

WINSPEED

ADVANCED MACHINING



New Products



TaeguTec
Member IMC Group

WINTURN
ADVANCED MACHINING

6-Cutting Edge TNMV Insert and Holders for All-Directional Turning

07

POSSTURN
DOUBLE SIDED POSITIVE TURNING

All Directional Turning with Positive 4 Cutting Edge Negative Insert

10

WINSWISS

New Modular Head and Holder for Swiss Machines

17

HUSHBORE
ANTI VIBRATION BAR

Vibration Free Boring Bar with Exchangeable Heads

30

HUSHMODU

Modular Type Shanks for Various Turning Applications

45

MULTITURN
SAFE TURNING

VBMX Insert and Holders with Rigid Clamping

49



WINCUT
ADVANCED PARTING

New Single-Ended Rigid Insert for Parting and Grooving with Unique Adapters

53

FACE RUSH
FACE GROOVING

Unique Shallow Face Grooving Inserts

60

WINGROOVE

Mini Indexable Insert for Internal Shallow Grooving

64

QUAD RUSH
PARTING & GROOVING

QUAD-RUSH Blank Insert for Wide Tailored Profiles

68

VT-CLAMP
V TURN

Multi-Functional V-Type Insert

71

T-CLAMP
PARTING & GROOVING

New Parting-Grooving Insert with Turning Capability

73



DRILLSPEED
INDEXABLE SYSTEM

Head Changeable 3 Flute Drill for Higher Productivity

77

SOLID3DRILL
FLUTE

Solid Carbide 3 Flute Drill for Higher Productivity

86

WINDRILL
ADVANCED MACHINING

Head Changeable Drill for Small Diameter

93

WINDRILL
ADVANCED MACHINING

MAXI-RUSH Connection for Head Changeable Drill

96

WINDRILL
ADVANCED MACHINING

T-FLEXTEC Connection for Head Changeable Drill

98

SPADERUSH

Large Diameter Drill with P+ Self-centering Drill Heads

100

XM-REAM

Head Changeable Reamer for Small Diameter

105





 ADVANCED MACHINING

Next Generation Shouldering Insert with V Bottom for Strong Clamping

111



Higher Ramp Down Angle with Secure 'V' Clamping for Improved Productivity

120



 80° FACING & SHOULDERING

90° Shouldering with 8-Cutting Edge SQKU Insert

124



Quick Changeable Head for Multiple Machining

132



High Productivity Finishing Lens and Chamfer Barrel Inserts

137



New, Higher Productivity Profile Milling Barrel Inserts and Holders

142



 FACING & HIGH FEED

8-Corner SQKU 11 & 14 Inserts for Improved Productivity Face Milling

146



 HARDPART & EXOTIC MATERIALS

SiAlON Ceramic Milling for High-Speed Machining of Super Alloy

150



WIN TURN

ADVANCED MACHINING

 TaeguTec

WIN SPEED
ADVANCED MACHINING



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Member IMC Group

WINTURN
ADVANCED MACHINING

6-Cutting Edge TNMV Insert and Holders for All-Directional Turning



All-directional turning



High feed



High positive rake angle



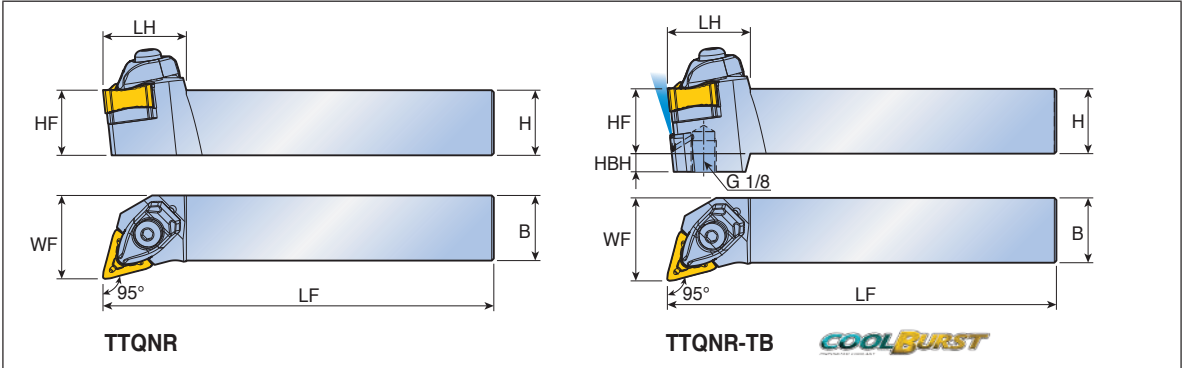
Unique and rigid captive clamping



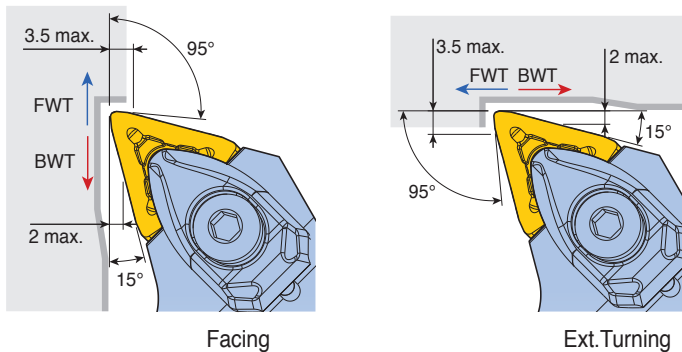
High-pressure coolant

TTQNR/L TTQNR/L-TB

T-holders for TNMV insert



Approach angle	Designation	Dimension (mm)							Insert
		H	HF	B	LF	LH	WF	HBH	
TNMV 15° (BWT) 95° (FWT)	TTQNR/L 2525 M2109	25	25	25	150	32	32	-	TNMV 2109...
	3232 P2109	32	32	32	170	32	40	-	
	TTQNR/L 2525 M2109-TB	25	25	25	150	32	32	7	
	3232 P2109-TB	32	32	32	170	32	40	-	



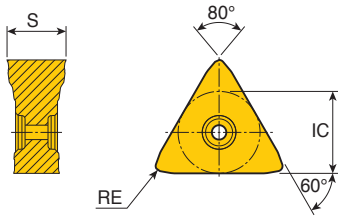
- ▶ BWT: Backward turning
- ▶ FWT: Forward turning

Spare parts



Designation	Clamp	Clamp screw	Spring	Shim	Shim screw	Wrench	
...2109	DLM 4.4T-NV	DLS 5	DSP 5	TSTV 210510	TS 35083I/HG	L-W 4	T 10
...2109-TB	DLM 4.4T-NV	DLS 5	DSP 5	TSTV 210510	TS 35083I/HG	L-W 4	T 10

TNMV

Negative triangular insert

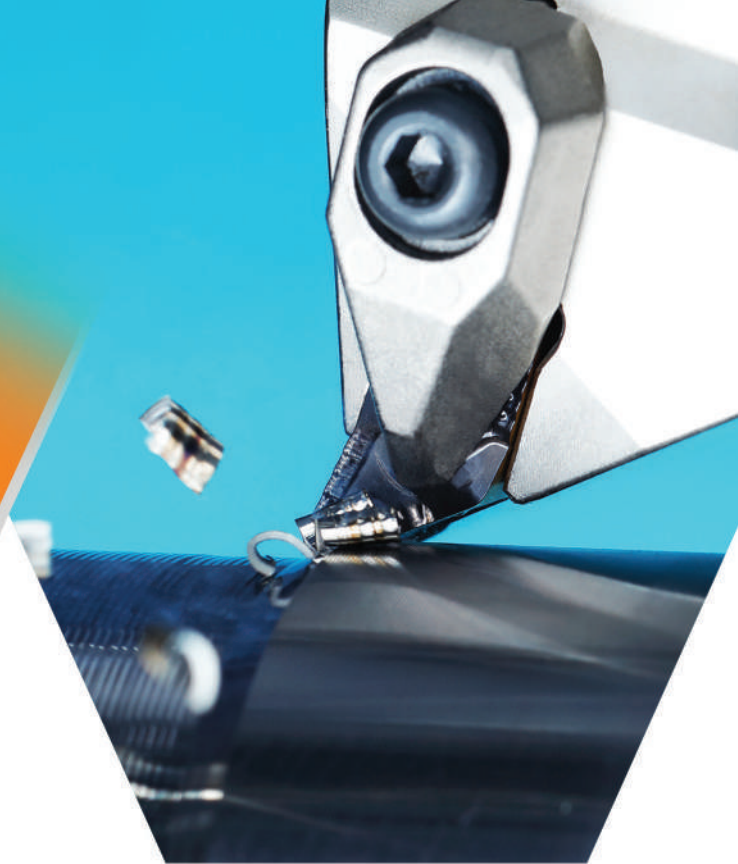


Size	Dimension (mm)		
	IC	S	RE
21	12.5	9	0.8

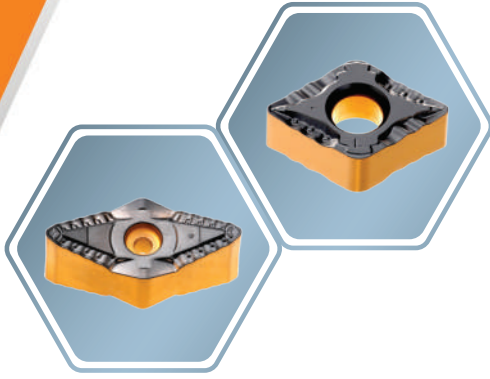
Insert	Designation	BWT		FWT		CVD coated							PVD coated					
		ap ⁽¹⁾ (mm)	Feed (mm/rev)	ap (mm)	Feed (mm/rev)	TT7005	TT7015	TT8105B	TT8115B	TT8125B	TT8135B	TT9215	TT9225	TT9235	TT5080	TT3010	TT3020	TT9080
	TNMV 210908-BM	0.7-2.0	0.60-1.20	0.5-3.5	0.20-0.60			●	●									
	TNMV 210908-BS	0.7-2.0	0.60-1.20	1.0-3.5	0.20-0.40							●						●

▶ BWT: Backward turning ●: Standard items
 ▶ FWT: Forward turning
 ▶ ap⁽¹⁾: Be aware that the insert may be damaged if the depth of cut is exceeded in high feed backward turning.

POSSTURN
DOUBLE SIDED
POSITIVE TURNING



All Directional Turning with Positive 4 Cutting Edge Negative Insert



All-directional turning



High feed



4 corner double-sided inserts



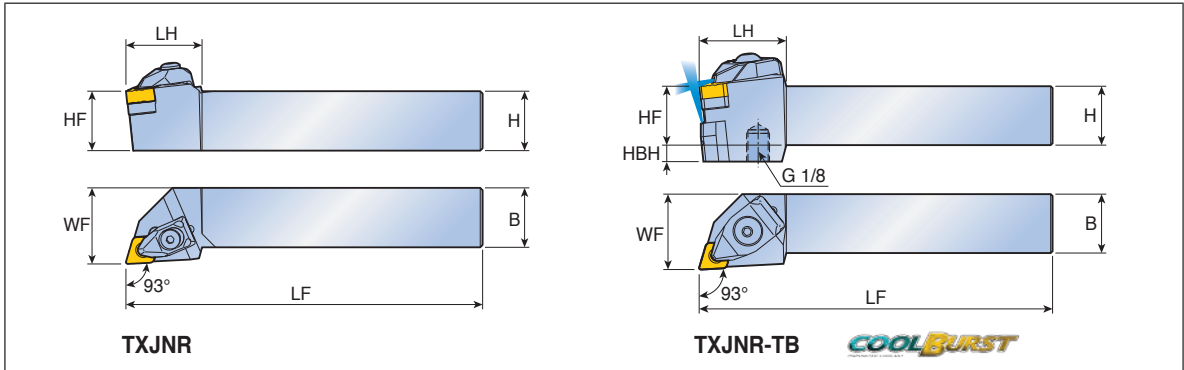
High positive rake angle



Unique and rigid captive clamping

TXJNR/L TXJNR/L-TB

T-holders



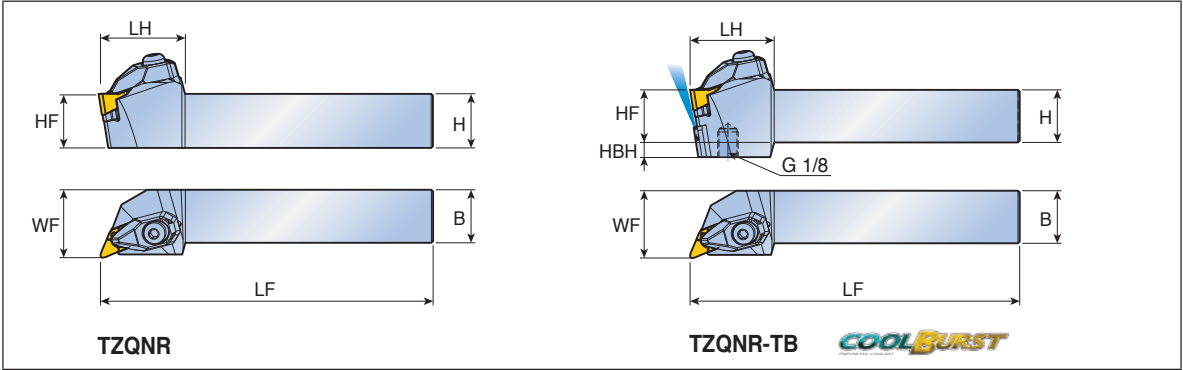
Approach angle	Designation	Dimension (mm)							Insert
		H	HF	B	LF	LH	WF	HBH	
93° 	TXJNR/L 2020 K1105	20	20	20	125	32	25	-	XN... 1105...
	2525 M1105	25	25	25	150	32	32	-	
93° 	TXJNR/L 2525 M1105-TB	25	25	25	150	37	32	7	

Spare parts

Designation	Clamp	Clamp screw	Spring	Upper O-ring	Lower O-ring	Shim	Shim screw	Wrench	
...1105	DLM 3.5-NX	DLS 4	DSP 4	-	-	TSX 3.53	SO 500901	L-W 3	T 20
...1105-TB	DLM 3-NX-TB	BH M5x0.8x21-MO-TB	DSP 4	O-RING ID5.28x1.78	O-RING ID7.59x2.62	TSX 3.53	SO 500901	L-W 3	T 20

TZQNR/L TZQNR-TB

T-holders for ZNMV insert



Approach angle	Designation	Dimension (mm)							Insert
		H	HF	B	LF	LH	WF	HBH	
ZNMV 23° (BWT) 95° (FWT)	TZQNR/L 2525 M1410	25	25	25	150	40	32	-	ZNMV 1410...
	3232 P1410	32	32	32	170	40	40	-	
	TZQNR/L 2525 M1410-TB	25	25	25	150	40	32	7	
	3232 P1410-TB	32	32	32	170	40	40	-	
ZNMV Y-BF 28° (BWT) 118° (FWT)									
			<p style="text-align: center;">ZNMV ZNMV Y-BF</p>						

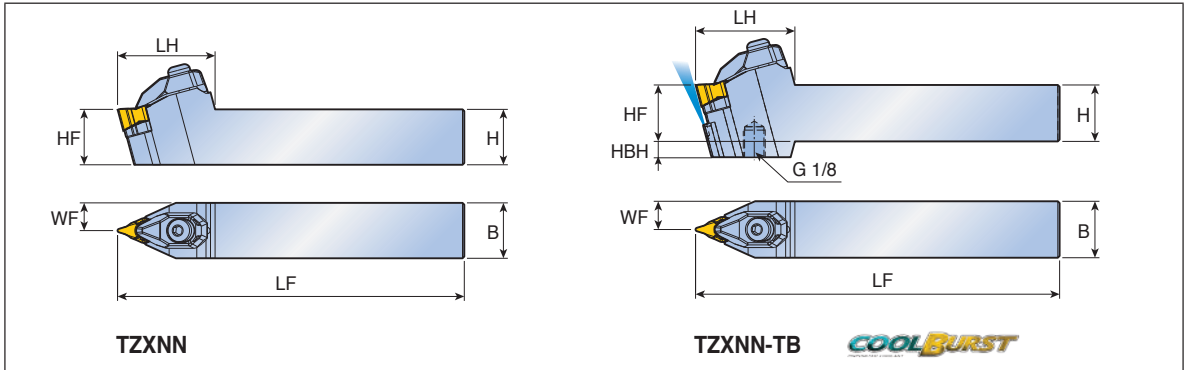
- ▶ BWT: Backward turning
- ▶ FWT: Forward turning

Spare parts

Designation	Clamp	Clamp screw	Spring	Shim	Shim screw	Wrench	
...1410	DLM 3.3Z-NV	DLS 5	DSP 5	TSZ 140310	TS 35083I/HG	L-W 4	T 10
...1410-TB	DLM 3.3Z-NV	DLS 5	DSP 5	TSZ 140310	TS 35083I/HG	L-W 4	T 10

TZXNN TZXNN-TB

T-holders for ZNMV Y-BF insert



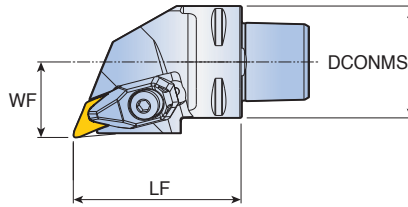
Approach angle	Designation	Dimension (mm)							Insert	
		H	HF	B	LF	LH	WF	HBH		
73° 	TZXNN 2525 M1410	25	25	25	150	44	12.5	-	ZNMV 1410...Y-BF	
	3232 P1410	32	32	32	170	44	16	-		
	TZXNN 2525 M1410-TB	25	25	25	150	44	12.5	7		
	3232 P1410-TB	32	32	32	170	44	16	-		

Spare parts

Designation	Clamp	Clamp screw	Spring	Shim	Shim screw	Wrench	
...1410	DLM 3.3Z-NV	DLS 5	DSP 5	TSZ 140310	TS 35083I/HG	L-W 4	T 10
...1410-TB	DLM 3.3Z-NV	DLS 5	DSP 5	TSZ 140310	TS 35083I/HG	L-W 4	T 10

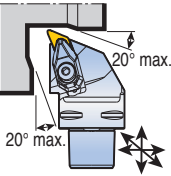
TZQNR/L-TB

High pressure T-holders with C-ADAPTER

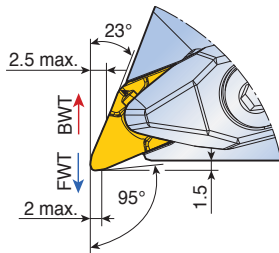
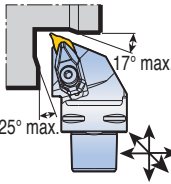


TZQNR-TB **COOLBURST**

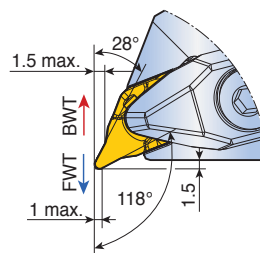
Approach angle	Designation	Dimension (mm)			Insert
		DCONMS	WF	LF	
ZNMV 23° (BWT) 95° (FWT)	C4-TZQNR/L 27060-1410-TB	40	27	60	ZNMV 1410...
	C5-TZQNR/L 35060-1410-TB	50	35	60	
	C6-TZQNR/L 45065-1410-TB	60	45	65	



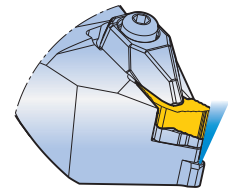
ZNMV Y-BF 28° (BWT) 118° (FWT)



ZNMV



ZNMV Y-BF



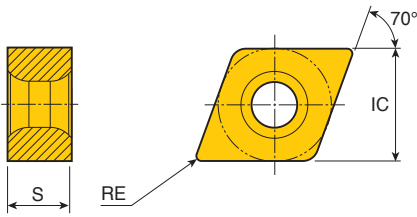
- ▶ BWT: Backward turning
- ▶ FWT: Forward turning

Spare parts

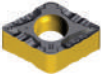
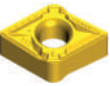
Designation	Clamp	Clamp screw	Spring	Shim	Shim screw	Wrench	
	...1410-TB	DLM 3.3Z-NV	DLS 5	DSP 5	TSZ 140310	TS 350831/HG	L-W 4

XNMV

Negative 70° rhombic inserts



Size	Dimension (mm)		
	IC	S	RE
11	11.11	5.56	0.8

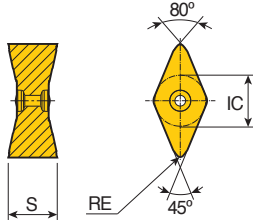
Insert	Designation	BWT		FWT		CVD coated							PVD coated					
		ap (mm)	Feed (mm/rev)	ap (mm)	Feed (mm/rev)	TT7005	TT7015	TT8105B	TT8115B	TT8125B	TT8135B	TT9215	TT9225	TT9235	TT5080	TT3010	TT3020	TT9080
	XNMV 110508L-BM	0.5-1.8	0.5-0.8	0.5-3.5	0.10-0.40			•	•									
	110508R-BM	0.5-1.8	0.5-0.8	0.5-3.5	0.10-0.40													
	XNMV 110508L-BS	0.5-1.8	0.4-0.8	1.0-4.0	0.15-0.40			•	•						•	•		
	110508R-BS	0.5-1.8	0.4-0.8	1.0-4.0	0.15-0.40			•	•						•	•		

▶ BWT: Backward turning
▶ FWT: Forward turning



• Standard items

ZNMV

Negative rhombic inserts with 80° corner angle



Size	Dimension (mm)		
	IC	S	RE
14	10.5	10	0.8

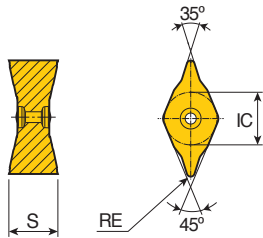
Insert	Designation	BWT		FWT		CVD coated							PVD coated									
		ap (mm)	Feed (mm/rev)	ap (mm)	Feed (mm/rev)	TT3005	TT7005	TT7015	TT7025	TT8105B	TT8115B	TT8125B	TT8135B	TT9215	TT9225	TT9235	TT5080	TT8020	TT9080	TT3010	TT3020	TT9020
	ZNMV 141008-BM	0.5-2.5	0.4-1.0	0.5-2.0	0.2-0.6					●	●	●										
	ZNMV 141008-BS	0.5-2.5	0.5-1.0	1.0-2.0	0.2-0.4	●				●	●	●								●	●	

- ▶ BWT: Backward turning
- ▶ FWT: Forward turning


●: Standard items

ZNMV Y-BF

Negative rhombic inserts with 35° corner angle



Size	Dimension (mm)		
	IC	S	RE
14	10.5	10	0.8

Insert	Designation	BWT		FWT		CVD coated							PVD coated									
		ap (mm)	Feed (mm/rev)	ap (mm)	Feed (mm/rev)	TT3005	TT7005	TT7015	TT7025	TT8105B	TT8115B	TT8125B	TT8135B	TT9215	TT9225	TT9235	TT5080	TT8020	TT9080	TT3010	TT3020	
	ZNMV 141008Y-BF	0.25-1.5	0.20-0.50	0.25-1.0	0.20-0.35	●				●	●	●										

- ▶ BWT: Backward turning
- ▶ FWT: Forward turning

●: Standard items

WINSWISS

New Modular Head and Holder for Swiss Machines



Easy replacement
of modular heads
and inserts



High-pressure
coolant



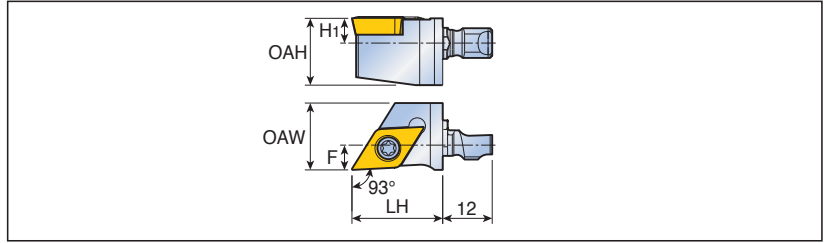
Rigid clamping and
good repeatability



A variety of
modular heads

QE1 SDJCR

Modular head for external turning on Swiss machines



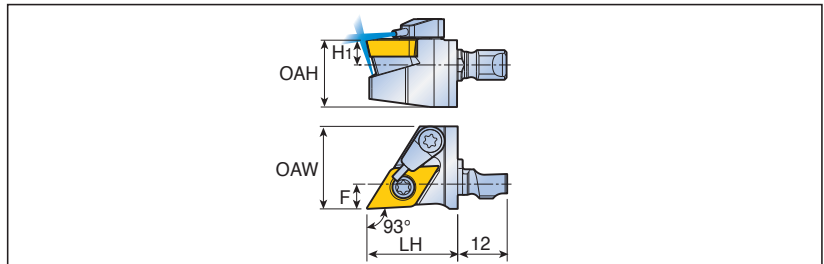
Approach angle	Designation	Dimensions (mm)					Shank	Insert
		OAH	LH	OAW	H1	F		
93°	QE1 SDJCR 11	16.2	22.0	16.2	6.0	7.0	QE1 S12N-TB QE1 S16R-TB	DC... 11T3...

QE1 SDJCR-TB

Modular head for external turning with high-pressure coolant on Swiss machines



COOLBURST



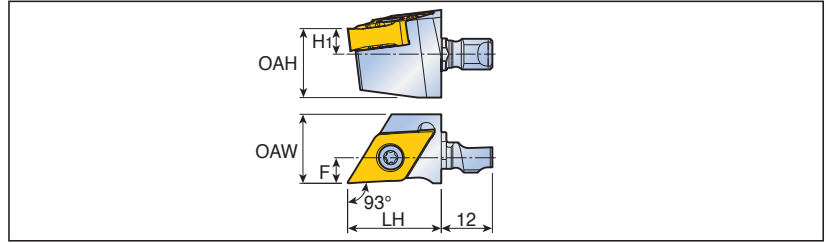
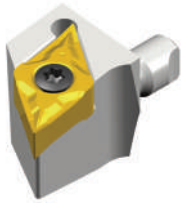
Approach angle	Designation	Dimensions (mm)					Shank	Insert
		OAH	LH	OAW	H1	F		
93°	QE1 SDJCR 11-TB	16.2	22.0	20.0	6.0	7.0	QE1 S12N-TB QE1 S16R-TB	DC... 11T3...

Spare parts

Designation	Screw	Cooling unit	Wrench	
QE1 SDJCR	SO 35080I	-	T15	
QE1 SDJCR-TB	SO 35080I	S-CU-TB	T15	

QE1 SDJNR

Modular head for external turning on Swiss machines



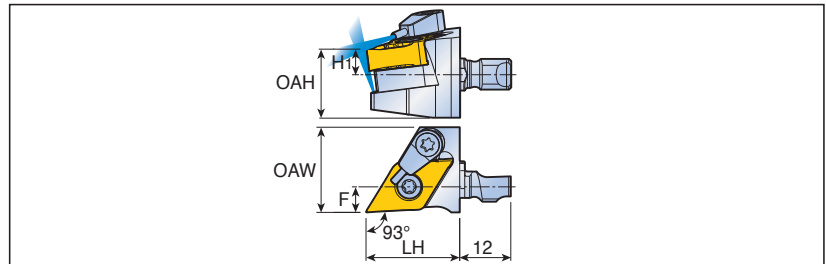
Approach angle	Designation	Dimensions (mm)					Shank	Insert
		OAH	LH	OAW	H1	F		
93° 	QE1 SDJNR 0803	16.2	22.0	16.2	6.0	7.0	QE1 S12N-TB QE1 S16R-TB	DN... 0803... RHINO TURN
	SDJNR 1305	16.2	22.0	16.2	6.0	7.0	QE1 S12N-TB QE1 S16R-TB	DN... 1305... RHINO TURN

QE1 SDJNR-TB

Modular head for external turning with high-pressure coolant on Swiss machines



COOLBURST



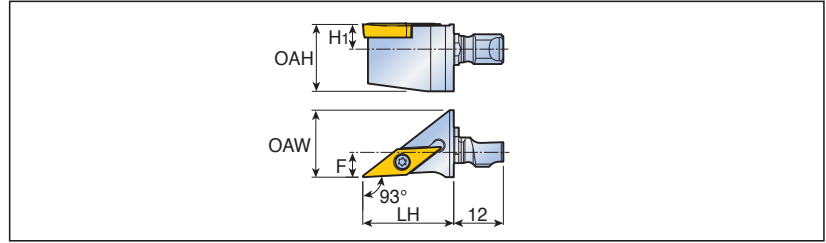
Approach angle	Designation	Dimensions (mm)					Shank	Insert
		OAH	LH	OAW	H1	F		
93° 	QE1 SDJNR 0803-TB	16.2	22.0	16.2	6.0	7.0	QE1 S12N-TB QE1 S16R-TB	DN... 0803... RHINO TURN
	SDJNR 1305-TB	16.2	22.0	20.0	6.0	7.0	QE1 S12N-TB QE1 S16R-TB	DN... 1305... RHINO TURN

Spare parts

Designation	Screw	Cooling unit	Wrench	
QE1 SDJNR 0803	TS 25D060/HG-P 	- 	T 7P 	
QE1 SDJNR 0803-TB	TS 25D060/HG-P	S-CU-TB	T 7P	
QE1 SDJNR 1305	TS 40G110I	-	T15	
QE1 SDJNR 1305-TB	TS 40G110I	S-CU-TB	T15	

QE1 SVJBR

Modular head for external turning on Swiss machines



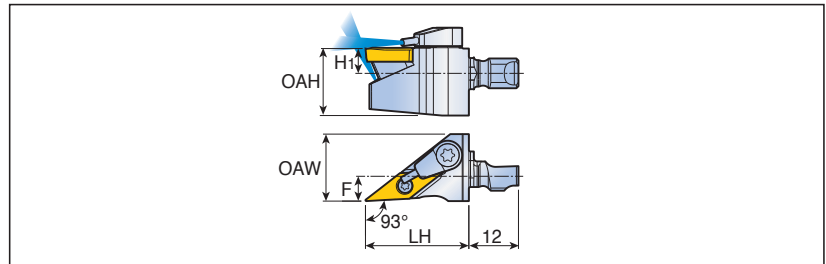
Approach angle	Designation	Dimensions (mm)					Shank	Insert
		OAH	LH	OAW	H1	F		
93°	QE1 SVJBR 11	16.2	22.0	16.2	6.0	7.0	QE1 S12N-TB QE1 S16R-TB	VB... 1103..

QE1 SVJBR-TB

Modular head for external turning with high-pressure coolant on Swiss machines



COOLBURST



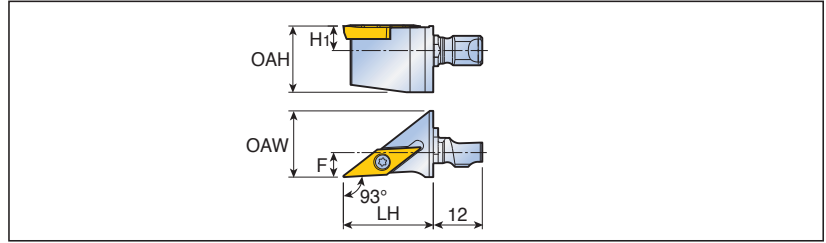
Approach angle	Designation	Dimensions (mm)					Shank	Insert
		OAH	LH	OAW	H1	F		
93°	QE1 SVJBR 11-TB	16.2	25.0	16.2	6.0	7.0	QE1 S12N-TB QE1 S16R-TB	VB... 1103..

Spare parts

Designation	Screw	Cooling unit	Wrench	
QE1 SVJBR 11	SO 25065I	-	T 7	
QE1 SVJBR 11-TB	SO 25065I	S-CU-TB	T 7	

QE1 SVJCR

Modular head for external turning on Swiss machines



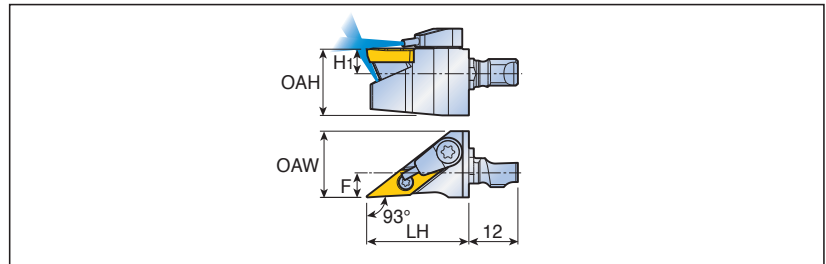
Approach angle	Designation	Dimensions (mm)					Shank	Insert
		OAH	LH	OAW	H1	F		
93°	QE1 SVJCR 11	16.2	22.0	16.2	6.0	7.0	QE1 S12N-TB QE1 S16R-TB	VC... 1103...

QE1 SVJCR-TB

Modular head for external turning with high-pressure coolant on Swiss machines



COOLBURST



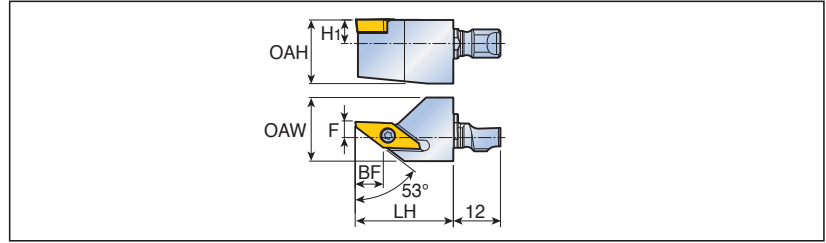
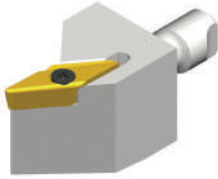
Approach angle	Designation	Dimensions (mm)					Shank	Insert
		OAH	LH	OAW	H1	F		
93°	QE1 SVJCR 11-TB	16.2	25.0	16.2	6.0	7.0	QE1 S12N-TB QE1 S16R-TB	VC... 1103...

Spare parts

Designation	Screw	Cooling unit	Wrench	
QE1 SVJCR 11	SO 25065I	-	T 7	
QE1 SVJCR 11-TB	SO 25065I	S-CU-TB	T 7	

QE1B SVXCR

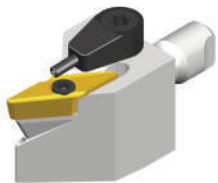
Modular head for external back turning on Swiss machines



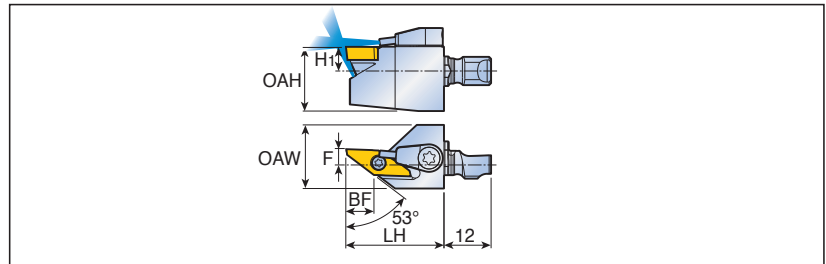
Approach angle	Designation	Dimensions (mm)							Shank	Insert
		OAH	LH	OAW	BF	H1	F			
53°	QE1B SVXCR 11	16.2	25.0	16.2	7.2	6.0	3.0	QE1 S12N-TB QE1 S16R-TB	BTVC 1103... TOP MINI	

QE1B SVXCR-TB

Modular head for external back turning with high-pressure coolant on Swiss machines



COOLBURST



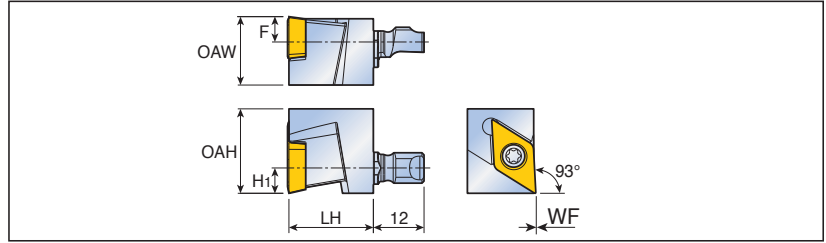
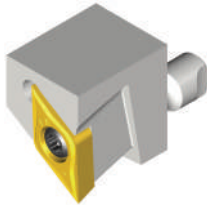
Approach angle	Designation	Dimensions (mm)							Shank	Insert
		OAH	LH	OAW	BF	H1	F			
53°	QE1B SVXCR 11-TB	16.2	25.0	16.2	7.2	6.0	3.0	QE1 S12N-TB QE1 S16R-TB	BTVC 1103... TOP MINI	

Spare parts

Designation	Screw	Cooling unit	Wrench	
QE1B SVXCR	SO 25065I 	- 	T 7 	
QE1B SVXCR-TB	SO 25065I	S-CU-TB	T 7	

QE1Y SDJCR

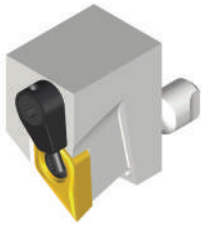
Modular head for Y-axis turning on Swiss machines



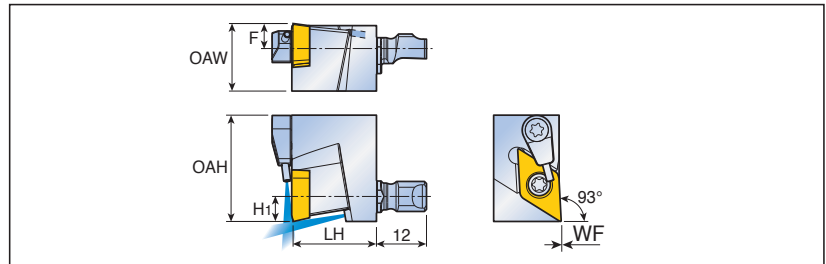
Approach angle	Designation	Dimensions (mm)						Shank	Insert
		OAW	OAH	LH	WF	H1	F		
93° 	QE1Y SDJCR 11	16.2	20.0	20.0	0.0	6.0	7.0	QE1 S12N-TB QE1 S16L-TB	DC... 11T3...

QE1Y SDJCR-TB

Modular head for Y-axis turning with high-pressure coolant on Swiss machines



COOLBURST



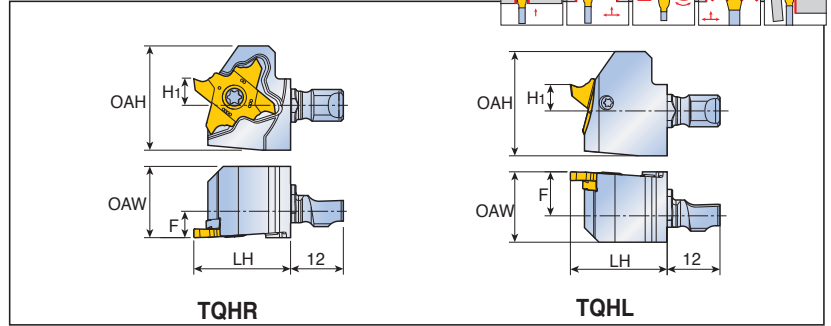
Approach angle	Designation	Dimensions (mm)						Shank	Insert
		OAW	OAH	LH	WF	H1	F		
93° 	QE1Y SDJCR 11-TB	16.2	25.5	20.0	0.0	6.0	7.0	QE1 S12N-TB QE1 S16L-TB	DC... 11T3...

Spare parts

Designation	Screw	Cooling unit	Wrench	
QE1Y SDJCR 11	SO 35080I	-	T 15	
QE1Y SDJCR 11-TB	SO 35080I	S-CU-TB	T 15	

QE1 TQHR/L

Modular head for parting and grooving on Swiss machines



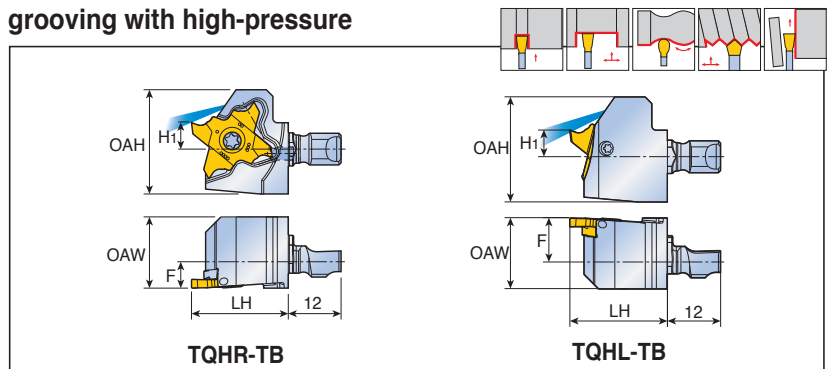
Designation	Dimensions (mm)					Shank	Insert
	OAH	LH	OAW	H1	F		
QE1 TQHR 20	23.7	22.0	16.2	6.0	7.0	QE1 S12N-TB	TQ... 20
QE1 TQHL 20	23.7	22.0	16.0	6.0	9.0	QE1 S16R-TB	

QE1 TQHR/L-TB

Modular head for parting and grooving with high-pressure coolant on Swiss machines



COOLBURST



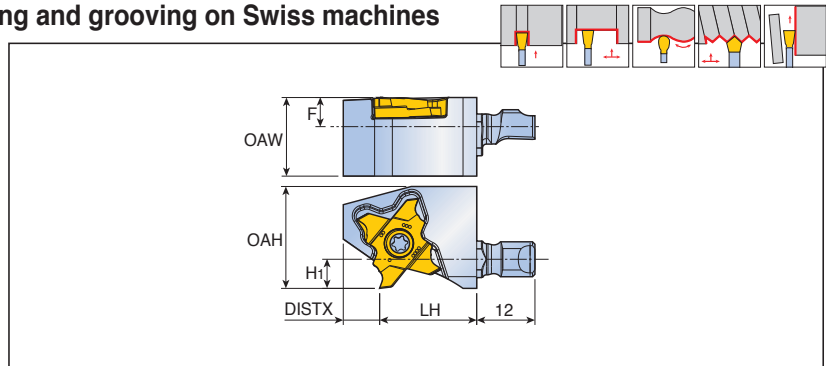
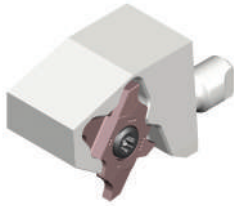
Designation	Dimensions (mm)					Shank	Insert
	OAH	LH	OAW	H1	F		
QE1 TQHR 20-TB	23.7	22.0	16.2	6.0	7.0	QE1 S12N-TB	TQ... 20
QE1 TQHL 20-TB	23.7	22.0	16.0	6.0	9.0	QE1 S16R-TB	

Spare parts

Designation	Screw	Wrench		
	QE1 TQHR(-TB)	TS 40A100L	T-1508/5	
QE1 TQHL(-TB)	TS 40A100	T-1508/5		

QE1Y TQHR

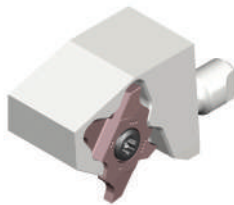
Modular head for Y-axis parting and grooving on Swiss machines



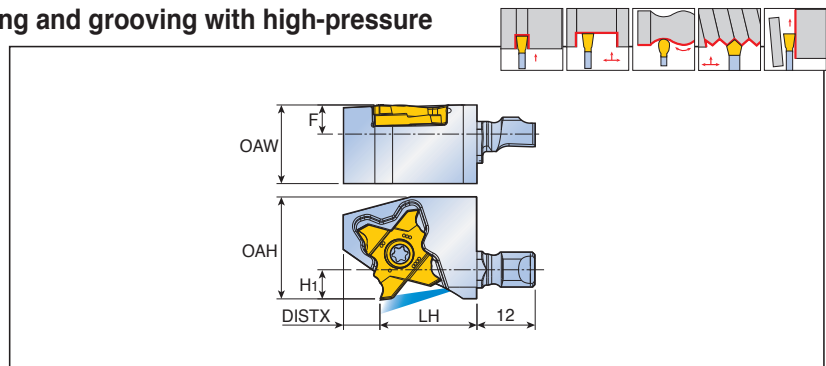
Designation	Dimensions (mm)						Shank	Insert
	OAH	LH	OAW	H1	F	DISTX		
QE1Y TQHR 20	21.0	20.0	16.2	6.0	7.0	7.5	QE1 S12N-TB QE1 S16L-TB	TQ... 20

QE1Y TQHR-TB

Modular head for Y-axis parting and grooving with high-pressure coolant on Swiss machines





COOLBURST



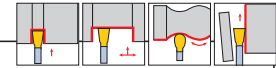
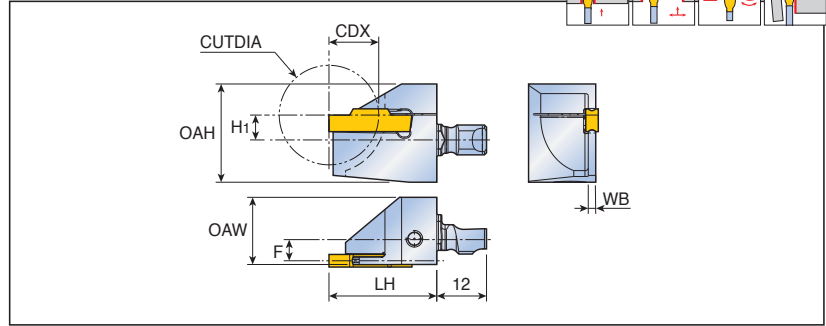
Designation	Dimensions (mm)						Shank	Insert
	OAH	ALH	OAW	H1	F	DISTX		
QE1Y TQHR 20-TB	21.0	20.0	16.2	6.0	7.0	7.5	QE1 S12N-TB QE1 S16L-TB	TQ... 20

Spare parts

Designation	Screw	Wrench		
QE1Y TQHR 20(-TB)	 TS 40A100L	 T-1508/5		

QE1 TTER

Modular head for external turning and grooving



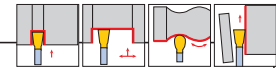
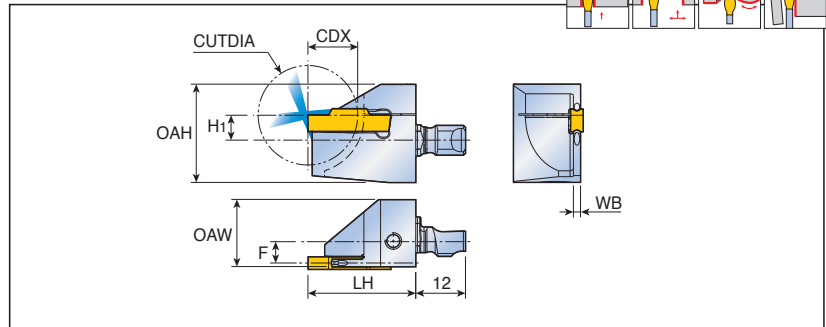
Designation	Insert seat size	Dimensions (mm)									Shank	Insert
		OAH	LH	OAW	WB	CDX	CUTDIA	H1	F			
QE1 TTER	2-12-24	2	23.7	26.0	16.2	1.8	12.0	24.0	6.0	6.1	QE1 S12N-TB	TDC/J/T/A
	2-16-32	2	23.7	26.0	16.2	1.8	16.0	32.0	6.0	6.1	QE1 S16R-TB	TDXU/XT/XY/CT
	3-12-24	3	23.7	26.0	16.2	2.4	12.0	24.0	6.0	5.8		TSC/J/A
	3-16-32	3	23.7	26.0	16.2	2.4	16.0	32.0	6.0	5.8		TDFU/TDV

QE1 TTER-TB

Modular head for external turning and grooving with high-pressure coolant





COOLBURST



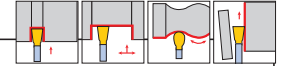
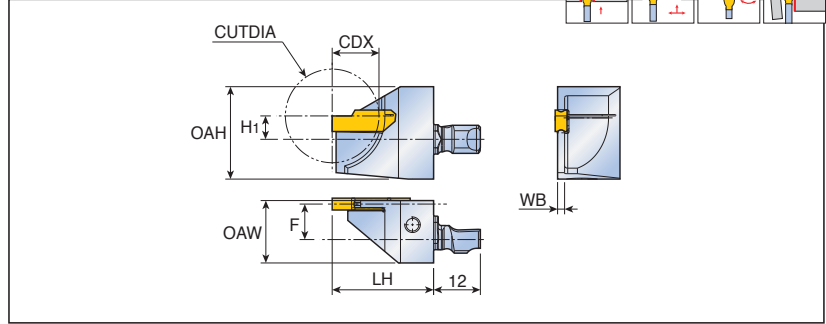
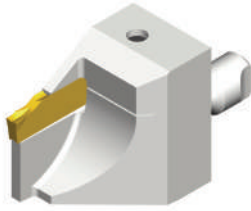
Designation	Insert seat size	Dimensions (mm)									Shank	Insert
		OAH	LH	OAW	WB	CDX	CUTDIA	H1	F			
QE1 TTER	2-12-24-TB	2	23.7	26.0	16.2	1.8	12.0	24.0	6.0	6.1	QE1 S12N-TB	TDC/J/T/A
	2-16-32-TB	2	23.7	26.0	16.2	1.8	16.0	32.0	6.0	6.1	QE1 S16R-TB	TDXU/XT/XY/CT
	3-12-24-TB	3	23.7	26.0	16.2	2.4	12.0	24.0	6.0	5.8		TSC/J/A
	3-16-32-TB	3	23.7	26.0	16.2	2.4	16.0	32.0	6.0	5.8		TDFU/TDV

Spare parts

Designation	Screw	Wrench		
	QE1 TTER(-TB)	 SH M4X0.7X16	 L-W 3	

QE1 TTEL

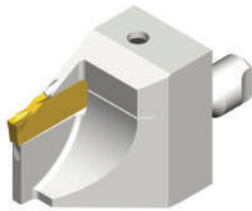
Modular head for external turning and grooving



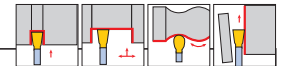
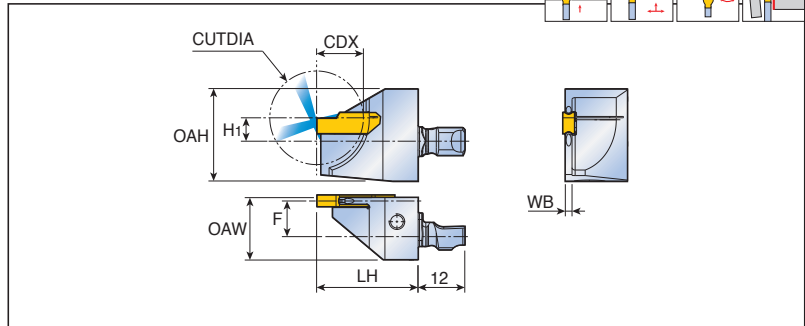
Designation	Insert seat size	Dimensions (mm)									Shank	Insert
		OAH	LH	OAW	WB	CDX	CUTDIA	H1	F			
QE1 TTEL 2-12-24	2	23.7	26.0	16.0	1.8	12.0	24.0	6.0	8.1	QE1 S12N-TB	TDC/J/T/A	
	2	23.7	26.0	16.0	1.8	16.0	32.0	6.0	8.1	QE1 S16R-TB	TDXU/XT/XY/CT	
3-12-24	3	23.7	26.0	16.0	2.4	12.0	24.0	6.0	7.8		TSC/J/A	
3-16-32	3	23.7	26.0	16.0	2.4	16.0	32.0	6.0	7.8		TDUF/TDV	

QE1 TTEL-TB

Modular head for external turning and grooving with high-pressure coolant



COOLBURST



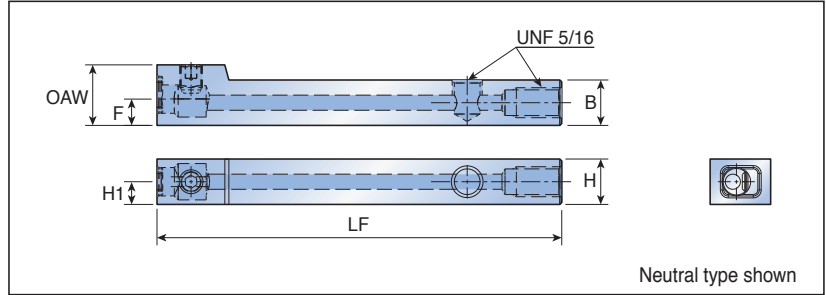
Designation	Insert seat size	Dimensions (mm)									Shank	Insert
		OAH	LH	OAW	WB	CDX	CUTDIA	H1	F			
QE1 TTEL 2-12-24-TB	2	23.7	26.0	16.0	1.8	12.0	24.0	6.0	8.1	QE1 S12N-TB	TDC/J/T/A	
	2	23.7	26.0	16.0	1.8	16.0	32.0	6.0	8.1	QE1 S16R-TB	TDXU/XT/XY/CT	
3-12-24-TB	3	23.7	26.0	16.0	2.4	12.0	24.0	6.0	7.8		TSC/J/A	
3-16-32-TB	3	23.7	26.0	16.0	2.4	16.0	32.0	6.0	7.8		TDUF/TDV	

Spare parts

Designation	Screw	Wrench		
	QE1 TTEL(-TB)	SH M4X0.7X16	L-W 3	

QE1 S12N-TB

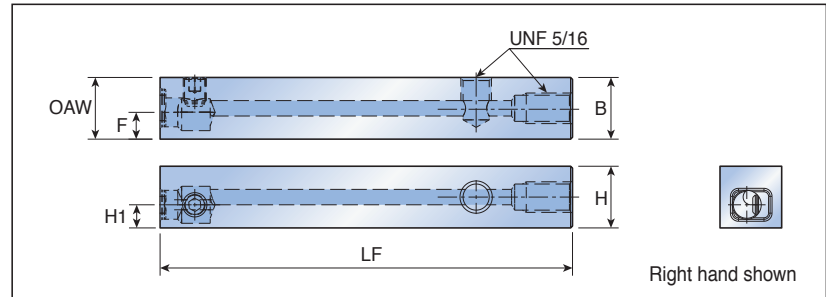
Shank for high-pressure coolant type Swiss machines



Designation	Dimensions (mm)					
	H ₁	F	H	B	LF	OAW
QE1 S12N-TB	6.0	7.0	12.0	12.0	107.0	16.0

QE1 S16R/L-TB

Shank for high-pressure coolant type Swiss machines



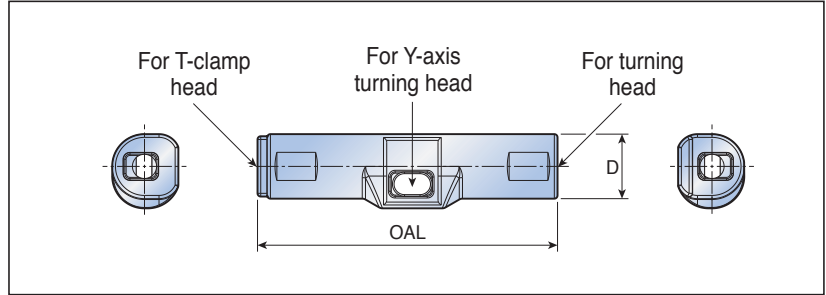
Designation	Dimensions (mm)					
	H ₁	F	H	B	LF	OAW
QE1 S16R/L-TB	6.0	7.0	16.0	16.0	107.0	16.0

Spare parts

Designation	Screw	Plug	Wrench	
QE1 ...-TB	SS M6F-7	PLG 5/16 UNF	L-W 3	L-W 5/32

QE1 FIX-20100

Insert replacement fixture



Designation	Dimensions (mm)	
	OAL	D
QE1 FIX-20100	93.0	20.0

► Fixture ordered separately

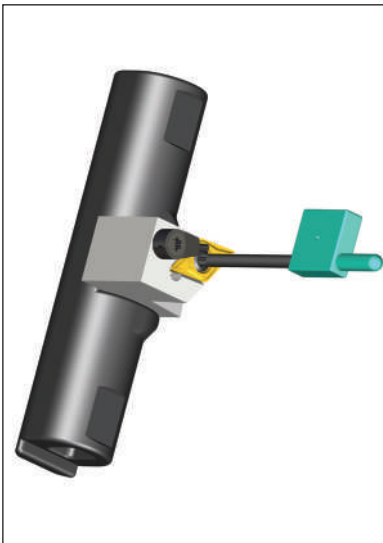
Insert replacement

■ Due to the WIN-SWISS' small head sizes, replacing the inserts could be difficult. Please use the fixture to facilitate insert replacement.

■ Y-axis turning head

■ T-clamp head

■ Turning head



HUSHBORE

ANTI VIBRATION BAR



Vibration Free Boring Bar with Exchangeable Heads



Vibration free for
deep internal
turning



A variety of
head types



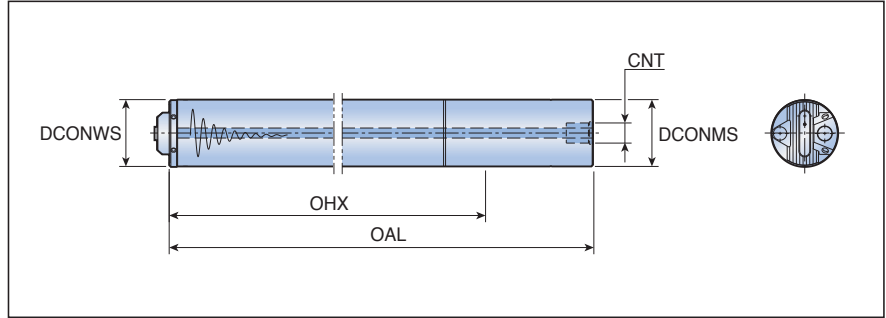
Through
coolant system



Serrated coupling
design for robust
tightening

QS-VH

Anti-Vibration shanks for boring

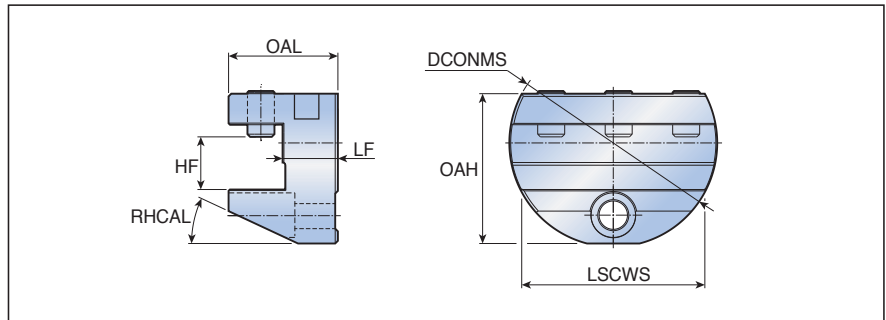
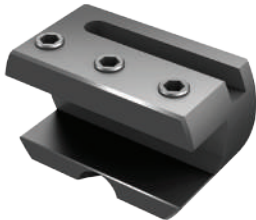


Designation	Dimension (mm)					Coolant hole
	DCONMS	DCONWS	OAL	OHX	CNT	
QS80A- 7D-VH	80	80	880	515	G 3/4"	•
10D-VH	80	80	1200	755	G 3/4"	•

► OHX: Maximum overhang

QH80-VH

Perpendicular adaptor for external square-shank tools





Designation	Dimension (mm)						
	DCONMS	LF	HF	OAL	OAH	LSCWS	RHCAL
QH80- 2020-VH	77.0	20.5	20.0	40.5	55.5	67.8	25.0

► Used with external 20x20 square holders

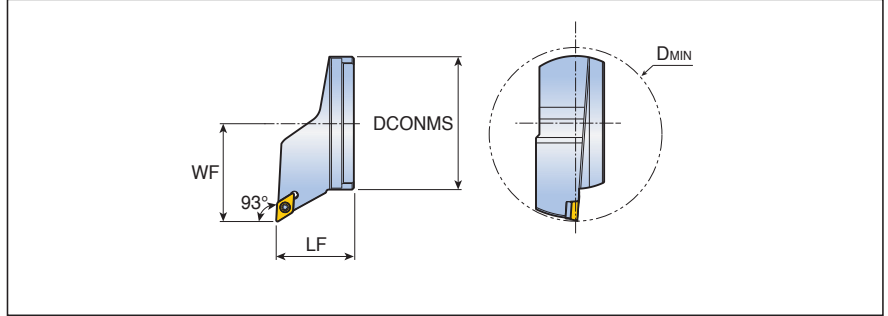
► Since there is a deviation in the D_{MIN} value for each holder, it is recommended to use the boring head after checking for interference with the workpiece.

Spare parts

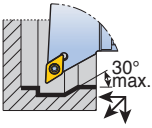
Designation	Screw	Wrench				
						
QH80	SR M10x16 DIN913	L-W 5				

QH-SDUCR/L-VH

Screw type boring heads

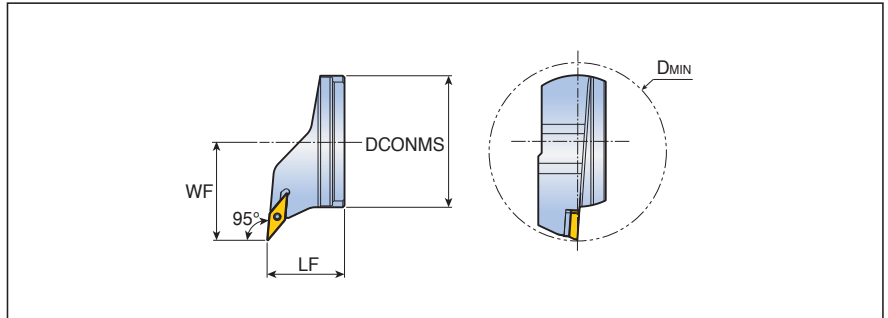


Approach angle	Designation	Dimension (mm)				Insert
		DCONMS	LF	WF	DMIN	
93°	QH80- SDUCR/L-11-VH	77	45	57	100	DC...T 11T3...

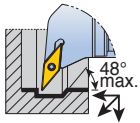


QH-SVLCR/L-VH

Screw type boring heads



Approach angle	Designation	Dimension (mm)				Insert
		DCONMS	LF	WF	DMIN	
95°	QH80- SVLCR/L-16-VH	77	45	57	100	VC...T 1604...

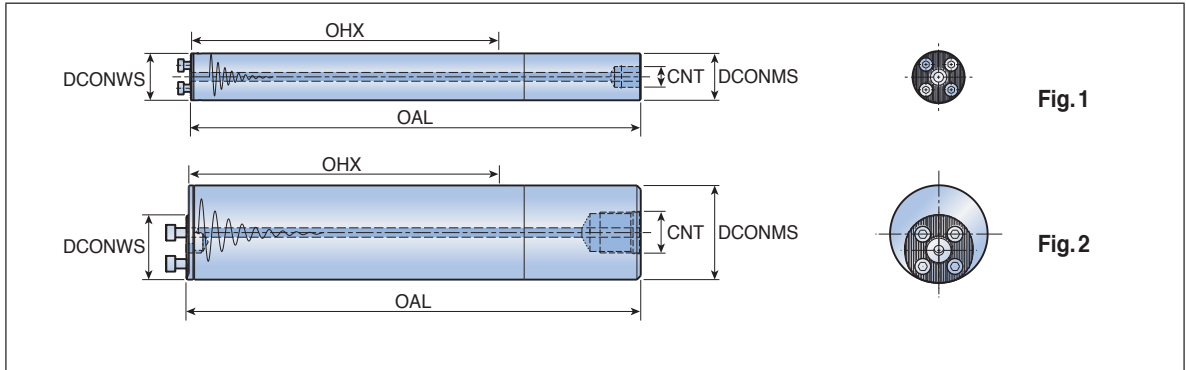


Spare parts

Designation	Screw	Shim		Shim screw	Stopper screw	Wrench		
SDUCR/L	SR 16-236 P	TDC 3-1P	-	SR TC-3P	SH M3x0.5x6	T-15/5	L-W 4	L-W 2.5
SVLCR/L...	SR 16-236 P	-	TVC 3-1P	SR TC-3P	SH M3x0.5x6	T-15/5	L-W 4	L-W 2.5

QS

Anti-vibration shanks for boring





Designation	Dimension (mm)					Coolant hole	Fig.
	DCONMS	DCONWS	OAL	OHX	CNT		
QS16A-7D	16	16	156.3	92	G 1/8	●	1
QS16E-10D⁽¹⁾	16	16	204.3	140	-	●	1
QS20A-7D	20	20	200.3	120	G 1/4	●	1
QS20E-10D⁽¹⁾	20	20	260.3	180	-	●	1
QS25A-7D	25	25	257.5	155	G 1/4	●	1
QS25A-10D	25	25	332.5	230	G 1/4	●	1
QS32A-7D	32	32	323.0	192	G 3/8	●	1
QS32A-10D	32	32	419.0	288	G 3/8	●	1
QS40A-7D	40	40	411.0	251	G 1/2	●	1
QS40A-10D	40	40	531.0	368	G 1/2	●	1
QS50A-7D	50	40	523.0	318	G 1/2	●	2
QS50A-10D	50	40	673.0	468	G 1/2	●	2
QS60A-7D	60	40	633.0	388	G 3/4	●	2
QS60A-10D	60	40	813.0	568	G 3/4	●	2

► OHX: Maximum overhang

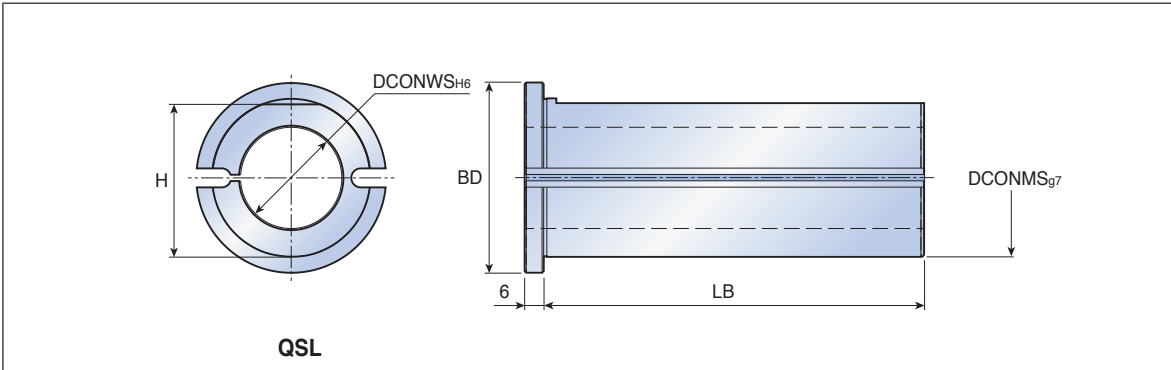
► ⁽¹⁾ Carbide shank

Spare parts

Designation	Screw	Wrench				
						
QS16	SH M3x0.5X10	L-W 2.5				
QS20	SH M3.5x0.6X10	L-W 2.5				
QS25	SH M4x0.7X12	L-W 3				
QS32	SH M5x0.8X12	L-W 4				
QS40/50/60	SH M6x1X16	L-W 5				

QSL

HUSH-BORE sleeve

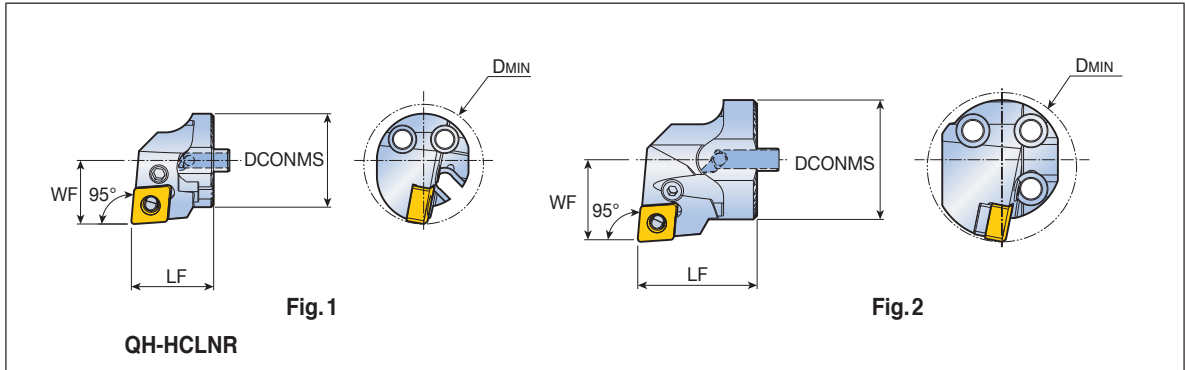


QSL

Designation	Dimension (mm)				
	DCONMS	DCONWS	BD	LB	H
QSL- 32-16-L66	32	16	42	60	31.0
32-20-L66	32	20	42	60	31.0
32-25-L66	32	25	42	60	31.0
40-16-L106	40	16	50	100	38.5
40-20-L106	40	20	50	100	38.5
40-25-L106	40	25	50	100	38.5
40-32-L106	40	32	50	100	38.5
50-20-L126	50	20	60	120	48.5
50-25-L126	50	25	60	120	48.5
50-32-L126	50	32	60	120	48.5
50-40-L126	50	40	60	120	48.5
60-32-L156	60	32	70	150	58.5
60-40-L156	60	40	70	150	58.5
60-50-L156	60	50	70	150	58.5

QH-HCLNR/L

Hook lever type boring heads



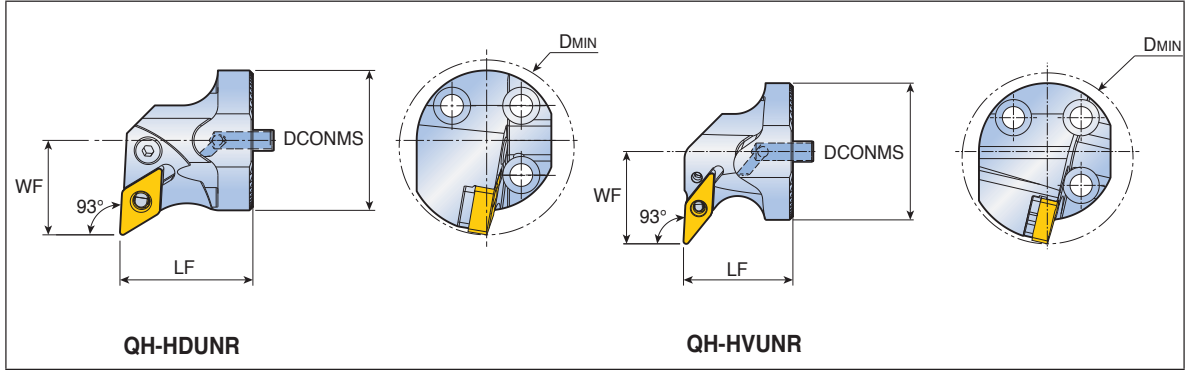
Approach angle	Designation	Dimension (mm)				Coolant hole	Fig.	Insert
		DCONMS	LF	WF	DMIN			
95° 	QH25- HCLNR/L-0904	25	22	17	32	•	1	CN... 0904...
	QH32- HCLNR/L-0904	32	32	22	40	•	2	RHINO TURN

Spare parts

Designation	Lever	Lever screw	Shim	Shim pin	Snap ring	Wrench	
QH25...0904	LCL 09B-NX	LCS 3B	-	-	LSR 3B	L-W 2	
QH32...0904	LCL 09-NX	LCS 3	LSC 32	LSP 3A	-	L-W 2.5	

QH-HDUNR/L QH-HVUNR/L

Hook lever type boring heads



Approach angle	Designation	Dimension (mm)				Coolant hole	Insert
		DCONMS	LF	WF	DMIN		
93°	QH40- HDUNR/L-1305 *	40	38	27	50	●	DN...G 1305... RHINOTURN
93°	QH40- HVUNR/L-1304 *	40	32	27	50	●	VN...X 1304... YNMG 1304... RHINOTURN

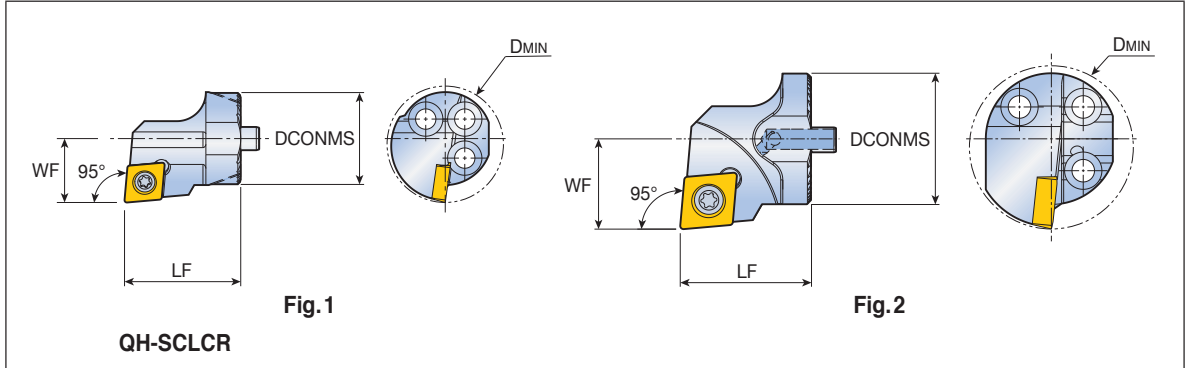
► * When applying Ø50mm shank, DMIN for the assembly is Ø60mm. When applying Ø60mm shank, DMIN for the assembly is Ø70mm.

Spare parts

Designation	Lever	Lever screw	Shim		Shim pin	Wrench	
HDUNR/L-1305	LCL 11-NX	LCS 4S	LSD 3.52B	-	LSP 4	L-W 3	
HVUNR/L-1304	LCL 08-NX	LCS 4-DH	-	LSV 2.51.8H	LSP 3B	L-W 2.5	

QH-SCLCR/L

Screw type boring heads



Approach angle	Designation	Dimension (mm)				Coolant hole	Fig.	Insert
		DCONMS	LF	WF	DMIN			
95° 	QH16- SCLCR/L-06	16	20	11	20	●	1	CC... 0602...
	QH20- SCLCR/L-09	20	20	13	25	●	2	CC... 09T3...
	QH25- SCLCR/L-09	25	22	17	32	●	2	
	QH32- SCLCR/L-09	32	32	22	40	●	2	
	QH32- SCLCR/L-12	32	32	22	40	●	2	CC... 1204...
	QH40- SCLCR/L-12 *	40	38	27	50	●	2	

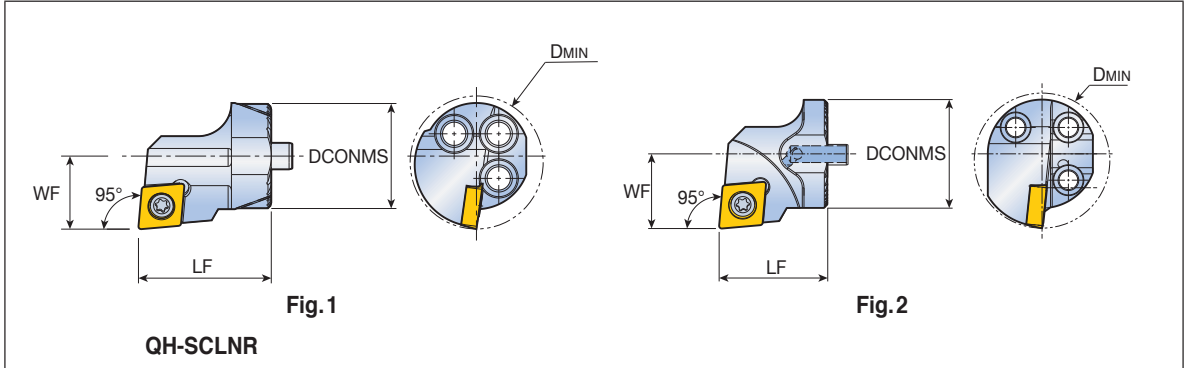
► * When applying Ø50mm shank, DMIN for the assembly is Ø60mm. When applying Ø60mm shank, DMIN for the assembly is Ø70mm.

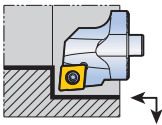
Spare parts

Designation	Screw	Shim	Shim screw	Wrench			
...06	SO 250650I	-	-	T 7	-		
...09	SO 35080I	-	-	T 15	-		
QH32...12	SO 45100I	-	-	T 20	-		
QH40...12	SO 45130I	SSC 43N	SO 60105S	T 20	L-W 5		



QH-SCLNR/L

Screw type boring heads



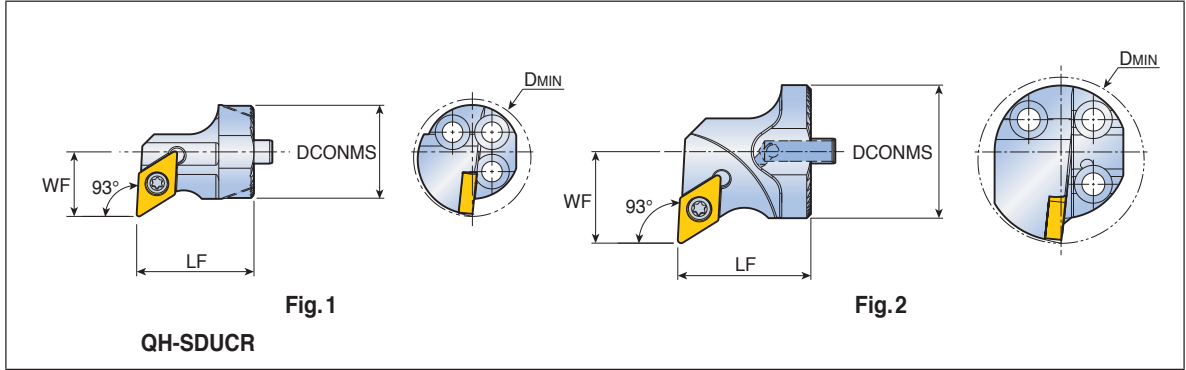
Approach angle	Designation	Dimension (mm)				Coolant hole	Fig.	Insert
		DCONMS	LF	WF	DMIN			
95° 	QH16- SCLNR/L-0703	16	20	11	20	●	1	CNMX 0703...
	QH20- SCLNR/L-0703	20	20	13	25	●	2	RHINO TURN

Spare parts

Designation	Screw 	Wrench 					
...0703	TS 25D060/HG-P	T 7P					

QH-SDUCR/L

Screw type boring heads



Approach angle	Designation	Dimension (mm)				Coolant hole	Fig.	Insert
		DCONMS	LF	WF	DMIN			
<p>30° max.</p>	QH16- SDUCR/L-07	16	20	11	20	•	1	DC... 0702...
	QH20- SDUCR/L-11	20	20	13	25	•	2	DC... 11T3...
	QH25- SDUCR/L-11	25	22	17	32	•	2	
	QH32- SDUCR/L-11	32	32	22	40	•	2	
	QH40- SDUCR/L-11 *	40	38	27	50	•	2	

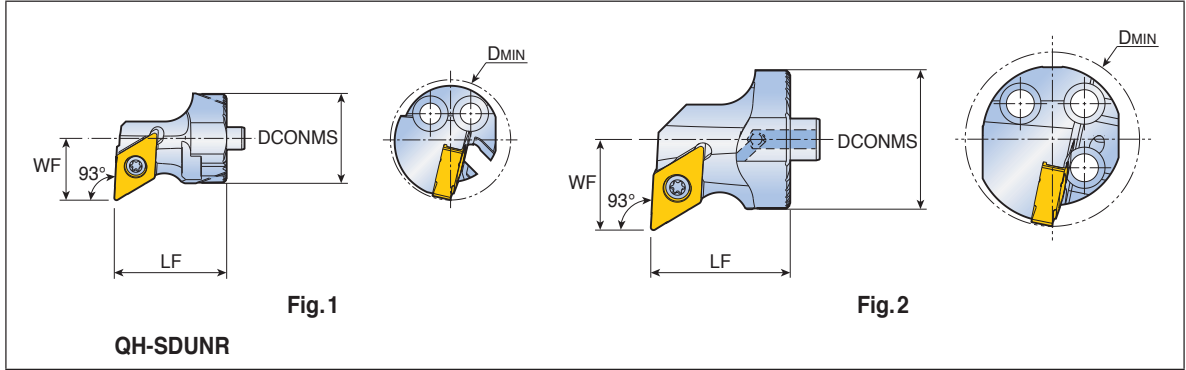
► * When applying Ø50mm shank, DMIN for the assembly is Ø60mm. When applying Ø60mm shank, DMIN for the assembly is Ø70mm.

Spare parts

Designation	Screw	Shim	Shim screw	Wrench			
...07	SO 25065I	-	-	T 7	-		
...11	SO 35080I	-	-	T 15	-		
QH40...11	SO 35124I	SSD 32	SO 50090S	T 15	L-W 3.5		

QH-SDUNR/L

Screw type boring heads



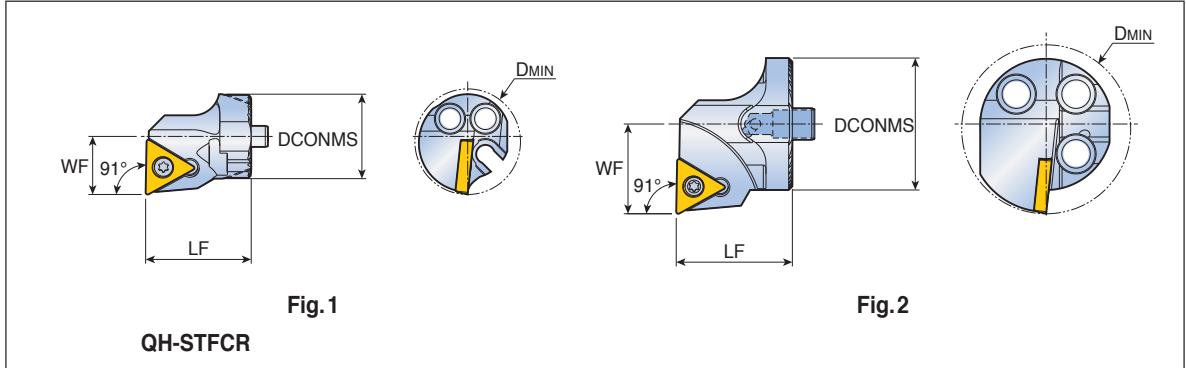
Approach angle	Designation	Dimension (mm)				Coolant hole	Fig.	Insert
		DCONMS	LF	WF	DMIN			
	QH16- SDUNR/L-0803	16	20	11	20	•	1	DN...X 0803...
	QH20- SDUNR/L-0803	20	20	13	25	•	2	RHINO TURN
	QH32- SDUNR/L-1305	32	32	22	40	•	2	DN...G 1305... RHINO TURN

Spare parts

Designation	Screw	Wrench					
...0803	TS 25D060/HG-P	T 7P					
...1305	TS 40G110I	T 15					

QH-STFCR/L

Screw type boring heads



Approach angle	Designation	Dimension (mm)				Coolant hole	Fig.	Insert
		DCONMS	LF	WF	DMIN			
	QH16- STFCR/L-11	16	20	11	20	●	1	TC... 1102...
	QH20- STFCR/L-11	20	20	13	25	●	2	
	QH25- STFCR/L-11	25	22	17	32	●	2	
	QH32- STFCR/L-16	32	32	22	40	●	2	TC... 16T3...
	QH40- STFCR/L-16 *	40	38	27	50	●	2	

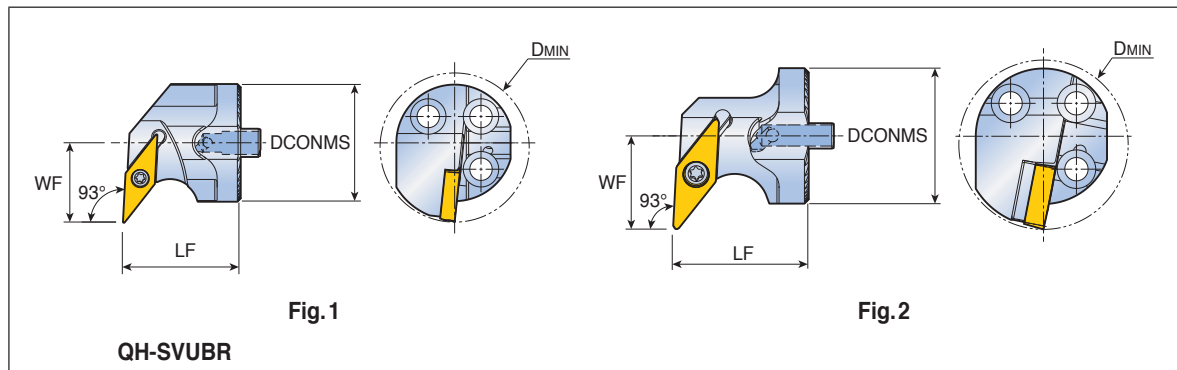
► * When applying Ø50mm shank, DMIN for the assembly is Ø60mm. When applying Ø60mm shank, DMIN for the assembly is Ø70mm.

Spare parts

Designation	Screw	Shim	Shim screw	Wrench			
...-11	SO 250651	-	-	T 7	-		
...-16	SO 351241	SST 32	SO 50090S	T 15	L-W 3.5		

QH-SVUBR/L

Screw type boring heads



Approach angle	Designation	Dimension (mm)				Coolant hole	Fig.	Insert
		DCONMS	LF	WF	DMIN			
	QH20- SVUBR/L-11	20	20	16	27	●	1	VB... 1103...
	QH25- SVUBR/L-11	25	25	17	31	●	1	
	QH32- SVUBR/L-16	32	32	22	40	●	2	VB... 1604...
	QH40- SVUBR/L-16 *	40	32	27	50	●	2	

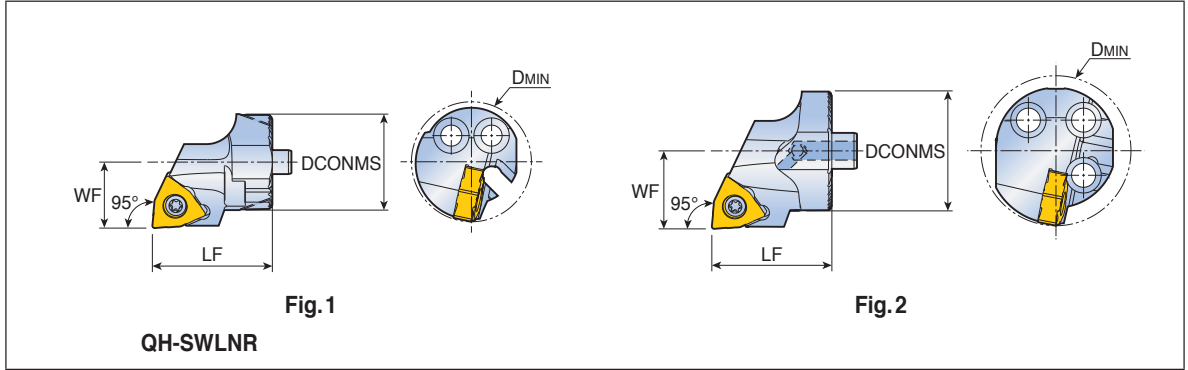
► * When applying Ø50mm shank, DMIN for the assembly is Ø60mm. When applying Ø60mm shank, DMIN for the assembly is Ø70mm.

Spare parts

Designation	Screw	Shim	Shim screw	Wrench			
SVUBR/L-11	SO 25065I	-	-	T 7	-		
SVUBR/L-16	SO 35124I	SSV 32	SO 50090S	T 15	L-W 3.5		

QH-SWLNR/L

Screw type boring heads



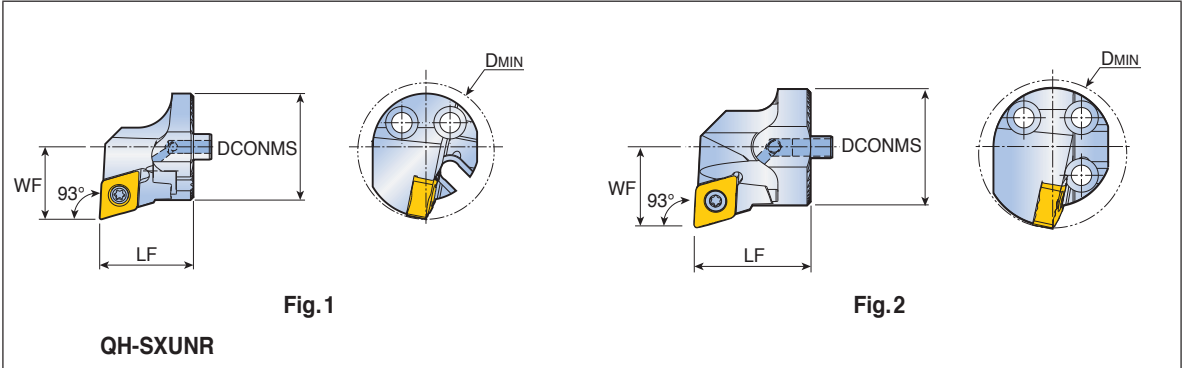
Approach angle	Designation	Dimension (mm)				Coolant hole	Fig.	Insert
		DCONMS	LF	WF	DMIN			
95°	QH16- SWLNR/L-0403	16	20	11	20	●	1	WN...X 0403...
	QH20- SWLNR/L-0403	20	20	13	25	●	2	RHINO TURN

Spare parts

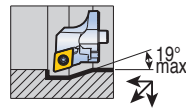
Designation	Screw	Wrench					
SWLNR/L-0403	TS 25D060/HG-P	T 7P					

QH-SXUNR/L

Screw type boring heads



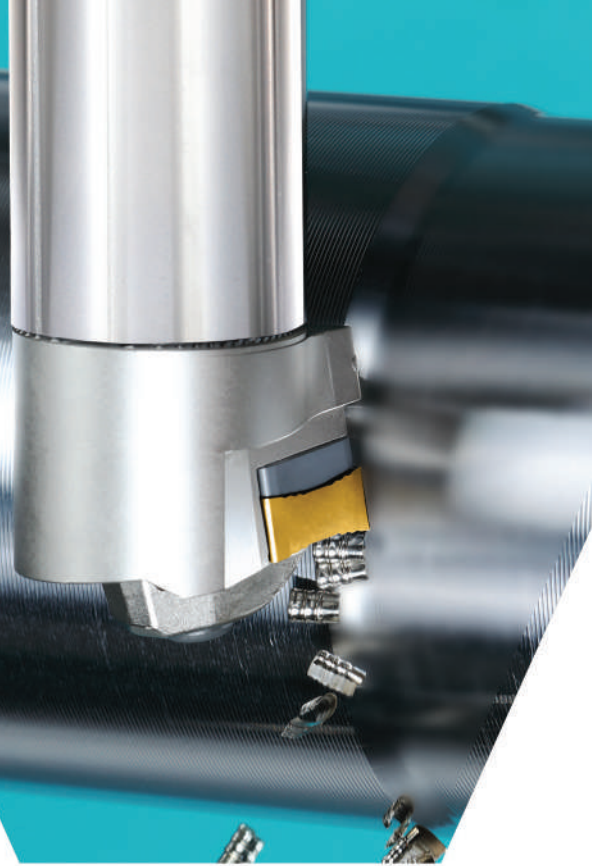
Approach angle	Designation	Dimension (mm)				Coolant hole	Fig.	Insert
		DCONMS	LF	WF	DMIN			
93°	QH25- SXUNR/L-0904	25	22	17	32	•	1	XNMG 0904... RHINOXTURN
	QH32- SXUNR/L-1105	32	32	22	40	•	2	XN... 1105... POSSTURN



Spare parts

Designation	Screw	Wrench					
...0904	TS 30080I/HG	T 9					
...1105	TS 40G110I	T 15					

HUSHMODU



Modular Type Shanks for Various Turning Applications



A variety of head types



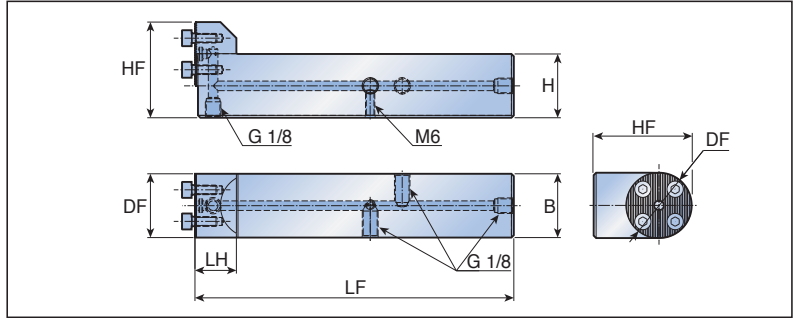
Through coolant system



Serrated coupling design for robust tightening





QSS

Head changeable square shank



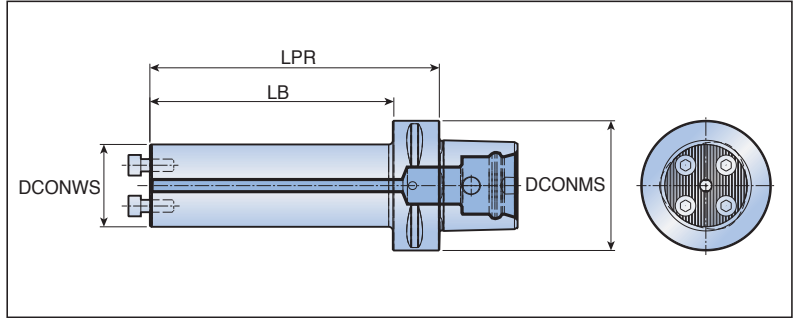
Designation	Dimensions (mm)						Coolant hole
	B	H	LF	LH	HF	DF	
QSS- N2020-D20-TB-MC	20	20	92	21	30	20	•
N2020-D25-TB-MC	20	20	92	21	32.5	25	•
N2020-D32-TB-MC	20	20	92	21	36	32	•
N2525-D25-TB-MC	25	25	107	21	37.5	25	•
N2525-D32-TB-MC	25	25	107	21	41	32	•
N2525-D40-TB-MC	25	25	107	21	45	40	•
N3232-D32-TB-MC	32	32	152	21	48	32	•
N3232-D40-TB-MC	32	32	152	26	52	40	•
N4040-D40-TB-MC	40	40	200	26	60	40	•

Spare parts

Designation	Screw	Plug		Wrench	
					
...-D20...	SH M3.5x0.6X10	RSS M6	PLG G1/8-L6.5	L-W 2.5	
...-D25...	SH M4x0.7X12	RSS M6	PLG G1/8-L6.5	L-W 3	
...N2020/N2525-D32...	SH M5x0.8X12	RSS M6	PLG G1/8-L6.5	L-W 4	
...N3232-D32...	SH M5x0.8X12	-	PLG G1/8-L6.5	L-W 4	
...N2525-D40...	SH M6x1X16	RSS M6	PLG G1/8-L6.5	L-W 5	
...N3232/N4040-D40...	SH M6x1X16	-	PLG G1/8-L6.5	L-W 5	

C...CS



Head changeable C-ADAPTER shank



Designation	Dimensions (mm)				Coolant hole
	DCONMS	DCONWS	LPR	LB	
C4- CS16A-2.5D	40	16	40	20	•
CS20A-2.5D	40	20	50	30	•
CS25A-2.5D	40	25	55	35	•
CS32A-2.5D	40	32	75	55	•
CS40A-3D	40	40	80	80	•
C5- CS16A-2.5D	50	16	40	20	•
CS20A-2.5D	50	20	50	30	•
CS25A-2.5D	50	25	55	35	•
CS32A-2.5D	50	32	75	55	•
CS40A-3D	50	40	100	80	•
C6- CS16A-2.5D	63	16	40	18	•
CS20A-2.5D	63	20	50	28	•
CS25A-2.5D	63	25	65	43	•
CS32A-3D	63	32	90	68	•
CS32A-4D	63	32	125	103	•
CS40A-3D	63	40	100	78	•
CS40A-4D	63	40	140	118	•
CS16E-5D	63	16	80	58	•
CS20E-5D	63	20	100	78	•
CS25E-5D	63	25	115	93	•
CS32E-5D	63	32	150	128	•
CS40E-5D	63	40	185	163	•

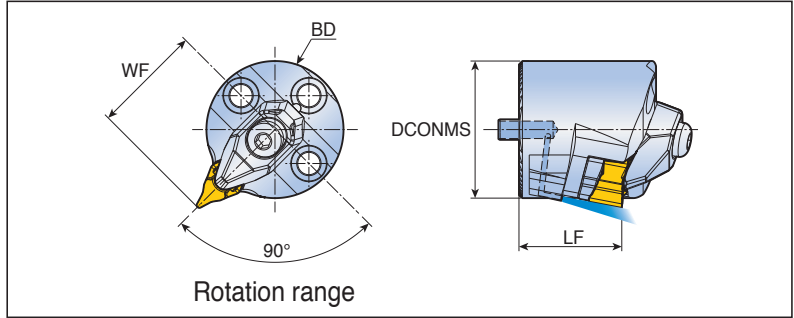
► 5D: Carbide core type

Spare parts

Designation	Screw	Wrench			
					
CS16	SH M3x0.5X10	L-W 2.5			
CS20	SH M3.5x0.6X10	L-W 2.5			
CS25	SH M4x0.7X12	L-W 3			
CS32	SH M5x0.8X12	L-W 4			
CS40	SH M6x1X16	L-W 5			

QH40Y-TZXNN-TB

Y-axis turning heads

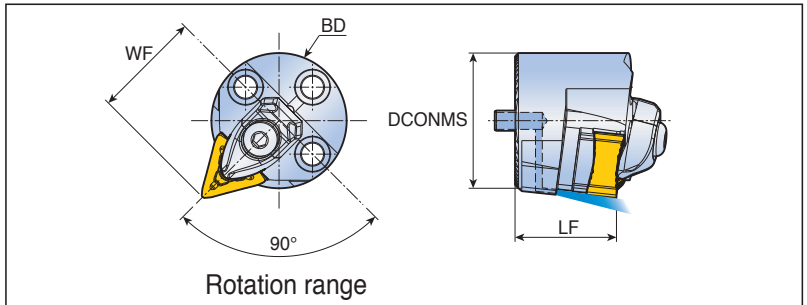


Approach angle	Designation	Dimensions (mm)				Insert
		DCONMS	LF	WF	BD	
	QH40Y- TZXNN -1410-TB	40	30	32	40	ZNMV 1410...Y-...

► Only ZNMV 1410...Y-BF inserts available

QH40Y-TTXNN-TB

Y-axis turning heads



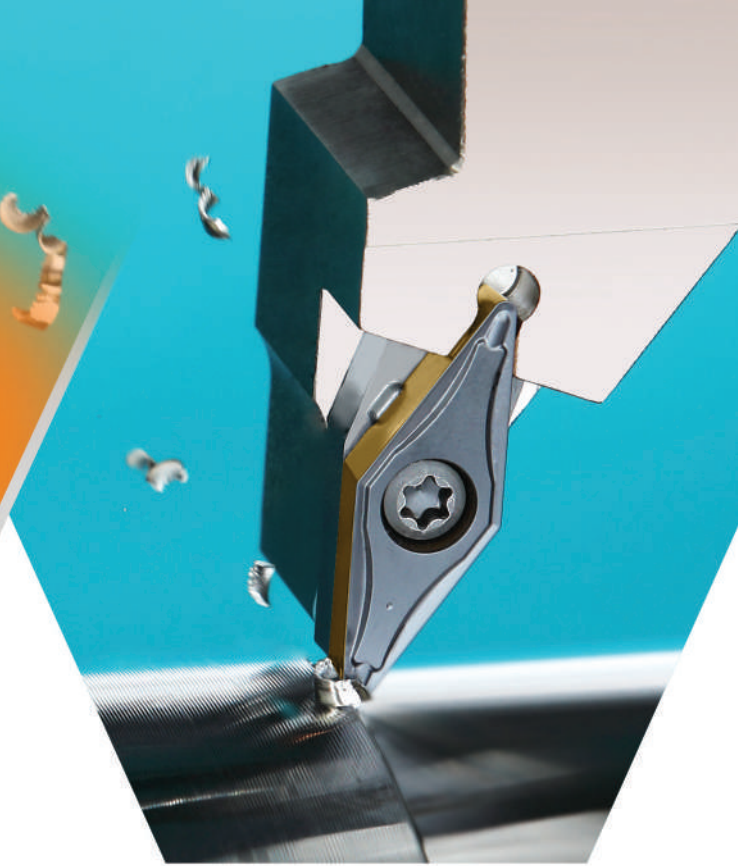
Approach angle	Designation	Dimensions (mm)				Insert
		DCONMS	LF	WF	BD	
	QH40Y- TTXNN -2109-TB	40	30	32	40	TNMV 2109...

Spare parts

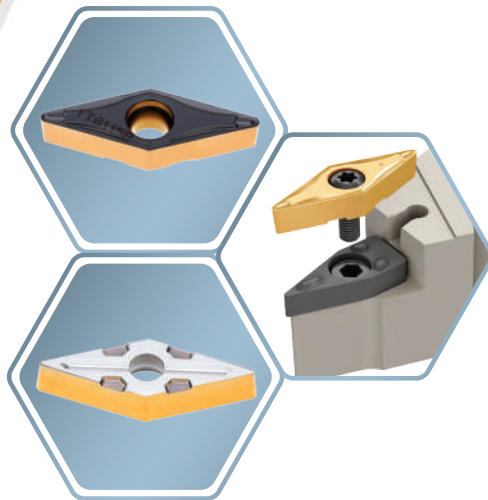
Designation	Clamp	Clamp screw	Spring	Shim		Shim screw	Wrench	
TZ...1410-TB	DLM 3.3Z-NV	DLS 5	DSP 5	TSZ 140310	-	TS 35083I/HG	L-W 4	T 10
TT...2109-TB	DLM 4.4T-NV	DLS 5	DSP 5	-	TSTV 210510	TS 35083I/HG	L-W 4	T 10

MULTITURN

SAFE TURNING



VBMX Insert and Holders with Rigid Clamping



For finishing



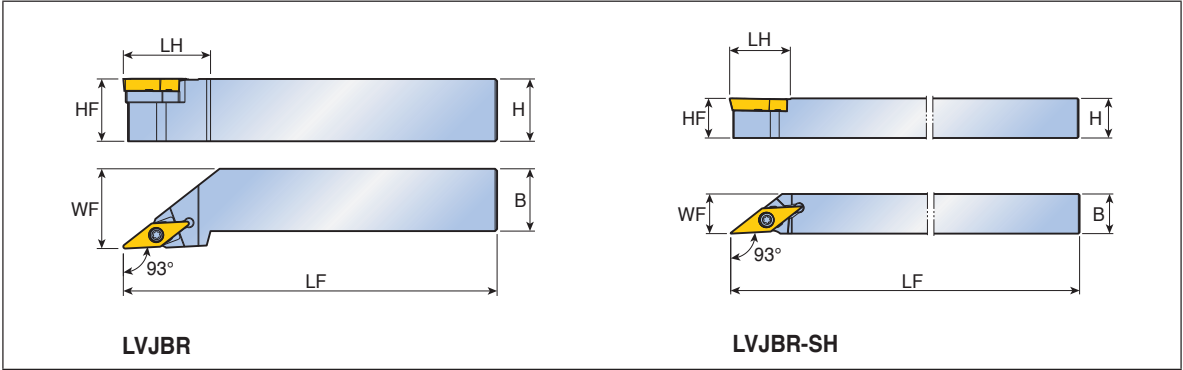
High stability



Secure and unique
clamping structure

LVJBR/L LVJBR-SH

Screw type holders



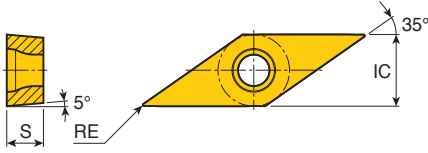
Approach angle	Designation	Dimension (mm)						Insert
		H	HF	B	LF	LH	WF	
93° 	LVJBR/L 2020 K16	20	20	20	125	35	25	VBMX 1604...
	2525 M16	25	25	25	150	35	32	
93° 	LVJBR 1616 K16-SH	16	16	16	125	24.5	16	

Spare parts

Designation	Screw	Shim	Shim screw	Wrench			
LVJBR/L	SO 35124I	SSVX 32	TS 5035062S	L-W 3.5	T 15		
LVJBR-SH	SO 35080I	-	-	-	T 15		

VBMX

Positive 5° clearance 35° rhombic inserts



Size	Dimension (mm)		
	IC	S	RE
16	9.52	4.76	0.2-0.8

Insert	Designation	ap (mm)	Feed (mm/rev)	Cermet		CVD coated							PVD coated								
				PV3010	CT3000	TT7005	TT7015	TT8105B	TT8115B	TT8125B	TT8135B	TT9215	TT9225	TT9235	TT5080	TT3010	TT3020	TT9080			
	VBMX 160402 FG	0.3-1.5	0.05-0.20																		
	160404 FG	0.5-1.5	0.07-0.20		•					•											
	160408 FG	0.7-2.0	0.10-0.25		•					•											•

► Insert can also be assembled onto an ISO holder •: Standard items

WINCUT

ADVANCED PARTING



WINSPEED

ADVANCED MACHINING



WINCUT
ADVANCED PARTING

New Single-Ended Rigid Insert for Parting and Grooving with Unique Adapters



High productivity with better tool life



Higher speed and feed



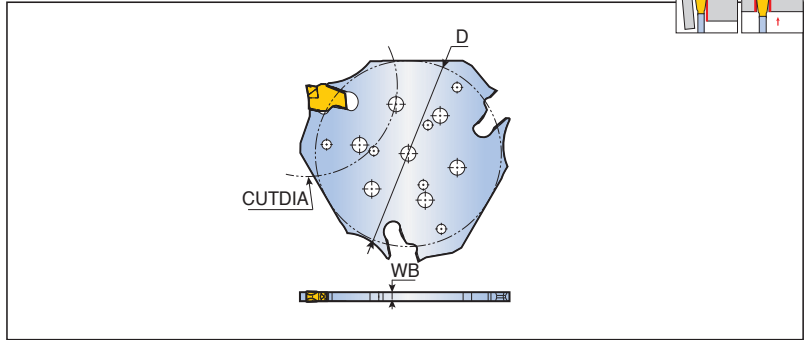
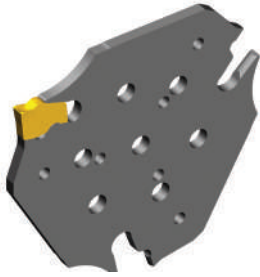
Simple and rigid clamping system



Top and bottom high-pressure coolant supply

SFTB

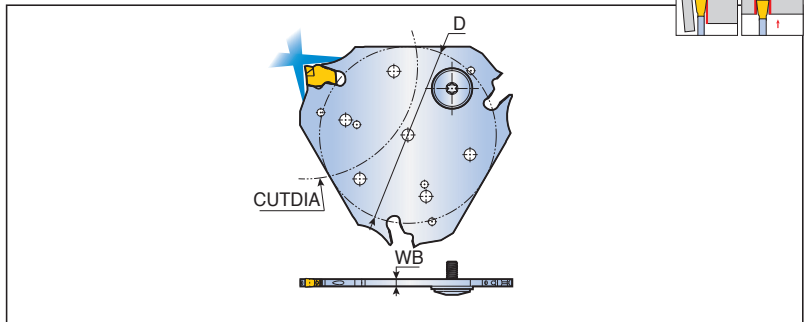
Triangular blades for parting and deep grooving



Designation	Insert seat size	Dimension (mm)			Block	Insert
		D	WB	CUTDIA		
SFTB D52-2	2	53.2	1.8	52	THTBR/L-TB	SFC SFJ
D52-3	3	53.2	2.5	52		
D82-2	2	64.3	1.8	82		
D82-3	3	64.3	2.5	82		
D120-2	2	85.5	1.8	120		
D120-3	3	85.5	2.5	120		



SFTB-TB

Triangular blades for parting and deep grooving with high-pressure coolant



Designation	Insert seat size	Dimension (mm)			Block	Insert
		D	WB	CUTDIA		
SFTB D52-2-TB	2	53.2	1.8	52	THTBR/L-TB	SFC SFJ
D52-3-TB	3	53.2	2.5	52		
D82-2-TB	2	64.3	1.8	82		
D82-3-TB	3	64.3	2.5	82		
D120-2-TB	2	85.5	1.8	120		
D120-3-TB	3	85.5	2.5	120		

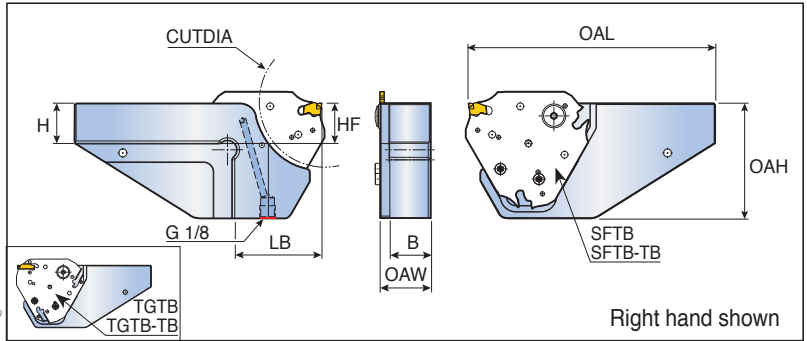
Spare parts

Designation	Sealing screw set	Extractor		
	SFTB	 -	 ETG 3-4	
SFTB-TB	SGC 340-Q	ETG 3-4		

► Extractor should be ordered separately

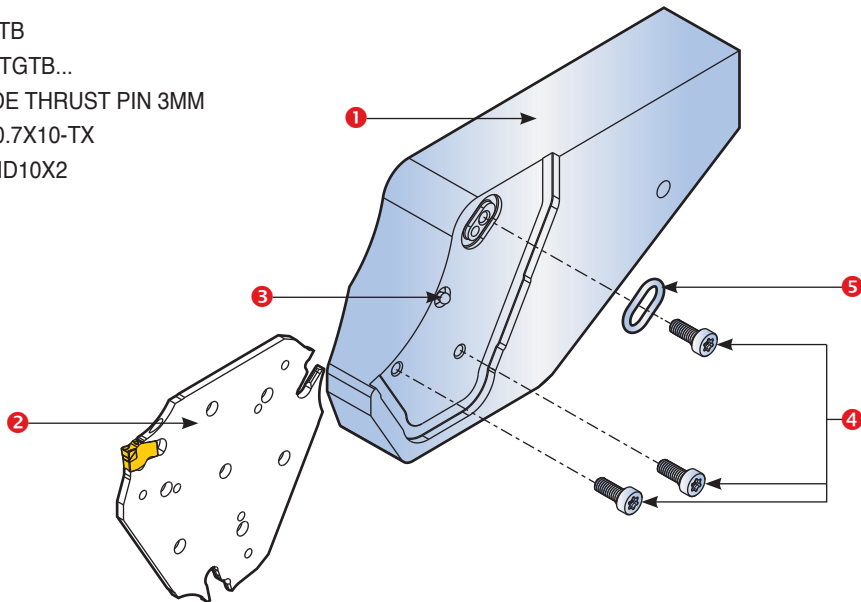
THTBR/L-TB

Blocks for triangular blade



Designation	Dimension (mm)								Blade
	H	HF	B	OAL	OAH	OAW	LB	CUTDIA	
THTBR/L 20-D52-TB	20	20	17.5	125	52	23.5	40	52	SFTB/SFTB-TB TGTB/TGTB-TB
25-D52-TB	25	25	22.5	135	52	28.5	40	52	
20-D82-TB	20	20	17.5	140	72	23.5	51.5	82	
25-D82-TB	25	25	22.5	150	72	28.5	51.5	82	
25-D120-TB	25	25	22.5	165	95	28.5	67	120	
32-D120-TB	32	32	29.0	165	95	35.0	67	120	

- 1 Block: THTBR/L-TB
- 2 Blade: SFTB... / TGTB...
- 3 Locating pin: SIDE THRUST PIN 3MM
- 4 Screw: SH M4X0.7X10-TX
- 5 O-ring: O-RING ID10X2

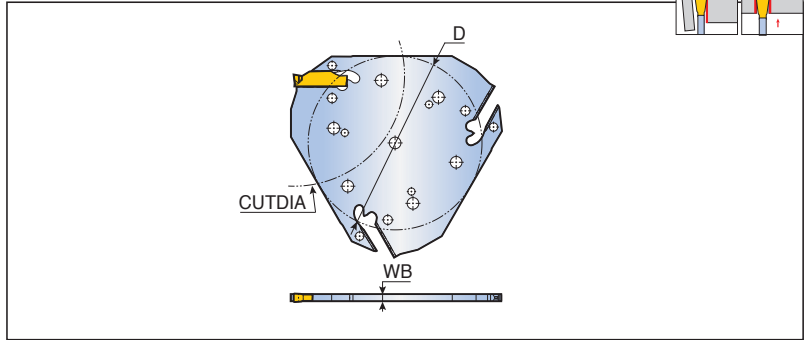
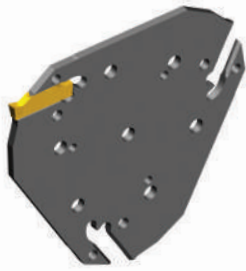


Spare parts

Designation	Locating pin	Screw	O-Ring	Wrench
THTBR/L-TB	SIDE THRUST PIN 3MM	SH M4X0.7X10-TX	O-RING ID10X2	T 20

TGTB

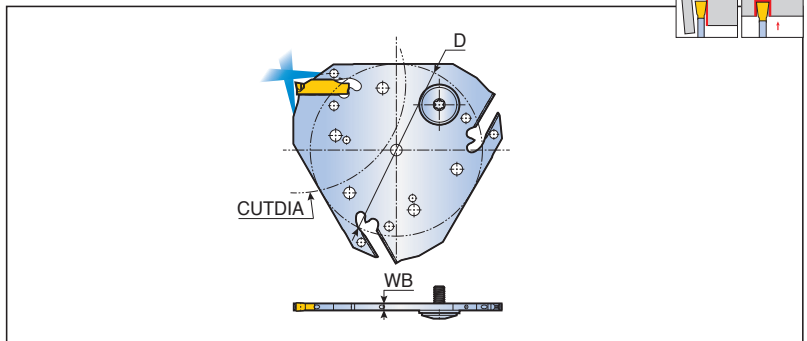
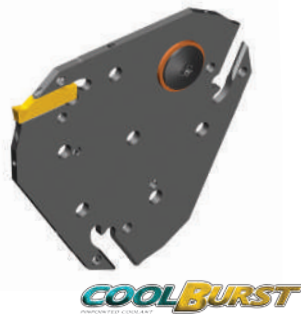
Triangular blades for parting and deep grooving



Designation	Insert seat size	Dimension (mm)			Block	Insert
		D	WB	CUTDIA		
TGTB D52-2	2	53.2	1.8	52	THTBR/L-TB	TDC/J/T/A
D52-3	3	53.2	2.5	52		TDXU/XT/XY/CT
D82-2	2	64.3	1.8	82		TSC/J
D82-3	3	64.3	2.5	82		TDFU/TDV



TGTB-TB

Triangular blades for parting and deep grooving with high-pressure coolant



Designation	Insert seat size	Dimension (mm)			Block	Insert
		D	WB	CUTDIA		
TGTB D52-2-TB	2	53.2	1.8	52	THTBR/L-TB	TDC/J/T/A
D52-3-TB	3	53.2	2.5	52		TDXU/XT/XY/CT
D82-2-TB	2	64.3	1.8	82		TSC/J/A
D82-3-TB	3	64.3	2.5	82		TDFU/TDV

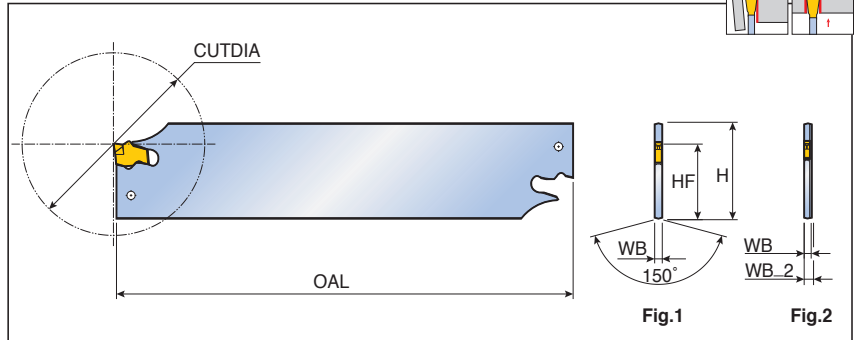
Spare parts

Designation	Sealing screw set	Extractor		
	TGTB	 -	 EDG 33B	
TGTB-TB	SGC 340-Q	EDG 33B		

► Extractor should be ordered separately

SFGB

Blades for parting and deep grooving

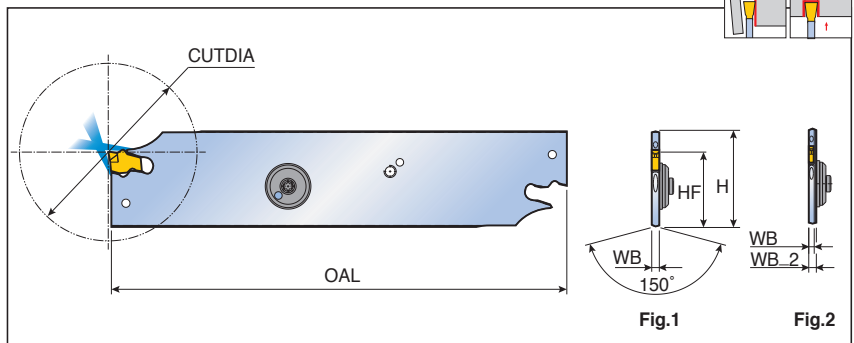


Designation	Insert seat size	Dimension (mm)						Fig.	Block	Insert
		H	HF	OAL	WB	WB_2	CUTDIA			
SFGB 32-1.6	1*	32	24.8	150	1.3	2.5	38	2	TTBN/U..32	SFC
32-2	2	32	24.8	150	1.8	2.5	50	2		SFJ
32-3	3	32	24.8	150	2.5	-	100	1		

• * : SFC 1.6 insert only

SFGB-TB

Blades for parting and deep grooving with high-pressure coolant



Designation	Insert seat size	Dimension (mm)						Fig.	Block	Insert
		H	HF	OAL	WB	WB_2	CUTDIA			
SFGB 32-2-TB	2	32	24.8	150	1.8	2.5	50	2	TTBU..-TB	SFC
32-3-TB	3	32	24.8	150	2.5	-	100	1		SFJ

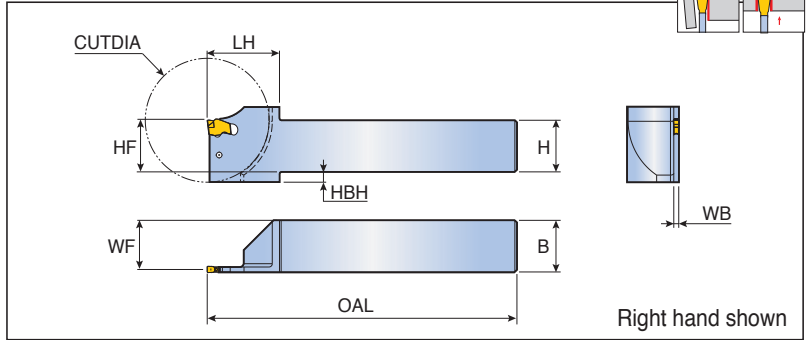
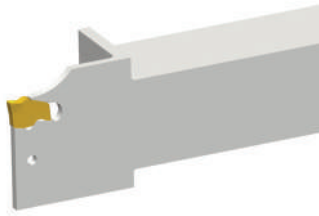
Spare parts

Designation	Sealing screw set	Extractor		
SFGB	-	ETG 3-4		
SFGB -TB	SGC 340	ETG 3-4		

• Extractor should be ordered separately

SFER/L

External holders for parting and deep grooving

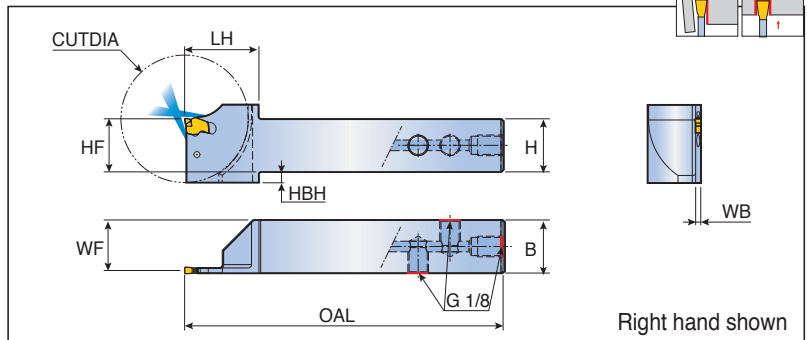
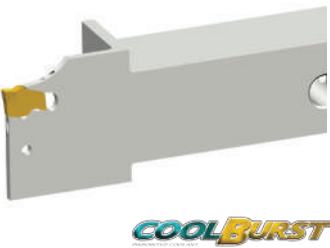


Designation	Insert seat size	Dimension (mm)										Insert
		H	HF	B	OAL	LH	WF	WB	HBH	CUTDIA		
SFER/L 2020-1.6T22-D45	1*	20	20	20	150	29.5	19.4	1.3	2.5	45	SFC	
2525-2T25-D50	2	25	25	25	150	32	24.1	1.8	-	50	SFJ	
2525-3T30-D60	3	25	25	25	150	35	23.8	2.4	5	60		

• *: SFC 1.6 insert only

SFER/L-TB

External holders for parting and deep grooving with high-pressure coolant



Designation	Insert seat size	Dimension (mm)										Insert
		H	HF	B	OAL	LH	WF	WB	HBH	CUTDIA		
SFER/L 2525-2T25-D50-TB	2	25	25	25	150	32	24.1	1.8	-	50	SFC	
2525-3T30-D60-TB	3	25	25	25	150	35	23.8	2.4	5	60	SFJ	

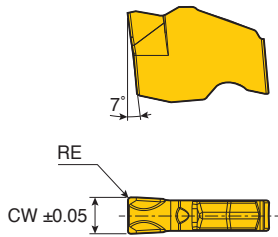
Spare parts

Designation	Plug	Wrench	Extractor	
SFER/L	-	-	ETG 3-4	
SFER/L-TB	PLG G1/8-L6.5	L-W 5	ETG 3-4	

• Extractor should be ordered separately

SFC

Single-ended inserts for parting and deep grooving with C-Type chip breaker



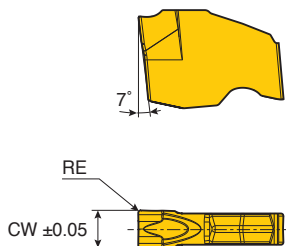
Size	Dimension (mm)			
	CW	RE		
1.6	1.6	0.2		
2	2.0	0.2		
3	3.0	0.2		

Insert	Designation	Insert seat size	Feed (mm/rev)	Cermet		Coated				Uncoated		
				CT3000		TT7505	TT6080	TT5100	TT9080	TT7220	TT8020	K10
	SFC 1.6	1	0.05-0.15						●	●		
	2	2	0.08-0.20						●	●		
	3	3	0.10-0.25						●	●		

●: Standard items

SFJ

Single-ended inserts for parting and deep grooving with J-Type chip breaker



Size	Dimension (mm)			
	CW	RE		
2	2.0	0.2		
3	3.0	0.2		

Insert	Designation	Insert seat size	Feed (mm/rev)	Cermet		Coated				Uncoated		
				CT3000		TT7505	TT6080	TT5100	TT9080	TT7220	TT8020	K10
	SFJ 2	2	0.05-0.15						●	●		
	3	3	0.08-0.20						●	●		

●: Standard items

FACERUSH

FACE GROOVING



Unique Shallow Face Grooving Inserts



Multiple applications



Stable and secure clamping



Various size inserts with one holder



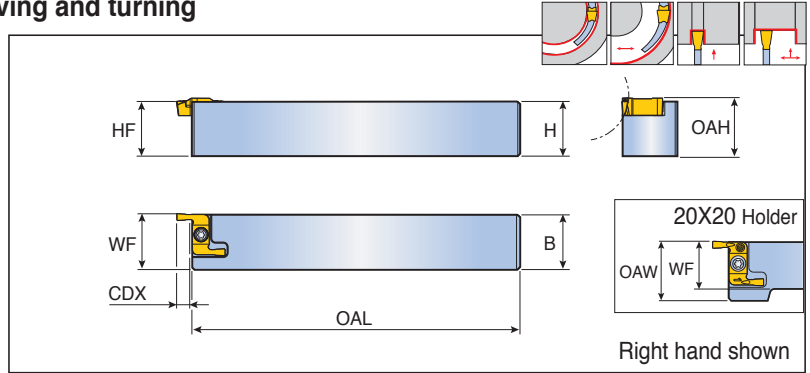
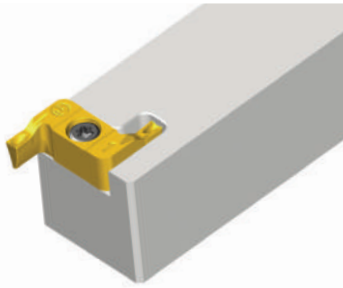
Good chip evacuation



High-pressure coolant

TXFR/L

Holders for shallow face grooving and turning

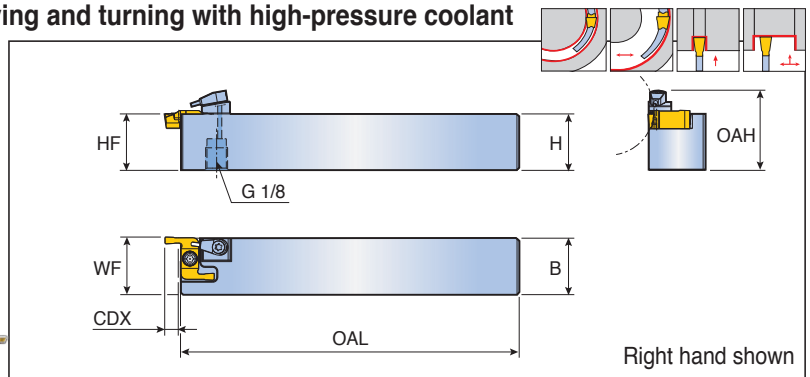
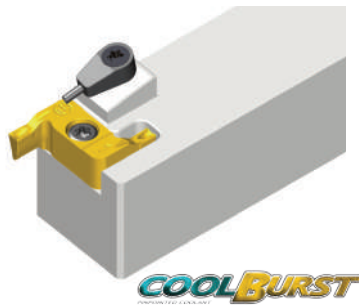


Designation	Dimension (mm)								Insert
	H	HF	B	OAL	OAH	WF	CDX	OAW	
TXFR/L 2020	20	20	20	125	21.5	20.5	6	25.5	TDFX ...R ⁽¹⁾
2525	25	25	25	150	26.5	25.5	6	25.5	TDFX ...L ⁽²⁾

• ⁽¹⁾ For TXFR ⁽²⁾ For TXFL

TXFR/L-TB

Holders for shallow face grooving and turning with high-pressure coolant



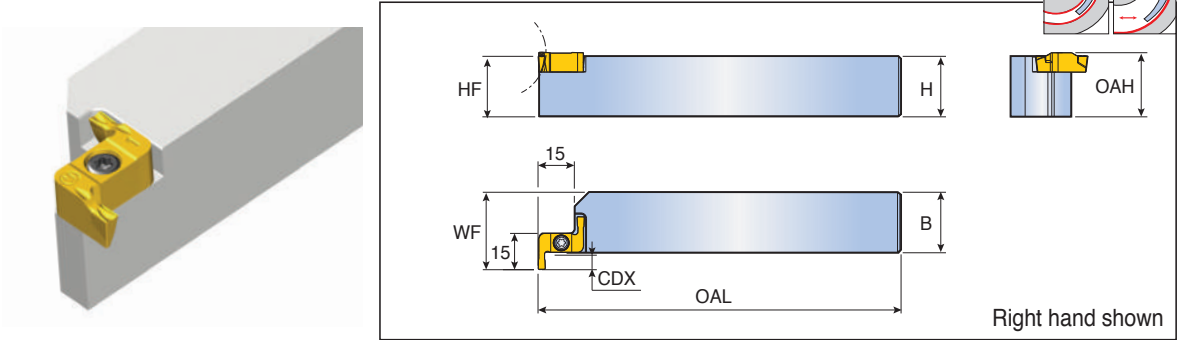
Designation	Dimension (mm)								Insert
	H	HF	B	OAL	OAH	WF	CDX	OAW	
TXFR 2525-TB	25	25	25	150	35.5	25.5	6	25.5	TDFX ...R
TXFL 2525-TB	25	25	25	150	35.5	25.5	6	25.5	TDFX ...L

Spare parts

Designation	Screw	Wrench	Cooling unit	
TXFR	TS 40E113I/HG	L-T15	-	
TXFL	TS 40E113L/HG	L-T15	-	
TXFR-TB	TS 40E113I/HG	L-T15	S-CU-TB	
TXFL-TB	TS 40E113L/HG	L-T15	S-CU-TB	

TXFPR/L

Perpendicular holders for shallow face grooving

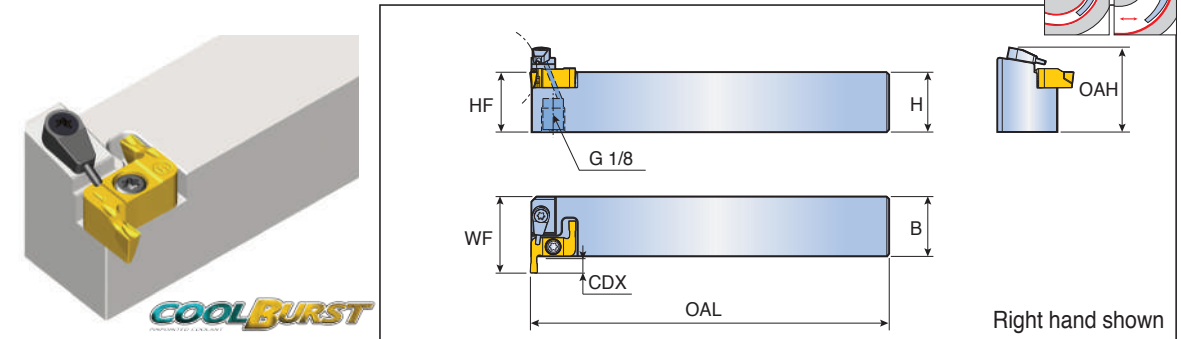


Designation	Dimension (mm)							Insert
	H	HF	B	OAL	OAH	WF	CDX	
TXFPR/L 2020	20	20	20	125	21.5	27	6	TDFX ...R ⁽¹⁾
2525	25	25	25	150	26.5	32	6	TDFX ...L ⁽²⁾

• ⁽¹⁾ For TXFPR ⁽²⁾ For TXFPL

TXFPR/L-TB

Perpendicular holders for shallow face grooving with high-pressure coolant



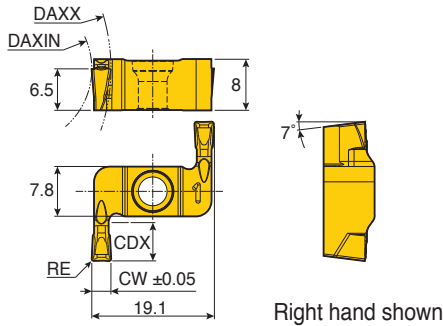
Designation	Dimension (mm)							Insert
	H	HF	B	OAL	OAH	WF	CDX	
TXFPR 2525-TB	25	25	25	150	35.5	32	6	TDFX ...R
TXFPL 2525-TB	25	25	25	150	35.5	32	6	TDFX ...L

Spare parts


Designation	Screw	Wrench	Cooling unit	
TXFPR	TS 40E113I/HG	L-T15	-	
TXFPL	TS 40E113IL/HG	L-T15	-	
TXFPR-TB	TS 40E113I/HG	L-T15	S-CU-TB	
TXFPL-TB	TS 40E113IL/HG	L-T15	S-CU-TB	

TDFX

Double-ended inserts for face grooving and turning



Size	Dimension (mm)				
	CW	RE	CDX	DAXIN	DAXX
2	2	0.3	6	25	N.L.
3	3	0.3	6	24	N.L.
4	4	0.4	6	32	N.L.

Insert	Designation	Turning		Grooving	Grade
		ap (mm)	Feed (mm/rev)	Feed (mm/rev)	TT9080
	TDFX 2E-0.3-D25R/L (new)	0.4-1.2	0.12-0.18	0.03-0.20	●
	3E-0.3-D24R/L	0.4-1.8	0.15-0.20	0.07-0.20	●
	4E-0.4-D32R/L	0.5-2.4	0.15-0.24	0.09-0.25	●

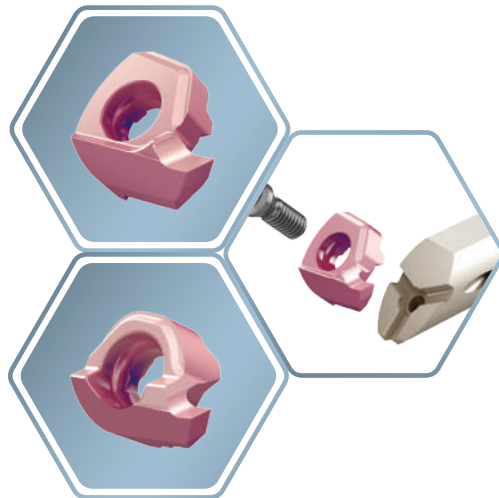
► N.L.: No limit

●: Standard items

WINIGROOVE



Mini Indexable Insert for Internal Shallow Grooving



Very small insert for miniature industry



Secure and unique clamping structure



Precision ground insert for finishing



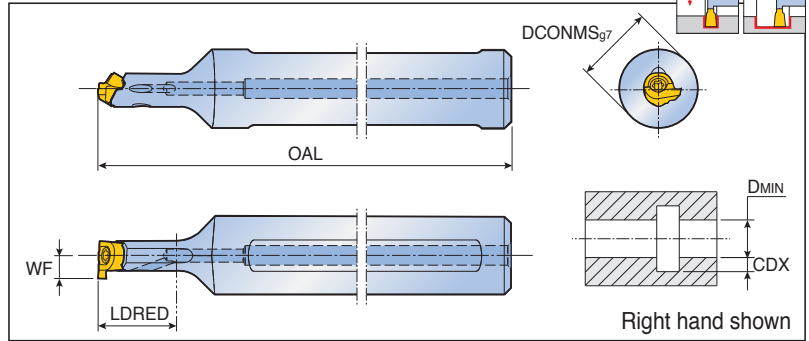
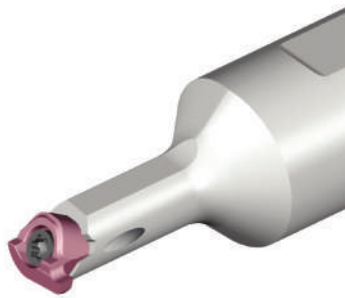
Good chip evacuation



Internal coolant

TMIHR/L

Internal boring bars for shallow grooving with coolant hole on small diameter



Designation	Dimension (mm)					Insert
	DCONMS	OAL	LDRED	WF	DMIN	
TMIHR/L 12-12-6	12	80	12	3.5	6.0	TMIR/L 6
12-16-8	12	80	16	4.7	8.0	TMIR/L 8

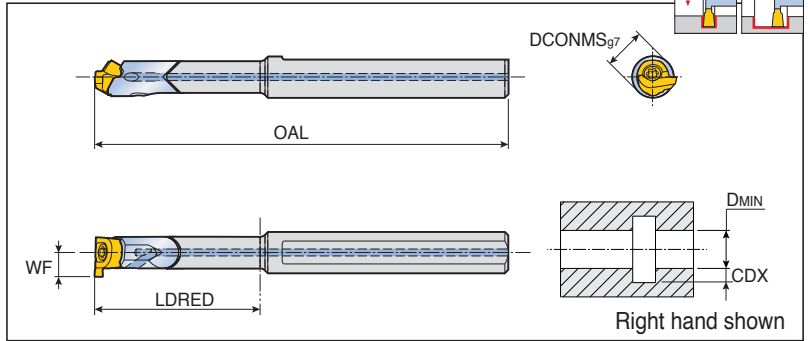
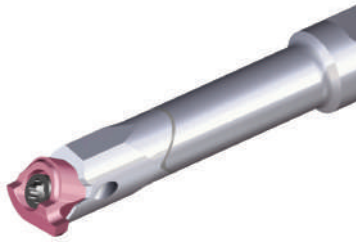
► CDX: Refer to insert dimension

Spare parts

Designation	Screw	Wrench		
	TMIHR/L 12-12-6	TS 18049/HG-P	T 6P	
TMIHR/L 12-16-8	TS 20055I	T 6		

TMIHR/L ..C



Internal carbide boring bars for shallow grooving with coolant hole on small diameter



Designation	Dimension (mm)					Insert
	DCONMS	OAL	LDRED	WF	DMIN	
TMIHR/L 06C-18-6	6	54	18	3.5	6.0	TMIR/L 6
06C-24-6	6	60	24	3.5	6.0	TMIR/L 6
12C-24-8	12	92	24	4.7	8.0	TMIR/L 8
12C-32-8	12	100	32	4.7	8.0	TMIR/L 8

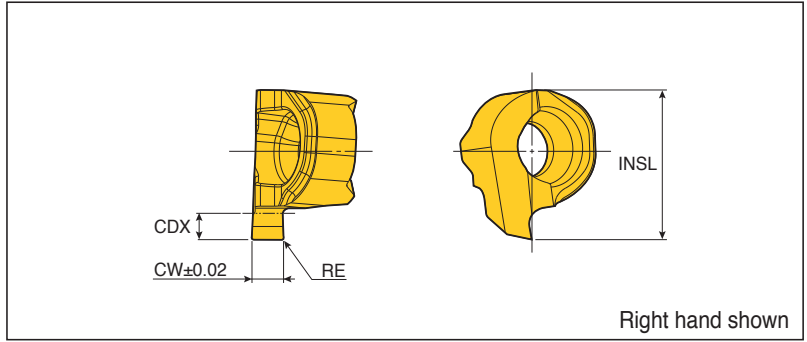
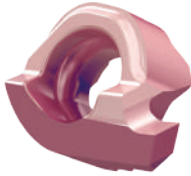
► CDX: Refer to insert dimension

Spare parts

Designation	Screw	Wrench		
				
TMIHR/L 06C	TS 18049/HG-P	T 6P		
TMIHR/L 12C	TS 20055I	T 6		

TMIR/L

Precise inserts for internal shallow grooving on small diameter



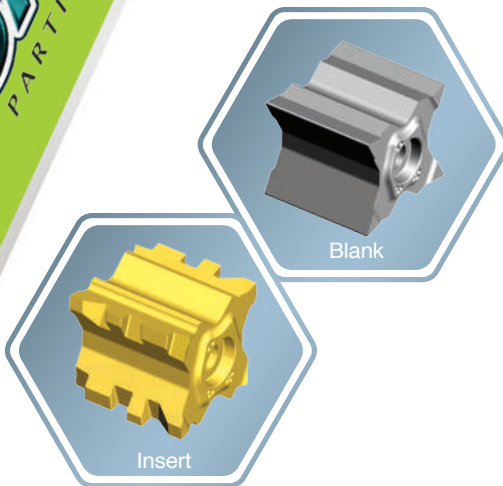
Designation	Feed (mm/rev)	Dimension (mm)				Grade	
		CW	RE	CDX	INSL	TT4430	TT8020
TMIR/L 6-0.50-0.00	0.01-0.03	0.50	0.00	0.5	5.7	•	•
6-1.00-0.00	0.01-0.03	1.00	0.00	1.0	5.7	•	•
6-1.20-0.05	0.01-0.03	1.20	0.05	1.0	5.7	•	•
8-0.50-0.00	0.01-0.03	0.50	0.00	0.7	7.4	•	•
8-1.00-0.00	0.01-0.03	1.00	0.00	1.5	7.4	•	•
8-1.50-0.05	0.01-0.03	1.50	0.05	1.5	7.4	•	•
8-2.00-0.10	0.01-0.03	2.00	0.10	1.5	7.4	•	•

•: Standard items

QUAD-RUSH

PARTING & GROOVING

QUAD-RUSH Blank Insert for Wide Tailored Profiles



For specially tailored profiles



Secure and unique clamping structure



High-pressure coolant



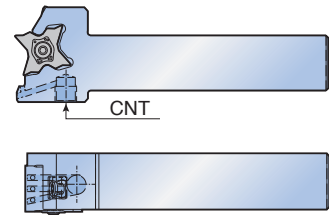
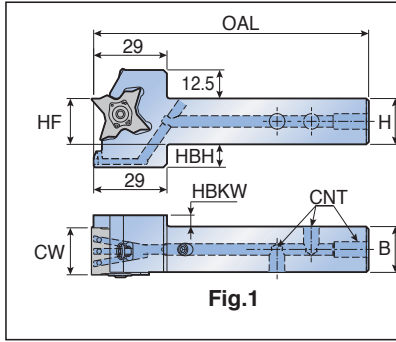
Economical insert

TQHR/L...EW-TB

Holders for external wide grooving and profiling with high-pressure coolant



COOLBURST



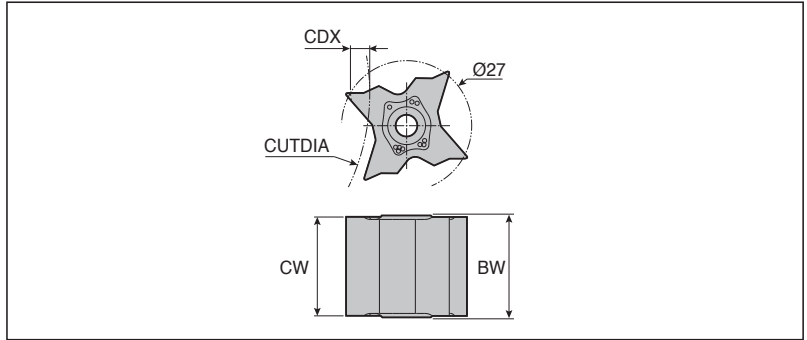
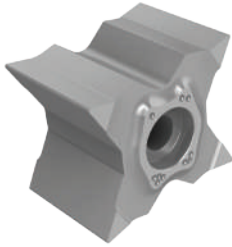
Designation	Dimension (mm)						Fig.	CNT	Insert
	H(HF)	B	OAL	CW	HBH	HBKW			
TQHR/L 20-27-10EW-TB	20	20	120	10.5	13	-	1	G 1/8	TQBS 27-10EW
20-27-15EW-TB	20	20	120	15.5	13	-	1	G 1/8	TQBS 27-15EW
20-27-20EW-TB	20	20	120	20.5	13	5.0	1	G 1/8	TQBS 27-20EW
25-27-10EW-TB	25	25	135	10.5	8	-	2	G 1/8	TQBS 27-10EW
25-27-15EW-TB	25	25	135	15.5	8	-	2	G 1/8	TQBS 27-15EW
25-27-20EW-TB	25	25	135	20.5	8	-	2	G 1/8	TQBS 27-20EW

Spare parts

Designation	Clamping Pin	Pin Screw	Side screw	Plug	Wrench		
TQHR/L 20...10EW-TB	PIN-TQ-W-T	TS 40F120A	BH M4X0.7X16-D7	PLG G1/8-L6.5	T 15	L-W 2.5	L-W 5
TQHR/L 20...15EW-TB	PIN-TQ-W-T	TS 40F120A	BH M4X0.7X20-D7	PLG G1/8-L6.5	T 15	L-W 2.5	L-W 5
TQHR/L 20...20EW-TB	PIN-TQ-W-T	TS 40F120A	BH M4X0.7X23-D7	PLG G1/8-L6.5	T 15	L-W 2.5	L-W 5
TQHR/L 25...10EW-TB	PIN-TQ-W-T	TS 40F120A	BH M4X0.7X16-D7	-	T 15	L-W 2.5	-
TQHR/L 25...15EW-TB	PIN-TQ-W-T	TS 40F120A	BH M4X0.7X20-D7	-	T 15	L-W 2.5	-
TQHR/L 25...20EW-TB	PIN-TQ-W-T	TS 40F120A	BH M4X0.7X23-D7	-	T 15	L-W 2.5	-

TQBS 27

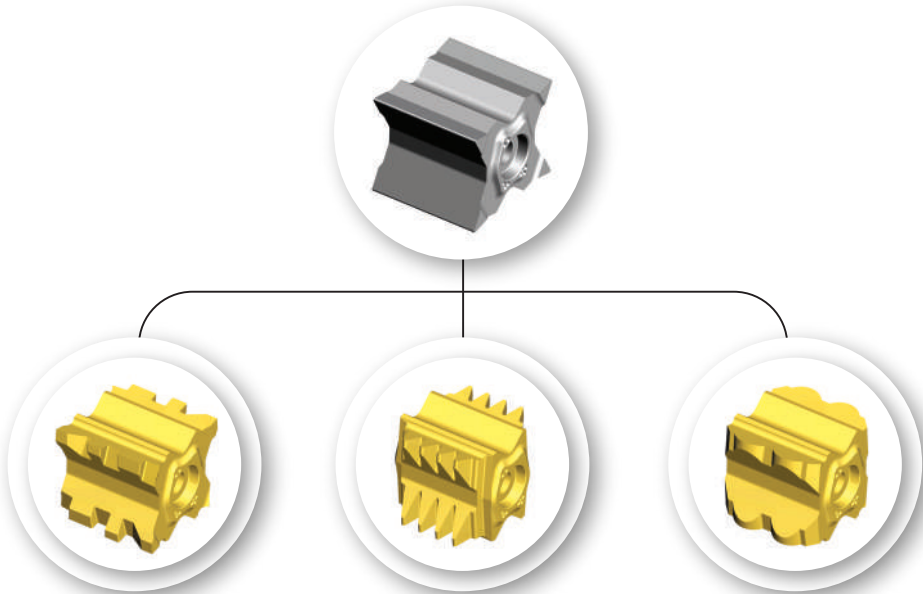
4 cutting edges with semi-finished blanks for wide grooving and profiling



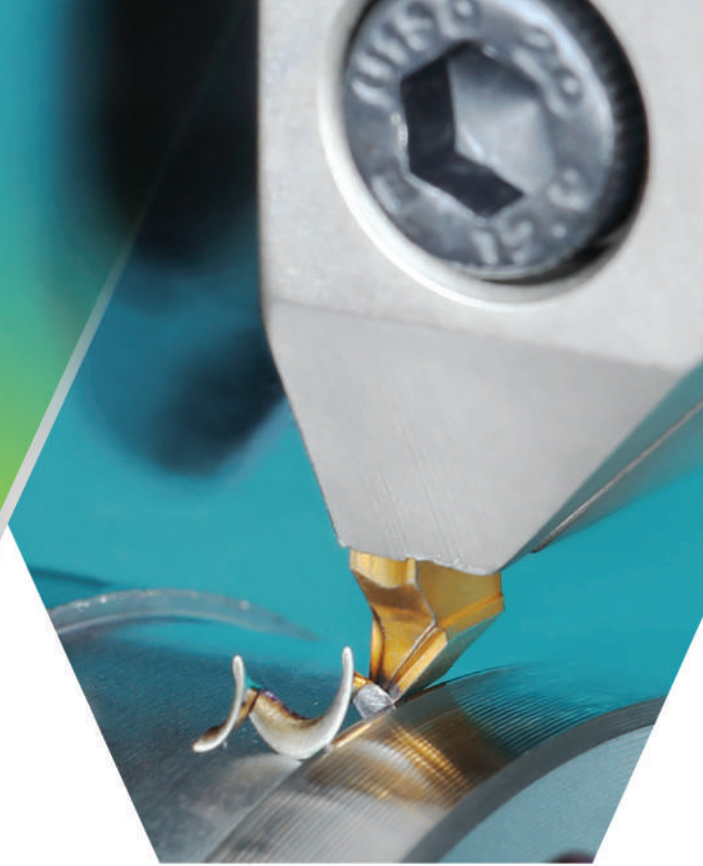
Designation	Dimension (mm)		CUTDIA										Grade
	CW	BW	CDX≤3.0	CDX≤3.5	CDX≤4.0	CDX≤4.5	CDX≤5.0	CDX≤5.5	CDX≤5.7	CDX≤6.0	CDX≤6.2	CDX≤6.4	UF10
TQBS 27-10EW	10.5	11.1	N.L.	600	280	180	135	105	95	85	78	55	●
27-15EW	15.5	16.1	N.L.	600	280	180	135	105	95	85	78	55	●
27-20EW	20.5	21.1	N.L.	600	280	180	135	105	95	85	78	55	●

► N.L.: No limit

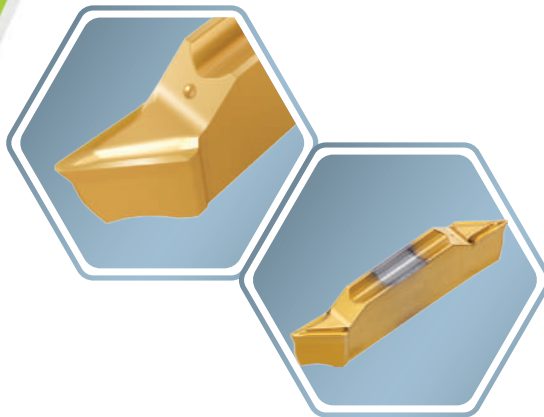
●: Standard items



VT-TURN
V-TURN
T-CLAMP



Multi-Functional V-Type Insert



Multiple applications



Working in
narrow spaces



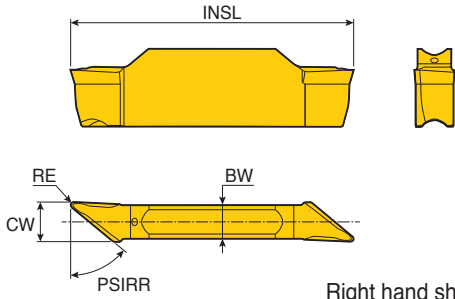
Optimum chip
breaking



Can be used on
standard holders

TDMV

Double-ended inserts for turning and grooving with V-type shape



Size	Dimension (mm)				
	CW	RE	PSIRR/L	BW	INSL
2.8E-0.2	2.8	0.2	50	2.4	20
2.8E-0.4	2.8	0.4	50	2.4	20

Insert	Designation	Insert Seat Size	BWT ⁽¹⁾		FWT ⁽²⁾		Grade TT9080
			ap (mm)	Feed (mm/rev)	ap (mm)	Feed (mm/rev)	
	TDMV 2.8E-0.2-R/L	3	0.2-2.5	0.05-0.18	0.3-1.5	0.03-0.15	●
	2.8E-0.4-R/L	3	0.4-2.5	0.08-0.25	0.4-1.5	0.05-0.18	●

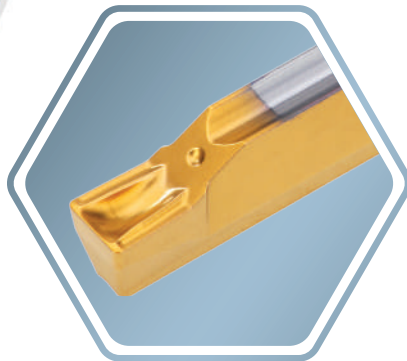
▶ Recommended to use with TGFR/L type holder ●: Standard items
 ▶ Lower supporter must be modified when using external grooving holder, for example TTER/L type
 ▶ ⁽¹⁾ BWT: Backward turning
 ▶ ⁽²⁾ FWT: Forward turning

T-CLAMP

PARTING & GROOVING



New Parting-Grooving Insert with Turning Capability



Enables high feed turning & grooving



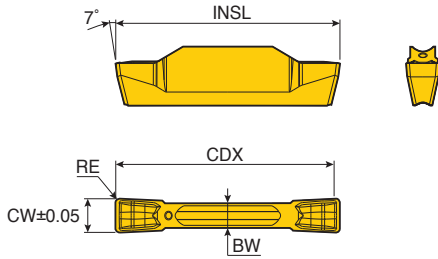
Optimized turning chip breaker



Can be used on standard holders

TDCT

Double-ended inserts for turning and grooving



Size	Dimension (mm)				
	CW	RE	BW	INSL	CDX
2	2.0	0.30	1.7	20	19
3	3.0	0.30	2.2	20	19
4	4.0	0.40	3.0	20	19
5	5.0	0.40	4.0	25	24
6	6.0	0.40	5.0	25	24

Insert	Designation	Insert Seat Size	Turning		Grooving	Grade
			ap (mm)	Feed (mm/rev)	Feed (mm/rev)	TT9080
	TDCT 2E-0.3	2	0.4-1.2	0.12-0.18	0.05-0.18	●
	3E-0.3	3	0.4-1.8	0.15-0.19	0.07-0.25	●
	4E-0.4	4	0.5-2.4	0.18-0.24	0.08-0.30	●
	5E-0.4	5	0.5-3.0	0.20-0.30	0.09-0.35	●
	6E-0.4	6	0.5-3.6	0.22-0.36	0.12-0.40	●

●: Standard items



WINDRILL

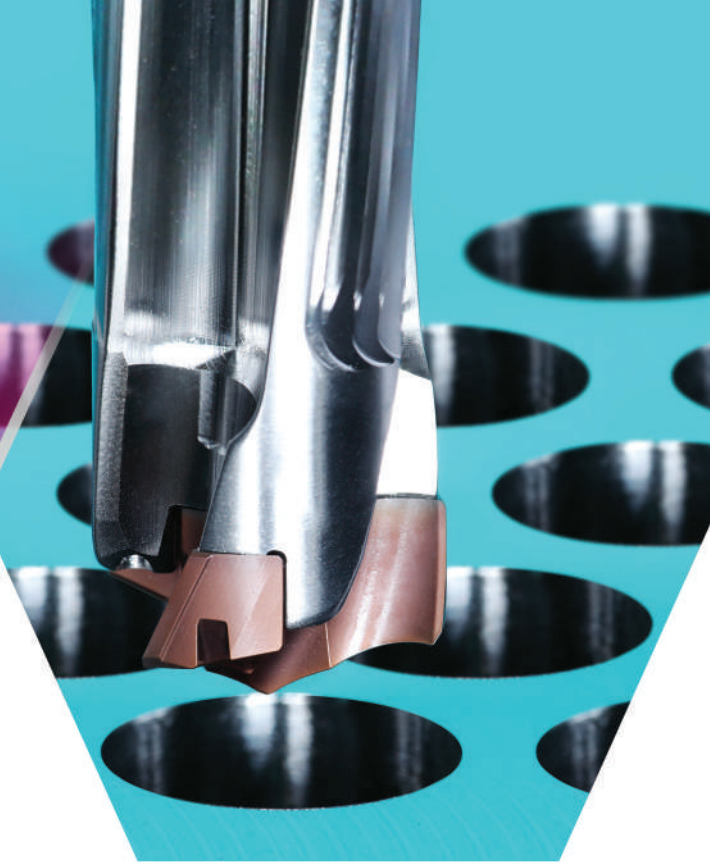
ADVANCED MACHINING



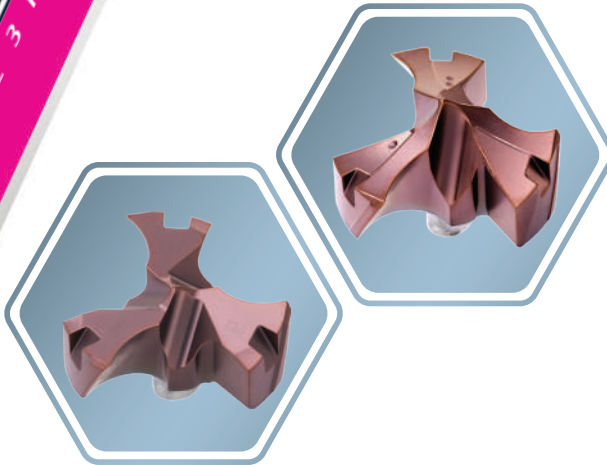
WINSPEED
ADVANCED MACHINING



DRILL SPEED
INDEXABLE 3 FLUTE



Head Changeable 3 Flute Drill for Higher Productivity



High productivity



Unique geometry for self-centering



Excellent hole accuracy



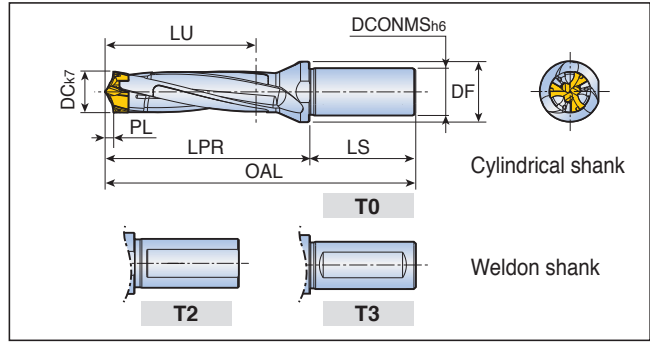
No set-up time



P & K application

3ED...T...-3D

Head changeable 3 flute drill holder



• Drilling depth: 3xDiameter



Designation	Dimension (mm)								Clamping key
	DC	DCONMS	DF	LU	LPR	LS	PL	SSC	
3ED 120-124-16T3/T0-3D new	12.0-12.4	16	20	40.0	60.7	48	2.74	12	K 3ED D12-D13
125-129-16T3/T0-3D new	12.5-12.9	16	20	41.5	62.5	48	2.76	12	K 3ED D12-D13
130-134-16T3/T0-3D new	13.0-13.4	16	20	43.0	64.8	48	2.91	13	K 3ED D12-D13
135-139-16T3/T0-3D new	13.5-13.9	16	20	44.5	66.6	48	2.93	13	K 3ED D12-D13
140-144-16T3/T0-3D new	14.0-14.4	16	20	46.0	68.9	48	3.17	14	K 3ED D14-D15
145-149-16T3/T0-3D new	14.5-14.9	16	20	47.5	70.7	48	3.19	14	K 3ED D14-D15
150-159-20T3/T0-3D	15.0-15.9	20	25	49.0	73.9	50	3.31	15	K 3ED D14-D15
160-169-20T3/T0-3D	16.0-16.9	20	25	52.0	79.0	50	3.70	16	K 3ED D16-D17
170-179-20T3/T0-3D	17.0-17.9	20	25	55.0	84.0	50	3.88	17	K 3ED D16-D17
180-189-25T2/T0-3D	18.0-18.9	25	32	58.0	90.1	56	4.07	18	K 3ED D18-D19
190-199-25T2/T0-3D	19.0-19.9	25	32	61.0	94.7	56	4.26	19	K 3ED D18-D19
200-209-25T2/T0-3D	20.0-20.9	25	32	64.0	99.3	56	4.44	20	K 3ED D20-D21
210-219-25T2/T0-3D new	21.0-21.9	25	32	67.0	103.8	56	4.62	21	K 3ED D20-D21
220-229-25T2/T0-3D new	22.0-22.9	25	32	70.0	108.4	56	4.78	22	K 3ED D22-D23
230-239-32T2/T0-3D new	23.0-23.9	32	42	73.0	112.8	60	5.02	23	K 3ED D22-D23
240-249-32T2/T0-3D new	24.0-24.9	32	42	76.0	117.4	60	5.18	24	K 3ED D24-D25
250-259-32T2/T0-3D new	25.0-25.9	32	42	79.0	122.0	60	5.29	25	K 3ED D24-D25

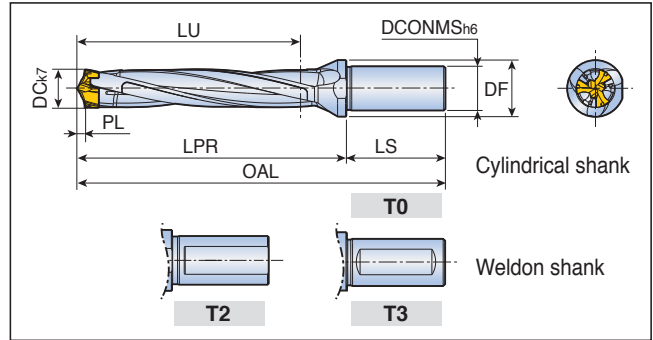
▶ SSC: Seat size code
▶ OAL: LPR+LS

3ED...T...-5D

Head changeable 3 flute drill holder



- Drilling depth: 5xDiameter



Designation	Dimension (mm)									Clamping key
	DC	DCONMS	DF	LU	LPR	LS	PL	SSC		
3ED 120-124-16T3/T0-5D (new)	12.0-12.4	16	20	64.0	84.7	48	2.74	12	K 3ED D12-D13	
125-129-16T3/T0-5D (new)	12.5-12.9	16	20	66.5	87.5	48	2.76	12	K 3ED D12-D13	
130-134-16T3/T0-5D (new)	13.0-13.4	16	20	69.0	90.8	48	2.91	13	K 3ED D12-D13	
135-139-16T3/T0-5D (new)	13.5-13.9	16	20	71.5	93.6	48	2.93	13	K 3ED D12-D13	
140-144-16T3/T0-5D (new)	14.0-14.4	16	20	74.0	96.9	48	3.17	14	K 3ED D14-D15	
145-149-16T3/T0-5D (new)	14.5-14.9	16	20	76.5	99.7	48	3.19	14	K 3ED D14-D15	
150-159-20T3/T0-5D	15.0-15.9	20	25	79.0	103.9	50	3.31	15	K 3ED D14-D15	
160-169-20T3/T0-5D	16.0-16.9	20	25	84.0	111.0	50	3.70	16	K 3ED D16-D17	
170-179-20T3/T0-5D	17.0-17.9	20	25	89.0	118.0	50	3.88	17	K 3ED D16-D17	
180-189-25T2/T0-5D	18.0-18.9	25	32	94.0	126.1	56	4.07	18	K 3ED D18-D19	
190-199-25T2/T0-5D	19.0-19.9	25	32	99.0	132.7	56	4.26	19	K 3ED D18-D19	
200-209-25T2/T0-5D	20.0-20.9	25	32	104.0	139.3	56	4.44	20	K 3ED D20-D21	
210-219-25T2/T0-5D (new)	21.0-21.9	25	32	109.0	145.8	56	4.62	21	K 3ED D20-D21	
220-229-25T2/T0-5D (new)	22.0-22.9	25	32	114.0	152.4	56	4.78	22	K 3ED D22-D23	
230-239-32T2/T0-5D (new)	23.0-23.9	32	42	119.0	158.8	60	5.02	23	K 3ED D22-D23	
240-249-32T2/T0-5D (new)	24.0-24.9	32	42	124.0	165.4	60	5.18	24	K 3ED D24-D25	
250-259-32T2/T0-5D (new)	25.0-25.9	32	42	129.0	172.0	60	5.29	25	K 3ED D24-D25	

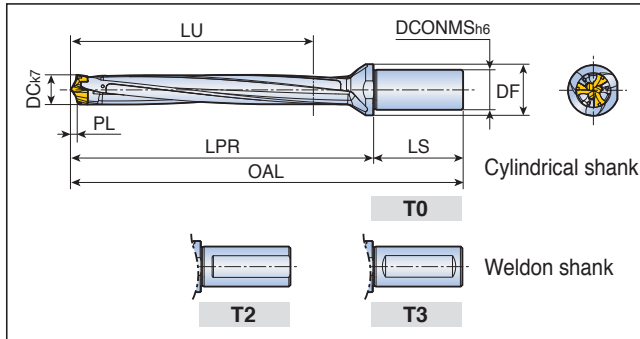
- ▶ SSC: Seat size code
- ▶ OAL: LPR+LS

3ED...T...-8D new

Head changeable 3 flute drill holder



• Drilling depth: 8xDiameter

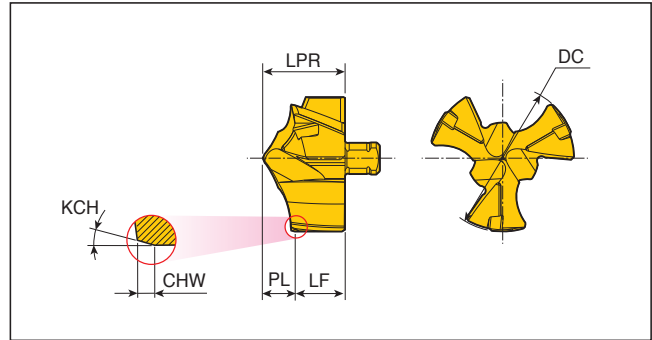


Designation	Dimension (mm)								Clamping key
	DC	DCONMS	DF	LU	LPR	LS	PL	SSC	
3ED 120-124-16T3/T0-8D	12.0-12.4	16	20	100	120.7	48	2.74	12	K 3ED D12-D13
125-129-16T3/T0-8D	12.5-12.9	16	20	104	125.0	48	2.76	12	K 3ED D12-D13
130-134-16T3/T0-8D	13.0-13.4	16	20	108	129.8	48	2.91	13	K 3ED D12-D13
135-139-16T3/T0-8D	13.5-13.9	16	20	112	134.1	48	2.93	13	K 3ED D12-D13
140-144-16T3/T0-8D	14.0-14.4	16	20	116	138.9	48	3.17	14	K 3ED D14-D15
145-149-16T3/T0-8D	14.5-14.9	16	20	120	143.2	48	3.19	14	K 3ED D14-D15
150-159-20T3/T0-8D	15.0-15.9	20	25	124	148.9	50	3.31	15	K 3ED D14-D15
160-169-20T3/T0-8D	16.0-16.9	20	25	132	159.0	50	3.70	16	K 3ED D16-D17
170-179-20T3/T0-8D	17.0-17.9	20	25	140	169.0	50	3.88	17	K 3ED D16-D17
180-189-25T2/T0-8D	18.0-18.9	25	32	148	180.1	56	4.07	18	K 3ED D18-D19
190-199-25T2/T0-8D	19.0-19.9	25	32	156	189.7	56	4.26	19	K 3ED D18-D19
200-209-25T2/T0-8D	20.0-20.9	25	32	164	199.3	56	4.44	20	K 3ED D20-D21
210-219-25T2/T0-8D	21.0-21.9	25	32	172	208.8	56	4.62	21	K 3ED D20-D21
220-229-25T2/T0-8D	22.0-22.9	25	32	180	218.4	56	4.78	22	K 3ED D22-D23
230-239-32T2/T0-8D	23.0-23.9	32	42	188	227.8	60	5.02	23	K 3ED D22-D23
240-249-32T2/T0-8D	24.0-24.9	32	42	196	237.4	60	5.18	24	K 3ED D24-D25
250-259-32T2/T0-8D	25.0-25.9	32	42	204	247.0	60	5.29	25	K 3ED D24-D25

► SSC: Seat size code
 ► OAL: LPR+LS

3ED...-P+

3 flute drill head



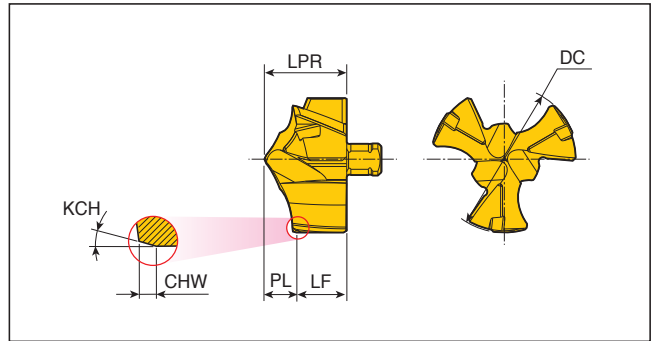
Designation	Dimension (mm)							Grade
	DC	LPR	PL	LF	CHW	KCH	SSC	
3ED-120-P+ new	12.0	6.7	2.74	3.96	0.4	15	12	●
121-P+ new	12.1	6.7	2.74	3.96	0.4	15	12	●
122-P+ new	12.2	6.7	2.74	3.96	0.4	15	12	●
123-P+ new	12.3	6.7	2.74	3.96	0.4	15	12	●
124-P+ new	12.4	6.7	2.74	3.96	0.4	15	12	●
125-P+ new	12.5	6.7	2.76	3.94	0.4	15	12	●
126-P+ new	12.6	6.7	2.76	3.94	0.4	15	12	●
127-P+ new	12.7	6.7	2.76	3.94	0.4	15	12	●
128-P+ new	12.8	6.7	2.76	3.94	0.4	15	12	●
129-P+ new	12.9	6.7	2.76	3.94	0.4	15	12	●
130-P+ new	13.0	7.3	2.91	4.39	0.4	15	13	●
131-P+ new	13.1	7.3	2.91	4.39	0.4	15	13	●
132-P+ new	13.2	7.3	2.91	4.39	0.4	15	13	●
133-P+ new	13.3	7.3	2.91	4.39	0.4	15	13	●
134-P+ new	13.4	7.3	2.91	4.39	0.4	15	13	●
135-P+ new	13.5	7.3	2.93	4.37	0.4	15	13	●
136-P+ new	13.6	7.3	2.93	4.37	0.4	15	13	●
137-P+ new	13.7	7.3	2.93	4.37	0.4	15	13	●
138-P+ new	13.8	7.3	2.93	4.37	0.4	15	13	●
139-P+ new	13.9	7.3	2.93	4.37	0.4	15	13	●
140-P+ new	14.0	7.9	3.17	4.73	0.4	15	14	●
141-P+ new	14.1	7.9	3.17	4.73	0.4	15	14	●
142-P+ new	14.2	7.9	3.17	4.73	0.4	15	14	●
143-P+ new	14.3	7.9	3.17	4.73	0.4	15	14	●
144-P+ new	14.4	7.9	3.17	4.73	0.4	15	14	●
145-P+ new	14.5	7.9	3.19	4.71	0.4	15	14	●
146-P+ new	14.6	7.9	3.19	4.71	0.4	15	14	●
147-P+ new	14.7	7.9	3.19	4.71	0.4	15	14	●
148-P+ new	14.8	7.9	3.19	4.71	0.4	15	14	●
149-P+ new	14.9	7.9	3.19	4.71	0.4	15	14	●

► SSC: Seat size code

●: Standard items

3ED...-P+

3 flute drill head



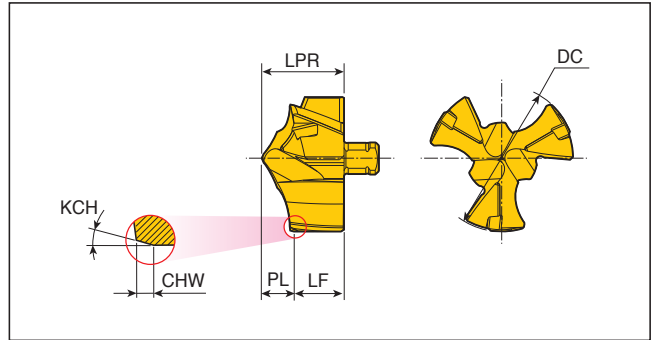
Designation	Dimension (mm)							Grade TT5130
	DC	LPR	PL	LF	CHW	KCH	SSC	
3ED- 150-P+	15.0	8.4	3.31	5.09	0.5	30	15	●
151-P+	15.1	8.4	3.31	5.09	0.5	30	15	●
152-P+	15.2	8.4	3.31	5.09	0.5	30	15	●
153-P+	15.3	8.4	3.31	5.09	0.5	30	15	●
154-P+	15.4	8.4	3.31	5.09	0.5	30	15	●
155-P+	15.5	8.4	3.32	5.08	0.5	30	15	●
156-P+	15.6	8.4	3.32	5.08	0.5	30	15	●
157-P+	15.7	8.4	3.32	5.08	0.5	30	15	●
158-P+	15.8	8.4	3.32	5.08	0.5	30	15	●
159-P+	15.9	8.4	3.32	5.08	0.5	30	15	●
160-P+	16.0	9.0	3.70	5.30	0.7	30	16	●
161-P+	16.1	9.0	3.70	5.30	0.7	30	16	●
162-P+	16.2	9.0	3.70	5.30	0.7	30	16	●
163-P+	16.3	9.0	3.70	5.30	0.7	30	16	●
164-P+	16.4	9.0	3.70	5.30	0.7	30	16	●
165-P+	16.5	9.0	3.71	5.29	0.7	30	16	●
166-P+	16.6	9.0	3.71	5.29	0.7	30	16	●
167-P+	16.7	9.0	3.71	5.29	0.7	30	16	●
168-P+	16.8	9.0	3.71	5.29	0.7	30	16	●
169-P+	16.9	9.0	3.71	5.29	0.7	30	16	●
170-P+	17.0	9.5	3.88	5.62	0.7	30	17	●
171-P+	17.1	9.5	3.88	5.62	0.7	30	17	●
172-P+	17.2	9.5	3.88	5.62	0.7	30	17	●
173-P+	17.3	9.5	3.88	5.62	0.7	30	17	●
174-P+	17.4	9.5	3.88	5.62	0.7	30	17	●
175-P+	17.5	9.5	3.89	5.61	0.7	30	17	●
176-P+	17.6	9.5	3.89	5.61	0.7	30	17	●
177-P+	17.7	9.5	3.89	5.61	0.7	30	17	●
178-P+	17.8	9.5	3.89	5.61	0.7	30	17	●
179-P+	17.9	9.5	3.89	5.61	0.7	30	17	●

► SSC: Seat size code

●: Standard items

3ED...-P+

3 flute drill head



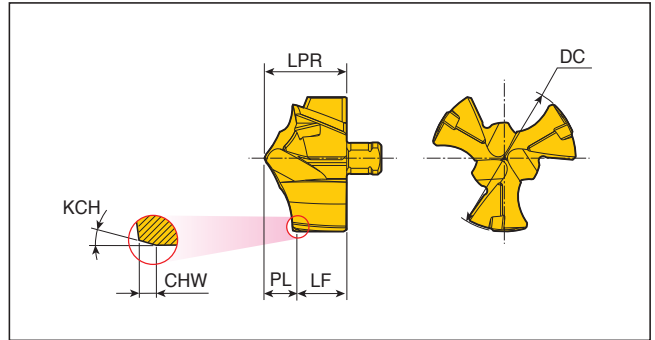
Designation	Dimension (mm)							Grade
	DC	LPR	PL	LF	CHW	KCH	SSC	
3ED- 180-P+	18.0	10.1	4.07	6.03	0.7	30	18	●
181-P+	18.1	10.1	4.07	6.03	0.7	30	18	●
182-P+	18.2	10.1	4.07	6.03	0.7	30	18	●
183-P+	18.3	10.1	4.07	6.03	0.7	30	18	●
184-P+	18.4	10.1	4.07	6.03	0.7	30	18	●
185-P+	18.5	10.1	4.08	6.02	0.7	30	18	●
186-P+	18.6	10.1	4.08	6.02	0.7	30	18	●
187-P+	18.7	10.1	4.08	6.02	0.7	30	18	●
188-P+	18.8	10.1	4.08	6.02	0.7	30	18	●
189-P+	18.9	10.1	4.08	6.02	0.7	30	18	●
190-P+	19.0	10.7	4.26	6.44	0.7	30	19	●
191-P+	19.1	10.7	4.26	6.44	0.7	30	19	●
192-P+	19.2	10.7	4.26	6.44	0.7	30	19	●
193-P+	19.3	10.7	4.26	6.44	0.7	30	19	●
194-P+	19.4	10.7	4.26	6.44	0.7	30	19	●
195-P+	19.5	10.7	4.27	6.43	0.7	30	19	●
196-P+	19.6	10.7	4.27	6.43	0.7	30	19	●
197-P+	19.7	10.7	4.27	6.43	0.7	30	19	●
198-P+	19.8	10.7	4.27	6.43	0.7	30	19	●
199-P+	19.9	10.7	4.27	6.43	0.7	30	19	●
200-P+	20.0	11.3	4.44	6.86	0.7	30	20	●
201-P+	20.1	11.3	4.44	6.86	0.7	30	20	●
202-P+	20.2	11.3	4.44	6.86	0.7	30	20	●
203-P+	20.3	11.3	4.44	6.86	0.7	30	20	●
204-P+	20.4	11.3	4.44	6.86	0.7	30	20	●
205-P+	20.5	11.3	4.45	6.85	0.7	30	20	●
206-P+	20.6	11.3	4.45	6.85	0.7	30	20	●
207-P+	20.7	11.3	4.45	6.85	0.7	30	20	●
208-P+	20.8	11.3	4.45	6.85	0.7	30	20	●
209-P+	20.9	11.3	4.45	6.85	0.7	30	20	●

► SSC: Seat size code

●: Standard items

3ED...-P+

3 flute drill head



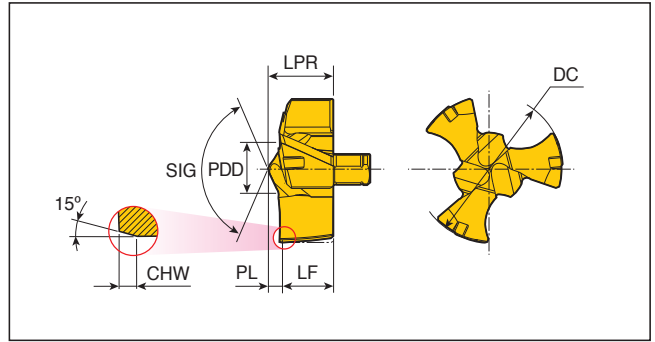
Designation	Dimension (mm)							Grade
	DC	LPR	PL	LF	CHW	KCH	SSC	
3ED- 210-P+ new	21.0	11.8	4.62	7.18	0.4	15	21	●
215-P+ new	21.5	11.8	4.64	7.16	0.4	15	21	●
220-P+ new	22.0	12.4	4.78	7.62	0.4	15	22	●
225-P+ new	22.5	12.4	4.80	7.60	0.4	15	22	●
230-P+ new	23.0	12.8	5.02	7.78	0.4	15	23	●
235-P+ new	23.5	12.8	5.04	7.76	0.4	15	23	●
240-P+ new	24.0	13.4	5.18	8.22	0.4	15	24	●
245-P+ new	24.5	13.4	5.20	8.20	0.4	15	24	●
250-P+ new	25.0	14.0	5.29	8.71	0.4	15	25	●
255-P+ new	25.5	14.0	5.31	8.69	0.4	15	25	●

► SSC: Seat size code

●: Standard items

3ED...-F **new**

3 flute drill heads for flat bottom hole



Designation	Dimension (mm)								Grade
	DC	LPR	PL	LF	PDD	SIG	CHW	SSC	TT5130
3ED-120-F	12.0	5.14	1.18	3.96	3.38	133	0.4	12	●
125-F	12.5	5.14	1.20	3.94	3.38	133	0.4	12	●
130-F	13.0	5.61	1.22	4.39	3.58	132	0.4	13	●
135-F	13.5	5.61	1.24	4.37	3.58	132	0.4	13	●
140-F	14.0	6.01	1.28	4.73	4.01	133	0.4	14	●
145-F	14.5	6.01	1.30	4.71	4.01	133	0.4	14	●
150-F	15.0	6.38	1.32	5.06	4.16	133	0.4	15	●
155-F	15.5	6.38	1.34	5.04	4.16	133	0.4	15	●
160-F	16.0	6.86	1.38	5.48	4.52	134	0.4	16	●
165-F	16.5	6.86	1.40	5.46	4.52	134	0.4	16	●
170-F	17.0	7.22	1.45	5.77	4.79	134	0.4	17	●
175-F	17.5	7.22	1.47	5.75	4.79	134	0.4	17	●
180-F	18.0	7.93	1.75	6.18	5.96	133	0.4	18	●
185-F	18.5	7.93	1.77	6.16	5.96	133	0.4	18	●
190-F	19.0	8.41	1.83	6.58	6.32	133	0.4	19	●
195-F	19.5	8.41	1.85	6.56	6.32	133	0.4	19	●
200-F	20.0	8.89	1.90	6.99	6.61	133	0.4	20	●
205-F	20.5	8.89	1.92	6.97	6.61	133	0.4	20	●
210-F	21.0	9.17	1.99	7.18	7.01	133	0.4	21	●
215-F	21.5	9.17	2.01	7.16	7.01	133	0.4	21	●
220-F	22.0	9.72	2.10	7.62	7.30	133	0.4	22	●
225-F	22.5	9.72	2.12	7.60	7.30	133	0.4	22	●
230-F	23.0	9.96	2.18	7.78	7.49	132	0.4	23	●
235-F	23.5	9.96	2.20	7.76	7.49	132	0.4	23	●
240-F	24.0	10.46	2.24	8.22	7.81	132	0.4	24	●
245-F	24.5	10.46	2.26	8.20	7.81	132	0.4	24	●
250-F	25.0	11.03	2.31	8.72	8.16	132	0.4	25	●
255-F	25.5	11.03	2.33	8.70	8.16	132	0.4	25	●

► SSC: Seat size code

●: Standard items

SOLID 3 DRILL

3 FLUTE



Solid Carbide 3 Flute Drill for Higher Productivity



High productivity



Self-centering
design



Optimum flute
design



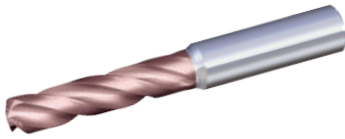
Unique flat bottom
design



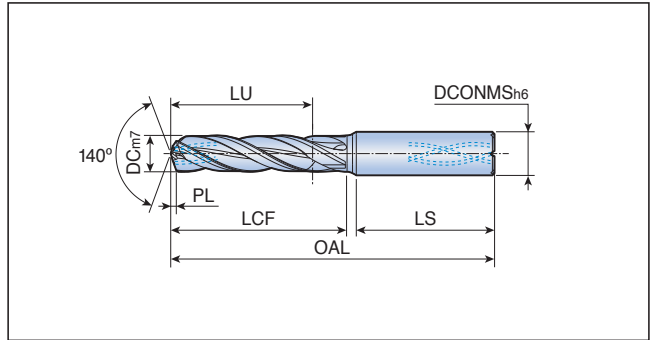
Longer tool life

3HD...PI3

3 flute solid carbide drills with oil holes



- Drilling depth: 3xDiameter



Designation	Dimension (mm)							Grade
	DC	DCONMS	OAL	LU	LCF	LS	PL	TT5130
3HD 040-017-06 PI3	4.0	6.0	66	17	25	35	0.82	●
045-017-06 PI3	4.5	6.0	66	17	25	35	0.88	●
050-020-06 PI3	5.0	6.0	66	20	29	36	0.96	●
051-020-06 PI3	5.1	6.0	66	20	29	36	0.98	●
055-020-06 PI3	5.5	6.0	66	20	29	36	1.08	●
060-020-06 PI3	6.0	6.0	66	20	29	36	1.17	●
065-024-08 PI3	6.5	8.0	79	24	35	36	1.26	●
068-024-08 PI3	6.8	8.0	79	24	35	36	1.31	●
070-024-08 PI3	7.0	8.0	79	24	35	36	1.35	●
075-029-08 PI3	7.5	8.0	79	29	42	36	1.40	●
080-029-08 PI3	8.0	8.0	79	29	42	36	1.49	●
085-035-10 PI3	8.5	10.0	89	35	48	40	1.63	●
086-035-10 PI3	8.6	10.0	89	35	48	40	1.65	●
090-035-10 PI3	9.0	10.0	89	35	48	40	1.72	●
095-035-10 PI3	9.5	10.0	89	35	48	40	1.75	●
100-035-10 PI3	10.0	10.0	89	35	48	40	1.85	●
103-040-12 PI3	10.3	12.0	102	40	55	45	1.94	●
105-040-12 PI3	10.5	12.0	102	40	55	45	1.98	●
110-040-12 PI3	11.0	12.0	102	40	55	45	2.07	●
115-040-12 PI3	11.5	12.0	102	40	56	45	2.12	●
120-040-12 PI3	12.0	12.0	102	40	56	45	2.21	●

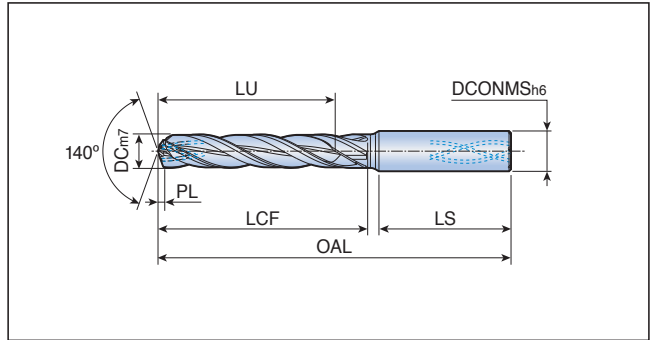
●: Standard items

3HD...PI5

3 flute solid carbide drills with oil holes



• Drilling depth: 5xDiameter

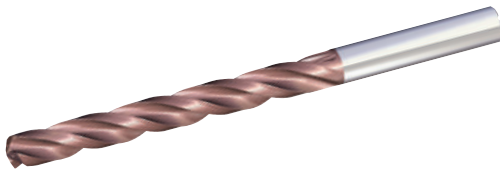


Designation	Dimension (mm)							Grade
	DC	DCONMS	OAL	LU	LCF	LS	PL	TT5130
3HD 040-029-06 PI5	4.0	6.0	74	29	37	35	0.82	●
045-029-06 PI5	4.5	6.0	74	29	37	35	0.88	●
050-035-06 PI5	5.0	6.0	82	35	45	36	0.96	●
051-035-06 PI5	5.1	6.0	82	35	45	36	0.98	●
055-035-06 PI5	5.5	6.0	82	35	45	36	1.08	●
060-035-06 PI5	6.0	6.0	82	35	45	36	1.17	●
065-043-08 PI5	6.5	8.0	91	43	54	36	1.26	●
068-043-08 PI5	6.8	8.0	91	43	54	36	1.31	●
070-043-08 PI5	7.0	8.0	91	43	54	36	1.35	●
075-043-08 PI5	7.5	8.0	91	43	54	36	1.40	●
080-043-08 PI5	8.0	8.0	91	43	54	36	1.49	●
085-049-10 PI5	8.5	10.0	103	49	62	40	1.63	●
086-049-10 PI5	8.6	10.0	103	49	62	40	1.65	●
090-049-10 PI5	9.0	10.0	103	49	62	40	1.72	●
095-049-10 PI5	9.5	10.0	103	49	62	40	1.75	●
100-049-10 PI5	10.0	10.0	103	49	62	40	1.85	●
103-056-12 PI5	10.3	12.0	118	56	71	45	1.94	●
105-056-12 PI5	10.5	12.0	118	56	71	45	1.98	●
110-056-12 PI5	11.0	12.0	118	56	71	45	2.07	●
115-056-12 PI5	11.5	12.0	118	56	72	45	2.12	●
120-056-12 PI5	12.0	12.0	118	56	72	45	2.21	●

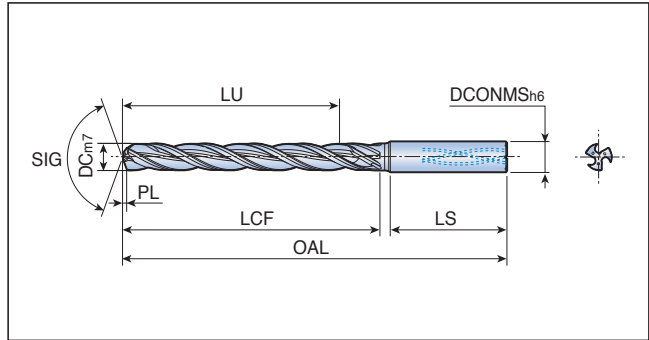
●: Standard items

3HD...PI8 new

3 flute solid carbide drills with oil holes



• Drilling depth: 8xDiameter

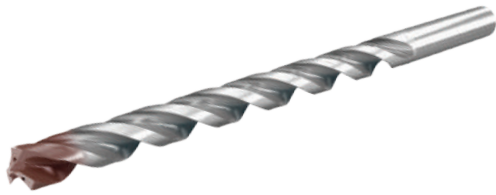


Designation	Dimension (mm)								Grade
	DC	DCONMS	OAL	SIG	LU	LCF	LS	PL	
3HD 040-036-06 PI8	4.0	6	81	140	36	43	35	0.82	●
045-036-06 PI8	4.5	6	81	140	36	43	35	0.88	●
050-048-06 PI8	5.0	6	95	140	48	57	36	0.96	●
055-048-06 PI8	5.5	6	95	140	48	57	36	1.08	●
060-048-06 PI8	6.0	6	95	140	48	57	36	1.17	●
065-064-08 PI8	6.5	8	114	140	64	76	36	1.26	●
070-064-08 PI8	7.0	8	114	140	64	76	36	1.35	●
075-064-08 PI8	7.5	8	114	140	64	76	36	1.40	●
080-064-08 PI8	8.0	8	114	140	64	76	36	1.49	●
085-080-10 PI8	8.5	10	142	130	80	95	40	2.04	●
090-080-10 PI8	9.0	10	142	130	80	95	40	2.16	●
095-080-10 PI8	9.5	10	142	130	80	95	40	2.29	●
100-080-10 PI8	10.0	10	142	130	80	95	40	2.33	●
105-096-12 PI8	10.5	12	162	130	96	113	45	2.50	●
110-096-12 PI8	11.0	12	162	130	96	113	45	2.61	●
115-096-12 PI8	11.5	12	162	130	96	113	45	2.67	●
120-096-12 PI8	12.0	12	162	130	96	113	45	2.80	●

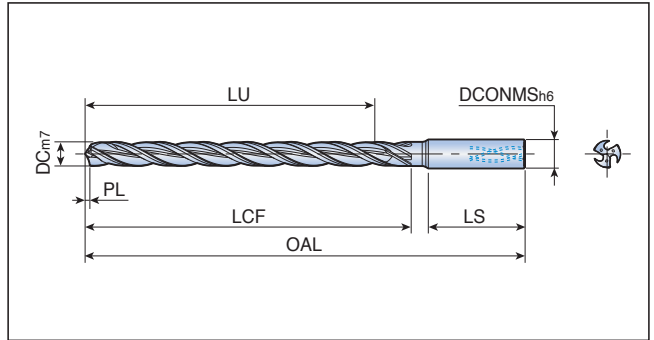
●: Standard items

3HD...CI12 new

3 flute solid carbide drill with oil holes



- Drilling depth: 12xDiameter

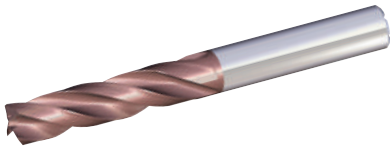


Designation	Dimension (mm)							Grade
	DC	DCONMS	OAL	LU	LCF	LS	PL	
3HD 060-069-06 CI12	6.0	6	116	69	78	36	1.38	●
065-096-08 CI12	6.5	8	146	96	108	36	1.57	●
070-096-08 CI12	7.0	8	146	96	108	36	1.60	●
075-096-08 CI12	7.5	8	146	96	108	36	1.78	●
080-096-08 CI12	8.0	8	146	96	108	36	1.81	●
085-105-10 CI12	8.5	10	162	105	120	40	2.07	●
090-105-10 CI12	9.0	10	162	105	120	40	2.10	●
095-105-10 CI12	9.5	10	162	105	120	40	2.27	●
100-105-10 CI12	10.0	10	162	105	120	40	2.30	●
105-139-12 CI12	10.5	12	204	139	156	45	2.56	●
110-139-12 CI12	11.0	12	204	139	156	45	2.59	●
115-139-12 CI12	11.5	12	204	139	156	45	2.76	●
120-139-12 CI12	12.0	12	204	139	156	45	2.79	●

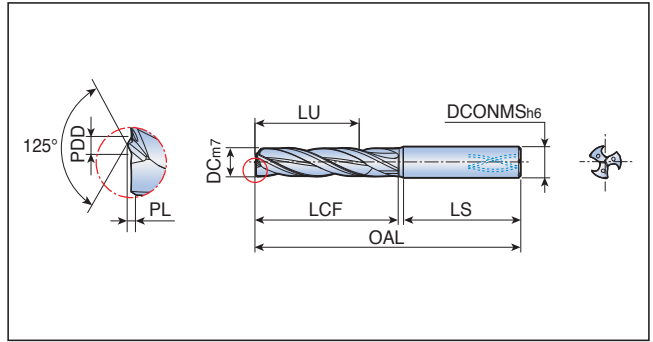
●: Standard items

3HD...FI3 new

3 flute solid carbide drills for flat bottom hole



• Drilling depth: 3xDiameter

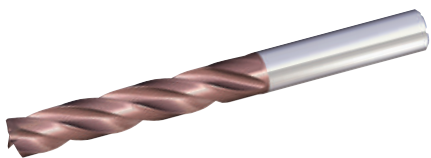


Designation	Dimension (mm)								Grade
	DC	DCONMS	OAL	LU	LCF	LS	PDD	PL	TT5130
3HD 040-017-06 FI3	4.0	6	66	17	25	35	0.77	0.43	●
045-017-06 FI3	4.5	6	66	17	25	35	0.86	0.45	●
050-020-06 FI3	5.0	6	66	20	29	36	0.97	0.47	●
055-020-06 FI3	5.5	6	66	20	29	36	1.08	0.58	●
060-020-06 FI3	6.0	6	66	20	29	36	1.08	0.58	●
065-024-08 FI3	6.5	8	79	24	35	36	1.26	0.62	●
070-024-08 FI3	7.0	8	79	24	35	36	1.26	0.62	●
075-029-08 FI3	7.5	8	79	29	42	36	1.44	0.66	●
080-029-08 FI3	8.0	8	79	29	42	36	1.44	0.66	●
085-035-10 FI3	8.5	10	89	35	48	40	1.62	0.79	●
090-035-10 FI3	9.0	10	89	35	48	40	1.62	0.79	●
095-035-10 FI3	9.5	10	89	35	48	40	1.80	0.82	●
100-035-10 FI3	10.0	10	89	35	48	40	1.80	0.82	●
105-040-12 FI3	10.5	12	102	40	55	45	1.98	0.95	●
110-040-12 FI3	11.0	12	102	40	55	45	1.98	0.95	●
115-040-12 FI3	11.5	12	102	40	56	45	2.16	0.98	●
120-040-12 FI3	12.0	12	102	40	56	45	2.16	0.98	●

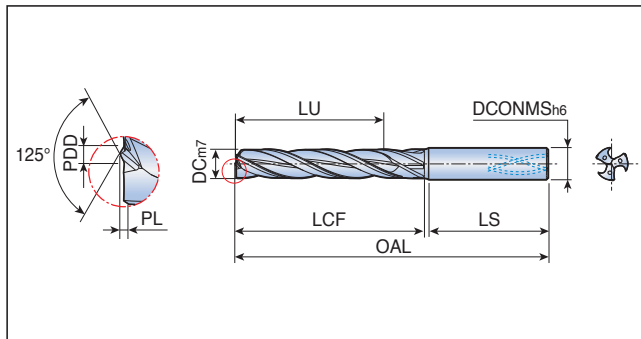
●: Standard items

3HD...FI5 **new**

3 flute solid carbide drills for flat bottom hole



• Drilling depth: 5xDiameter



Designation	Dimension (mm)								Grade
	DC	DCONMS	OAL	LU	LCF	LS	PDD	PL	
3HD 040-029-06 FI5	4.0	6	74	29	37	35	0.77	0.43	●
045-029-06 FI5	4.5	6	74	29	37	35	0.86	0.45	●
050-035-06 FI5	5.0	6	82	35	45	36	0.97	0.47	●
055-035-06 FI5	5.5	6	82	35	45	36	1.08	0.58	●
060-035-06 FI5	6.0	6	82	35	45	36	1.08	0.58	●
065-043-08 FI5	6.5	8	91	43	54	36	1.26	0.62	●
070-043-08 FI5	7.0	8	91	43	54	36	1.26	0.62	●
075-043-08 FI5	7.5	8	91	43	54	36	1.44	0.66	●
080-043-08 FI5	8.0	8	91	43	54	36	1.44	0.66	●
085-049-10 FI5	8.5	10	103	49	62	40	1.62	0.79	●
090-049-10 FI5	9.0	10	103	49	62	40	1.62	0.79	●
095-049-10 FI5	9.5	10	103	49	62	40	1.80	0.82	●
100-049-10 FI5	10.0	10	103	49	62	40	1.80	0.82	●
105-056-12 FI5	10.5	12	118	56	71	45	1.98	0.95	●
110-056-12 FI5	11.0	12	118	56	71	45	1.98	0.95	●
115-056-12 FI5	11.5	12	118	56	72	45	2.16	0.98	●
120-056-12 FI5	12.0	12	118	56	72	45	2.16	0.98	●

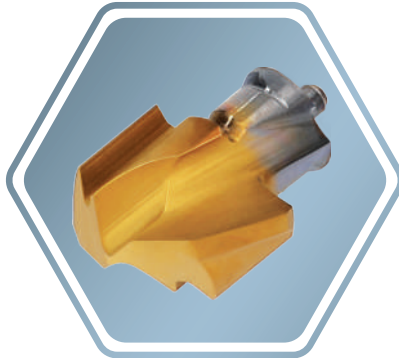
●: Standard items

WINDRILL

ADVANCED MACHINING



Head Changeable Drill for Small Diameter



No set-up time



Small diameter head



Easy to use



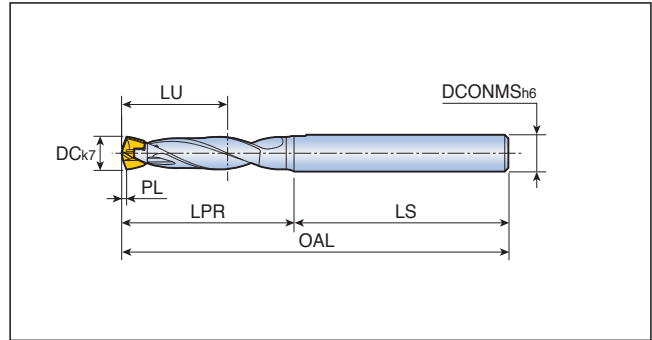
Accurate hole size and
excellent hole quality

TCD...-3D

Head changeable drill holder - Cylindrical type shank



- Drilling depth: 3xDiameter



Designation	Dimension (mm)							Clamping key
	DC	DCONMS	LU	LPR	LS	PL	SSC	
TCD 040-044-06A0-3D	4.0-4.4	6	13	22.7	35	0.62	4	K TCD D040-D049
045-049-06A0-3D	4.5-4.9	6	14	24.7	35	0.66	4.5	K TCD D040-D049
050-054-06A0-3D	5.0-5.4	6	16	26.3	35	0.73	5	K TCD D050-D059
055-059-06A0-3D	5.5-5.9	6	17	28.2	35	0.81	5.5	K TCD D050-D059

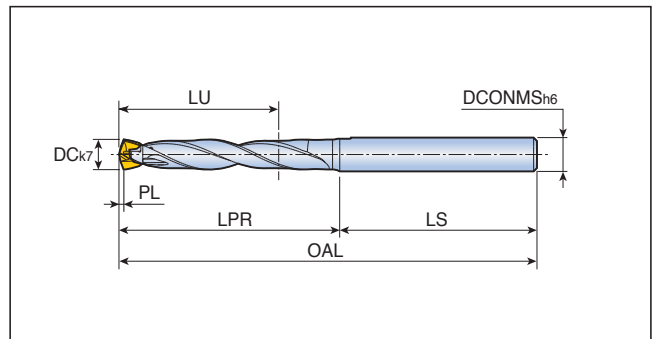
- ▶ OAL = LPR+LS
- ▶ SSC: Seat size code

TCD...-5D

Head changeable drill holder - Cylindrical type shank



- Drilling depth: 5xDiameter

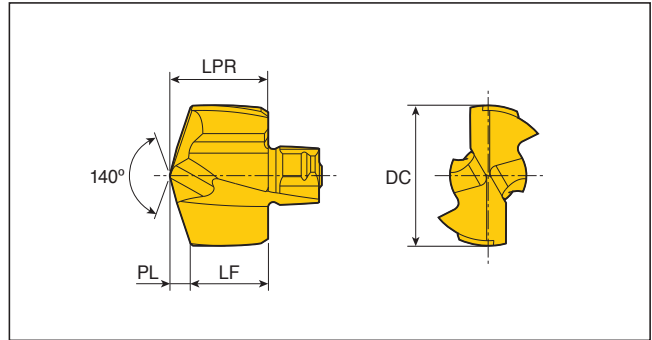


Designation	Dimension (mm)							Clamping key
	DC	DCONMS	LU	LPR	LS	PL	SSC	
TCD 040-044-06A0-5D	4.0-4.4	6	21	30.7	35	0.62	4	K TCD D040-D049
045-049-06A0-5D	4.5-4.9	6	23	33.7	35	0.66	4.5	K TCD D040-D049
050-054-06A0-5D	5.0-5.4	6	26	36.3	35	0.73	5	K TCD D050-D059
055-059-06A0-5D	5.5-5.9	6	28	39.2	35	0.81	5.5	K TCD D050-D059

- ▶ OAL = LPR+LS
- ▶ SSC: Seat size code

TCD...-P

Drill head



Designation	Dimension (mm)					Grade
	DC	LPR	PL	LF	SSC	
TCD- 040-P	4.0	3.10	0.62	2.48	4	●
041-P	4.1	3.10	0.64	2.46	4	●
042-P	4.2	3.10	0.66	2.44	4	●
043-P	4.3	3.10	0.67	2.43	4	●
044-P	4.4	3.10	0.69	2.41	4	●
045-P	4.5	3.55	0.66	2.89	4.5	●
046-P	4.6	3.55	0.68	2.87	4.5	●
047-P	4.7	3.55	0.70	2.85	4.5	●
048-P	4.8	3.55	0.71	2.84	4.5	●
049-P	4.9	3.55	0.73	2.82	4.5	●
050-P	5.0	3.70	0.73	2.97	5	●
051-P	5.1	3.70	0.75	2.95	5	●
052-P	5.2	3.70	0.77	2.93	5	●
053-P	5.3	3.70	0.78	2.92	5	●
054-P	5.4	3.70	0.80	2.90	5	●
055-P	5.5	3.85	0.80	3.05	5.5	●
056-P	5.6	3.85	0.82	3.03	5.5	●
057-P	5.7	3.85	0.84	3.01	5.5	●
058-P	5.8	3.85	0.85	3.00	5.5	●
059-P	5.9	3.85	0.87	2.98	5.5	●

► SSC: Seat size code

●: Standard items

WINDRILL

ADVANCED MACHINING



MAXI-RUSH Connection for Head Changeable Drill



No set-up time



Easy to use



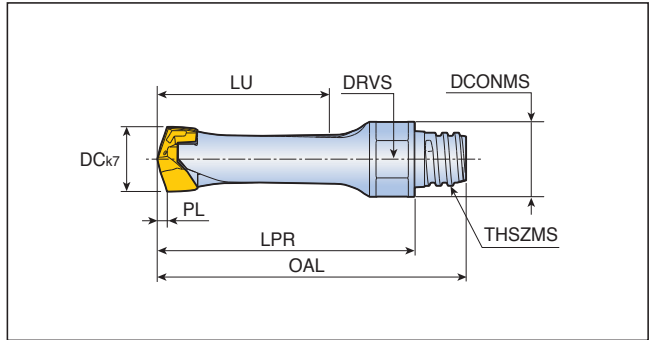
Accurate hole size and
excellent hole quality

TCD...-MRS-2D

Head changeable drill holder with MAXI-RUSH type shank



- Drilling depth: 2xDiameter

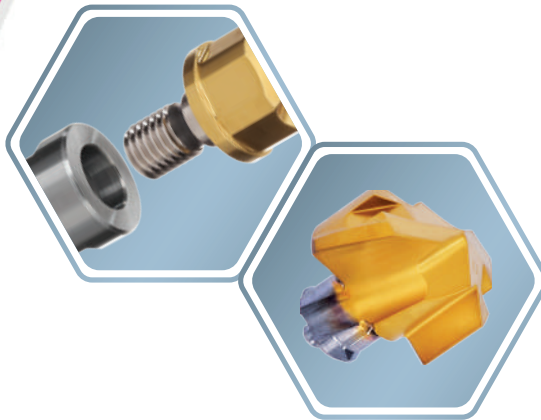


Designation	Dimension (mm)										Clamping key
	DC	DCONMS	LU	LPR	PL	OAL	DRVS	THSZMS	SSC		
TCD 060-064-MRS06-2D	6.0-6.4	9.6	13.0	28.0	1.0	34.3	8	S06	6	K TCD D060-D099	
080-084-MRS06-2D	8.0-8.4	9.6	17.2	32.9	1.2	39.2	8	S06	8	K TCD D060-D099	
100-104-MRS08-2D	10.0-10.4	11.6	21.5	39.8	1.5	47.3	10	S08	10	K TCD D100-D199	

- SSC: Seat size code
- Matched with MAXI-RUSH holder

WINDRILL
ADVANCED MACHINING

T-FLEXTEC Connection for Head Changeable Drill



No set-up time



Easy to use



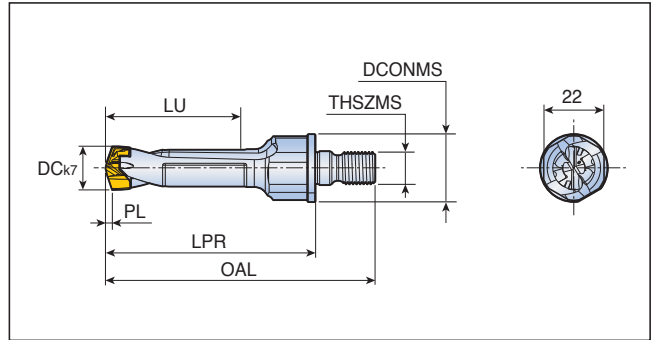
Accurate hole size and
excellent hole quality

TCDM...-M12-3D

Head changeable drill holder with T-FLEXTEC type shank



• Drilling depth: 3xDiameter



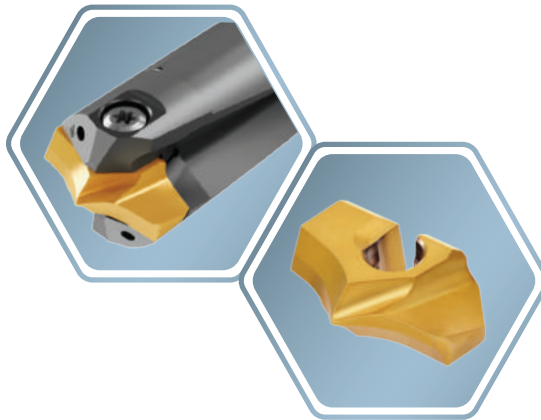
Designation	Dimension (mm)								Clamping key	
	DC	DCONMS	LU	LPR	PL	OAL	THSZMS	SSC		
TCDM 060-064-M12-3D	6.0-6.4	25	19.0	42.0	1.0	64.0	M12	6	K TCD D060-D099	
065-069-M12-3D	6.5-6.9	25	20.7	44.3	1.2	66.3	M12	6.5		
070-074-M12-3D	7.0-7.4	25	22.0	45.6	1.0	67.6	M12	7		
075-079-M12-3D	7.5-7.9	25	23.6	47.6	1.1	69.6	M12	7		
080-084-M12-3D	8.0-8.4	25	25.2	49.4	1.2	71.4	M12	8		
085-089-M12-3D	8.5-8.9	25	26.8	50.4	1.3	72.4	M12	8		
090-094-M12-3D	9.0-9.4	25	28.4	52.8	1.4	74.8	M12	9		
095-099-M12-3D	9.5-9.9	25	29.9	54.8	1.4	76.8	M12	9		
100-104-M12-3D	10.0-10.4	25	31.5	56.2	1.5	78.2	M12	10		K TCD D100-D199
105-109-M12-3D	10.5-10.9	25	33.1	58.2	1.6	80.2	M12	10		
110-114-M12-3D	11.0-11.4	25	34.7	59.6	1.7	81.6	M12	11		
115-119-M12-3D	11.5-11.9	25	36.3	61.6	1.8	83.6	M12	11		
120-124-M12-3D	12.0-12.4	25	37.8	63.0	1.8	85.0	M12	12		
125-129-M12-3D	12.5-12.9	25	39.4	64.0	1.9	86.0	M12	12		
130-134-M12-3D	13.0-13.4	25	41.0	66.6	2.0	88.6	M12	13		
135-139-M12-3D	13.5-13.9	25	42.6	68.6	2.1	90.6	M12	13		
140-144-M12-3D	14.0-14.4	25	44.1	70.2	2.1	92.2	M12	14		
145-149-M12-3D	14.5-14.9	25	45.7	72.2	2.2	94.2	M12	14		
150-159-M12-3D	15.0-15.9	25	47.3	73.7	2.3	95.7	M12	15	K TCD D200-D269	
160-169-M12-3D	16.0-16.9	25	50.4	77.3	2.4	99.3	M12	16		
170-179-M12-3D	17.0-17.9	25	53.6	80.9	2.6	102.9	M12	17		
180-189-M12-3D	18.0-18.9	25	56.7	84.5	2.7	106.5	M12	18		
190-199-M12-3D	19.0-19.9	25	59.9	88.0	2.9	110.0	M12	19		
200-209-M12-3D	20.0-20.9	25	63.0	91.6	3.0	113.6	M12	20		

► SSC: Seat size code
 ► Matched with T-FLEXTEC holder

SPADERUSH



Large Diameter Drill with P+ Self-centering Drill Heads



Excellent
self-centering
capability



Premium
hole quality



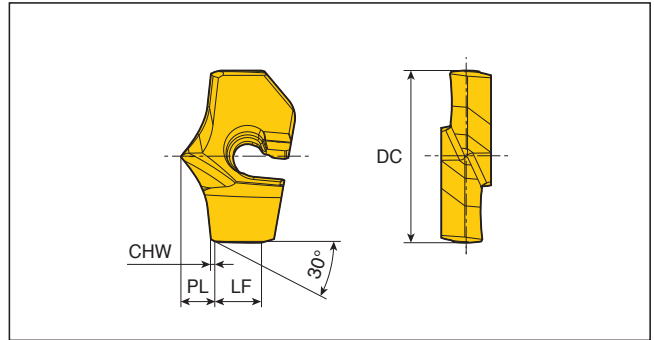
High productivity
without pilot drilling



Reinforced
cutting edge

LCD...-P+ new

Self-centering drill head



Designation	Dimension (mm)					Grade
	DC	PL	LF	CHW	SSC	
LCD - 200-P+	20.0	4.55	5.83	0.86	20	●
205-P+	20.5	4.58	5.60	0.86	20	●
210-P+	21.0	4.60	5.36	0.86	21	●
215-P+	21.5	4.63	5.13	0.86	21	●
220-P+	22.0	4.92	6.21	0.86	22	●
225-P+	22.5	4.95	5.98	0.86	22	●
230-P+	23.0	4.97	5.74	0.86	23	●
235-P+	23.5	5.00	5.51	0.86	23	●
240-P+	24.0	5.30	5.93	0.86	24	●
245-P+	24.5	5.33	5.70	0.86	24	●
250-P+	25.0	5.35	5.46	0.86	25	●
255-P+	25.5	5.38	5.23	0.86	25	●
260-P+	26.0	5.67	7.39	0.86	26	●
265-P+	26.5	5.70	7.16	0.86	26	●
270-P+	27.0	5.72	6.92	0.86	27	●
275-P+	27.5	5.75	6.69	0.86	27	●
280-P+	28.0	5.73	7.26	0.86	28	●
285-P+	28.5	5.76	7.03	0.86	28	●
290-P+	29.0	5.78	6.79	0.86	29	●
295-P+	29.5	5.81	6.56	0.86	29	●
300-P+	30.0	6.08	9.17	0.86	30	●
305-P+	30.5	6.11	8.94	0.86	30	●
310-P+	31.0	6.13	8.70	0.86	31	●
315-P+	31.5	6.16	8.47	0.86	31	●
320-P+	32.0	6.43	9.18	0.86	32	●
325-P+	32.5	6.46	8.95	0.86	32	●
330-P+	33.0	6.48	8.71	0.86	33	●
335-P+	33.5	6.51	8.48	0.86	33	●
340-P+	34.0	6.53	8.24	0.86	34	●
345-P+	34.5	6.56	8.01	0.86	34	●

► SSC: Seat size code

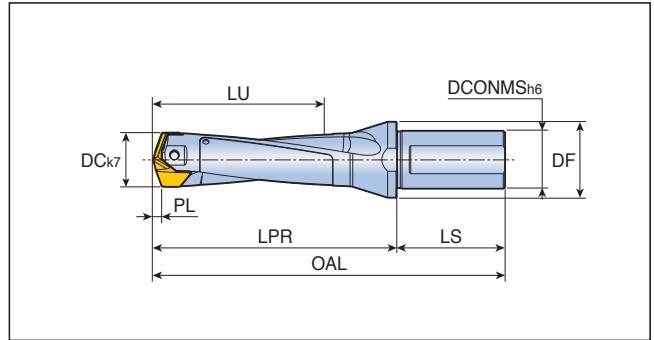
●: Standard items

LCD...T2-3D

Head changeable drill holders - Weldon type shank






• Drilling depth: 3xDiameter



Designation	Dimension (mm)							
	DC	DCONMS	DF	LU	LPR	LS	PL	SSC
LCD 200-209-25T2-3D	20.0-20.9	25	32	63	92.1	56	3.11	20
210-219-25T2-3D	21.0-21.9	25	32	66	95.3	56	3.29	21
220-229-25T2-3D	22.0-22.9	25	32	69	98.4	56	3.42	22
230-239-25T2-3D	23.0-23.9	25	32	73	101.6	56	3.60	23
240-249-32T2-3D	24.0-24.9	32	40	76	110.7	60	3.73	24
250-259-32T2-3D	25.0-25.9	32	40	79	113.9	60	3.91	25
260-269-32T2-3D	26.0-26.9	32	40	82	117.0	60	4.04	26
270-279-32T2-3D	27.0-27.9	32	40	85	120.2	60	4.22	27
280-289-32T2-3D	28.0-28.9	32	40	88	128.4	60	4.35	28
290-299-32T2-3D	29.0-29.9	32	40	92	131.5	60	4.53	29
300-309-32T2-3D	30.0-30.9	32	42	95	134.7	60	4.67	30
310-319-32T2-3D	31.0-31.9	32	42	98	137.9	60	4.85	31
320-329-40T2-3D	32.0-32.9	40	48	101	143.0	68	4.98	32
330-339-40T2-3D	33.0-33.9	40	48	104	146.2	68	5.16	33
340-349-40T2-3D	34.0-34.9	40	48	107	149.3	68	5.34	34
350-359-40T2-3D	35.0-35.9	40	48	110	152.4	68	5.44	35
360-369-40T2-3D	36.0-36.9	40	48	114	155.6	68	5.62	36
370-379-40T2-3D	37.0-37.9	40	48	117	158.8	68	5.80	37
380-389-40T2-3D	38.0-38.9	40	50	120	166.9	68	5.91	38
390-399-40T2-3D	39.0-39.9	40	50	123	170.1	68	6.09	39
400-410-40T2-3D	40.0-41.0	40	50	126	173.3	68	6.27	40

▶ OAL = LPR+LS ▶ SSC: Seat size code

Spare parts

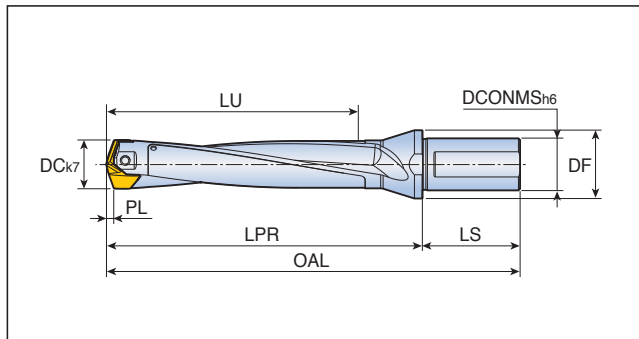
Designation	Screw	Wrench	Wrench handle	
				
LCD 200-219-3D	TS 40178D25	BLD T20/S7	SW6-T-SH	
LCD 220-239-3D	TS 40198D28	BLD T20/S7	SW6-T-SH	
LCD 240-259-3D	TS 40210D3	BLD T20/S7	SW6-T-SH	
LCD 260-279-3D	TS 50230D3	BLD T20/S7	SW6-T-SH	
LCD 280-299-3D	TS 50250D35	BLD T25/S7	SW6-T-SH	
LCD 300-319-3D	TS 60265D4	BLD T25/S7	SW6-T-SH	
LCD 320-349-3D	TS 60285D42	BLD T25/S7	SW6-T-SH	
LCD 350-379-3D	TS 60320D5	BLD T25/S7	SW6-T-SH	
LCD 380-410-3D	TS 80340D6	BLD T25/S7	SW6-T-SH	

LCD...T2-5D

Head changeable drill holders - Weldon type shank






• Drilling depth: 5xDiameter



Designation	Dimension (mm)							
	DC	DCONMS	DF	LU	LPR	LS	PL	SSC
LCD 200-209-25T2-5D	20.0-20.9	25	32	103	132.1	56	3.11	20
210-219-25T2-5D	21.0-21.9	25	32	108	137.3	56	3.29	21
220-229-25T2-5D	22.0-22.9	25	32	113	142.4	56	3.42	22
230-239-25T2-5D	23.0-23.9	25	32	119	147.6	56	3.60	23
240-249-32T2-5D	24.0-24.9	32	40	124	158.7	60	3.73	24
250-259-32T2-5D	25.0-25.9	32	40	129	163.9	60	3.91	25
260-269-32T2-5D	26.0-26.9	32	40	134	169.0	60	4.04	26
270-279-32T2-5D	27.0-27.9	32	40	139	174.2	60	4.22	27
280-289-32T2-5D	28.0-28.9	32	40	144	184.4	60	4.35	28
290-299-32T2-5D	29.0-29.9	32	40	150	189.5	60	4.53	29
300-309-32T2-5D	30.0-30.9	32	42	155	194.7	60	4.67	30
310-319-32T2-5D	31.0-31.9	32	42	160	199.9	60	4.85	31
320-329-40T2-5D	32.0-32.9	40	48	165	207.0	68	4.98	32
330-339-40T2-5D	33.0-33.9	40	48	170	212.2	68	5.16	33
340-349-40T2-5D	34.0-34.9	40	48	175	217.3	68	5.34	34
350-359-40T2-5D	35.0-35.9	40	48	180	222.4	68	5.44	35
360-369-40T2-5D	36.0-36.9	40	48	186	227.6	68	5.62	36
370-379-40T2-5D	37.0-37.9	40	48	191	232.8	68	5.80	37
380-389-40T2-5D	38.0-38.9	40	50	196	242.9	68	5.91	38
390-399-40T2-5D	39.0-39.9	40	50	201	248.1	68	6.09	39
400-410-40T2-5D	40.0-41.0	40	50	206	253.3	68	6.27	40

▶ OAL = LPR+LS ▶ SSC: Seat size code

Spare parts

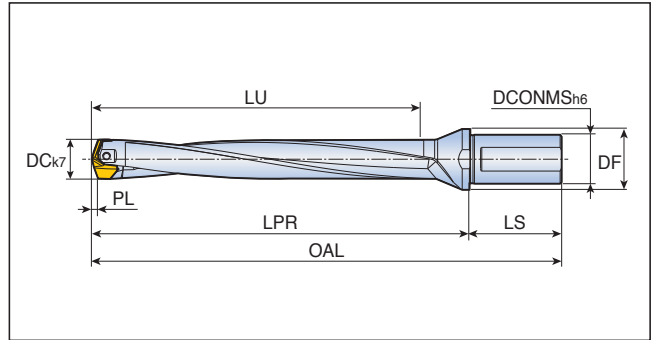
Designation	Screw	Wrench	Wrench handle	
				
LCD 200-219-5D	TS 40178D25	BLD T20/S7	SW6-T-SH	
LCD 220-239-5D	TS 40198D28	BLD T20/S7	SW6-T-SH	
LCD 240-259-5D	TS 40210D3	BLD T20/S7	SW6-T-SH	
LCD 260-279-5D	TS 50230D3	BLD T20/S7	SW6-T-SH	
LCD 280-299-5D	TS 50250D35	BLD T25/S7	SW6-T-SH	
LCD 300-319-5D	TS 60265D4	BLD T25/S7	SW6-T-SH	
LCD 320-349-5D	TS 60285D42	BLD T25/S7	SW6-T-SH	
LCD 350-379-5D	TS 60320D5	BLD T25/S7	SW6-T-SH	
LCD 380-410-5D	TS 80340D6	BLD T25/S7	SW6-T-SH	

LCD...T2-8D

Head changeable drill holders - Weldon type shank



- Drilling depth: 8xDiameter



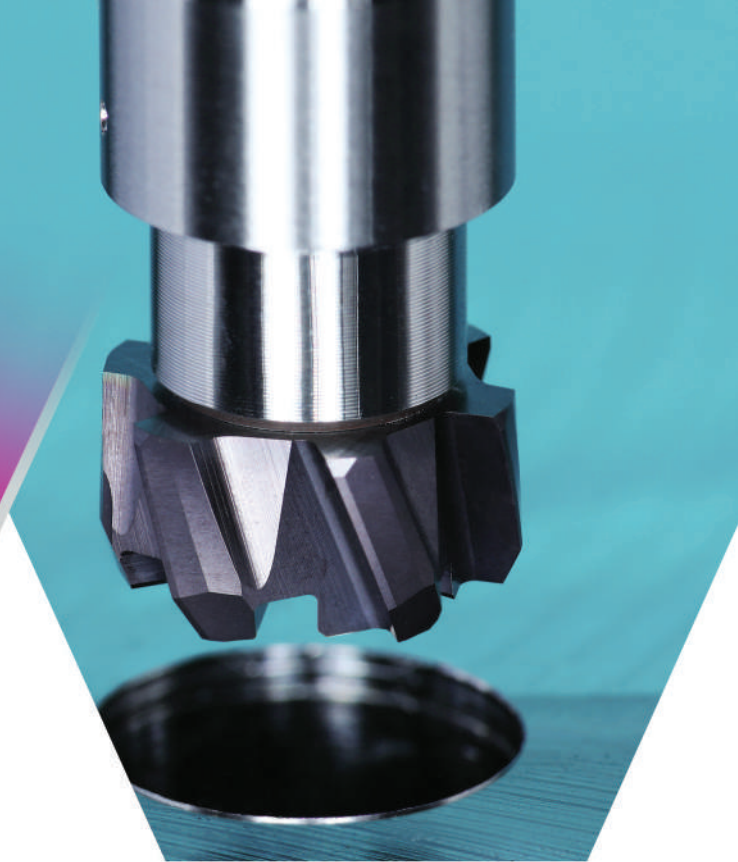
Designation	Dimension (mm)							
	DC	DCONMS	DF	LU	LPR	LS	PL	SSC
LCD 200-209-25T2-8D	20.0-20.9	25	32	163.1	192.1	56	3.11	20
210-219-25T2-8D	21.0-21.9	25	32	171.3	200.1	56	3.29	21
220-229-25T2-8D	22.0-22.9	25	32	179.4	208.4	56	3.42	22
230-239-25T2-8D	23.0-23.9	25	32	187.6	216.4	56	3.60	23
240-249-32T2-8D	24.0-24.9	32	40	195.7	230.7	60	3.73	24
250-259-32T2-8D	25.0-25.9	32	40	203.9	238.7	60	3.91	25
260-269-32T2-8D	26.0-26.9	32	40	212.0	247.0	60	4.04	26
270-279-32T2-8D	27.0-27.9	32	40	220.2	255.0	60	4.22	27
280-289-32T2-8D	28.0-28.9	32	40	228.4	268.4	60	4.35	28
290-299-32T2-8D	29.0-29.9	32	40	236.5	276.4	60	4.53	29
300-309-32T2-8D	30.0-30.9	32	42	244.7	284.7	60	4.67	30
310-319-32T2-8D	31.0-31.9	32	42	252.9	292.7	60	4.85	31
320-329-40T2-8D	32.0-32.9	40	48	261.0	303.0	68	4.98	32
330-339-40T2-8D	33.0-33.9	40	48	269.2	311.0	68	5.16	33
340-349-40T2-8D	34.0-34.9	40	48	277.3	319.0	68	5.34	34
350-359-40T2-8D	35.0-35.9	40	48	285.4	327.4	68	5.44	35
360-369-40T2-8D	36.0-36.9	40	48	293.6	335.4	68	5.62	36
370-379-40T2-8D	37.0-37.9	40	48	301.8	343.4	68	5.80	37
380-389-40T2-8D	38.0-38.9	40	50	309.9	356.9	68	5.91	38
390-399-40T2-8D	39.0-39.9	40	50	318.1	364.9	68	6.09	39
400-410-40T2-8D	40.0-41.0	40	50	326.3	372.9	68	6.27	40

▶ OAL = LPR+LS ▶ SSC: Seat size code

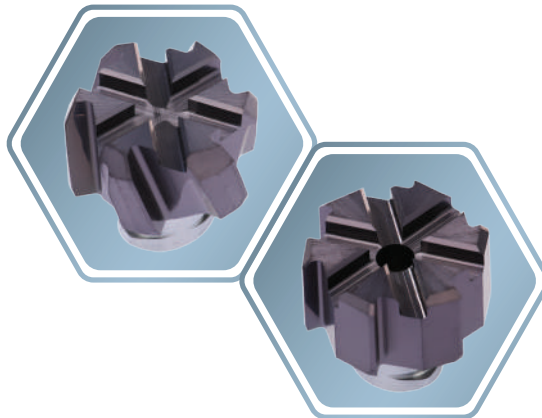
Spare parts

Designation	Screw	Wrench	Wrench handle	
LCD 200-219-8D	TS 40178D25	BLD T20/S7	SW6-T-SH	
LCD 220-239-8D	TS 40198D28	BLD T20/S7	SW6-T-SH	
LCD 240-259-8D	TS 40210D3	BLD T20/S7	SW6-T-SH	
LCD 260-279-8D	TS 50230D3	BLD T20/S7	SW6-T-SH	
LCD 280-299-8D	TS 50250D35	BLD T25/S7	SW6-T-SH	
LCD 300-319-8D	TS 60265D4	BLD T25/S7	SW6-T-SH	
LCD 320-349-8D	TS 60285D42	BLD T25/S7	SW6-T-SH	
LCD 350-379-8D	TS 60320D5	BLD T25/S7	SW6-T-SH	
LCD 380-410-8D	TS 80340D6	BLD T25/S7	SW6-T-SH	

XM-REAM



Head Changeable Reamer for Small Diameter



High productivity



Easy to use



No set-up time



Small diameter head



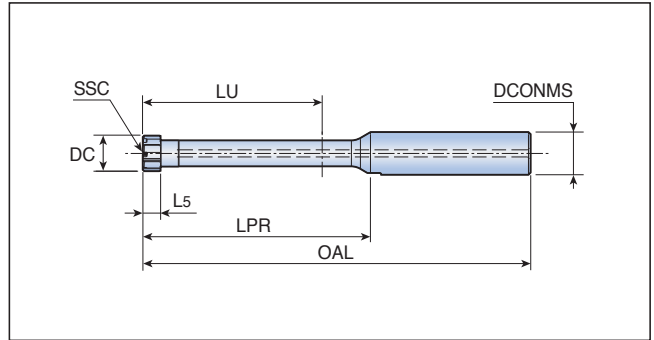
Excellent
hole accuracy

XR...-3B/5B-S0

Head changeable reamer holders for small diameter blind hole



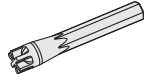
• Cylindrical shank



Designation	DC	SSC	Dimension (mm)					Overhang
			DCONMS	L5	OAL	LU	LPR	
XR-D08-3B-10S0	8.000-8.999	8	10	4.0	81.0	28.0	36.0	3XD
D09-3B-10S0	9.000-9.999	9	10	4.5	85.5	31.5	40.5	
D10-3B-12S0	10.000-10.999	10	12	5.0	89.0	35.0	44.0	
D11-3B-12S0	11.000-11.999	11	12	5.5	92.5	38.5	47.5	
D12-3B-12S0	12.000-12.999	12	12	6.0	96.0	42.0	51.0	
XR-D08-5B-10S0	8.000-8.999	8	10	4.0	97.0	44.0	52.0	5XD
D09-5B-10S0	9.000-9.999	9	10	4.5	103.5	49.5	58.5	
D10-5B-12S0	10.000-10.999	10	12	5.0	109.0	55.0	64.0	
D11-5B-12S0	11.000-11.999	11	12	5.5	114.5	60.5	69.5	
D12-5B-12S0	12.000-12.999	12	12	6.0	120.0	66.0	75.0	

- ▶ SSC: Seat size code
- ▶ Matched with XR...-AS reamer heads

Spare parts

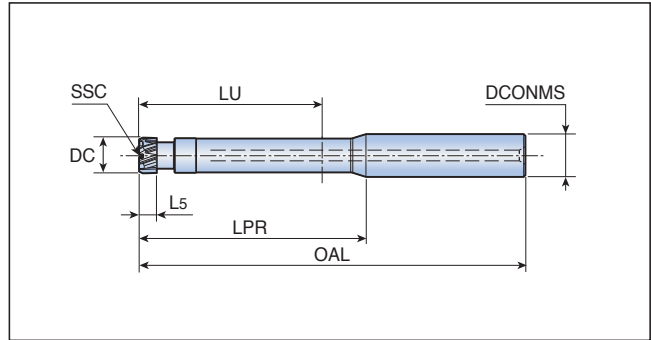
Designation	Clamping key	Key handle
		
XR-D08...	W XR D08-KEY	SW6-T-SH
XR-D09...	W XR D08-KEY	SW6-T-SH
XR-D10...	W XR D10-KEY	SW6-T-SH
XR-D11...	W XR D10-KEY	SW6-T-SH
XR-D12...	W XR D12-KEY	SW6-T-SH

XR...-3T/5T-S0

Head changeable reamer holders for small diameter through hole



• Cylindrical shank



Designation	DC	SSC	Dimension (mm)					Overhang
			DCONMS	L5	OAL	LU	LPR	
XR-D08-3T-10S0	8.000-8.999	8	10	4.0	81.0	28.0	36.0	3XD
D09-3T-10S0	9.000-9.999	9	10	4.5	85.5	31.5	40.5	
D10-3T-12S0	10.000-10.999	10	12	5.0	89.0	35.0	44.0	
D11-3T-12S0	11.000-11.999	11	12	5.5	92.5	38.5	47.5	
D12-3T-12S0	12.000-12.999	12	12	6.0	95.0	42.0	50.0	
XR-D08-5T-10S0	8.000-8.999	8	10	4.0	97.0	44.0	52.0	5XD
D09-5T-10S0	9.000-9.999	9	10	4.5	103.5	49.5	58.5	
D10-5T-12S0	10.000-10.999	10	12	5.0	109.0	55.0	64.0	
D11-5T-12S0	11.000-11.999	11	12	5.5	114.5	60.5	69.5	
D12-5T-12S0	12.000-12.999	12	12	6.0	119.0	66.0	74.0	

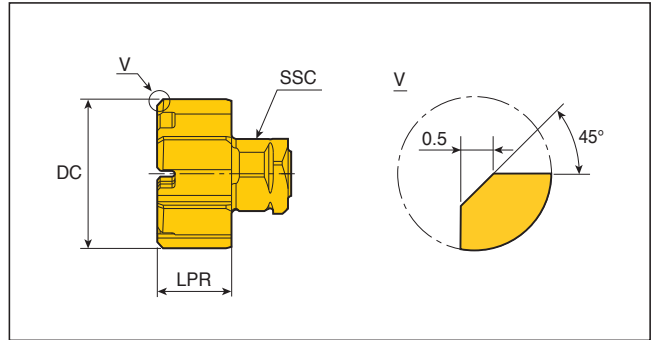
- ▶ SSC: Seat size code
- ▶ Matched with XR...-BL reamer heads

Spare parts

Designation	Clamping key	Key handle
XR-D08...	W XR D08-KEY	SW6-T-SH
XR-D09...	W XR D08-KEY	SW6-T-SH
XR-D10...	W XR D10-KEY	SW6-T-SH
XR-D11...	W XR D10-KEY	SW6-T-SH
XR-D12...	W XR D12-KEY	SW6-T-SH

XR...-AS

Head changeable reamer head



- Straight flute for blind hole
- For H7 hole tolerance

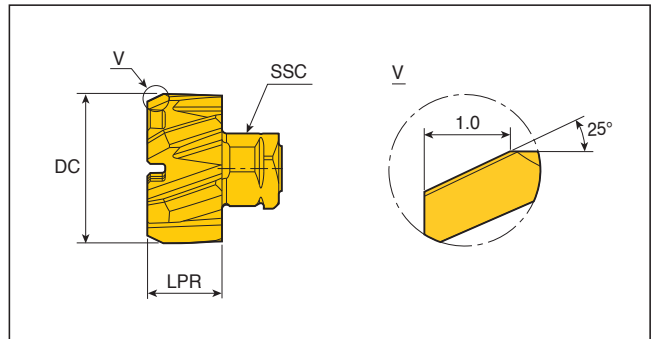
Designation	Dimension (mm)		NOF	SSC	Flute type	Edge type	Grade
	DC	LPR					
XR-08.000-AS	8.000	4.0	6	8	S	A	●
09.000-AS	9.000	4.5	6	9	S	A	●
10.000-AS	10.000	5.0	6	10	S	A	●
11.000-AS	11.000	5.5	6	11	S	A	●
12.000-AS	12.000	6.0	6	12	S	A	●

- ▶ NOF: Number of flutes
- ▶ SSC: Seat size code
- ▶ Matched with XR...B... holders

●: Standard items

XR...-BL

Head changeable reamer head



- Helical flute for through hole
- For H7 hole tolerance

Designation	Dimension (mm)		NOF	SSC	Flute type	Edge type	Grade
	DC	LPR					
XR-08.000-BL	8.000	4.0	6	8	L	B	●
09.000-BL	9.000	4.5	6	9	L	B	●
10.000-BL	10.000	5.0	6	10	L	B	●
11.000-BL	11.000	5.5	6	11	L	B	●
12.000-BL	12.000	6.0	6	12	L	B	●

- ▶ NOF: Number of flutes
- ▶ SSC: Seat size code
- ▶ Matched with XR...T... holders

●: Standard items



WINMILL

ADVANCED MACHINING



WINSPEED

ADVANCED MACHINING



WINMILL

ADVANCED MACHINING



Next Generation Shouldering Insert with V Bottom for Strong Clamping



V-shape insert



Super high positive rake angle



High ramping down angle for various applications



High productivity



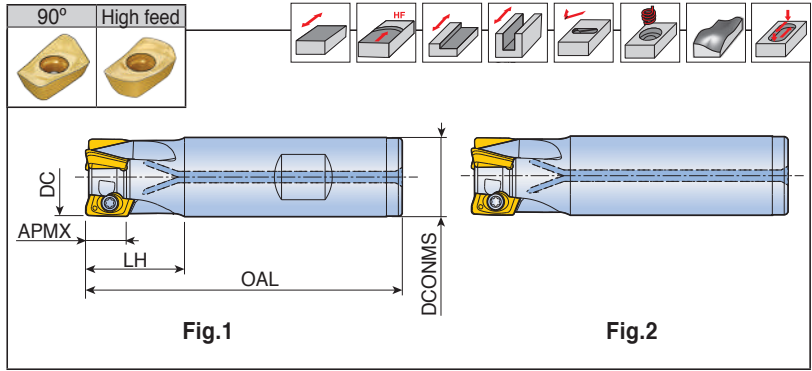
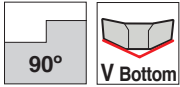
90-degree shouldering



High feed insert

TE90AV-10

End mills



Designation	Z	Dimension (mm)					Coolant hole	Fig.	Insert
		DC	DCONMS	OAL	LH	APMX			
TE90AV-216-W16-10	2	16	16	75	20	10	●	1	AVKT 10-M/EL AVKT 10-HF AVCT 10-AL
218-W16-10	2	18	16	90	25	10	●	1	
320-20-10-L120	3	20	20	120	40	10	●	2	
320-W20-10	3	20	20	80	25	10	●	1	
325-W25-10	3	25	25	90	30	10	●	1	
425-W25-10	4	25	25	90	30	10	●	1	
532-W32-10	5	32	32	100	35	10	●	1	

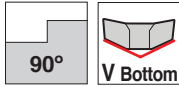
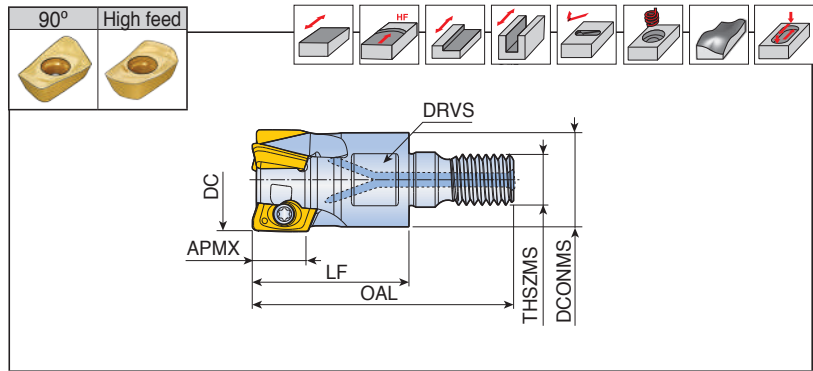
- ▶ When using the "AVKT 1004R-HF" insert, the cutter body needs to be modified to a corner radius of 3.0 mm
- ▶ When using "AVKT 10" insert with a corner radius of 2.0 mm or bigger, the cutter body corner radius should be adjusted to insert "R" + 0.2 mm

Spare parts

Designation	Screw	Wrench			
TE90AV-10	TS 30B062/HG-P	TD 8P			

TE90AV-M-10



Modular heads



Designation	Z	Dimension (mm)							Coolant hole	Insert
		DC	DCONMS	LF	OAL	THSZMS	APMX	DRVS		
TE90AV- 216-M08-10	2	16	13	30	47.5	M08	10	10	●	AVKT 10-M/EL
320-M10-10	3	20	18	30	50	M10	10	15	●	AVKT 10-HF
425-M12-10	4	25	21	35	57	M12	10	17	●	AVCT 10-AL
532-M16-10	5	32	29	43	68	M16	10	25	●	

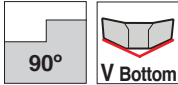
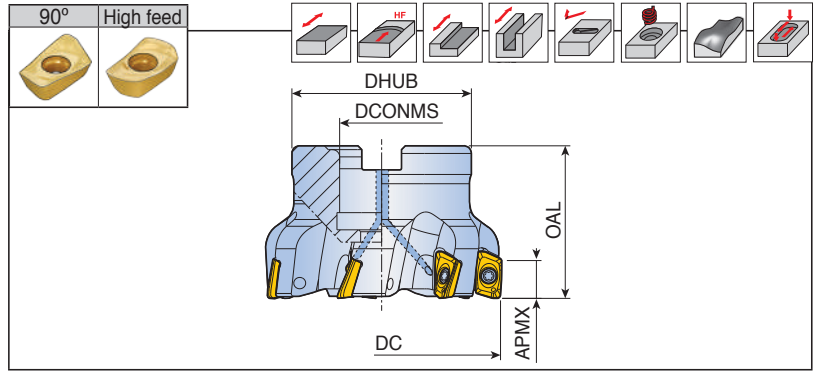
- ▶ When using the "AVKT 1004R-HF" insert, the cutter body needs to be modified to a corner radius of 3.0 mm
- ▶ When using "AVKT 10" insert with a corner radius of 2.0 mm or bigger, the cutter body corner radius should be adjusted to insert "R" + 0.2 mm
- ▶ Matched with T-FLEXTEC holder

Spare parts

Designation	Screw	Wrench			
	TE90AV-M-10	 TS 30B062/HG-P	 TD 8P		

TFM90AV-10

Face mills



Designation		Dimension (mm)					Coolant hole	Arbor type	Kg	Mounting bolt	Insert
		DC	DCONMS	DHUB	OAL	APMX					
TFM90AV-540-16R-10	5	40	16	38	40	10	●	A	0.2	SH M8x30	AVKT 10-M/EL AVKT 10-HF AVCT 10-AL
550-22R-10	5	50	22	45	40	10	●	A	0.3	SH M10x30	
750-22R-10	7	50	22	45	40	10	●	A	0.3	SH M10x30	
763-22R-10	7	63	22	47	40	10	●	A	0.5	SH M10x30	

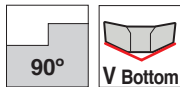
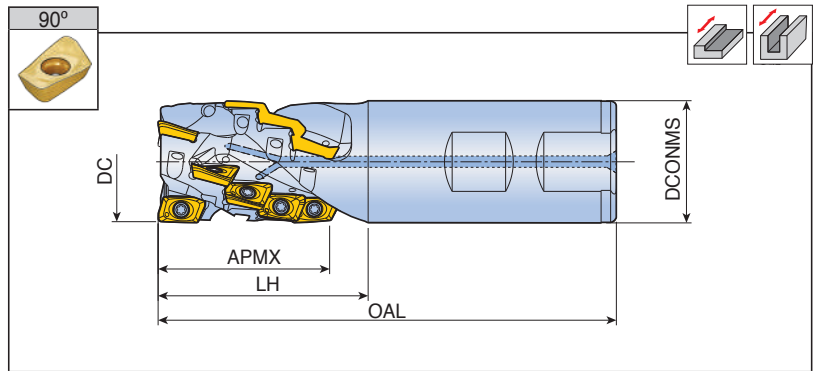
- ▶ When using the "AVKT 1004R-HF" insert, the cutter body needs to be modified to a corner radius of 3.0 mm
- ▶ When using "AVKT 10" insert with a corner radius of 2.0 mm or bigger, the cutter body corner radius should be adjusted to insert "R" + 0.2 mm

Spare parts

Designation	Screw	Wrench			
	TFM90AV-10	TS 30B062/HG-P	TD 8P		

TEF-AV10

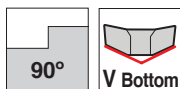
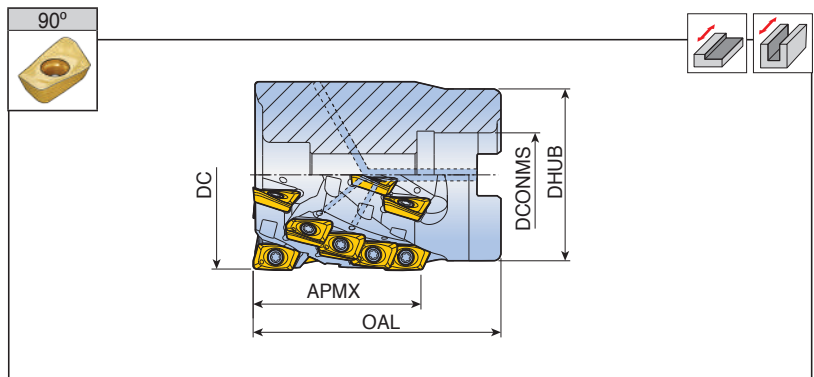
Extended flute cutters



Designation	No. of inserts	Dimension (mm)					Coolant hole	Kg	Insert	
		DC	DCONMS	OAL	LH	APMX				
TEF D25-27-W25-AV10-2F	2	6	25	25	95	35	27	●	0.3	AVKT 10-M/EL
D32-44-W32-AV10-3F	3	15	32	32	120	55	44	●	0.6	AVCT 10-AL

TES-AV10

Extended flute cutters



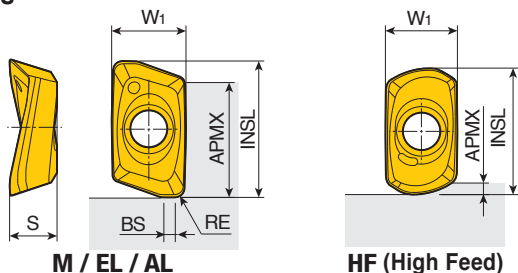
Designation	No. of inserts	Dimension (mm)					Coolant hole	Kg	Mounting bolt	Insert	
		DC	DCONMS	OAL	DHUB	APMX					
TES D40-35-16R-AV10-4F	4	16	40	16	55	38	35	●	0.3	SH M8x40	AVKT 10-M/EL
D50-44-22R-AV10-5F	5	25	50	22	65	45	44	●	0.6	SH M10x50	AVCT 10-AL

Spare parts

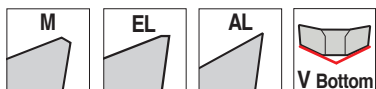
Designation	Screw	Wrench			
	TEF/TES-AV10	TS 30B062/HG-P	TD 8P		

AVK(C)T 10

Inserts



Size	Dimension (mm)					
	INSL	W1	S	APMX	BS	RE
10-M/EL	11.5-12.4	6.8	4.1-4.3	9.6-10	0-1.0	0.8-3.2
10-HF	11.6	6.6	4.4	1.0	-	-
10-AL	11.5-12.5	6.8	4.1-4.5	9.6-10.1	0-1.2	0.4-3.0

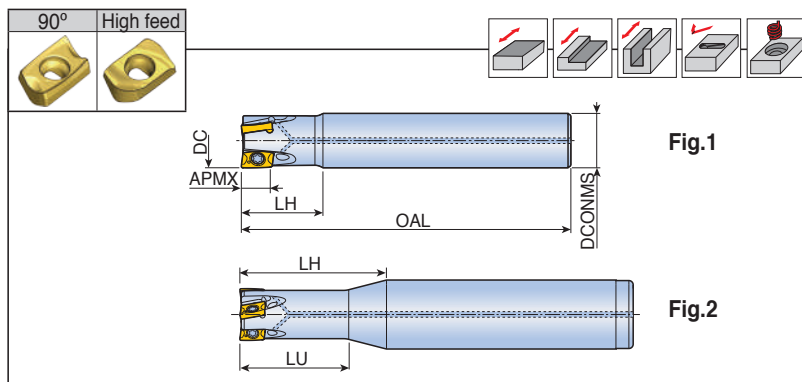
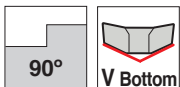


Insert	Designation	Recommended machining conditions		Coated						Uncoated			
		ap (mm)	Feed (mm/tooth)	TT9080	TT9030	TT8080	TT8020	TT8525B	TT7080	TT7515	TT6080	K10	
	AVKT 1004 PER-M	2.5-8.0	0.12-0.06	●		●			●		●		
	100416R-M	2.5-8.0	0.12-0.06	●									
	100432R-M	2.5-8.0	0.12-0.06	●									
	AVKT 1004 PER-EL	2.5-8.0	0.06-0.03			●							
	100416R-EL	2.5-8.0	0.06-0.03			●							
	100432R-EL	2.5-8.0	0.06-0.03			●							
	AVKT 1004R-HF	0.1-1.0	0.80-0.30	●		●							
	AVCT 100404R-AL	2.5-8.0	0.50-0.10									●	
	1004 PER-AL	2.5-8.0	0.50-0.10									●	
	100420R-AL	2.5-8.0	0.50-0.10									●	
	100430R-AL	2.5-8.0	0.50-0.10									●	

●: Standard items

2S-TE90CV-05

End mills

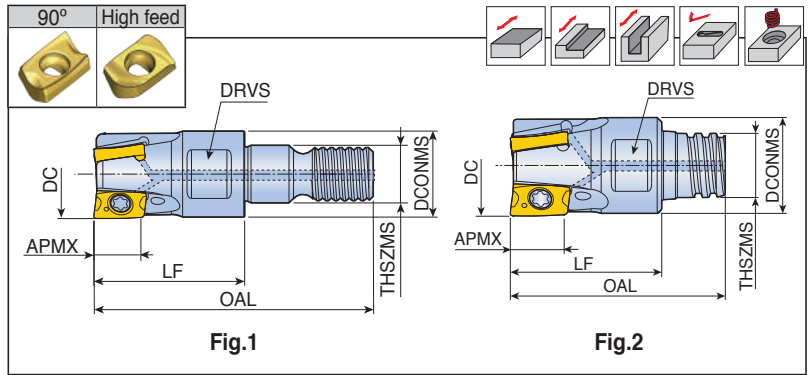
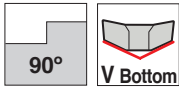


Designation	⌀	Dimension (mm)						Coolant hole	Fig.	Insert
		DC	DCONMS	OAL	LH	LU	APMX			
2S-TE90CV-106-06-05	1	6	6	60	12	-	5.0	●	1	CVK(H)T 0502...
106-06-05-L50	1	6	6	50	10	-	5.0	●	1	
208-07-05	2	8	7	80	12	-	5.0	●	1	
208-08-05	2	8	8	80	12	-	5.0	●	1	
208-08-05-L50	2	8	8	50	10	-	5.0	●	1	
208-12-05	2	8	12	80	25	18	5.0	●	2	
209-08-05	2	9	8	80	12	-	5.0	●	1	
210-10-05	2	10	10	80	15	-	5.0	●	1	
212-12-05	2	12	12	80	15	-	5.0	●	1	
310-09-05	3	10	9	80	12	-	5.0	●	1	
310-10-05	3	10	10	80	15	-	5.0	●	1	
310-10-05-L55	3	10	10	55	12	-	5.0	●	1	
310-16-05-L90	3	10	16	90	34	22	5.0	●	2	
311-10-05	3	11	10	80	12	-	5.0	●	1	
312-12-05	3	12	12	80	15	-	5.0	●	1	
412-11-05	4	12	11	80	12	-	5.0	●	1	
412-12-05	4	12	12	80	15	-	5.0	●	1	
412-12-05-L60	4	12	12	60	14	-	5.0	●	1	
412-16-05-L100	4	12	16	100	34	26	5.0	●	2	
413-12-05	4	13	12	80	12	-	5.0	●	1	
414-12-05	4	14	12	80	10	-	5.0	●	1	
514-14-05-L90	5	14	14	90	15	-	5.0	●	1	

► Cutter body for 'HF' insert should be modified with body corner radius 1.8 mm

2S-TE90CV-M(S)-05

Modular heads



Designation	⚙️	Dimension (mm)								Coolant hole	Fig.	Insert
		DC	DCONMS	LF	OAL	THSZMS	APMX	DRVS				
2S-TE90CV- 208-M04-05	2	8	7.8	10	21.5	M04	5.0	6	●	1	CVK(H)T 0502...	
310-M06-05	3	10	9.7	17	31.5	M06	5.0	8	●	1		
412-M06-05	4	12	11	17	31.5	M06	5.0	8	●	1		
516-M08-05	5	16	13	23	40.5	M08	5.0	10	●	1		
620-M10-05	6	20	18	23	43.0	M10	5.0	15	●	1		
720-M10-05	7	20	18	23	43.0	M10	5.0	15	●	1		
2S-TE90CV- 208-S05-05	2	8	7.6	10	16.7	S05	5.0	5.5	●	2		
310-S06-05	3	10	9.6	15	21.3	S06	5.0	8	●	2		
412-S08-05	4	12	11.5	16	23.5	S08	5.0	10	●	2		

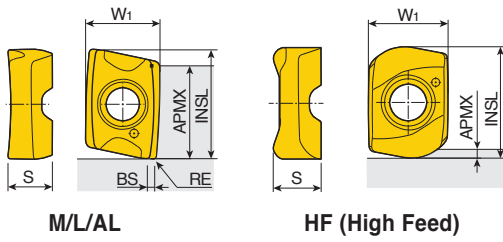
- ▶ Cutter body for 'HF' insert should be modified with body corner radius 1.8 mm
- ▶ Matched with T-FLEXTEC holder (Fig.1) & MAXI-RUSH holder (Fig.2)

Spare parts

Designation	Screw	Wrench			
	2S-TE90CV-05	TS 18033/HG-P	TD 6P		

CVK(H)T

Inserts



Size	Dimension (mm)					
	INSL	W1	S	APMX	BS	RE
05-M	6.2-6.3	4.2	2.6	5.0	0.3	0.2-0.4
05-L/AL	6.3	4.1	2.6	5.0	0.3	0.2
05-HF	5.6	4.1	2.5	0.5	-	-



Insert	Designation	Recommended machining conditions		Coated								Uncoated			
		ap (mm)	Feed (mm/tooth)	TT9080	TT9030	TT8080	TT8020	TT8525	TT7080	TT7515	TT6080	TT5525	TT2510	UF10	
	CVKT 0502PNR-M	0.5-4.0	0.08-0.04	●		●									
	050204R-M	0.5-4.0	0.08-0.04	●		●									
	CVHT 0502PNR-L	0.5-4.0	0.07-0.03	●		●					●				
	CVHT 0502PNR-AL	0.5-4.0	0.07-0.03											●	
	CVKT 0502R-HF	0.2-0.4	0.70-0.30	●		●							●		

●: Standard items

WIN4FEED



**Higher Ramp Down Angle
with Secure 'V' Clamping
for Improved Productivity**



**V-shape
insert**



**High feed insert
with strong
geometry**



**High productivity
due to high
ramp angle**



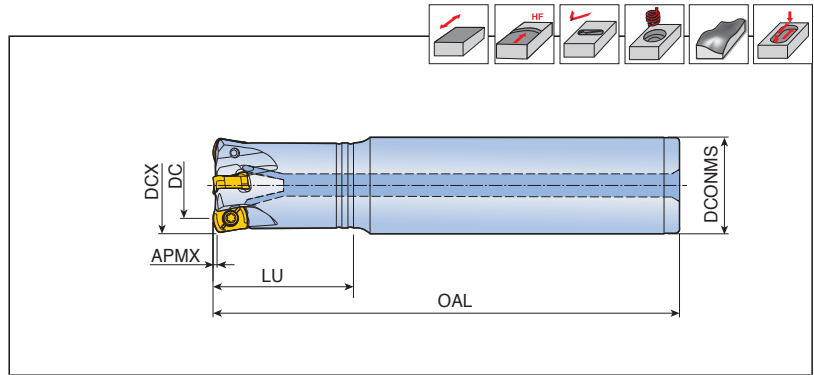
**High positive
rake angle**



**Good chip
evacuation**

TEBLV-06

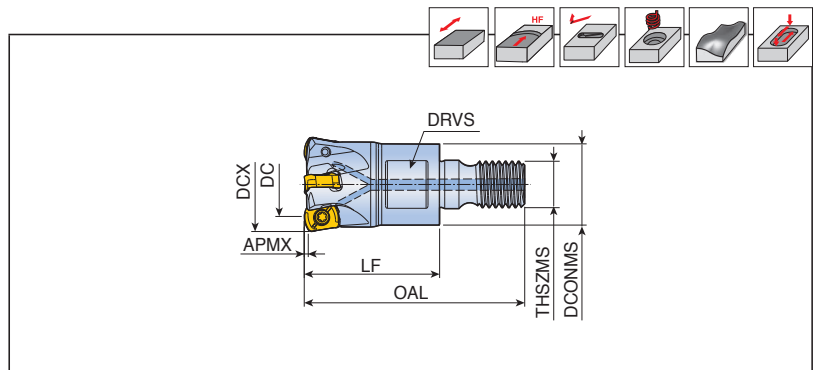
End mills



Designation	⌀	Dimension (mm)						Coolant hole	Insert
		DCX	DC	DCONMS	OAL	LU	APMX		
TEBLV 216-15-06-L150	2	16	9.1	15	150	40	0.7	●	BLMV 0603...
216-16-06-L100	2	16	9.1	16	100	30	0.7	●	
216-16-06-L150	2	16	9.1	16	150	40	0.7	●	
217-16-06-L200	2	17	10.1	16	200	20	0.7	●	
320-20-06-L130	3	20	12	20	130	50	1.0	●	
320-20-06-L160	3	20	12	20	160	80	1.0	●	
321-20-06-L150	3	21	13	20	150	20	1.0	●	
321-20-06-L200	3	21	13	20	200	20	1.0	●	
425-25-06-L140	4	25	17	25	140	60	1.0	●	
425-25-06-L180	4	25	17	25	180	60	1.0	●	
426-25-06-L200	4	26	18	25	200	30	1.0	●	
532-32-06-L150	5	32	24	32	150	70	1.0	●	
640-32-06-L150	6	40	32	32	150	40	1.0	●	

TEBLV-M-06

Modular heads

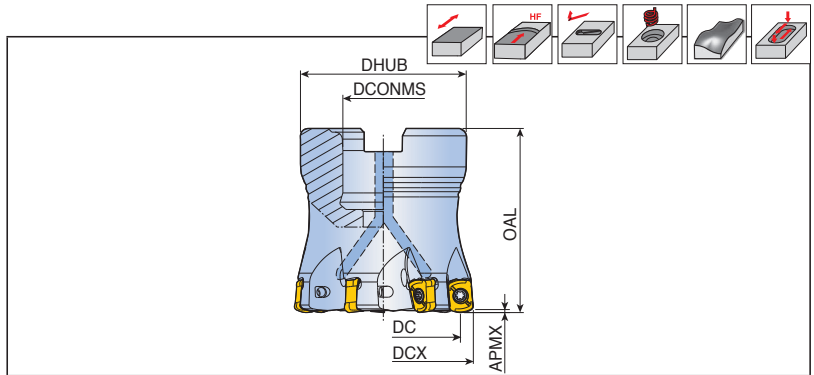


Designation	⌀	Dimension (mm)								Coolant hole	Insert
		DCX	DC	DCONMS	LF	OAL	THSZMS	APMX	DRVS		
TEBLV 216-M08-06	2	16	9.1	13	25	42.5	M08	0.7	10	●	BLMV 0603...
320-M10-06	3	20	12	18	30	50	M10	1.0	15	●	
425-M12-06	4	25	17	21	35	57	M12	1.0	17	●	
532-M16-06	5	32	24	29	40	65	M16	1.0	25	●	
535-M16-06	5	35	27	29	43	68	M16	1.0	25	●	
640-M16-06	6	40	32	29	43	68	M16	1.0	25	●	

▶ Matched with T-FLEXTEC holder

TFMBLV-06

Face mills



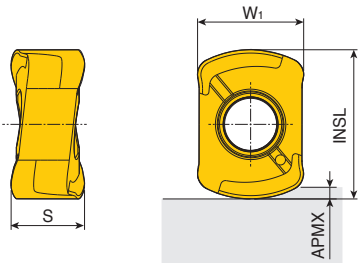
Designation	⊗	Dimension (mm)						Coolant hole	Arbor type	Kg	Mounting bolt	Insert
		DCX	DC	DCONMS	DHUB	OAL	APMX					
TFMBLV 532-16R-06	5	32	24	16	30	40	1.0	●	A	0.1	SH M8x25	BLMV 0603...
640-16R-06	6	40	32	16	38	40	1.0	●	A	0.2	SH M8x25	
650-22R-06	6	50	42	22	45	50	1.0	●	A	0.4	SH M10x30	
750-22R-06	7	50	42	22	45	50	1.0	●	A	0.4	SH M10x30	
752-22R-06	7	52	44	22	45	40	1.0	●	A	0.4	SH M10x30	
863-22R-06	8	63	55	22	48	50	1.0	●	A	0.6	SH M10x30	

Spare parts

Designation	Screw	Wrench			
TEBLV/TFMBLV-06	TS 25064I/HG-P	TD 8P			

BLMV 06

Inserts



Size	Dimension (mm)			
	INSL	W1	S	APMX
06	9	6.4	4.43	1.0

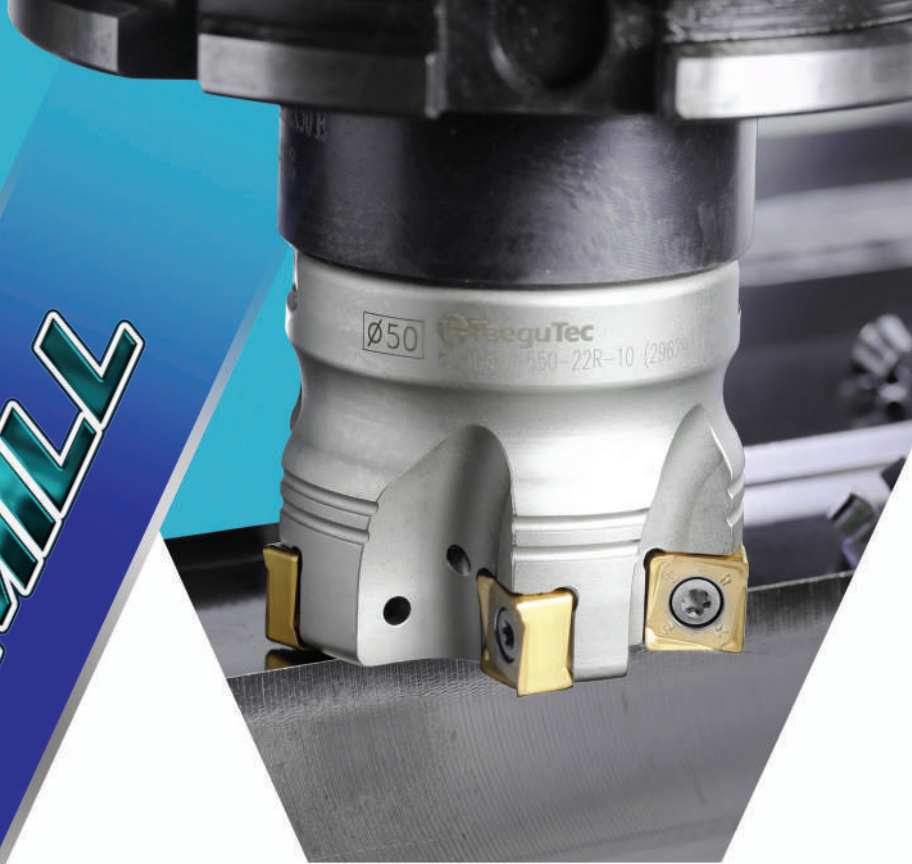


Insert	Designation	Recommended machining conditions		Coated							Uncoated
		ap (mm)	Feed (mm/tooth)	TT9080	TT9030	TT8080	TT8020	TT8525B	TT7080	TT2510	K10
	BLMV 0603R-M	0.1-1.0	2.50-0.30	●	●	●	●				

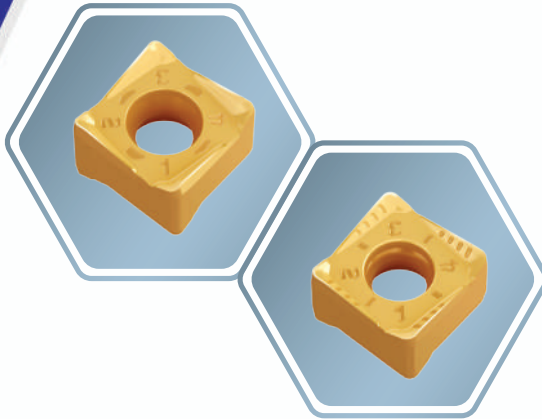
●: Standard items

CHASE 8 MILL

90° FACING & SHOULDERING



90° Shouldering with 8-Cutting Edge SQKU Insert



Economical double-sided insert



Strong tool body and high positive insert



High productivity with maximum No. of teeth



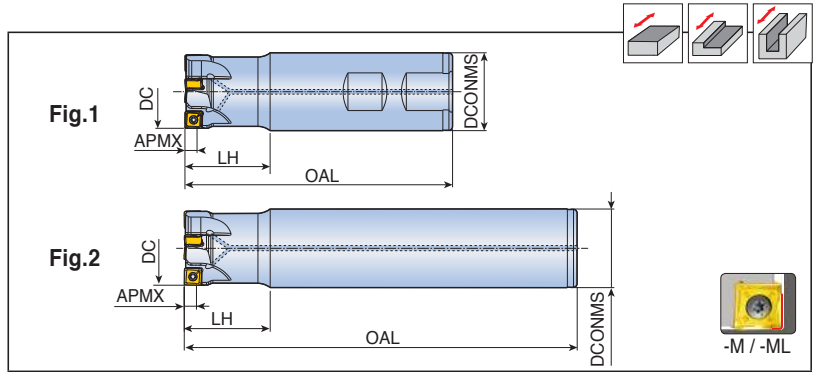
90-degree shouldering with wiper flat insert



Good chip evacuation

8D-TE90-07

End mills



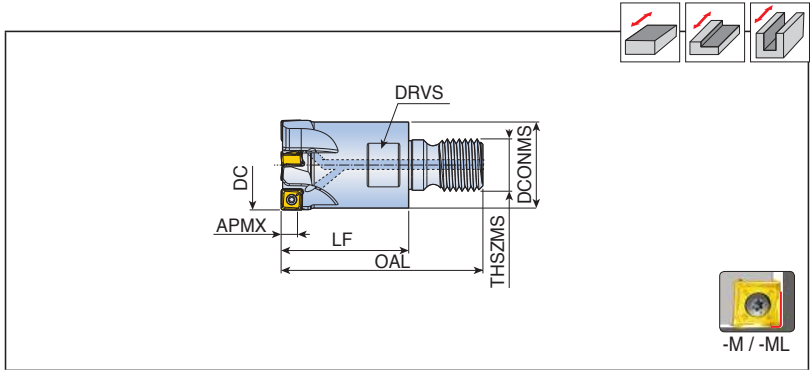
Designation		Dimension (mm)					Coolant hole	Fig.	Insert	
		DC	DCONMS	LH	OAL	APMX				
8D-TE90- 216-W16-07	2	16	16	20	90	5.0	●	1	SQKU 0703...	
216-16-07-L110	2	16	16	20	110	5.0	●	2		
217-16-07-L110	2	17	16	20	110	5.0	●	2		
220-W20-07	2	20	20	25	90	5.0	●	1		
220-20-07-L160	2	20	20	25	160	5.0	●	2		
320-W20-07	3	20	20	25	90	5.0	●	1		
221-20-07-L160	2	21	20	25	160	5.0	●	2		
325-W25-07	3	25	25	30	100	5.0	●	1		
325-25-07-L160	3	25	25	30	160	5.0	●	2		
425-W25-07	4	25	25	30	100	5.0	●	1		
326-25-07-L160	3	26	25	30	160	5.0	●	2		
432-W32-07	4	32	32	35	110	5.0	●	1		
432-32-07-L200	4	32	32	35	200	5.0	●	2		
632-W32-07	6	32	32	35	110	5.0	●	1		
433-32-07-L200	4	33	32	35	200	5.0	●	2		
540-W32-07	5	40	32	40	110	5.0	●	1		
840-W32-07	8	40	32	40	110	5.0	●	1		

Spare parts

Designation	Screw	Wrench			
8D-TE90-07	TS 25D060/HG-P	TD 7P			

8D-TE90-M-07

Modular heads



Designation		Dimension (mm)								Coolant hole	Insert
		DC	DCONMS	LF	OAL	THSZMS	APMX	DRVS			
8D-TE90- 216-M08-07	2	16	14	23	40.5	M08	5.0	10	●	SQKU 0703...	
320-M10-07	3	20	18	30	50	M10	5.0	15	●		
325-M12-07	3	25	22	35	57	M12	5.0	17	●		
432-M16-07	4	32	29	43	68	M16	5.0	25	●		
540-M16-07	5	40	29	43	68	M16	5.0	25	●		

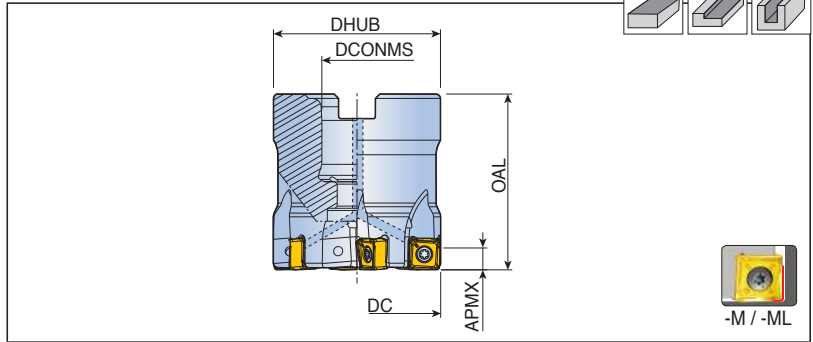
► Matched with T-FLEXTEC holder

Spare parts

Designation	Screw	Wrench			
8D-TE90-07	TS 25D060/HG-P	TD 7P			

8D-TF90-07

Face mills



Designation		Dimension (mm)					Coolant hole	Arbor style		Mounting bolt	Insert
		DC	DCONMS	DHUB	OAL	APMX					
8D-TF90- 432-16R-07	4	32	16	30	32	5.0	●	A	0.1	SH M8x25	SQKU 0703...
640-16R-07	6	40	16	38	40	5.0	●	A	0.3	SH M8x25	
650-22R-07	6	50	22	45	40	5.0	●	A	0.4	SH M10x30	
850-22R-07	8	50	22	45	40	5.0	●	A	0.4	SH M10x30	
763-22R-07	7	63	22	47	40	5.0	●	A	0.5	SH M10x30	

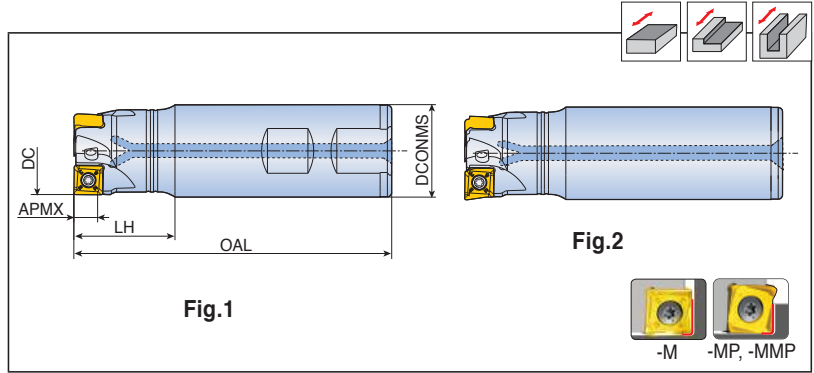
► Mounting bolt with coolant through hole is available on request (ordering example: SH M10x1.5x30-C)

Spare parts

Designation	Screw	Wrench			
8D-TE90-07	TS 25D060/HG-P	TD 7P			

8D-TE90-10

End mills

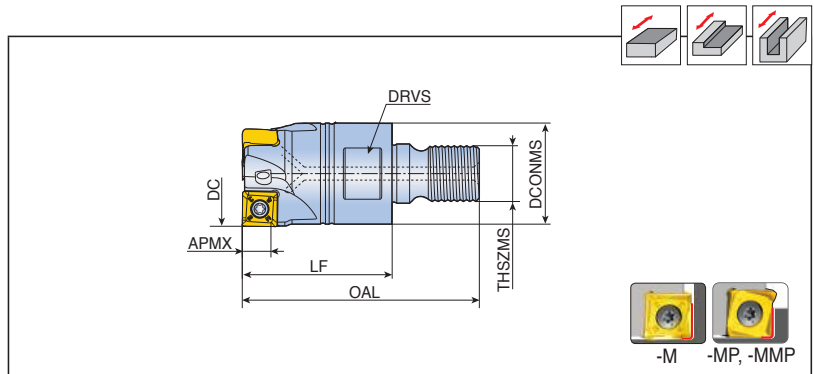


Designation	Z	Dimension (mm)					Coolant hole	Fig.	Insert
		DC	DCONMS	OAL	LH	APMX			
8D-TE90-225-W25-10	2	25	25	100	30	7.0*	●	1	SQK(H)U 1004...
225-25-10-L160	2	25	25	160	30	7.0*	●	2	
332-W32-10	3	32	32	110	35	7.0*	●	1	
332-32-07-L200	3	32	32	200	35	7.0*	●	2	
440-W32-10	4	40	32	110	40	7.0*	●	1	

► *When applying SQHU insert, APMX is 6.5 mm.

8D-TE90-M-10

Modular heads



Designation	Z	Dimension (mm)							Coolant hole	Insert
		DC	DCONMS	LF	OAL	THSZMS	APMX	DRVS		
8D-TE90-225-M12-10	2	25	22	35	57	M12	7.0*	17	SQK(H)U 1004...	
332-M16-10	3	32	29	43	68	M16	7.0*	25		
440-M16-10	4	40	29	43	68	M16	7.0*	25		

► Matched with T-FLEXTEC holder

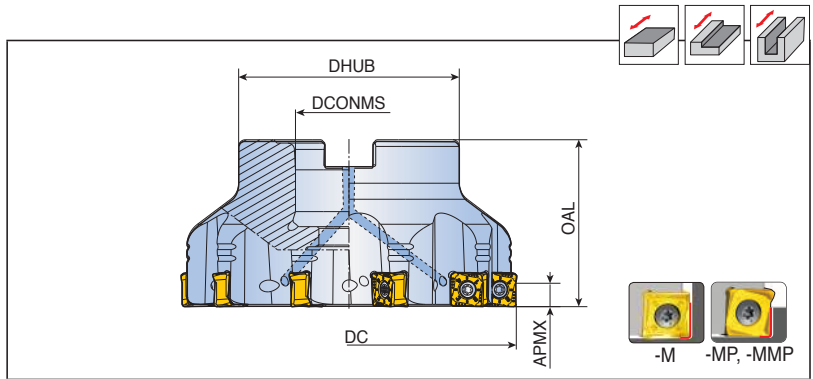
► *When applying SQHU insert, APMX is 6.5 mm.

Spare parts

Designation	Screw	Wrench			
	8D-TE90-10	TS 35A088I/HG	TD 10P		

8D-TF90-10

Face mills



Designation		Dimension (mm)					Coolant hole	Arbor type	Kg	Mounting bolt	Insert
		DC	DCONMS	DHUB	OAL	APMX					
8D-TF90-440-16R-10	4	40	16	38	40	7.0*	●	A	0.2	SH M8x25	SQK(H)U 1004...
550-22R-10	5	50	22	45	40	7.0*	●	A	0.3	SH M10x30	
663-22R-10	6	63	22	47	40	7.0*	●	A	0.5	SH M10x30	
863-22R-10	8	63	22	47	40	7.0*	●	A	0.5	SH M10x30	
880-27R-10	8	80	27	58	50	7.0*	●	A	1.1	SH M12x35	
1080-27R-10	10	80	27	58	50	7.0*	●	A	1.1	SH M12x35	
10100-32R-10	10	100	32	66	50	7.0*	●	A	1.6	SH M16x35	
14100-32R-10	14	100	32	66	50	7.0*	●	A	1.7	SH M16x35	
12125-40R-10	12	125	40	85	63	7.0*	●	A	3.4	SH M20x40	
16125-40R-10	16	125	40	85	63	7.0*	●	A	3.5	SH M20x40	

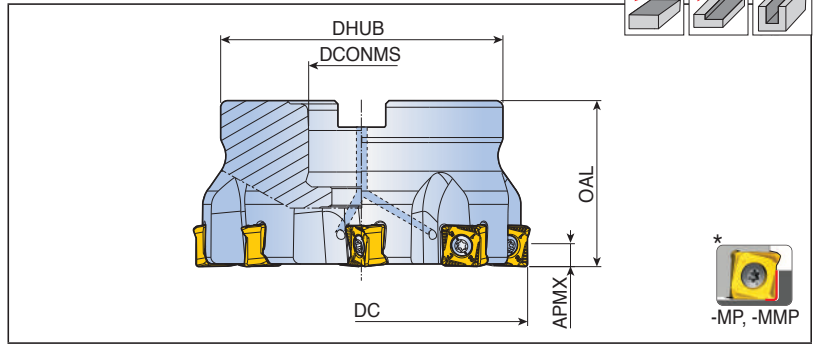
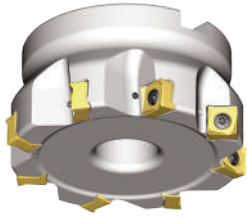
- ▶ Mounting bolt with coolant through hole is available on request (ordering example: SH M10x1.5x30-C)
- ▶ *When applying SQHU insert, APMX is 6.5 mm.

Spare parts

Designation	Screw	Wrench			
	8D-TF90-10	TS 35A088I/HG	TD 10P		

8D-TF90-12

Face mills



Designation		Dimension (mm)					Coolant hole	Arbor style	Kg	Mounting bolt	Insert
		DC	DCONMS	DHUB	OAL	APMX					
8D-TF90-340-16R-12	3	40	16	38	40	8.5**	●	E	0.3	KTB 32B	SQK(H)U 1206...
440-16R-12	4	40	16	38	40	8.5**	●	E	0.3	KTB 32B	
450-22R-12	4	50	22	45	40	8.5**	●	A	0.3	SH M10x30	
650-22R-12	6	50	22	45	40	8.5**	●	A	0.4	SH M10x30	
563-22R-12	5	63	22	47	40	8.5**	●	A	0.5	SH M10x30	
863-22R-12	8	63	22	47	40	8.5**	●	A	0.6	SH M10x30	
680-27R-12	6	80	27	58	50	8.5**	●	A	1.1	SH M12x35	
980-27R-12	9	80	27	58	50	8.5**	●	A	1.2	SH M12x35	
1180-27R-12	11	80	27	58	50	8.5**	●	A	1.2	SH M12x35	
8100-32R-12	8	100	32	66	50	8.5**	●	A	1.6	SH M16x35	
11100-32R-12	11	100	32	66	50	8.5**	●	A	1.7	SH M16x35	
14100-32R-12	14	100	32	66	50	8.5**	●	A	1.7	SH M16x35	
10125-40R-12	10	125	40	85	63	8.5**	●	A	3.4	SH M20x40	
18125-40R-12	18	125	40	85	63	8.5**	●	A	3.5	SH M20x40	
12160-40R-12	12	160	40	110	63	8.5**	x	C	4.7	-	
22160-40R-12	22	160	40	110	63	8.5**	x	C	4.9	-	

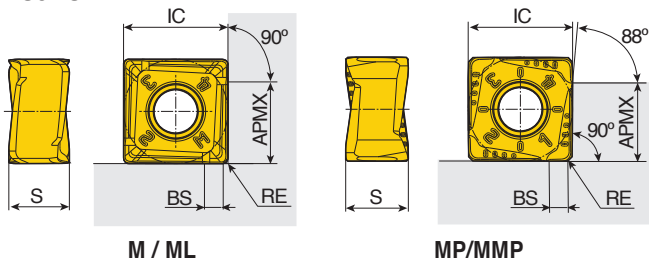
- ▶ Mounting bolt with coolant through hole is available on request (ordering example: SH M10x1.5x30-C)
- ▶ * Multi-Step milling is not recommended over the APMX ▶ ** When applying SQHU insert, APMX is 8.0mm.

Spare parts

Designation	Screw	Wrench	Wrench handle		
	8D-TF90-12	TS 40M100/HG	TBLD T15-W6	SW6-T	

SQK(H)U 07 / 10 / 12

Inserts



Size	Dimension (mm)				
	IC	S	APMX	BS	RE
07	7	4.16	5.0	0.9	0.8
10-M	10	5.8	7.0	1.1	0.8
10-MP	10	6	7.0	1.1	0.8
10-MMP	10	6	6.5	1.1	0.8
12-MP	12.2	8.06	8.5	1.1	0.8
12-MMP	12.2	8.06	8.0	1.1	0.8

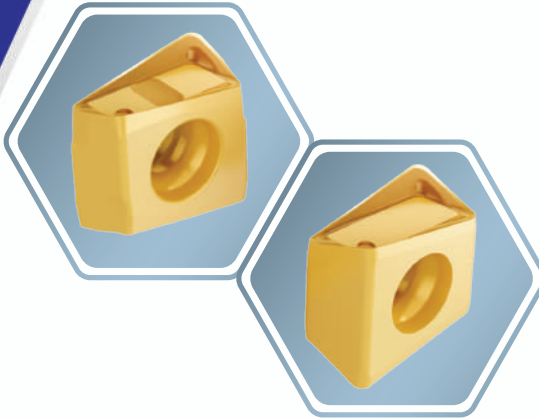


Insert	Designation	Recommended machining conditions		Coated							Uncoated			
		ap (mm)	Feed (mm/tooth)	TT9080	TT9030	TT8080	TT8020	TT8525B	TT7080	TT7515	TT6080	TT2510	K10	
	SQKU 070308 PNR-M	1.0-4.0	0.20-0.10	●		●					●	●		
	100408 PNR-M	1.5-5.5	0.20-0.10	●		●					●	●		
	SQKU 070308 PNR-ML	1.0-4.0	0.20-0.10	●		●								
	SQKU 100408 PNR-MP	1.5-5.5	0.20-0.10	●							●	●		
	120608 PNR-MP	2.0-6.5	0.25-0.15	●			●				●	●		
	SQHU 100408 PNR-MMP	1.5-5.5	0.20-0.10	●							●			
	120608 PNR-MMP	2.0-6.5	0.25-0.15	●							●			

●: Standard items

MAXITANG

Quick Changeable Head for Multiple Machining



No set-up time



High
productivity



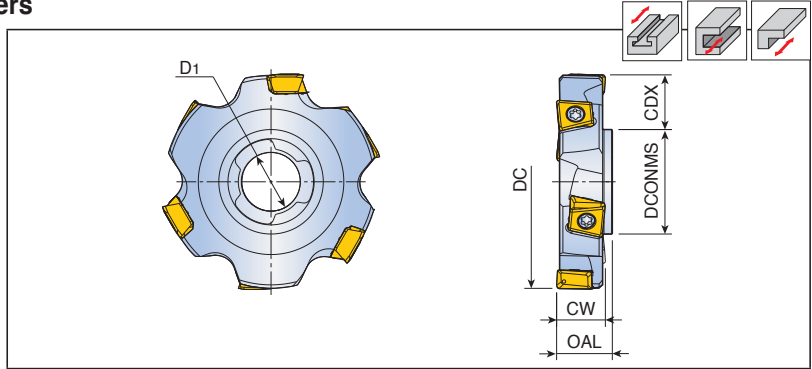
Various
applications



Good chip
evacuation

4T-TSM-TR-05

Interchangeable Slotting Cutters

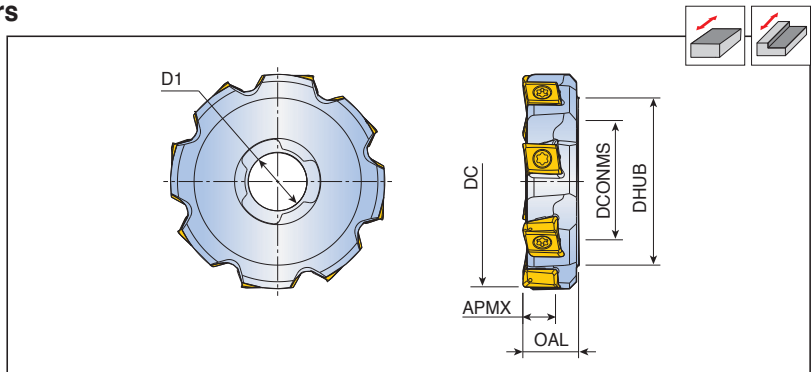


Designation	CW (mm)		Dimension (mm)					Coolant hole	Insert
			DC	DCONMS	D1	CDX	OAL		
4T-TSM-D23-07-TR13-05	7	2+2	23	13	7.5	4.5	8	X	LXHU 05
D25-07-TR13-05	7	2+2	25	13	7.5	5.5	8	X	
D32-07-TR15-05	7	3+3	32	15	8.4	8	8	X	
D40-07-TR17-05	7	4+4	40	17	9.8	11	10	X	

▶ Matched with TR holder

4T-TE90-TR-05

Interchangeable Milling Cutters



Designation		Dimension (mm)						Coolant hole	Insert
		DC	DCONMS	D1	DHUB	OAL	APMX		
4T-TE90-625-TR15-05	6	25	15	8.4	19	8	4.6	X	LPK(H)U 05
832-TR15-05	8	32	15	8.4	24	8	4.6	X	
1040-TR17-05	10	40	17	9.8	31	10	4.6	X	

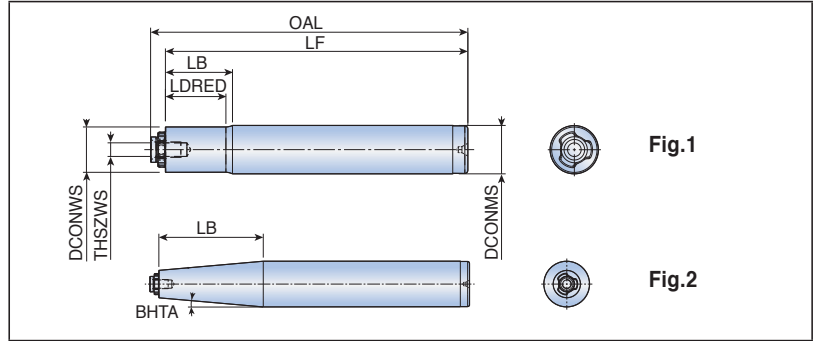
▶ Matched with TR-F-C holder

Spare parts

Designation	Screw	Wrench			
	4T-TSM/TE90-TR-05	TS 18049/HG-P	TD 6P		

TR

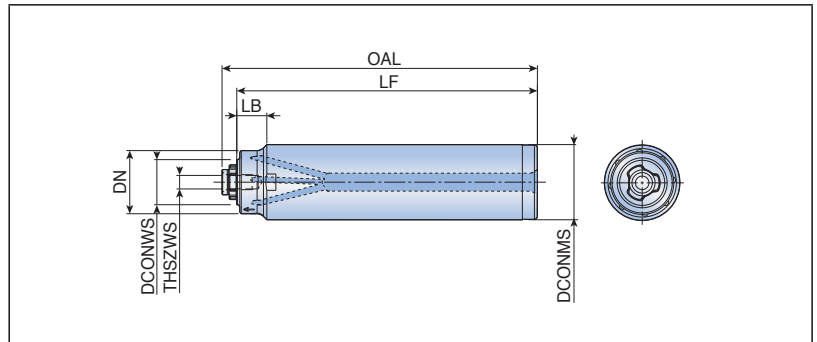
Slotting holders



Designation	Dimension (mm)									Coolant hole	Fig.	Cutter
	DCONMS	DCONWS	LB	LF	OAL	THSZWS	LDRED	BHTA				
TR13-16-L100	16	13	16.6	100	104.35	M4x0.5	13.0	-	x	1	4T-TSM-TR-05	
15-16-L100	16	15	18.2	100	104.90	M5x0.5	16.0	-	x	1		
15-16-L130	16	15	18.2	130	134.90	M5x0.5	16.0	-	x	1		
17-20-L140	20	17	23.8	140	146.00	M6x0.5	20.2	-	x	1		
15-25-TC170	25	15	57.2	170	174.90	M5x0.5	-	5	x	2		

TR-F-C

Facing holders



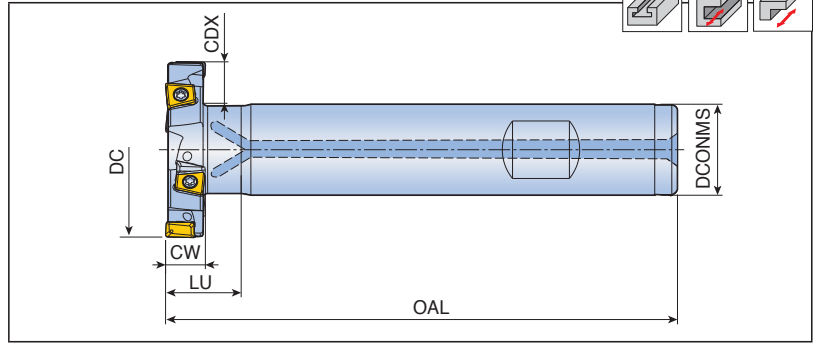
Designation	Dimension (mm)							Coolant hole	Cutter
	DCONMS	DCONWS	LB	LF	OAL	THSZWS	DN		
TR15-25-L100-F-C	25	15	10	100	104.90	M5x0.5	21	●	4T-TE90-TR-05
15-32-L110-F-C	32	15	13.5	110	114.90	M5x0.5	21	●	
17-32-L140-F-C	32	17	10	140	146.00	M6x0.5	28	●	
17-42-L140-F-C	42	17	15	140	146.00	M6x0.5	28	●	

Spare parts

Designation	Screw	Wrench	Wrench handle		
TR13	TS 40T098/HG-P	BLD IP15/S7	SW6-T		
TR15	TS 50T110/HG-P	BLD IP20/S7	SW6-T		
TR17	TS 60T130/HG-P	BLD IP20/S7	SW6-T		



4T-TSM-W-05

Slotting Cutters: End mills



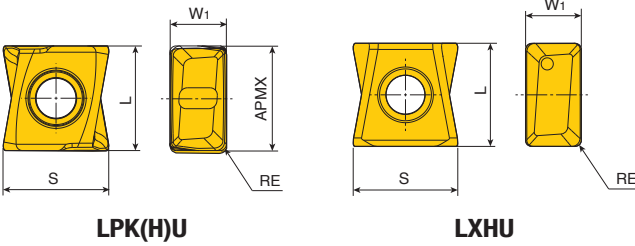
Designation	CW (mm)	✱	Dimension (mm)					Coolant hole	Insert
			DC	DCONMS	OAL	LU	CDX		
4T-TSM-D16-07-W12-05	7	1+1	16	12	90	12	3	●	LXHU 05
D20-07-W12-05	7	2+2	20	12	90	13	4	●	
D25-07-W12-05	7	2+2	25	12	90	13	6.5	●	
D32-07-W16-05	7	3+3	32	16	90	13	8	●	
D40-07-W16-05	7	4+4	40	16	105	13	12	●	

Spare parts

Designation	Screw	Wrench			
					
4T-TSM-W-05	TS 18049/HG-P	TD 6P			

LPK(H)U / LXHU 05

Inserts



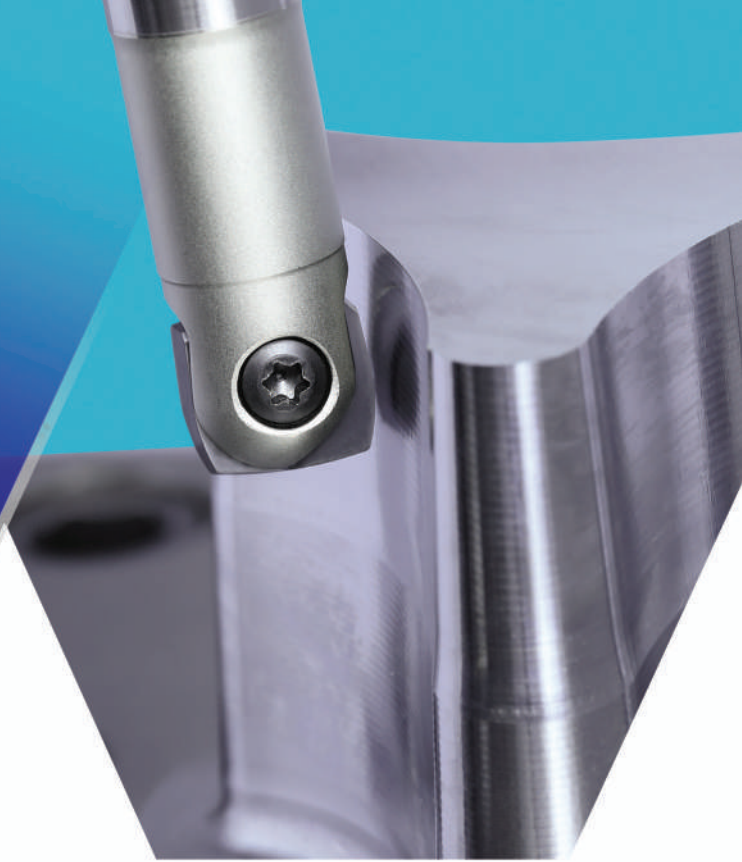
Size	Dimension (mm)					
	L	W1	S	APMX	RE	
LPK(H)U 05	5	2.7	5.0-5.2	4.6	0-0.4	
LXHU 05	5	2.7	5.0	-	0.4	



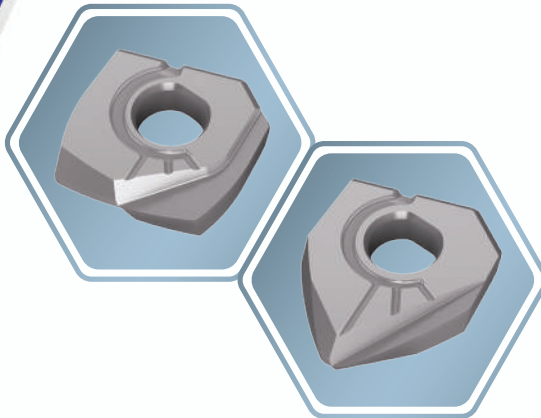
Insert	Designation	Recommended machining conditions		Coated								Uncoated		
		ap (mm)	Feed (mm/tooth)	TT9080	TT9030	TT8080	TT8020	TT8525B	TT7080	TT7515	TT6080	TT5525	K10	
	LPKU 050204 PNR-M	1.0-3.5	0.08-0.04	●		●					●			
	LPHU 050200 PNR-ML	0.1-3.5	0.08-0.03									●		
	LPHU 050202 PNR-ML	0.2-3.5	0.10-0.03									●		
	LPHU 050204 PNR-ML	0.3-3.5	0.10-0.03	●		●					●	●		
	LXHU 05-04-ML	-	0.08-0.04	●		●								

●: Standard items

FINEBARREL



High Productivity Finishing Lens and Chamfer Barrel Inserts



High
productivity



Superior surface
roughness



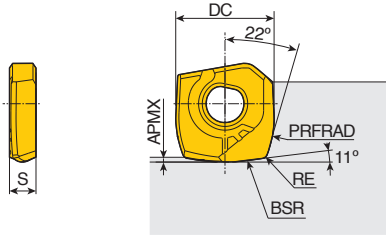
90° & 45°
Barrel Lens



Various inserts
with one holder

NFLB

Inserts



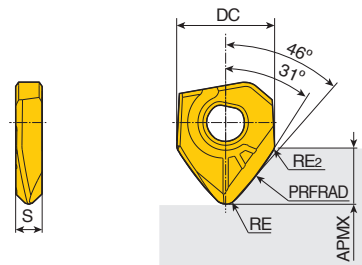
Size	Dimension (mm)					
	DC	S	APMX	RE	BSR	PRFRAD
120	12	3.2	0.4	0.7	24	12
160	16	4.2	0.6	0.8	32	16
200	20	5.2	0.7	1	40	20
250	25	6.2	0.9	1.3	50	25
300	30	7.2	1.1	1.5	60	30

Insert	Designation	Recommended machining conditions		Coated						Uncoated			
		ap (mm)	Feed (mm/tooth)	TT9080	TT9030	TT8080	TT8020	TT8525B	TT7080	TT7515	TT6080	TT5515	K10
	NFLB 120-L24-B12	-	0.15-0.08								●		
	160-L32-B16	-	0.15-0.08								●		
	200-L40-B20	-	0.15-0.08								●		
	250-L50-B25	-	0.15-0.08								●		
	300-L60-B30	-	0.20-0.08								●		

●: Standard items

NFCB

Inserts



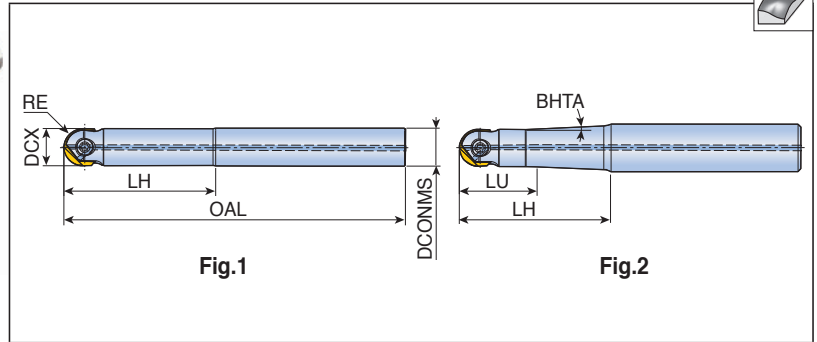
Size	Dimension (mm)								
	DC	S	APMX	RE	PRFRAD	RE ₂			
80	8	2.2	4.3	1.0	20	0.6			
100	10	2.7	5.4	1.2	25	0.8			
120	12	3.2	6.4	1.5	30	1.0			
160	16	4.2	8.5	2.0	40	1.3			
200	20	5.2	10.7	2.5	50	1.6			
250	25	6.2	13.5	3.0	62.5	2.0			
300	30	7.2	16.3	3.5	75	2.4			

Insert	Designation	Recommended machining conditions		Coated						Uncoated			
		ap (mm)	Feed (mm/tooth)	TT9080	TT9030	TT8080	TT8020	TT8525B	TT7080	TT7515	TT6080	TT5515	K10
	NFCB 080-R20	-	0.12-0.05								●		
	100-R25	-	0.12-0.05								●		
	120-R30	-	0.15-0.08								●		
	160-R40	-	0.15-0.08								●		
	200-R50	-	0.15-0.08								●		
	250-R62.5	-	0.15-0.08								●		
	300-R75	-	0.20-0.08								●		

●: Standard items

TNF

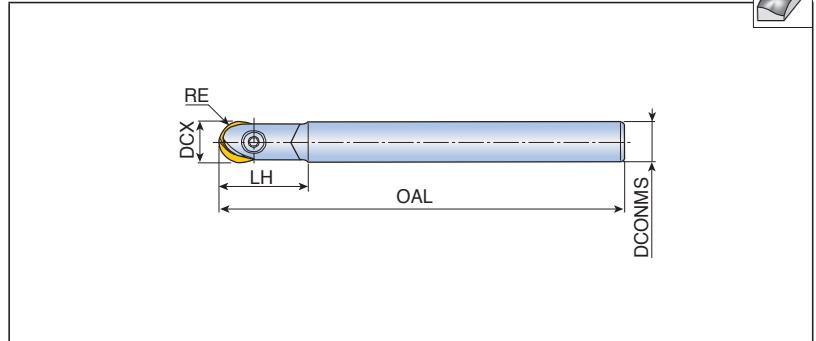
End mills - Steel shank



Designation	Dimension (mm)							Coolant hole	Fig.	Insert
	DCX	RE	DCONMS	OAL	LH	LU	BHTA			
TNF 080-08S	8	4	8	90	20	-	-	●	1	NFCB 080...
080-12S	8	4	12	100	20	10	9.5	●	2	
080-12M	8	4	12	130	50	10	3	●	2	
100-10S	10	5	10	90	30	-	-	●	1	NFCB 100...
100-12S	10	5	12	110	25	15	5	●	2	
100-16M	10	5	16	130	60	15	3.5	●	2	
120-12S	12	6	12	110	30	-	-	●	1	NFLB 120...
120-12M	12	6	12	180	60	-	-	●	1	NFCB 120...
120-16M	12	6	16	140	60	25	2.4	●	2	
120-20L	12	6	20	180	80	40	5	●	2	
160-16M	16	8	16	130	40	-	-	●	1	NFLB 160...
160-16L	16	8	16	200	100	-	-	●	1	NFCB 160...
160-20M	16	8	20	160	60	25	2.5	●	2	
160-25L	16	8	25	220	100	55	5	●	2	
200-20S	20	10	20	110	40	-	-	●	1	NFLB 200...
200-20M	20	10	20	150	50	-	-	●	1	NFCB 200...
200-20L	20	10	20	220	70	-	-	●	1	
200-25M	20	10	25	180	80	40	2.5	●	2	
200-25L	20	10	25	220	110	45	1.5	●	2	
250-25S	25	12.5	25	125	40	-	-	●	1	NFLB 250...
250-25M	25	12.5	25	170	70	-	-	●	1	NFCB 250...
250-32M	25	12.5	32	200	90	32	3	●	2	
250-32L	25	12.5	32	250	130	40	1.5	●	2	
300-32S	30	15	32	140	55	-	-	●	1	NFLB 300...
300-32M	30	15	32	190	75	-	-	●	1	NFCB 300...
300-32L	30	15	32	250	100	65	1	●	2	
300-32XL	30	15	32	300	150	-	-	●	1	
300-32-L220	30	15	32	220	100	55	1	●	2	

TNF-CT-L

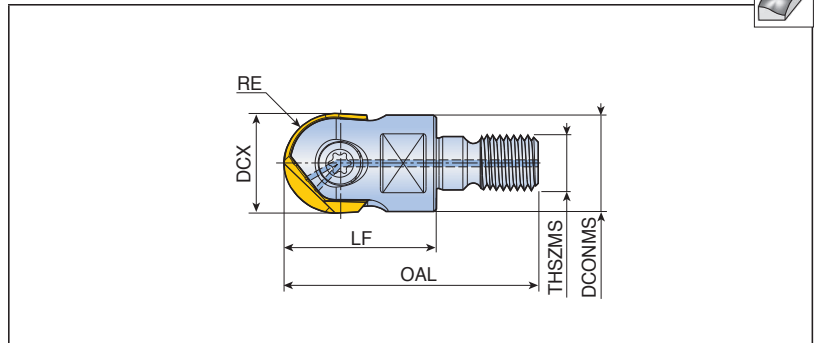
End mills - Carbide shank



Designation	Dimension (mm)					Insert
	DCX	RE	DCONMS	OAL	LH	
TNF 080-08-CT-L100	8	4	8	100	30	NFCB 080...
080-10-CT-L140	8	4	10	140	75	
080-08-CT-L160	8	4	8	160	80	
100-10-CT-L100	10	5	10	100	35	NFCB 100...
100-10-CT-L140	10	5	10	140	75	
100-10-CT-L200	10	5	10	200	70	
100-10-CT-L220	10	5	10	220	140	
120-12-CT-L120	12	6	12	120	50	NFLB 120...
120-12-CT-L160-S	12	6	12	160	30	NFCB 120...
120-12-CT-L160	12	6	12	160	90	
120-12-CT-L200	12	6	12	200	70	
120-12-CT-L220	12	6	12	220	150	
160-16-CT-L120	16	8	16	120	60	NFLB 160...
160-16-CT-L160-S	16	8	16	160	70	NFCB 160...
160-16-CT-L160	16	8	16	160	80	
160-16-CT-L200	16	8	16	200	70	
160-16-CT-L220	16	8	16	220	150	
200-20-CT-L200	20	10	20	200	70	NFLB 200...
200-20-CT-L110	20	10	20	110	40	NFCB 200...
200-20-CT-L220	20	10	20	220	120	
200-20-CT-L300	20	10	20	300	220	
250-25-CT-L200	25	12.5	25	200	70	NFLB 250...
250-25-CT-L220-S	25	12.5	25	220	80	NFCB 250...
250-25-CT-L220	25	12.5	25	220	120	
250-25-CT-L300	25	12.5	25	300	220	
300-32-CT-L200	30	15	32	200	70	NFLB 300...
300-32-CT-L250-S	30	15	32	250	80	NFCB 300...
300-32-CT-L250	30	15	32	250	150	
300-32-CT-L350-S	30	15	32	350	80	
300-32-CT-L350	30	15	32	350	230	

TNF-M

Modular heads



Designation	Dimension (mm)						Coolant hole	Insert
	DCX	RE	DCONMS	OAL	LF	THSZMS		
TNF 100-M06	10	5	9.7	34.5	20	M06	●	NFCB 100...
120-M06	12	6	11.5	37.5	23	M06	●	NFLB 120...
120-M08	12	6	13	40.5	23	M08	●	NFCB 120...
160-M08	16	8	13	47.5	30	M08	●	NFLB 160... NFCB 160...
200-M10	20	10	19	50	30	M10	●	NFLB 200... NFCB 200...
250-M12	25	12.5	24	57	35	M12	●	NFLB 250...
250-M16	25	12.5	29	68	43	M16	●	NFCB 250...
300-M16	30	15	29	68	43	M16	●	NFLB 300... NFCB 300...

► Matched with T-FLEXTEC holder

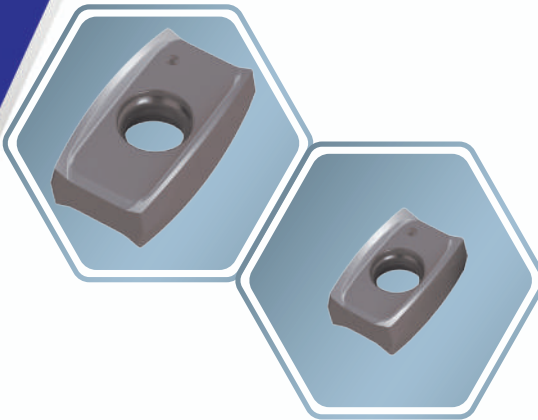
Spare parts

Designation	Screw	Wrench			Wrench handle
TNF 080	TS 25F080A	TD 8	-	-	-
TNF 100	TS 30F100A	TD 10	-	-	-
TNF 120	TS 40F120A	TD 15	-	-	-
TNF 160	TS 50F160A	-	T-T20	-	-
TNF 200	TS 60F200A	-	-	BLD T25/M7	SW6-T
TNF 250	TS 70F250A	-	-	BLD T25/M7	SW6-T
TNF 300	TS 80F300A	-	T-T30	-	-

SPEED BARREL



New, Higher Productivity Profile Milling Barrel Inserts and Holders



Big radius for
better surface
quality



Big radius for
maximizing pitch
distance



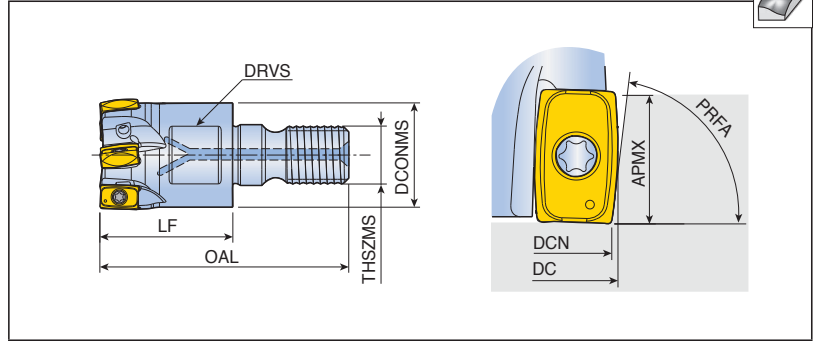
Various angle
options - 90° , 75°
& 45° Barrel



Economical
4 cutting edge
insert

TBR90-M-06/12

Modular heads

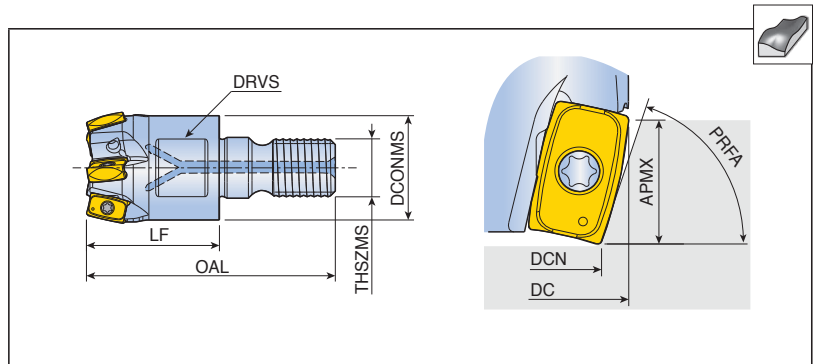


Designation	✱	Dimension (mm)										Coolant hole	Insert
		DC	DCN	APMX	PRFA	DCONMS	LF	OAL	THSZMS	DRVS			
TBR90 312-M06-06	3	12	10.95	6.3	80°- 90°	11	17	31.5	M06	8	●	BRHU 06...	
416-M08-06	4	16	14.95	6.3	80°- 90°	13	23	40.5	M08	10	●		
520-M10-06	5	20	18.95	6.3	80°- 90°	18	23	43	M10	15	●		
725-M12-06	7	25	22.95	6.3	80°- 90°	21	27	49	M12	17	●		
TBR90 320-M10-12	3	20	17.5	12.0	75°- 90°	18	27	47	M10	15	●	BRHU 12...	
425-M12-12	4	25	22.8	12.0	75°- 90°	21	35	57	M12	17	●		
532-M16-12	5	32	29.8	12.0	75°- 90°	29	38	63	M16	25	●		

► Matched with T-FLEXTEC holder

TBR75-M-06/12

Modular heads

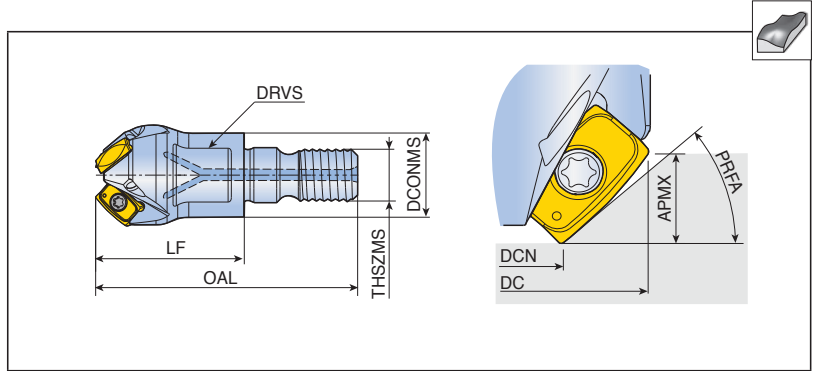


Designation	✱	Dimension (mm)										Coolant hole	Insert
		DC	DCN	APMX	PRFA	DCONMS	LF	OAL	THSZMS	DRVS			
TBR75 416-M08-06	4	16	12.75	6.14	69°- 81°	13	23	40.5	M08	10	●	BRHU 06...	
520-M10-06	5	20	16.75	6.14	69°- 81°	18	23	43	M10	15	●		
625-M12-06	6	25	21.75	6.14	69°- 81°	21	27	49	M12	17	●		
TBR75 220-M10-12	2	20	13.8	11.7	67°- 83°	18	27	47	M10	15	●	BRHU 12...	
325-M12-12	3	25	18.8	11.7	67°- 83°	21	35	57	M12	17	●		
532-M16-12	5	32	25.8	11.7	67°- 83°	29	38	63	M16	25	●		

► Matched with T-FLEXTEC holder

TBR45-M-06/12

Modular heads



Designation	✱	Dimension (mm)									Coolant hole	Insert
		DC	DCN	APMX	PRFA	DCONMS	LF	OAL	THSZMS	DRVS		
TBR45 316-M08-06	3	16	7	4.2	39°- 51°	13	23	40.5	M08	10	●	BRHU 06...
420-M10-06	4	20	11	4.2	39°- 51°	18	23	43	M10	15	●	
TBR45 332-M16-12	3	32	15	8.4	37°- 53°	29	38	63	M16	25	●	BRHU 12...

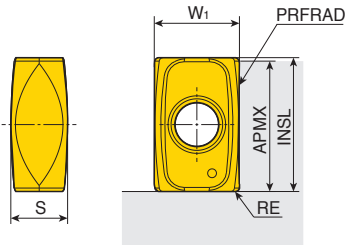
► Matched with T-FLEXTEC holder

Spare parts


Designation	Screw	Wrench			
TBR-M-06	TS 18041/HG	TD 6P			
TBR-M-12	TS 30B068I/HG	TD 8			

BRHU 06/12

Inserts



Size	Dimension (mm)					
	W1	S	APMX	INSL	RE	PRFRAD
06	4.2	2.8	6.4	6.6	0.2	20
12	7	4.56	12.2	12.4	0.2	30

Insert	Designation	Recommended machining conditions		Coated							Uncoated		
		ap (mm)	Feed (mm/tooth)	TT9080	TT9030	TT8080	TT8020	TT8525B	TT7080	TT7515	TT5515	TT2510	K10
	BRHU 06R2002-L	-	0.15-0.08										
	12R3002-L	-	0.20-0.08							•			

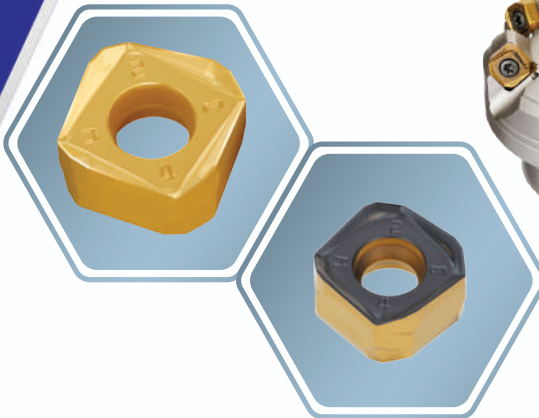
•: Standard items

CHASE 8 SPEED

FACING & HIGH FEED



8-Corners SQKU 11 & 14 Inserts for High Productivity Face Milling



High productivity
with max. No. teeth



Strong tool body
and reinforced
cutting edge



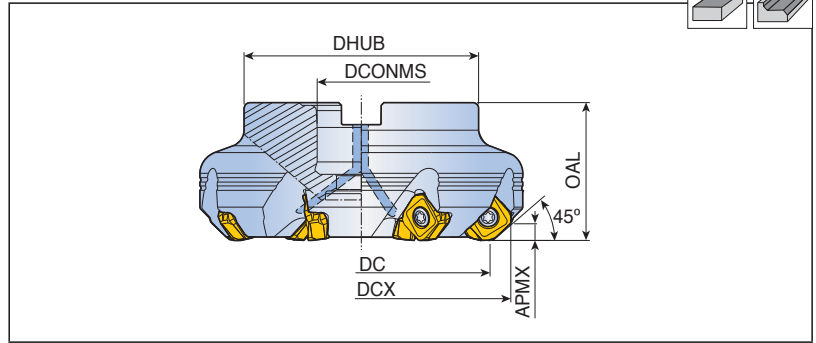
Excellent
chip evacuation



Economical
8 cutting edge

8D-TF45-11/14

Face mills



Designation	Z	Dimension (mm)						Coolant hole	Arbor type	Kg	Mounting bolt	Insert
		DC	DCX	DCONMS	DHUB	OAL	APMX					
8D-TF45-440-16R-11	4	40	51	16	38	40	4.2	●	A	0.4	SH M8X25	SQKU 1105
640-16R-11	6	40	51	16	38	40	4.2	●	A	0.4	SH M8X25	
650-22R-11	6	50	61	22	45	40	4.2	●	A	0.5	LH M10X25	
850-22R-11	8	50	61	22	45	40	4.2	●	A	0.5	LH M10X25	
763-22R-11	7	63	74	22	47	50	4.2	●	A	1.0	SH M10X30	
1063-22R-11	10	63	74	22	47	50	4.2	●	A	1.0	SH M10X30	
880-27R-11	8	80	91	27	70	50	4.2	●	A	1.6	LH M12X30	
1280-27R-11	12	80	91	27	70	50	4.2	●	A	1.6	LH M12X30	
9100-32R-11	9	100	111	32	85	50	4.2	●	A	2.4	LH M16X35	
14100-32R-11	14	100	111	32	85	50	4.2	●	A	2.5	LH M16X35	
12125-40R-11	12	125	136	40	85	63	4.2	●	A	4.0	SH M20X40	
18125-40R-11	18	125	136	40	85	63	4.2	●	A	4.1	SH M20X40	
16160-40R-11	16	160	171	40	110	63	4.2	x	C	5.6	-	
24160-40R-11	24	160	171	40	110	63	4.2	x	C	5.6	-	
8D-TF45-450-22R-14	4	50	65.5	22	45	40	6	●	A	0.6	LH M10X25	SQKU 1406
650-22R-14	6	50	65.5	22	45	40	6	●	A	0.6	LH M10X25	
663-22R-14	6	63	78.5	22	47	50	6	●	A	1.1	SH M10X30	
863-22R-14	8	63	78.5	22	47	50	6	●	A	1.0	SH M10X30	
780-27R-14	7	80	95.5	27	70	50	6	●	A	1.7	LH M12X30	
1080-27R-14	10	80	95.5	27	70	50	6	●	A	1.7	LH M12X30	
8100-32R-14	8	100	115.5	32	85	50	6	●	A	2.6	LH M16X35	
12100-32R-14	12	100	115.5	32	85	50	6	●	A	2.5	LH M16X35	
10125-40R-14	10	125	140.5	40	85	63	6	●	A	4.4	SH M20X40	
16125-40R-14	16	125	140.5	40	85	63	6	●	A	4.3	SH M20X40	
12160-40R-14	12	160	175.5	40	110	63	6	x	C	5.9	-	
20160-40R-14	20	160	175.5	40	110	63	6	x	C	5.9	-	
18200-60R-14	18	200	215.5	60	130	63	6	x	C	8.4	-	
26200-60R-14	26	200	215.5	60	130	63	6	x	C	8.3	-	

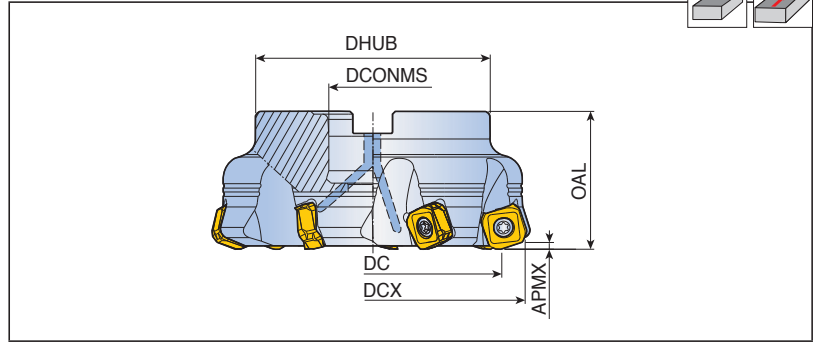
► Mounting bolt with coolant through hole is available on request (ordering example: SH M10x1.5x30-C)

Spare parts

Designation	Screw	Wrench	Wrench handle		
	8D-TF-11	TS 40A115I	TBLD T15-W6	SW6-T	
8D-TF-14	TS 50C130I/HG	TBLD T20-W6	SW6-T		

8D-TF20-11/14

High feed face mills



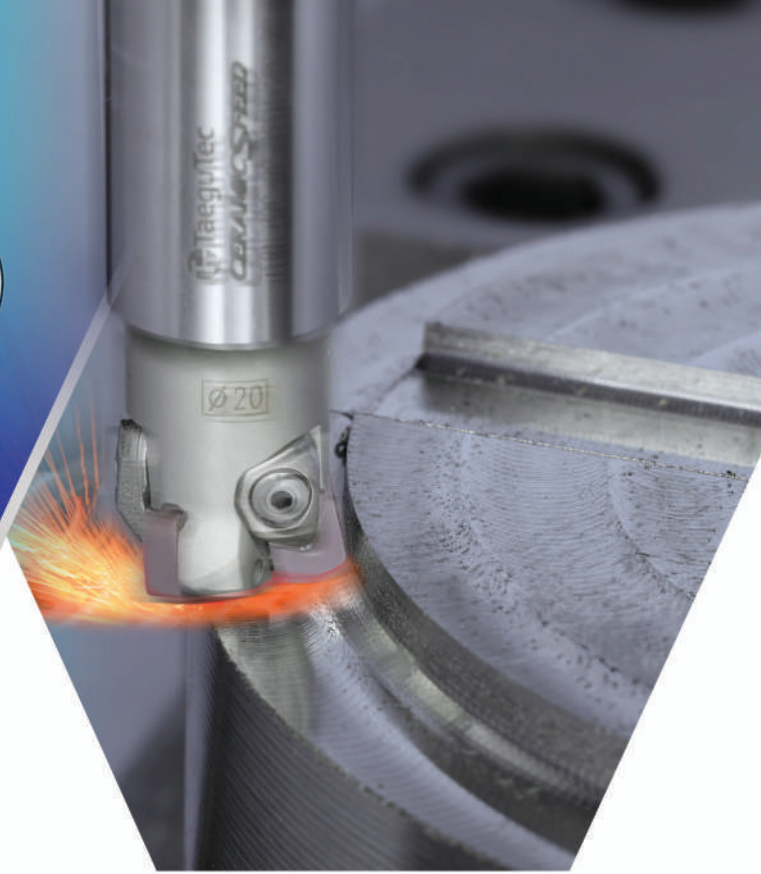
Designation	Z	Dimension (mm)						Coolant hole	Arbor type	Kg	Mounting bolt	Insert
		DC	DCX	DCONMS	DHUB	OAL	APMX					
8D-TF20-450-22R-11	4	50	63.5	22	45	40	1.8	●	A	0.5	SH M10X30	SQKU 1105
563-22R-11	5	63	76.5	22	47	50	1.8	●	A	0.9	SH M10X30	
680-27R-11	6	80	93.5	27	70	50	1.8	●	A	1.5	SH M12X35	
8100-32R-11	8	100	113.5	32	85	50	1.8	●	A	2.2	LH M16X35	
8D-TF20-563-22R-14	5	63	80.6	22	47	50	2.5	●	A	1.0	SH M10X30	SQKU 1406
680-27R-14	6	80	97.6	27	70	50	2.5	●	A	1.7	SH M12X35	
7100-32R-14	7	100	117.5	32	85	50	2.5	●	A	2.5	LH M16X35	
8125-40R-14	8	125	142.5	40	85	63	2.5	●	A	4.3	SH M20X40	

► Mounting bolt with coolant through hole is available on request (ordering example: SH M10x1.5x30-C)

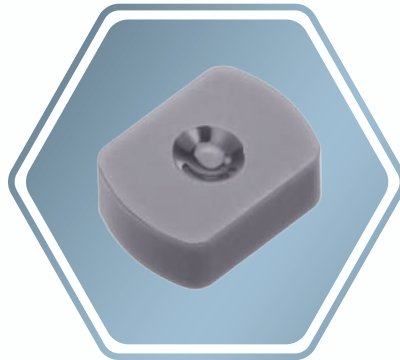
Spare parts

Designation	Screw	Wrench	Wrench handle		
8D-TF-11	TS 40A115I	TBLD T15-W6	SW6-T		
8D-TF-14	TS 50C130I/HG	TBLD T20-W6	SW6-T		

CERAMICSPEED
HARDPART & EXOTIC MATERIALS



SiAlON Ceramic Milling for High-Speed Machining of Super Alloy



For super alloy
materials



Ultra High Speed
(V: 800-1200m/min)



High feed
geometry



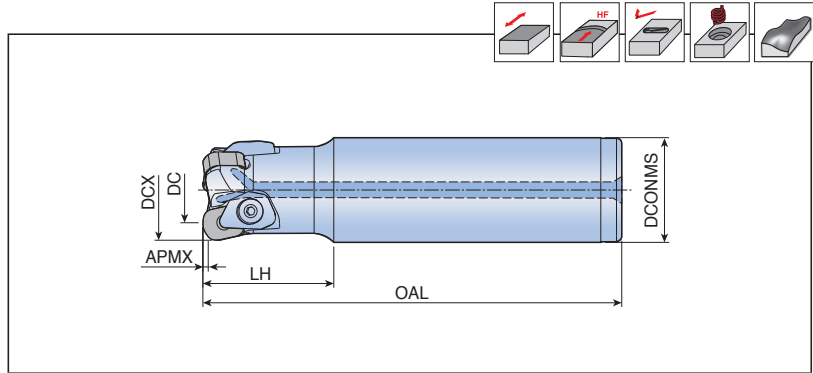
High
productivity



Good chip
evacuation

TEBN-06CH

High feed end mills

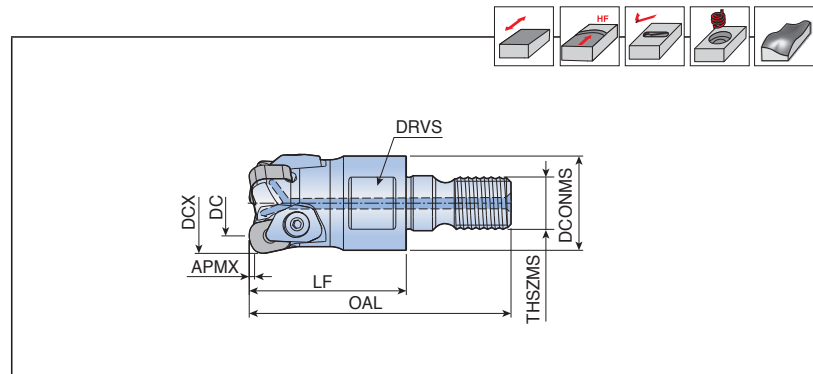


Designation	✱	Dimension (mm)						Air (1) hole	Insert
		DCX	DC	DCONMS	OAL	LH	APMX		
TEBN 216-16-06CH-L80	2	16	8.6	16	80	25	1.0	x	BNGX 0603...
320-20-06CH-L80	3	20	12.5	20	80	25	1.0	●	
425-25-06CH-L100	4	25	17.4	25	100	40	1.0	●	
532-32-06CH-L120	5	32	24.3	32	120	40	1.0	●	

► (1) Use only air (coolant is prohibited)

TEBN-M-06CH

High feed modular heads



Designation	✱	Dimension (mm)								Air (1) hole	Insert
		DCX	DC	DCONMS	LF	OAL	THSZMS	APMX	DRVS		
TEBN 216-M08-06CH	2	16	8.6	13	25	42.5	8	1.0	10	x	BNGX 0603...
320-M10-06CH	3	20	12.5	18	30	50	10	1.0	15	●	
425-M12-06CH	4	25	17.4	21	35	57	12	1.0	17	●	
532-M16-06CH	5	32	24.3	29	43	68	16	1.0	25	●	

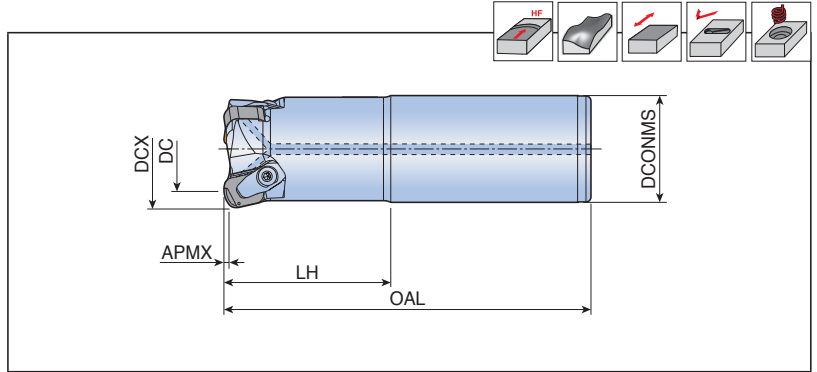
► Matched with T-FLEXTEC holder ► (1) Use only air (coolant is prohibited)

Spare parts

Designation	Clamp	Screw	Snap ring	Wrench	
TEBN-06CH	CCL-2S	CLS-25A080	CSR M2.5	L-W 1.5	

TEBN-09CH

High feed end mills



Designation		Dimension (mm)						Air hole ⁽¹⁾	Insert
		DCX	DC	DCONMS	OAL	LH	APMX		
TEBN 225-25-09CH-L100	2	25	14.8	25	100	40	1.5	x	BNGX 0904...
325-25-09CH-L100	3	25	14.8	25	100	40	1.5	x	
332-32-09CH-L120	3	32	21.5	32	120	40	1.5	●	
440-32-09CH-L120	4	40	29.4	32	120	40	1.5	●	

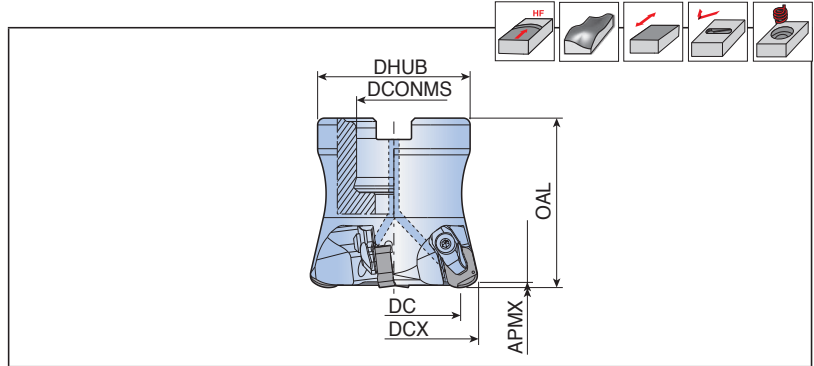
► ⁽¹⁾ Use only air (Coolant is prohibited)

Spare parts

Designation	Clamp 	Screw 	Snap ring 	Wrench 	
TEBN-09CH	CCL-3S	CLS-35A120	CSR 1.25	L-W 2	

TFMBN-09CH

High feed face mills



Designation		Dimension (mm)						Air hole ⁽¹⁾	Arbor style		Mounting bolt	Insert
		DCX	DC	DCONMS	DHUB	OAL	APMX					
TFMBN 440-16R-09CH	4	40	29.4	16	38	40	1.5	●	A	0.2	SH M8x30	BNGX 0904...
350-22R-09CH	3	50	39.4	22	45	40	1.5	●	A	0.5	SH M10x30	
550-22R-09CH	5	50	39.4	22	45	40	1.5	●	A	0.4	SH M10x30	

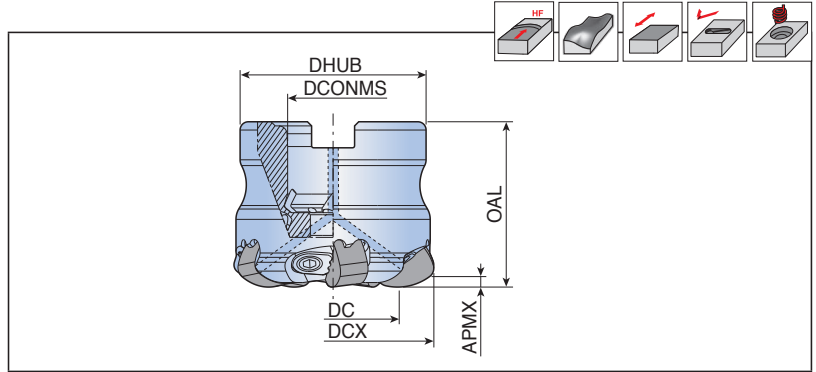
- ▶ Mounting bolt with coolant through hole is available on request (ordering example: SH M10x1.5x30-C)
- ▶ ⁽¹⁾ Use only air (Coolant is prohibited)

Spare parts

Designation	Clamp 	Screw 	Snap ring 	Wrench 	
TFMBN-09CH	CCL-3S	CLS-35A120	CSR 1.25	L-W 2	

TFMBN-12

High feed face mills



Designation		Dimension (mm)						Air hole ⁽¹⁾	Arbor style		Mounting bolt	Insert
		DCX	DC	DCONMS	DHUB	OAL	APMX					
TFMBN 450-22R-12	4	50	32.8	22	45	40	2.5	●	A	0.3	SH M10x30	BNGX 1207...
550-22R-12	5	50	32.8	22	45	40	2.5	●	A	0.3	SH M10x30	
663-22R-12	6	63	45.7	22	47	40	2.5	●	A	0.4	SH M10x30	
763-22R-12	7	63	45.7	22	47	40	2.5	●	A	0.4	SH M10x30	
780-27R-12	7	80	62.6	27	70	50	2.5	●	A	1.2	SH M12x35	
880-27R-12	8	80	62.6	27	70	50	2.5	●	A	1.2	SH M12x35	

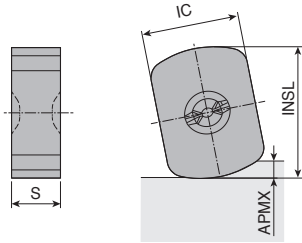
- ▶ Mounting bolt with coolant through hole is available on request (ordering example: SH M10x1.5x30-C)
- ▶ ⁽¹⁾ Use only air (Coolant is prohibited)

Spare parts

Designation	Wedge 	Screw 	Wrench 		
TFMBN-12	WFZ 6-C	WS 6	T-W 3		

BNGX 06 / 09

High feed inserts



Size	Dimension (mm)					
	INSL	IC	S	APMX		
06	8	6	3	1.0		
09	12	9	5	1.5		

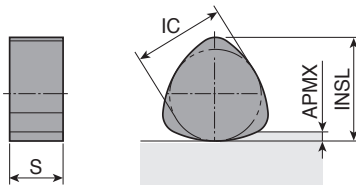
Insert	Designation	Recommended machining conditions		Ceramic		Coated						Uncoated			
		ap (mm)	Feed (mm/tooth)	TC3030	TC3020	TT9080	TT9030	TT8080	TT8020	TT8525B	TT7080	TT7515	TT6080	K10	
	BNGX 0603 CH-E04	0.4-0.8	0.30-0.10	●											
	0904 CH-E04	0.5-1.0	0.35-0.15	●											

▶ E04: Honing 0.04-0.05mm

●: Standard items

BNGX 12

High feed inserts



Size	Dimension (mm)					
	INSL	IC	S	APMX		
12	13.6	12	7	2.5		

Insert	Designation	Recommended machining conditions		Ceramic		Coated						Uncoated			
		ap (mm)	Feed (mm/tooth)	TC3030	TC3020	TT9080	TT9030	TT8080	TT8020	TT8525B	TT7080	TT7515	TT6080	K10	
	BNGX 1207-E04	1.0-2.0	0.35-0.15	●											

▶ E04: Honing 0.04-0.05mm

●: Standard items

WINSPEED

ADVANCED MACHINING



- Cat.No: 6250729
- English Version: CT 05/2023
- ©TaeguTec LTD.

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