	WF	RE**	Insert	Torque
SYJBR/L123	0.750	0.750	4.500	1.350	0.750	1.000	0.0310	YWMT16T3...	0.96
SYJBR/L163	1.000	1.000	6.000	1.500	1.000	1.250	0.0310	YWMT16T3...	0.96

(Unit: Inch)

Metric Designation	H	B	LF	LH	HF	WF	RE**	Insert	Torque*
SYJBR/L2020K16	20	20	125	35	20	25	0.8	YWMT16T3...	1.3
SYJBR/L2525M16	25	25	150	40	25	32	0.8	YWMT16T3...	1.3

(Unit: mm)

Torque: Recommended clamping torque: lbs-ft (*N·m)

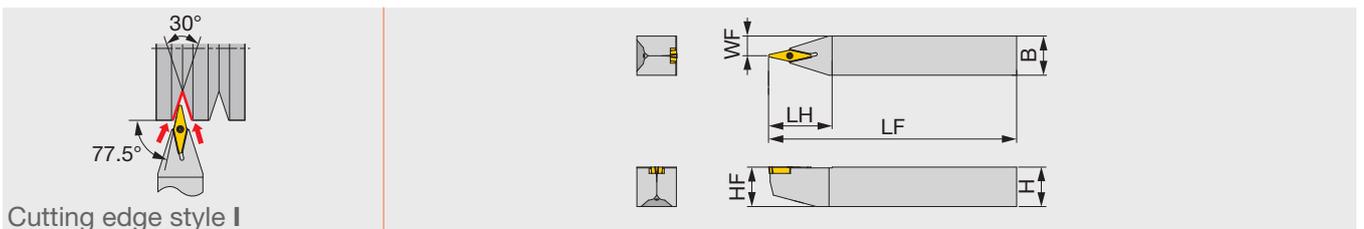
RE**: Standard corner radius

SPARE PARTS

Designation	Clamping screw	Wrench
SYJBR/L...	CSTB-2.5L080	T-8F

SYIBN

Screw-on toolholder with 77.5° approach angle, for positive 25° rhombic inserts



Inch Designation	H	B	LF	LH	HF	WF	RE**	Insert	Torque
SYIBN123	0.750	0.750	4.500	1.250	0.750	0.375	0.0310	YWMT16T3...	0.96
SYIBN163	1.000	1.000	6.000	1.600	1.000	0.500	0.0310	YWMT16T3...	0.96

(Unit: Inch)

Metric Designation	H	B	LF	LH	HF	WF	RE**	Insert	Torque*
SYIBN2020K16	20	20	125	32	20	10	0.8	YWMT16T3...	1.3
SYIBN2525M16	25	25	150	40	25	12.5	0.8	YWMT16T3...	1.3

(Unit: mm)

Torque: Recommended clamping torque: lbs-ft (*N·m)

RE**: Standard corner radius

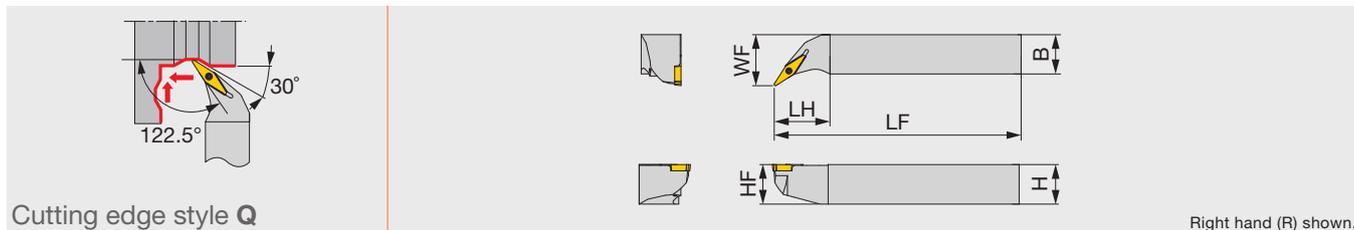
SPARE PARTS

Designation	Clamping screw	Wrench
SYIBN...	CSTB-2.5L080	T-8F

Y-PRO SERIES

SYQBR/L

Screw-on toolholder with 122.5° approach angle, for positive 25° rhombic inserts



Inch Designation	H	B	LF	LH	HF	WF	RE**	Insert	Torque
SYQBR/L123	0.750	0.750	4.500	1.350	0.750	1.000	0.0310	YWMT16T3...	0.96
SYQBR/L163	1.000	1.000	6.000	1.500	1.000	1.250	0.0310	YWMT16T3...	0.96

(Unit: Inch)

Metric Designation	H	B	LF	LH	HF	WF	RE**	Insert	Torque*
SYQBR/L2020K16	20	20	125	35	20	27	0.8	YWMT16T3...	1.3
SYQBR/L2525M16	25	25	150	35	25	32	0.8	YWMT16T3...	1.3

Torque: Recommended clamping torque: lbs-ft (*N·m)
RE**: Standard corner radius

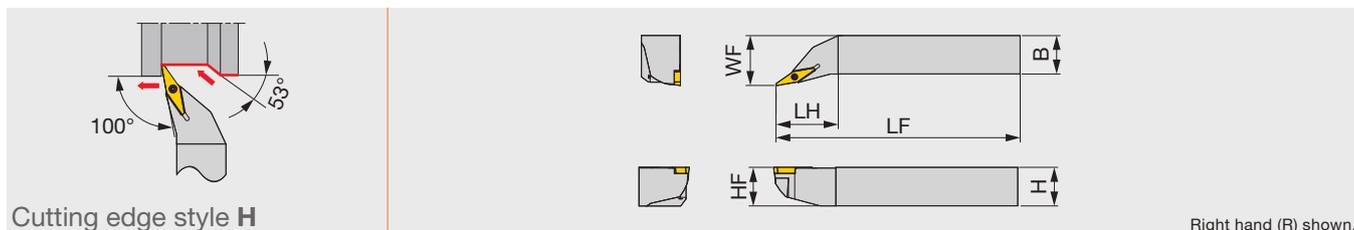
(Unit: mm)

SPARE PARTS

Designation	Clamping screw	Wrench
SYQBR/L...	CSTB-2.5L080	T-8F

SYHBR/L

Screw-on toolholder with 100° approach angle, for positive 25° rhombic inserts



Inch Designation	H	B	LF	LH	HF	WF	RE**	Insert	Torque
SYHBR/L123	0.750	0.750	4.500	1.250	0.750	1.000	0.0310	YWMT16T3...	0.96
SYHBR/L163	1.000	1.000	6.000	1.600	1.000	1.250	0.0310	YWMT16T3...	0.96

(Unit: Inch)

Metric Designation	H	B	LF	LH	HF	WF	RE**	Insert	Torque*
SYHBR/L2020K16	20	20	125	35	20	27	0.8	YWMT16T3...	1.3
SYHBR/L2525M16	25	25	150	40	25	32	0.8	YWMT16T3...	1.3

Torque: Recommended clamping torque: lbs-ft (*N·m)
RE**: Standard corner radius

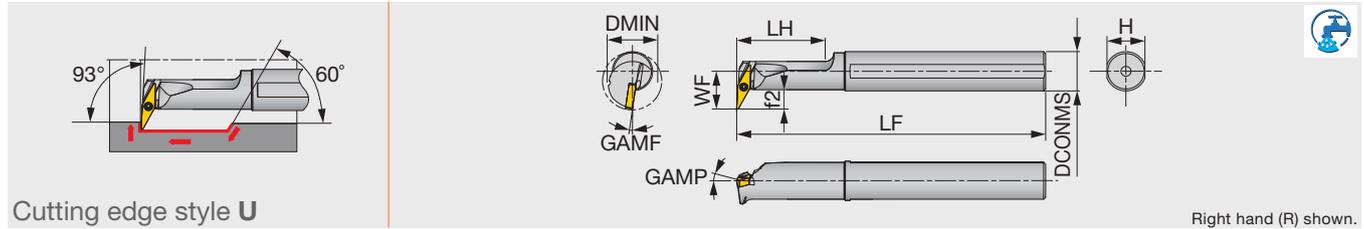
(Unit: mm)

SPARE PARTS

Designation	Clamping screw	Wrench
SYHBR/L...	CSTB-2.5L080	T-8F

A/E-SYUBR/L

Screw-on boring bar, for positive 25° rhombic inserts



Cutting edge style U

Right hand (R) shown.

Inch Designation	Material	DMIN	DCONMS	WF	LF	LH	H	f2	GAMP	GAMF	RE**	Insert	Torque
A10-SYUBR/L2-D16	Steel	1.000	0.625	0.625	7	1.250	0.600	0.313	0°	-8°	0.016	YW**11T2...	0.44
E08-SYUBR2-D14	Carbide	0.875	0.500	0.563	5	1.060	0.475	0.313	0°	-8°	0.016	YW**11T2...	0.44
E10-SYUBR/L-D16	Carbide	1.000	0.625	0.625	7	1.250	0.600	0.313	0°	-8°	0.016	YW**11T2...	0.44

(Unit: Inch)

Metric Designation	Material	DMIN	DCONMS	WF	LF	LH	H	f2	GAMP	GAMF	RE**	Insert	Torque*
A16Q-SYUBR/L11-D200	Steel	20	16	15.5	180	35	15	8	0°	-8°	0.4	YW**11T2...	0.6
E12Q-SYUBR/L11-D200	Carbide	20	12	13.5	180	27	11	7.5	0°	-8°	0.4	YW**11T2...	0.6
E16R-SYUBR/L11-D245	Carbide	24.5	16	16	200	32	15	8	0°	-8°	0.4	YW**11T2...	0.6

Torque: Recommended clamping torque: lbs-ft (*N·m)
RE**: Standard corner radius

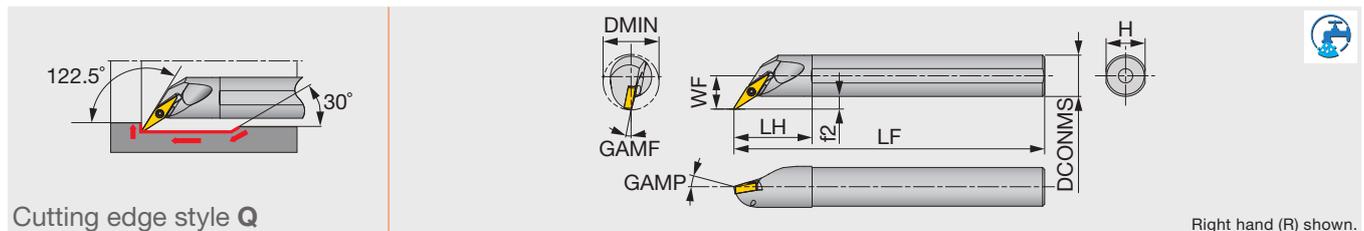
(Unit: mm)

SPARE PARTS

Designation	Clamping screw	Wrench
A**-SYUBR/L...	CSTB-2L	T-6F
E**-SYUBR/L...	CSTB-2L	T-6F

A/E-SYQBR/L

Screw-on boring bar, for positive 25° rhombic inserts



Cutting edge style Q

Right hand (R) shown.

Inch Designation	Material	DMIN	DCONMS	WF	LF	LH	H	f2	GAMP	GAMF	RE**	Insert	Torque
A08-SYQBR2-D12	Steel	0.750	0.500	0.438	5	1.000	0.475	0.188	-5°	-10°	0.016	YW**11T2...	0.44
A10-SYQBR2-D14	Steel	0.875	0.625	0.500	7	1.250	0.600	0.188	-5°	-8°	0.016	YW**11T2...	0.44
E08-SYQBR2-D12	Carbide	0.750	0.500	0.438	5	1.000	0.475	0.188	-5°	-10°	0.016	YW**11T2...	0.44
E10-SYQBR2-D14	Carbide	0.875	0.625	0.500	7	1.250	0.600	0.188	-5°	-8°	0.016	YW**11T2...	0.44

(Unit: Inch)

Metric Designation	Material	DMIN	DCONMS	WF	LF	LH	H	f2	GAMP	GAMF	RE**	Insert	Torque*
A12M-SYQBR/L11-D170	Steel	17	12	10.5	150	24	11	4.5	-5°	-10°	0.4	YW**11T2...	0.6
A16Q-SYQBR/L11-D215	Steel	21.5	16	13	180	30	15	5	-5°	-8°	0.4	YW**11T2...	0.6
E12Q-SYQBR/L11-D170	Carbide	17	12	10.5	180	27	11	4.5	-5°	-10°	0.4	YW**11T2...	0.6
E16R-SYQBR/L11-D215	Carbide	21.5	16	13	200	32	15	5	-5°	-8°	0.4	YW**11T2...	0.6

Torque: Recommended clamping torque: lbs-ft (*N·m)
RE**: Standard corner radius

(Unit: mm)

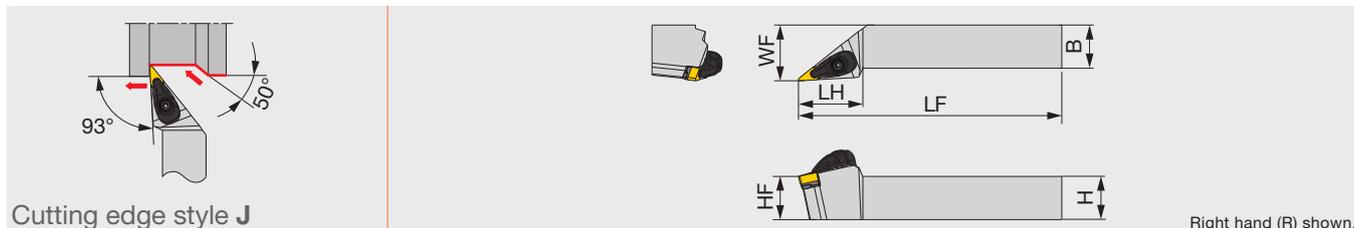
SPARE PARTS

Designation	Clamping screw	Wrench
A**-SYQBR/L...	CSTB-2L	T-6F
E**-SYQBR/L...	CSTB-2L	T-6F

Y-PRO SERIES

AVJNR/L

Double-clamp toolholder with 93° approach angle, for negative 35°/25° rhombic inserts



Inch Designation	H	B	LF	LH	HF	WF	RE**	Insert	Torque
AVJNR/L123-A	0.750	0.750	4.500	1.750	0.750	1.000	0.0310	V/YNMG332	2.21
AVJNR/L163-A	1.000	1.000	6.000	1.875	1.000	1.250	0.0310	V/YNMG332	2.21

(Unit: Inch)

Metric Designation	H	B	LF	LH	HF	WF	RE**	Insert	Torque*
AVJNR/L2020K16-A	20	20	125	43	20	25	0.8	V/YN**1604...	3
AVJNR/L2525M16-A	25	25	150	46	25	32	0.8	V/YN**1604...	3

(Unit: mm)

Torque: Recommended clamping torque: lbs-ft (*N-m)
RE**: Standard corner radius

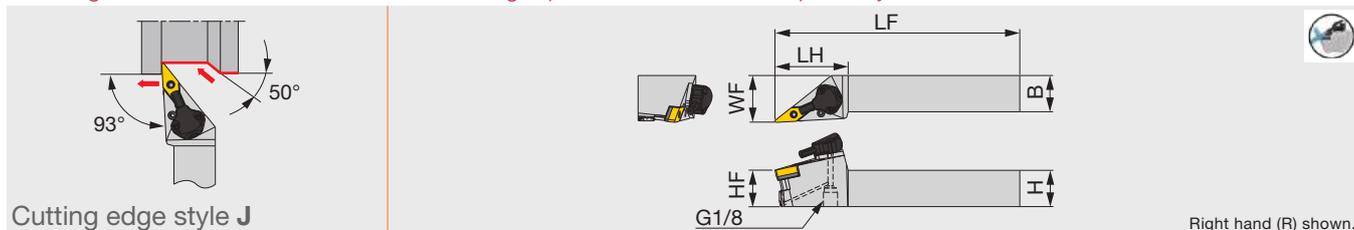
SPARE PARTS

Designation	Clamp	Clamp screw	Spring	Spring pin	Shim	Shim screw	Wrench
AVJNR/L...	ACP3L	ACS-5W	BP-7	SP-2.5	ASV322	CSTB-3.5	T-15F

PVJNR/L-CHP

Tube connection

Lever lock toolholders – 93° approach angle.
For negative 35°/25° rhombic insert. High-pressure coolant capability.



Inch Designation	H	B	LF	LH	HF	WF	RE**	Insert	Torque
PVJNR123-CHP	0.750	0.750	4.500	1.969	0.750	1.250	0.0310	V/YNMG332	1.48
PVJNR163-CHP	1.000	1.000	6.000	1.969	1.000	1.250	0.0310	V/YNMG332	1.48

(Unit: Inch)

Metric Designation	H	B	LF	LH	HF	WF	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

(Unit: mm)

Torque: Recommended clamping torque: lbs-ft (*N-m)
RE**: Standard corner radius

SPARE PARTS

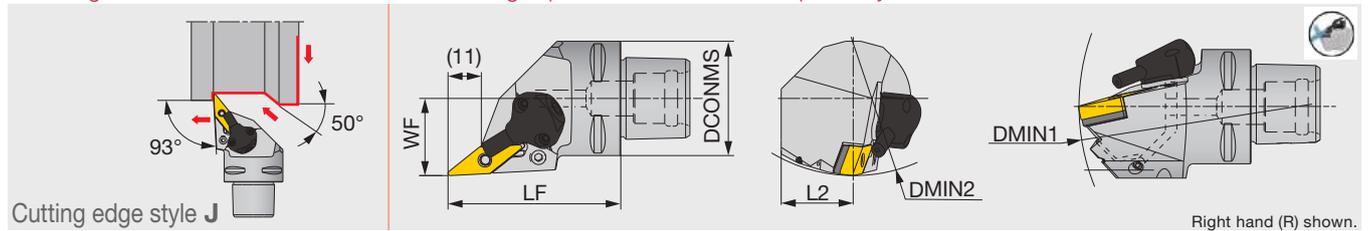
Designation	Shim	Clamping screw	Wrench 1	Spring pin	Lever
PVJNR/L...	LSV317	LCS3V	P-2.5	LSP3	LCL3V

SPARE PARTS CONTINUED

Designation	Coolant unit	Mounting screw	Wrench 2	O-ring	Coolant screw	Wrench 3
PVJNR/L...	CU-V-CHP	SR M3	T-8F	OR 6.4X0.9N	SR M4X4 DIN913 TL360	P-2

C-PVJNR/L-CHP

Lever lock toolholders with TungCap connection – 93° approach angle.
For negative 35°/25° rhombic insert. High-pressure coolant capability.



Inch Designation	DCONMS	LF	L2	WF	DMIN1	DMIN2	RE**	Insert	Torque
C4PVJNR/L27060-1204-CHP	1.575	2.362	0.787	1.063	5.500	3.500	0.0310	VNMG2.332E	1.48
C6PVJNR/L45065-1204-CHP	2.480	2.559	1.240	1.772	7.500	3.200	0.0310	VNMG2.332E	1.48

(Unit: Inch)

Metric Designation	DCONMS	LF	L2	WF	DMIN1	DMIN2	RE**	Insert	Torque*
C4PVJNR/L27060-16-CHP	40	60	20	27	140	110	0.8	V/YN**1604...	2
C6PVJNR/L45065-16-CHP	63	65	31.5	45	190	81	0.8	V/YN**1604...	2

(Unit: mm)

Torque: Recommended clamping torque: lbs-ft (*N·m)
RE**: Standard corner radius
Applicable for 14 MPa pressure coolant

SPARE PARTS

Designation	Shim	Clamping screw	Wrench 1	Spring pin	Lever
C*PVJNR/L**1204-CHP	LSV212	LCS3V	P-2.5	LSP3	LCL3V
C*PVJNR/L...16-CHP	LSV317	LCS3V	P-2.5	LSP3	LCL3V

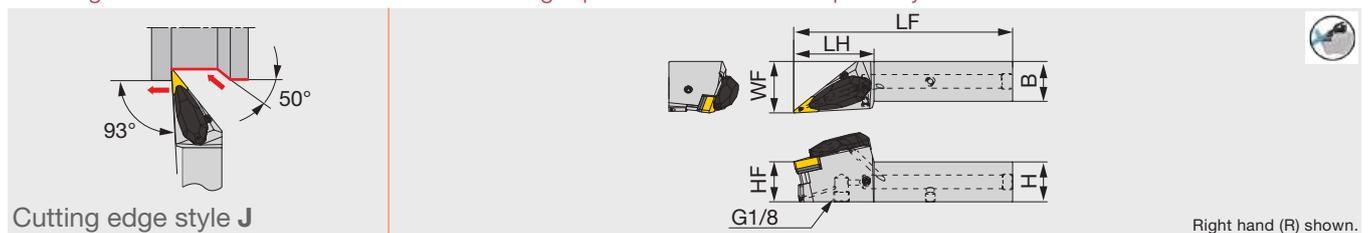
SPARE PARTS CONTINUED

Designation	Coolant unit	Mounting screw	Wrench 2	O-ring
C*PVJNR/L**1204-CHP	CU-V-CHP	SR M3	T-8F	OR 6.4X0.9N
C*PVJNR/L...16-CHP	CU-V-CHP	SR M3	T-8F	OR 6.4X0.9N

AVJNR/L-CHP

Direct connection Tube connection

Double clamping tool holders-93° approach angle.
For negative 35° or 25° rhombic insert. High-pressure coolant capability with tube and direct connections.



Inch Designation	H	B	LF	LH	HF	WF	RE	Insert	Torque
AVJNR/L123-CHP	0.750	0.750	4.500	1.970	0.750	1.000	0.0315	V/YN**1604...	2.21
AVJNR/L163-CHP	1.000	1.000	6.000	1.970	1.000	1.250	0.0315	V/YN**1604...	2.21

(Unit: Inch)

Metric Designation	H	B	LF	LH	HF	WF	RE	Insert	Torque*
AVJNR/L2020X16-CHP	20	20	122	50	20	25	0.8	V/YN**1604...	3
AVJNR/L2525X16-CHP	25	25	135	50	25	32	0.8	V/YN**1604...	3

(Unit: mm)

Torque: Recommended clamping torque: lbs-ft (*N·m)

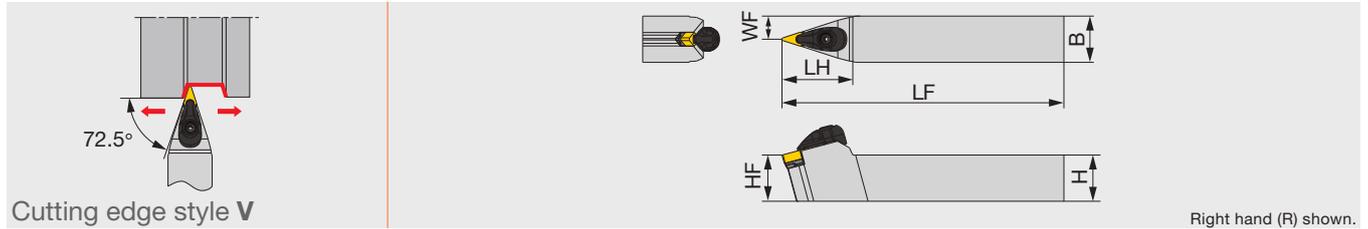
SPARE PARTS

Designation	Clamp	Clamping screw	Shim	Shim screw	Spring	Wrench	O-ring
AVJNR/L...	ACP3L-CHP	SR 11800782	ASV322	CSTB-3.5	BP-4.5	T-15F	ORAS568-2.62X7.59

Y-PRO SERIES

AVVNN

Double-clamp toolholder with 72.5° approach angle, for negative 35°/25° rhombic inserts



Inch Designation	H	B	LF	LH	HF	WF	RE**	Insert	Torque
AVVNN123-A	0.750	0.750	4.500	1.870	0.750	0.375	0.0310	VNMG332	2.21
AVVNN163-A	1.000	1.000	6.000	1.870	1.000	0.500	0.0310	VNMG332	2.21

(Unit: Inch)

Metric Designation	H	B	LF	LH	HF	WF	RE**	Insert	Torque*
AVVNN2020K16-A	20	20	125	46	20	10	0.8	V/YN**1604...	3
AVVNN2525M16-A	25	25	150	46	25	12.5	0.8	V/YN**1604...	3

Torque: Recommended clamping torque: lbs-ft (*N-m)

RE**: Standard corner radius

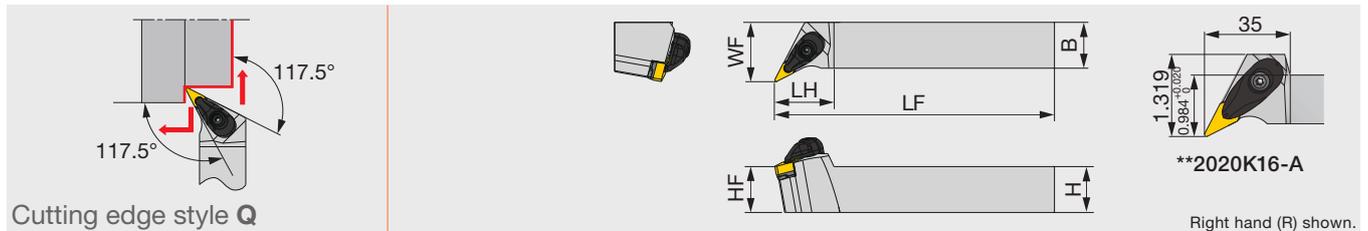
(Unit: mm)

SPARE PARTS

Designation	Clamp	Clamp screw	Spring	Spring pin	Shim	Shim screw	Wrench
AVVNN**1204-A	ACP3L-E	ACS-5W	BP-7	SP-2.5	ASV222	CSTB-3.0	T-15F
AVVNN**16-A, AWNN123-A, AWNN163-A	ACP3L	ACS-5W	BP-7	SP-2.5	ASV322	CSTB-3.5	T-15F

AVQNR/L

Double-clamp toolholder with 117.5° approach angle, for negative 35°/25° rhombic inserts



Inch Designation	H	B	LF	LH	HF	WF	RE**	Insert	Torque
AVQNR/L123-A	0.750	0.750	4.500	1.380	0.750	1.000	0.0310	V/YNMG332	2.21
AVQNR/L163-A	1.000	1.000	6.000	1.380	1.000	1.250	0.0310	V/YNMG332	2.21

(Unit: Inch)

Metric Designation	H	B	LF	LH	HF	WF	RE**	Insert	Torque*
AVQNR/L2020K16-A	20	20	125	35	20	25	0.8	V/YN**1604...	3
AVQNR/L2525M16-A	25	25	150	35	25	32	0.8	V/YN**1604...	3

Torque: Recommended clamping torque: lbs-ft (*N-m)

RE**: Standard corner radius

(Unit: mm)

SPARE PARTS

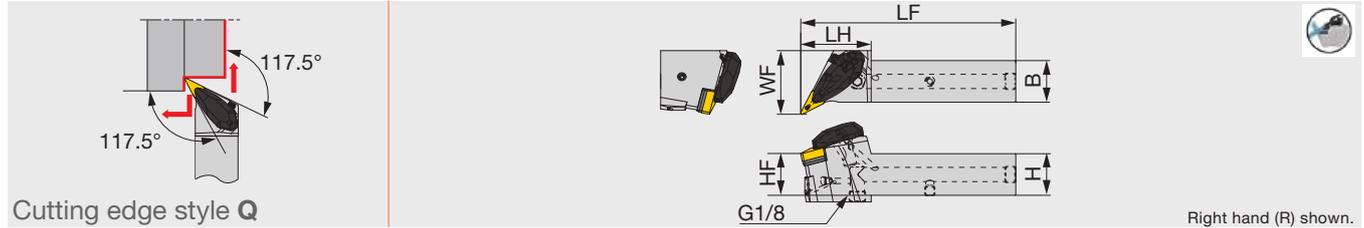
Designation	Clamp	Clamp screw	Spring	Spring pin	Shim	Shim screw	Wrench
AVQNR/L...	ACP3L	ACS-5W	BP-7	SP-2.5	ASV322	CSTB-3.5	T-15F

AVQNR/L-CHP

Direct connection Tube connection

Double clamping tool holders-117.5° approach angle.

For negative 35° or 25° rhombic insert. High-pressure coolant capability with tube and direct connections.



Inch Designation	H	B	LF	LH	HF	WF	RE	Insert	Torque
AVQNR/L123-CHP	0.750	0.750	4.500	1.610	0.750	1.000	0.0314	V/YN**1604...	2.21
AVQNR/L163-CHP	1.000	1.000	6.000	1.650	1.000	1.250	0.0314	V/YN**1604...	2.21

(Unit: Inch)

Metric Designation	H	B	LF	LH	HF	WF	RE	Insert	Torque*
AVQNR/L2020X16-CHP	20	20	114	41	20	25	0.8	V/YN**1604...	3
AVQNR/L2525X16-CHP	25	25	127	42	25	32	0.8	V/YN**1604...	3

Torque: Recommended clamping torque: lbs-ft (*N-m)

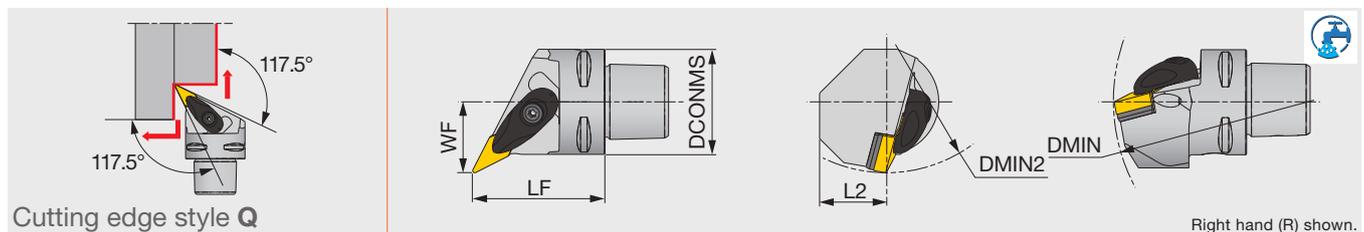
(Unit: mm)

SPARE PARTS

Designation	Clamp	Clamping screw	Shim	Shim screw	Spring	Wrench	O-ring
AVQNR/L***-CHP	ACP3L-CHP	SR 11800782	ASV322	CSTB-3.5	BP-4.5	T-15F	ORAS568-2.62X7.59

C-AVQNR/L

Double-clamp toolholder, with 117.5° approach angle, for negative 35°/25° rhombic inserts



Designation	DCONMS	LF	L2	WF	DMIN	DMIN2	RE	Insert
C4AVQNR/L27050-16N	1.575	1.968	0.984	1.063	5.709	4.331	0.0315	V/YN**332...

Applicable for 7 MPa coolant

(Unit: Inch)

SPARE PARTS

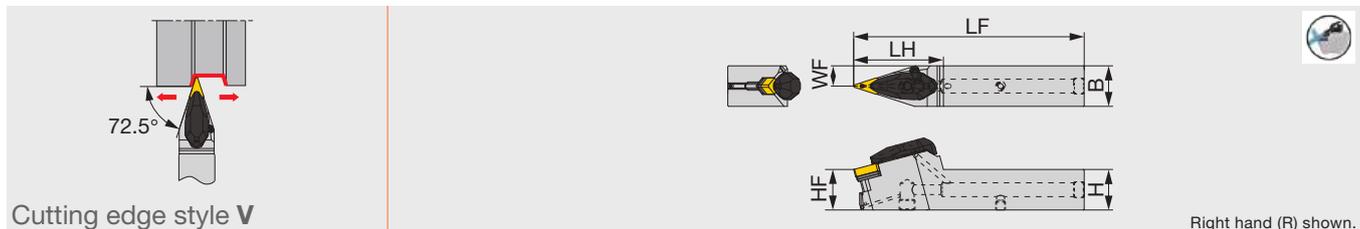
Designation	Clamp	Clamp screw	Spring	Spring pin	Shim	Shim screw	Wrench
C4AVQNR/L**-16N	ACP3L	ACS-5W	BP-7	SP-2.5	ASV322	CSTB-3.5	T-15F

Y-PRO SERIES

AVVNN-CHP

Direct connection Tube connection

Double clamping tool holders-72.5° approach angle.
For negative 35° or 25° rhombic insert. High-pressure coolant capability with tube and direct connections.



Inch Designation	H	B	LF	LH	HF	WF	RE	Insert	Torque
AVVNN123-CHP	0.750	0.750	4.500	1.180	0.750	1.060	0.0315	V/YN**1604...	2.21
AVVNN163-CHP	1.000	1.000	6.000	1.180	1.000	1.250	0.0315	V/YN**1604...	2.21

(Unit: Inch)

Metric Designation	H	B	LF	LH	HF	WF	RE	Insert	Torque*
AVVNN2020X16-CHP	20	20	127	55	20	10	0.8	V/YN**1604...	3
AVVNN2525X16-CHP	25	25	140	55	25	12.5	0.8	V/YN**1604...	3

(Unit: mm)

Torque: Recommended clamping torque: lbs-ft (*N-m)

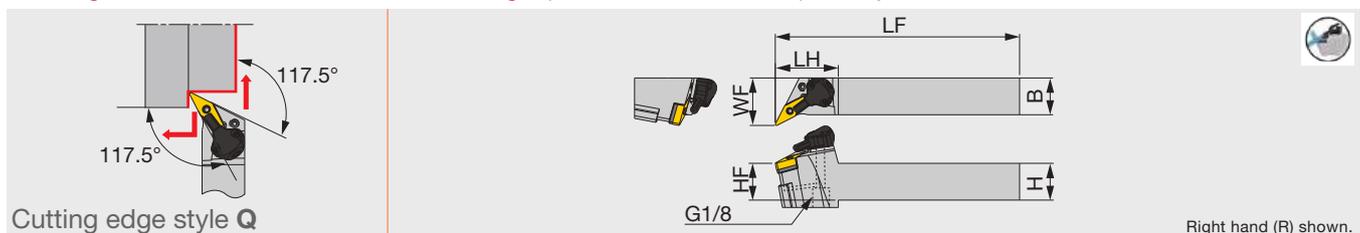
SPARE PARTS

Designation	Clamp	Clamping screw	Shim	Shim screw	Spring	Wrench	O-ring
AVVNN...	ACP3L-CHP	SR 11800782	ASV322	CSTB-3.5	BP-4.5	T-15F	ORAS568-2.62X7.59

PVQNR/L-CHP

Tube connection

Lever lock toolholders – 117.5° approach angle.
For negative 35°/25° rhombic insert. High-pressure coolant capability.



Inch Designation	H	B	LF	LH	HF	WF	RE **	Insert	Torque
PVQNR/L123-CHP	0.750	0.750	4.500	1.688	0.750	1.250	0.0310	V/YN**332...	1.48
PVQNR/L163-CHP	1.000	1.000	6.000	1.688	1.000	1.250	0.0310	V/YN**32...	1.48

(Unit: Inch)

Metric Designation	H	B	LF	LH	HF	WF	RE **	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

(Unit: mm)

Torque: Recommended clamping torque: lbs-ft (*N-m)

RE**: Standard corner radius

SPARE PARTS

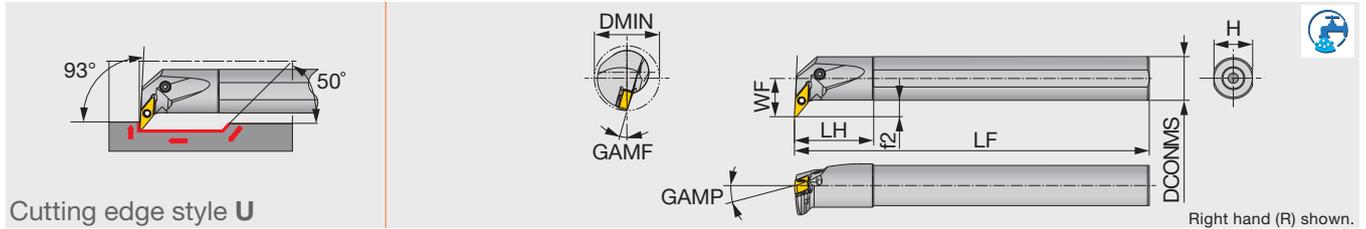
Designation	Shim	Clamping screw	Wrench 1	Spring pin	Lever
PVQNR/L**16-CHP, PVQNR/L123-CHP, PVQNR/L163-CHP	LSV317	LCS3V	P-2.5	LSP3	LCL3V

SPARE PARTS

Designation	Coolant unit	Mounting screw	Wrench 2	O-ring	Coolant screw	Wrench 3
PVQNR/L**16-CHP, PVQNR/L123-CHP, PVQNR/L163-CHP	CU-V-CHP	SR M3	T-8F	OR 6.4X0.9N	SR M4X4 DIN913 TL360	P-2

A-PVUNR/L

Lever-lock boring bar, for negative 35°/25° rhombic inserts



Cutting edge style U

Right hand (R) shown.

Metric Designation	Material	DMIN	DCONMS	WF	LF	LH	H	f2	GAMP	GAMF	RE**	Insert	Torque
A25R-PVUNR/L16-D370	Steel	37	25	22	200	45	23	9.5	-5°	-14°	0.8	V/YN**1604...	2.7
A32S-PVUNR/L16-D400	Steel	40	32	22	250	50	30	6	-5°	-12°	0.8	V/YN**1604...	2.7
A40T-PVUNR/L16-D500	Steel	50	40	27	300	60	37	7	-5°	-10°	0.8	V/YN**1604...	2.7

Torque: Recommended clamping torque (N-m)
RE**: Standard corner radius

(Unit: mm)

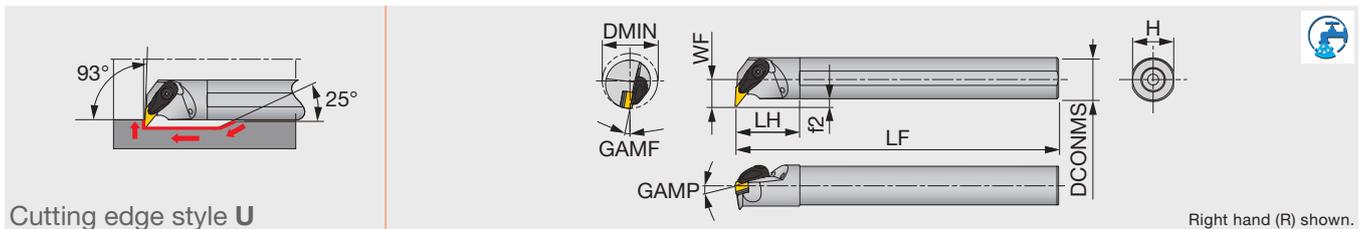
SPARE PARTS

Designation	Shim	Clamping screw	Wrench	Spring pin	Lever	Oil supply attachment*	Screw for oil hole*
A25R-PVUNR/L16-D370	LSV317BR/L	LCS3V	P-2.5	LSP3	LCL3V	EA-25	SSHM4-5
A32S-PVUNR/L16-D400	LSV317BR/L	LCS3V	P-2.5	LSP3	LCL3V	EA-32	SSHM4-5
A40T-PVUNR/L16-D500	LSV317BR/L	LCS3V	P-2.5	LSP3	LCL3V	-	SSHM5-6

*Optional

A-AVUNR/L

Double-clamp boring bar, for negative 35°/25° rhombic inserts



Cutting edge style U

Right hand (R) shown.

Inch Designation	Material	DMIN	DCONMS	WF	LF	LH	H	f2	GAMP	GAMF	RE**	Insert	Torque
A20-AVUNR/L3-D25	Steel	1.560	1.250	0.859	14	1.960	1.180	0.234	-6°	-10°	0.0310	V/YN**332...	2.21
A24-AVUNR/L3-D32	Steel	2.000	1.500	1.060	14	2.160	1.440	0.313	-6°	-8°	0.0310	V/YN**332...	2.21

(Unit: Inch)

Metric Designation	Material	DMIN	DCONMS	WF	LF	LH	H	f2	GAMP	GAMF	RE**	Insert	Torque*
A32S-AVUNR/L16-D400	Steel	40	32	22	250	50	30	6	-6°	-10°	0.8	V/YN**1604...	3
A40T-AVUNR/L16-D500	Steel	50	40	27	300	55	37	7	-6°	-8°	0.8	V/YN**1604...	3

Torque: Recommended clamping torque: lbs-ft (*N-m)
RE**: Standard corner radius

(Unit: mm)

SPARE PARTS

Designation	Clamp	Clamp screw	Spring	Spring pin	Shim	Shim screw	Wrench
A**-AVUNR/L...	ACP3L	ACS-5W	BP-7	SP-2.5	ASV322	CSTB-3.5	T-15F

Y-PRO SERIES

STANDARD CUTTING CONDITIONS

For positive insert

ISO	Operation	Chipbreaker	Grades	Depth of cut ap (in)	Feed f (ipr)	Cutting speed: Vc (sfm)		
						Low carbon steels, alloy steels	Medium carbon steels, alloy steels	High carbon steels, alloy steels
P	Precision finishing	JS	SH7025	0.02 - 0.118	0.001 - 0.008	33 - 656	33 - 656	33 - 656
			Finishing	ZF	GT9530	0.008 - 0.059	0.002 - 0.01	492 - 984
	NS9530	0.008 - 0.059			0.002 - 0.01	492 - 984	492 - 984	492 - 984
	T9215	0.008 - 0.059			0.002 - 0.01	394 - 1148	328 - 1148	262 - 820
	T9225	0.008 - 0.059			0.002 - 0.01	394 - 984	394 - 984	328 - 820
	T9235	0.008 - 0.059			0.002 - 0.01	164 - 656	164 - 656	164 - 492
	Finishing to medium	ZM			GT9530	0.02 - 0.079	0.002 - 0.012	492 - 984
			NS9530	0.02 - 0.079	0.002 - 0.012	492 - 984	492 - 984	492 - 984
			T9215	0.02 - 0.079	0.002 - 0.012	394 - 1148	328 - 1148	262 - 820
			T9225	0.02 - 0.079	0.002 - 0.012	394 - 984	394 - 984	328 - 820
	T9235	0.02 - 0.079	0.002 - 0.012	164 - 656	164 - 656	164 - 492		
	Stainless steels							
M	Precision finishing	JS	SH7025	0.02 - 0.118	0.001 - 0.008	33 - 656	33 - 656	33 - 656
			Finishing to medium	ZF	T6215	0.008 - 0.059	0.002 - 0.01	459 - 787
	AH6225	0.008 - 0.059			0.002 - 0.01	295 - 656	361 - 787	197 - 361
	ZM	T6215		0.02 - 0.079	0.002 - 0.012	459 - 787	525 - 919	262 - 492
AH6225		0.02 - 0.079		0.002 - 0.012	295 - 656	361 - 787	197 - 361	
Cast iron								
K	Finishing to medium	ZF	T9215	0.008 - 0.059	0.002 - 0.01	459 - 1640	459 - 1640	459 - 1640
			T9225	0.008 - 0.059	0.002 - 0.01	459 - 1640	459 - 1640	459 - 1640
		ZM	T9215	0.02 - 0.079	0.002 - 0.012	459 - 1640	459 - 1640	459 - 1640
			T9225	0.02 - 0.079	0.002 - 0.012	459 - 1640	459 - 1640	459 - 1640
Heat-resistant alloys								
S	Finishing to medium	ZF	AH8015	0.008 - 0.059	0.002 - 0.01	66 - 262	66 - 262	66 - 262
		ZM	AH8015	0.02 - 0.079	0.002 - 0.012	66 - 262	66 - 262	66 - 262

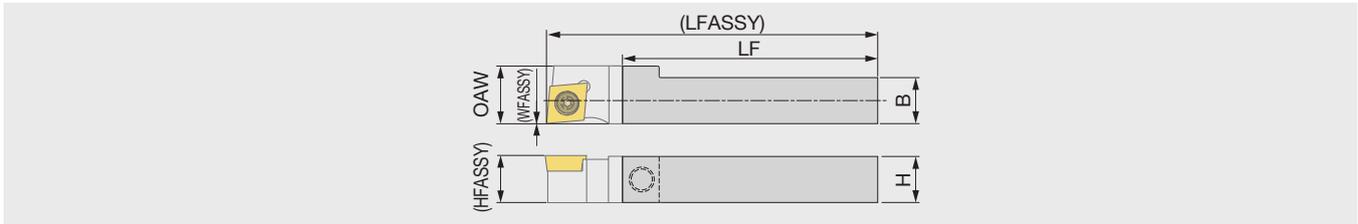
For negative insert

ISO	Operation	Chipbreaker	Grades	Depth of cut ap (in)	Feed f (ipr)	Cutting speed: Vc (sfm)		
						Low carbon steels, alloy steels	Medium carbon steels, alloy steels	High carbon steels, alloy steels
P	Finishing	ZF	GT9530	0.008 - 0.059	0.001 - 0.008	492 - 984	492 - 984	492 - 984
			NS9530	0.008 - 0.059	0.001 - 0.008	492 - 984	492 - 984	492 - 984
			T9215	0.008 - 0.059	0.001 - 0.008	394 - 1148	328 - 1148	262 - 820
			T9225	0.008 - 0.059	0.001 - 0.008	394 - 984	394 - 984	328 - 820
			T9235	0.008 - 0.059	0.001 - 0.008	164 - 656	164 - 656	164 - 492
	Finishing to medium	ZM	GT9530	0.028 - 0.079	0.006 - 0.016	492 - 984	492 - 984	492 - 984
			NS9530	0.028 - 0.079	0.006 - 0.016	492 - 984	492 - 984	492 - 984
			T9215	0.028 - 0.079	0.006 - 0.016	394 - 1148	328 - 1148	262 - 820
			T9225	0.028 - 0.079	0.006 - 0.016	394 - 984	394 - 984	328 - 820
			T9235	0.028 - 0.079	0.006 - 0.016	164 - 656	164 - 656	164 - 492
Stainless steels								
M	Finishing	ZF	T6215	0.008 - 0.059	0.001 - 0.008	459 - 787	525 - 919	262 - 492
			AH6225	0.008 - 0.059	0.001 - 0.008	295 - 656	361 - 787	197 - 361
	Finishing to medium	ZM	T6215	0.028 - 0.079	0.006 - 0.016	459 - 787	525 - 919	262 - 492
			AH6225	0.028 - 0.079	0.006 - 0.016	295 - 656	361 - 787	197 - 361
Cast iron								
K	Finishing	ZF	T9215	0.008 - 0.059	0.001 - 0.008	459 - 1640	459 - 1640	459 - 1640
			T9225	0.008 - 0.059	0.001 - 0.008	459 - 1640	459 - 1640	459 - 1640
	Finishing to medium	ZM	T9215	0.028 - 0.079	0.006 - 0.016	459 - 1640	459 - 1640	459 - 1640
			T9225	0.028 - 0.079	0.006 - 0.016	459 - 1640	459 - 1640	459 - 1640
Heat-resistant alloys								
S	Finishing	ZF	AH8015	0.008 - 0.059	0.001 - 0.008	66 - 262	66 - 262	66 - 262
	Finishing to medium	ZM	AH8015	0.028 - 0.079	0.006 - 0.016	66 - 262	66 - 262	66 - 262

SHANKS

QC-1212 / QC-08

Shank for modular heads (All metric heads are compatible with the inch shanks)



Inch Designation	H	B	LF	OAW	WFASSY	HFASSY	LFASSY ⁽¹⁾	Torque	Coupling size
QC-08F	0.500	0.500	2.559	0.591	0	0.500	3.346	2.21	QC12
QC-08X	0.500	0.500	3.937	0.591	0	0.500	4.724	2.21	QC12

(Unit: Inch)

Metric Designation	H	B	LF	OAW	WFASSY	HFASSY	LFASSY ⁽¹⁾	Torque*	Coupling size
QC-1212F	12	12	65	15	0	12	85	3	QC12
QC-1212X	12	12	100	15	0	12	120	3	QC12

(Unit: mm)

Torque: Recommended clamping torque: lbs-ft (*N-m)

(1) The size is true when the modular head with LH = 0.768" (19.5 mm) is mounted.

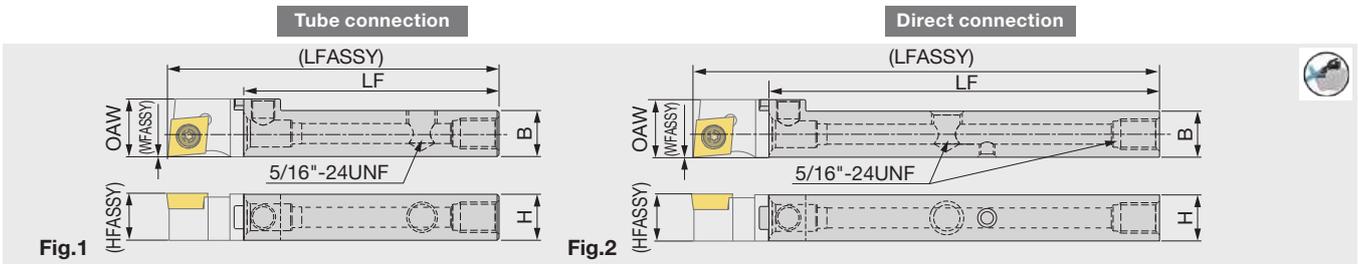
SPARE PARTS

Designation	Clamping screw	Wrench
QC-08*, QC-1212*	SRM6X0.5-26977	P-3

Note: QC12 heads fit both the metric QC-1212 and the inch QC-08 shanks.

QC-1212/1616-CHP, QC-08/10-CHP

Shank for modular heads, with high pressure coolant capability



Inch Designation	H	B	LF	OAW	WFASSY	HFASSY	LFASSY	Torque	Coupling size	Fig.
QC-08F-CHP	0.500	0.500	2.559	0.591	0	0.500	3.346 ⁽¹⁾	2.21	QC12	1
QC-08X-CHP ^(*)	0.500	0.500	3.937	0.591	0	0.500	4.724 ⁽¹⁾	2.21	QC12	2
QC-10X-CHP ^(*)	0.625	0.625	3.897	0.787	0	0.625	4.724 ⁽²⁾	6.27	QC16	2

(Unit: Inch)

Metric Designation	H	B	LF	OAW	WFASSY	HFASSY	LFASSY	Torque*	Coupling size	Fig.
QC-1212F-CHP	12	12	65	15	0	12	85 ⁽¹⁾	3	QC12	1
QC-1212X-CHP ^(*)	12	12	100	15	0	12	120 ⁽¹⁾	3	QC12	2
QC-1616X-CHP ^(*)	16	16	99	20	0	16	120 ⁽²⁾	8.5	QC16	2

(Unit: mm)

Torque: Recommended clamping torque: lbs-ft (*N-m)

(*) : Compatible to the direct internal coolant supply system without the use of external coolant hose.

(1) The size is true when the modular head with LH = 0.768" (19.5 mm) is mounted.

(2) The size is true when the modular head with LH = 0.827" (21 mm) is mounted.

SPARE PARTS

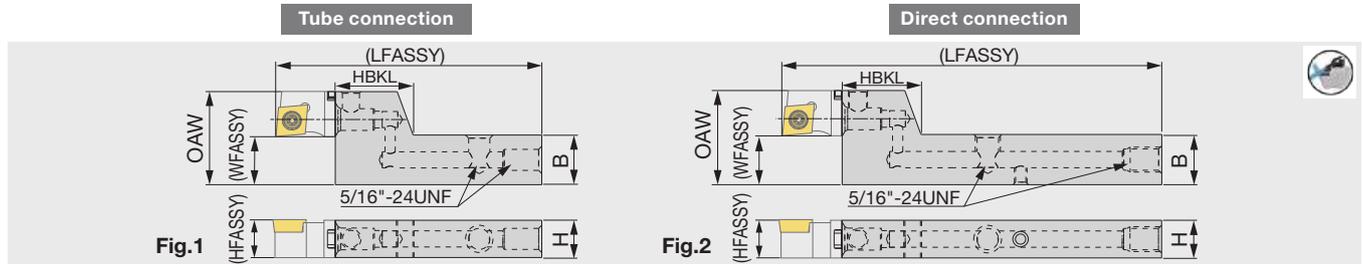
Designation	Clamping screw	Wrench 1	Coolant plug	Wrench 2	DirectJet plug	Wrench 3
QC-1212F-CHP, QC-08F-CHP	SRM6X0.5-26977	P-3	SR 5/16UNF TL360	P-4	-	-
QC-1212X-CHP, QC-08X-CHP	SRM6X0.5-26977	P-3	SR 5/16UNF TL360	P-4	SSHM4-6-TB	P-2
QC-1616X-CHP, QC-10X-CHP	SRM8X0.5	P-5	SR 5/16UNF TL360	P-4	SSHM4-6-TB	P-2

Note: QC12 heads fit both the metric QC-1212 and the inch QC-08 shanks.

Y-PRO SERIES

QC-1216/1620-F15-CHP, QC-08/10-CHP

Stepped-head shank for modular heads, with high pressure coolant capability



Inch Designation	H	B	LF	OAW	WFASSY	HFASSY	LFASSY	HBKL	Torque	Coupling size	Fig.
QC-08F-F10-CHP	0.500	0.625	2.559	1.220	0.625	0.500	3.346 ⁽¹⁾	0.980	2.21	QC12	1
QC-08X-F10-CHP (*)	0.500	0.625	3.937	1.220	0.625	0.500	4.724 ⁽¹⁾	0.980	2.21	QC12	2
QC-10X-F10-CHP (*)	0.625	0.750	3.897	1.413	0.625	0.625	4.724 ⁽²⁾	1.181	6.27	QC16	2

(Unit: Inch)

Metric Designation	H	B	LF	OAW	WFASSY	HFASSY	LFASSY	HBKL	Torque*	Coupling size	Fig.
QC-1216F-F15-CHP	12	16	65	30	15	12	85 ⁽¹⁾	25	3	QC12	1
QC-1216X-F15-CHP (*)	12	16	100	30	15	12	120 ⁽¹⁾	25	3	QC12	2
QC-1620X-F15-CHP (*)	16	20	99	35	15	16	120 ⁽²⁾	30	8.5	QC16	2

(Unit: mm)

Torque: Recommended clamping torque: lbs-ft (*N-m)

(*) : Compatible to the direct internal coolant supply system without the use of external coolant hose.

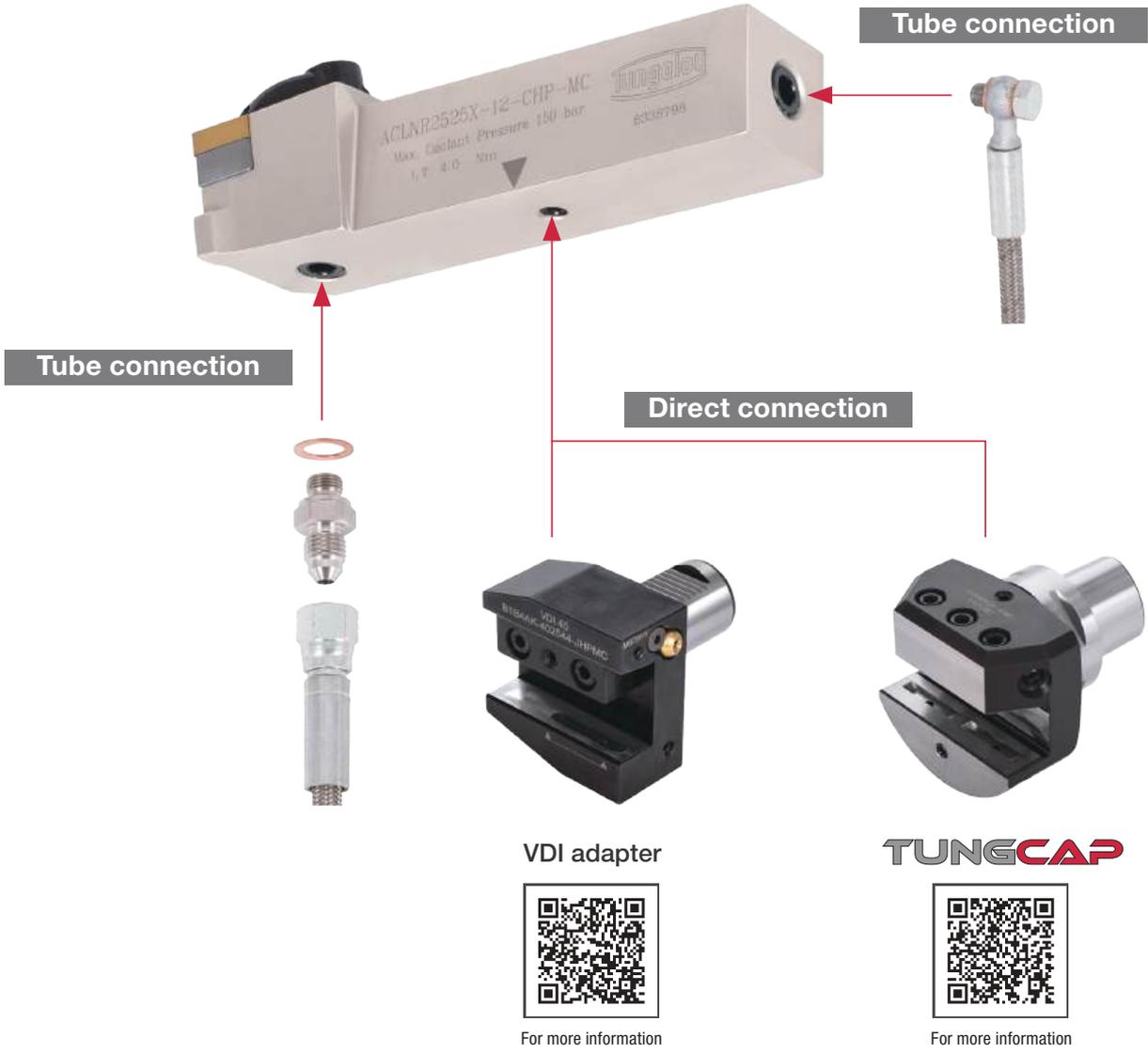
1) The size is true when the modular head with LH = 0.768" (19.5 mm) is mounted.

2) The size is true when the modular head with LH = 0.827" (21 mm) is mounted.

SPARE PARTS

Designation	Clamping screw	Wrench 1	Coolant plug	Wrench 2	DirectJet plug	Wrench 3
QC-1216F-F15-CHP, QC-08F-F10-CHP	SRM6X0.5-26977	P-3	SR 5/16UNF TL360	P-4	-	-
QC-1216X-F15-CHP, QC-08X-F10-CHP	SRM6X0.5-26977	P-3	SR 5/16UNF TL360	P-4	SSHM4-6-TB	P-2
QC-1620X-F15-CHP, QC-10X-F10-CHP	SRM8X0.5	P-5	SR 5/16UNF TL360	P-4	SSHM4-6-TB	P-2

PARTS FOR COOLANT HOSE



Y-PRO SERIES

PARTS FOR COOLANT HOSE

Connecting hose

Fig. 1

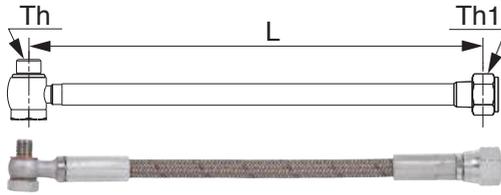
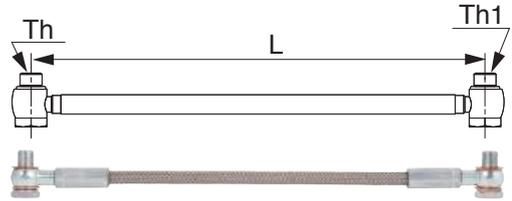
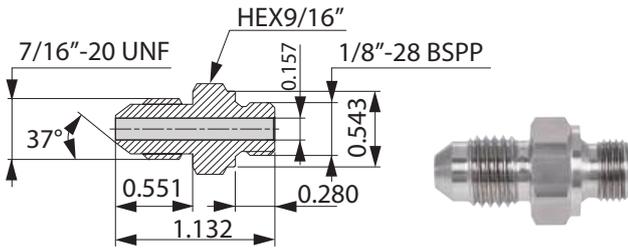


Fig. 2



Designation	Length	Threading size		Max. pressure (Mpa)	Fig.
	L	Th	Th1		
CHP-HOSE-G1/8-7/16-200BS	7.874	G1/8"-28 BSPP	7/16"-20 UNF	20	1
CHP-HOSE-G1/8-7/16-250BS	9.843	G1/8"-28 BSPP	7/16"-20 UNF	20	1
CHP-HOSE-5/16-7/16-200BS	7.874	5/16"-24UNF	7/16"-20 UNF	20	1
CHP-HOSE-5/16-G1/8-200BS	7.874	5/16"-24UNF	G1/8"-28 BSPP	20	1
CHP-HOSE-G1/8-G1/8-200BB	7.874	G1/8"-28 BSPP	G1/8"-28 BSPP	20	2
CHP-HOSE-G1/8-G1/8-250BB	9.843	G1/8"-28 BSPP	G1/8"-28 BSPP	20	2

Connector



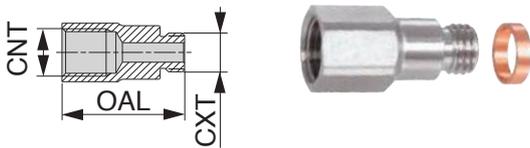
Designation
CHP-NIPPLE-G1/8-7/16UNF

Seal washer



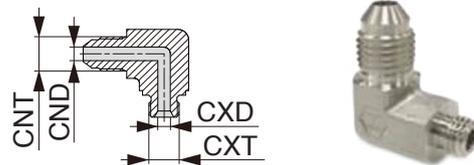
Designation	øD	ød	W
CHP-COPPER-SEAL1/8	0.590	0.394	0.039
CHP-COPPER-SEAL5/16	0.470	0.321	0.053
CHP-COPPER-SEAL5/16-2.5	0.370	0.315	0.098

Connector for small lathe with seal washer



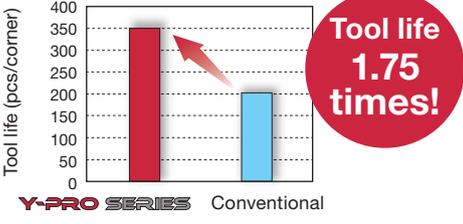
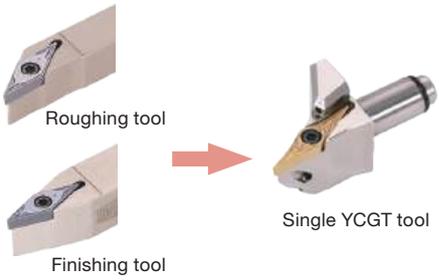
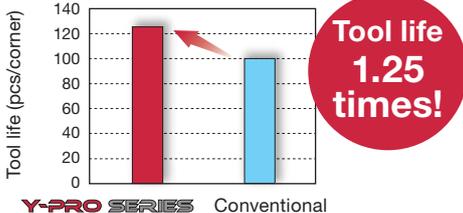
Designation	CNT	CXT	OAL
CHP-CONNECTOR5/16-G1/8	G1/8"-28 BSPP	5/16"-24 UNF	0.984
CHP-CONNECTOR-G1/8-R1/8	G1/8"-28 BSPP	R1/8"-28 BSPT	0.984

Connector elbow



Designation	CNT	CND	CXT	CXD
CHP-ELBOW-90-G1/8-7/16UNF	7/16"-20 UNF	0.173	1/8"-28 BSPP	0.157
CHP-ELBOW-90-5/16-7/16UNF	7/16"-20 UNF	0.173	5/16"-24 UNF	0.157

PRACTICAL EXAMPLES

Workpiece type		Fitting	Shaft
Toolholder		JSYJ2CR1212X10	QC12-JSYJ2CR10-CHP
Insert		New YCGT100202MF-JS	New YCGT100202MF-JS
Grade		SH7025	SH7025
Workpiece material		304SS  M	1045  P
Cutting conditions	Cutting speed : Vc (sfm)	279	230
	Feed : f (ipr)	0.001	0.001
	Depth of cut : ap (in)	0.003	0.012
	Machining	External turning	External turning
	Coolant	Wet	Wet
Results		 <p>Tool life 1.75 times!</p> <p>Traditionally, machining the thread-end taper requires a dedicated insert shape. YCGT performs this operation while delivering 1.75 times longer tool life.</p>	 <p>Conventionally, two different tools were required for external turning and profiling. YCGT integrates both functions into a single tool.</p>
Workpiece type		Pulley	Automotive part
Toolholder		AVVNN2525M16-A	A16Q-SYUBR11-D200
Insert		YNMG160404-ZM	YWMT11T204-ZF
Grade		GT9530	T9215
Workpiece material		SCM415  P	SACM645  P
Cutting conditions	Cutting speed : Vc (sfm)	820	328
	Feed : f (ipr)	0.020	0.020
	Depth of cut : ap (in)	0.004 - 0.008	0.008
	Machining	External turning	Internal turning
	Coolant	Wet	Wet
Results		 <p>Tool life 1.25 times!</p> <p>Chip control was drastically improved against conventional grooving tool. 1.25 times longer tool life achieved.</p>	 <p>Chips by -ZF chipbreaker</p> <p>Chip control and surface finish are improved drastically when internal turning.</p>

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