



FLEXTURN

MODULAR HEAD TYPE HOLDERS FOR SWISS MACHINES

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- Modular head type holders for swiss machines •*
- Easy replacement of modular heads and inserts •*
- Improved productivity owing to reduced set-up time •*
- Rigid clamping between shanks and heads, and good repeatability •*
- Reduced inventory due to the ability to mount multiple heads on one shank •*



General Information

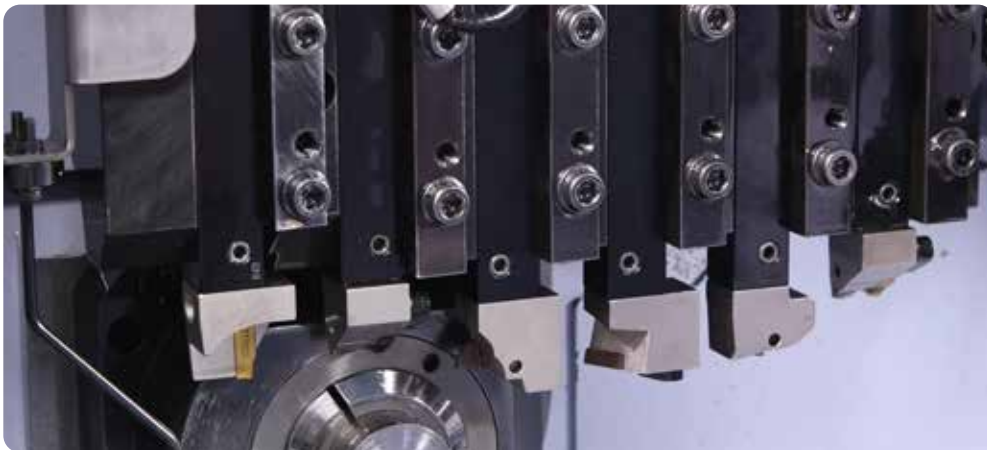
Ingersoll presents the new FLEX-TURN family of modular heads and holders for Swiss machines.

It is usually time consuming to remove holders from the tool post when changing inserts on Swiss machines. With the ingenious FLEX-TURN family, inserts can be replaced outside of the machine by removing only the modular head, with the shank mounted to the tool post, reducing insert changing time and increasing productivity.

Additionally, unlike the integrated holders, there is no risk of losing the holder's spare parts and inserts by dropping them in the machine when replacing inserts, making the **FLEX-TURN** family more convenient to use.



















Advantages & Features

- Modular head type holders for swiss machines
- Easy replacement of modular heads and inserts
- Improved productivity owing to reduced set-up time
- Rigid clamping between shanks and heads, and good repeatability
- Reduced inventory due to the ability to mount multiple heads on one shank
- A variety of modular heads are available for turning, grooving and parting applications
- COOL-BURST system improves chip control and tool life (-TB holders)
- Minimized risk of losing holder's spare parts and inserts







FLEXTURN MODULAR CHANGEABLE HEAD SYSTEM

Modular head and shank assembly for external machining applications

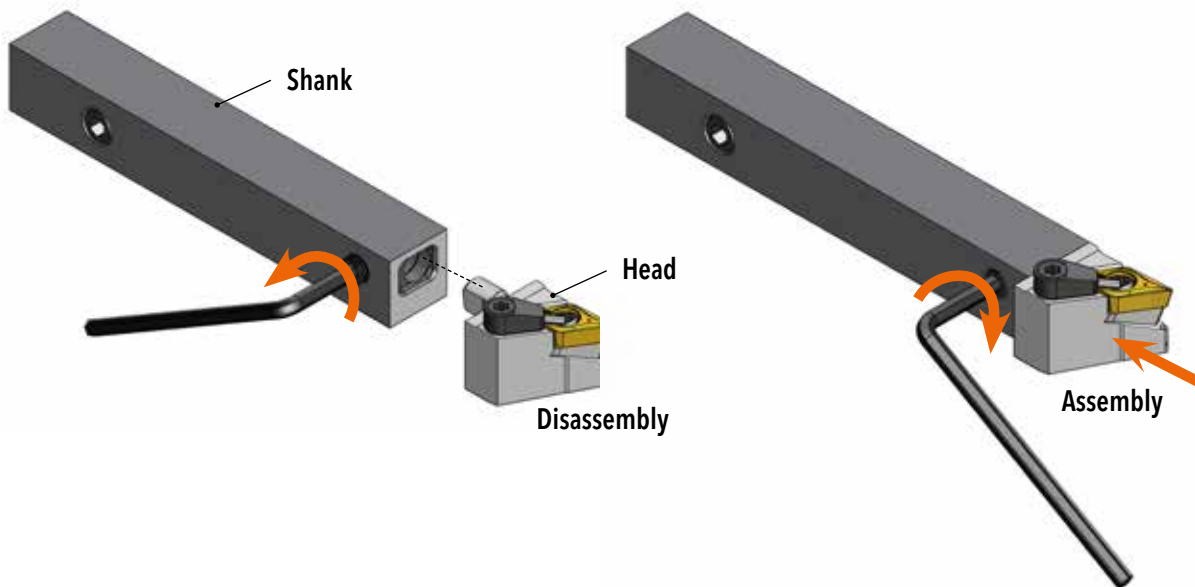
External coolant supply				 <p>QE1 S12N-TB (Neutral type, 12x12)</p>
 <p>TTURN QE1 SDJCR</p>	 <p>TTURN QE1 SVJB(C)R</p>	 <p>RHINOTURN QE1 SDJNR</p>	 <p>RHINOTURN QE1 SDJNR</p>	
 <p>TTURN QE1B SVXCR</p>	 <p>TCLAMP QE1 TTER</p>	 <p>TCLAMP QE1 TTEL</p>	 <p>GOLDFLEX QE1 TQHR</p>	
COOLBURST High-pressure internal coolant supply				 <p>QE1 S16R-TB (Right hand type, 16x16)</p>
 <p>TTURN QE1 SDJCR-TB</p>	 <p>TTURN QE1 SVJB(C)R-TB</p>	 <p>RHINOTURN QE1 SDJNR-TB</p>	 <p>RHINOTURN QE1 SDJNR-TB</p>	
 <p>TTURN QE1B SVXCR-TB</p>	 <p>TCLAMP QE1 TTER-TB</p>	 <p>TCLAMP QE1 TTEL-TB</p>	 <p>GOLDFLEX QE1 TQHR-TB</p>	

Right hand head and shank assembly for Y-axis machining

External coolant supply	 <p>QE1 S12N-TB (Neutral type, 12x12)</p>
 <p>TTURN QE1Y SDJCR</p>	
COOLBURST High-pressure internal coolant supply	 <p>QE1 S16L-TB (Left hand type, 16x16)</p>
 <p>TTURN QE1Y SDJCR-TB</p>	

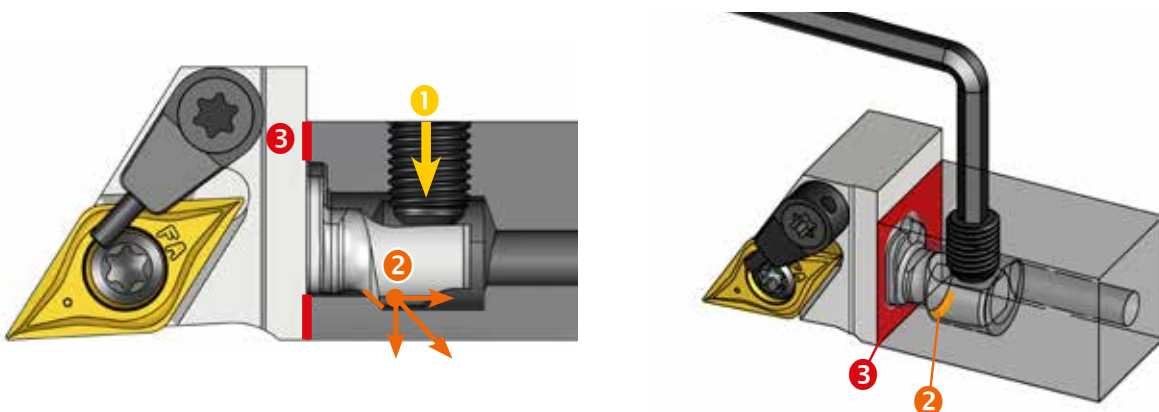
Easy modular head replacement

- The shanks remain in the tool post
- Disassemble the head from the shank with one rotation of the screw
- Right-hand modular heads for turning can be assembled with neutral and right-hand shanks
- Right-hand modular heads for Y-axis machining can be assembled with neutral and left-hand shanks
- Modular heads for grooving can be assembled with neutral and right-hand shanks



Rigid clamping and good repeatability

The unique assembly mechanism provides higher rigidity than the competitors' products. Combining the taper with the lever principle ensures a rigid assembly.



- 1 Screw clamping
- 2 Tapered face contact
- 3 Rigid clamping between the shanks and the heads

FLEXTURN MODULAR CHANGEABLE HEAD SYSTEM

CoolBurst high-pressure coolant system

- Chip control and tool life are improved due to the coolant channels directed to insert's cutting edge



Insert replacement

Due to the FLEX-TURN's small head sizes, replacing the inserts could be difficult. Please use the fixture to facilitate insert replacement.

Modular heads for Y-axis (QE1Y...)



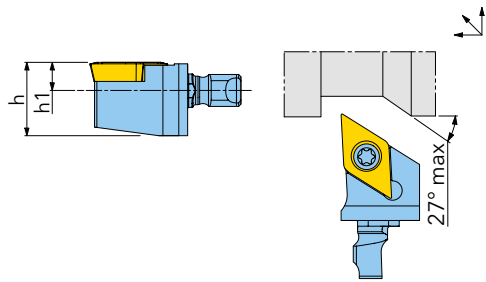
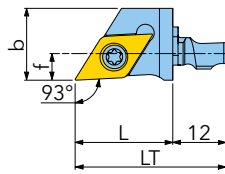
Other modular heads



must be ordered separately

FLEXTURN QE1 SDJCR

MODULAR HEAD FOR EXTERNAL TURNING ON SWISS-TYPE MACHINES
FOR POSITIVE 55° DC_ INSERTS WITH 7° CLEARANCE ANGLE



Designation

LT

L

f

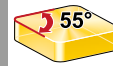
κ

h

h1

b

kg



QE1 SDJCR 11

34,0

22,0

7,0

93

16,2

6,0

16,2

0,055

DC_11T3_

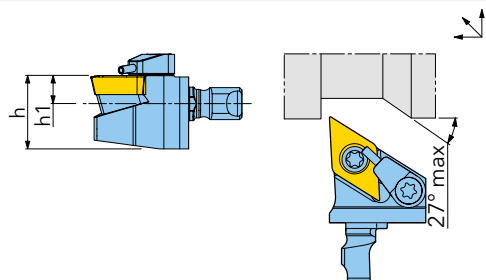
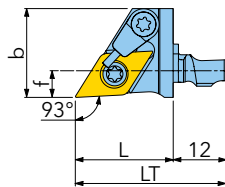
SO 350801

T15

① = insert screw ② = wrench

FLEXTURN QE1 SDJCR-TB

MODULAR HEAD FOR EXTERNAL TURNING WITH HIGH-PRESSURE COOLANT ON SWISS-TYPE MACHINES
FOR POSITIVE 55° DC_ INSERTS WITH 7° CLEARANCE ANGLE



Designation

LT

L

f

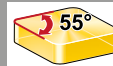
κ

h

h1

b

kg



QE1 SDJCR 11-TB

34,0

22,0

7,0

93

16,5

6,0

20,0

0,060



DC_11T3_

SO 350801

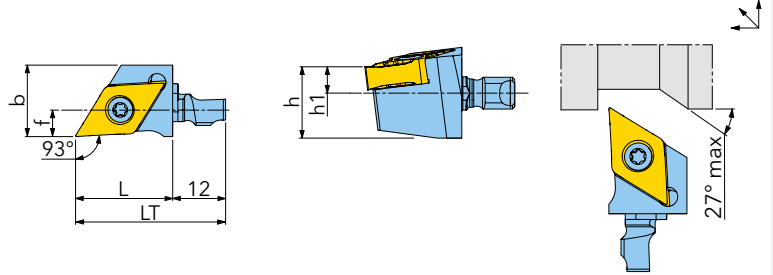
T15

S-CU-TB

① = insert screw ② = wrench ③ = coolant unit

FLEXTURN QE1 SDJNR

MODULAR HEAD FOR EXTERNAL TURNING ON SWISS-TYPE MACHINES
FOR NEGATIVE 55° DN_ INSERTS

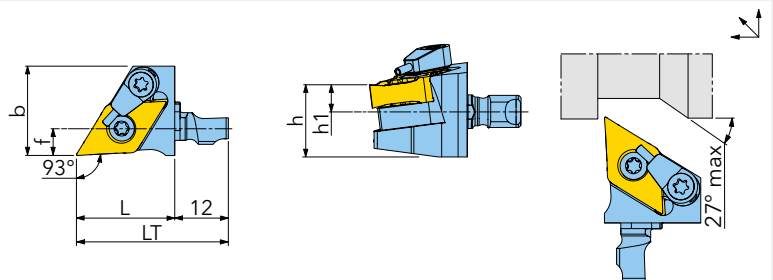


Designation	LT	L	f	κ	h	h1	b	kg			
QE1 SDJNR 0803	34,0	22,0	7,0	93	16,2	6,0	16,2	0,055	DN_X 0803_	TS 25D060/HG-P	T7P
QE1 SDJNR 1305	34,0	22,0	7,0	93	16,2	6,0	16,2	0,055	DN_G 1305_	TS 40G110I	T15

① = insert screw ② = wrench

FLEXTURN QE1 SDJNR-TB

MODULAR HEAD FOR EXTERNAL TURNING WITH HIGH-PRESSURE COOLANT ON SWISS-TYPE MACHINES
FOR NEGATIVE 55° DN_ INSERTS

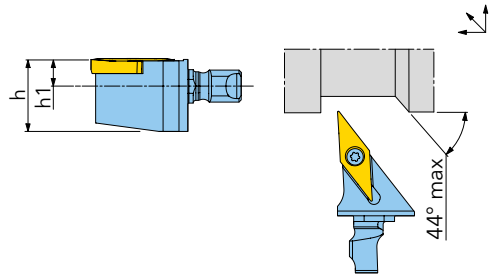
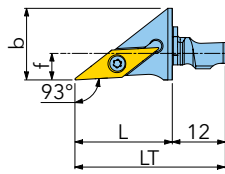


Designation	LT	L	f	κ	h	h1	b	kg					
QE1 SDJNR 0803-TB	34,0	22,0	7,0	93	16,2	6,0	16,2	0,055	✓	DN_X 0803_	TS 25D060/HG-P	T7P	S-CUTB
QE1 SDJNR 1305-TB	34,0	22,0	7,0	93	16,2	6,0	20,0	0,055	✓	DN_G 1305_	TS 40G110I	T15	S-CUTB

① = insert screw ② = wrench ③ = coolant unit

FLEXTURN QE1 SVJBR

MODULAR HEAD FOR EXTERNAL TURNING ON SWISS-TYPE MACHINES
FOR POSITIVE 35° VB_ INSERTS



Designation

LT

L

f

κ

h

h1

b

kg



QE1 SVJBR 11

37,0

25,0

7,0

93

16,2

6,0

16,2

0,055

VB_11T3_

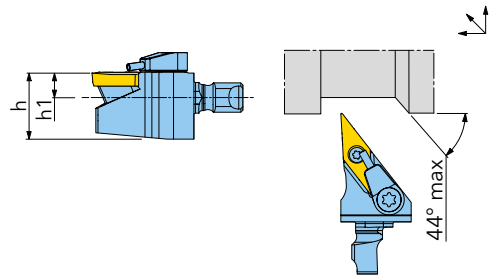
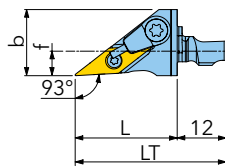
SO 250501

T7

① = insert screw ② = wrench

FLEXTURN QE1 SVJBR-TB

MODULAR HEAD FOR EXTERNAL TURNING WITH HIGH-PRESSURE COOLANT ON SWISS-TYPE MACHINES
FOR POSITIVE 35° VB_ INSERTS



Designation

LT

L

f

κ

h

h1

b

kg



QE1 SVJBR 11-TB

37,0

25,0

7,0

93

16,2

6,0

16,2

0,055



VB_11T3_

SO 250501

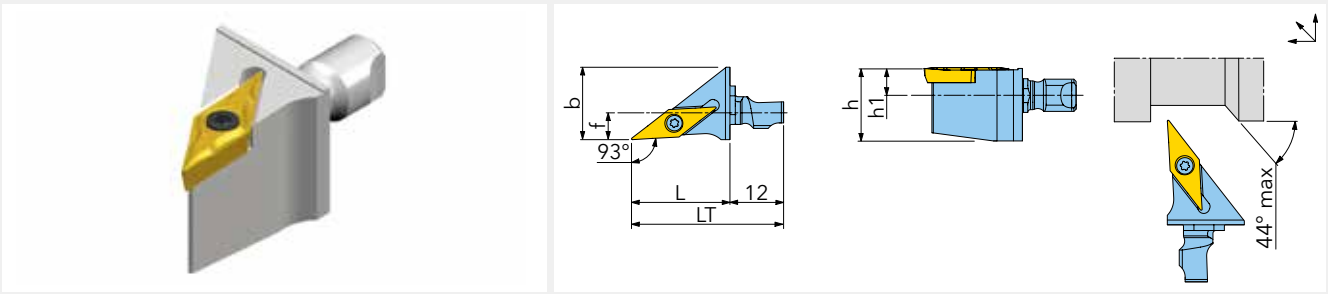
T7

S-CU-TB

① = insert screw ② = wrench ③ = coolant unit

FLEXTURN QE1 SVJCR

MODULAR HEAD FOR EXTERNAL TURNING ON SWISS-TYPE MACHINES
FOR POSITIVE 35° VC_ INSERTS

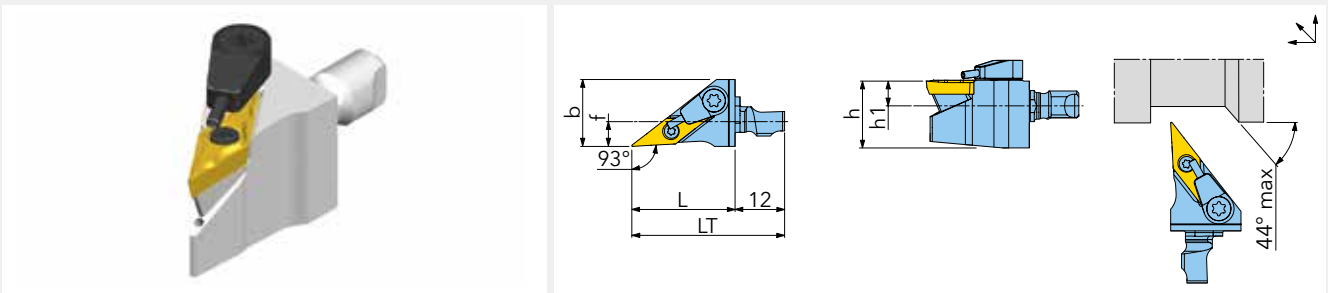


Designation	LT	L	f	κ	h	h1	b	kg			
QE1 SVJCR 11	37,0	25,0	7,0	93	16,2	6,0	16,2	0,055	VC_1103_	S0 25065I	T7

① = insert screw ② = wrench

FLEXTURN QE1 SVJCR-TB

MODULAR HEAD FOR EXTERNAL TURNING WITH HIGH-PRESSURE COOLANT ON SWISS-TYPE MACHINES
FOR POSITIVE 35° VC_ INSERTS

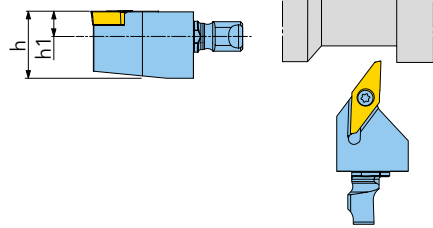
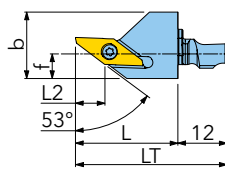


Designation	LT	L	f	κ	h	h1	b	kg					
QE1 SVJCR 11-TB	37,0	25,0	7,0	93	16,2	6,0	16,2	0,055	✓	VC_1103_	S0 25065I	T7	S-CUTB

① = insert screw ② = wrench ③ = coolant unit

FLEXTURN QE1B SVXCR

MODULAR HEAD FOR EXTERNAL BACK TURNING ON SWISS-TYPE MACHINES



Designation

LT

L

L2

f

κ

h

h1

b

kg

35°



QE1B SVXCR 11

37,0

25,0

7,2

3,0

53

16,2

6,0

16,2

0,050

BTVC 1103_

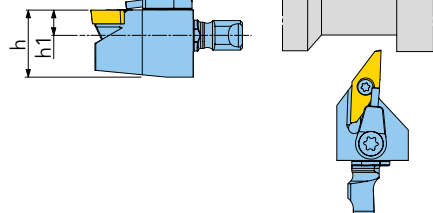
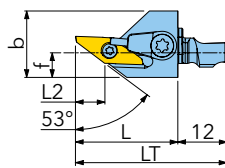
SO 250651

T7

① = insert screw ② = wrench

FLEXTURN QE1B SVXCR-TB

MODULAR HEAD FOR EXTERNAL BACK TURNING WITH HIGH-PRESSURE COOLANT ON SWISS-TYPE MACHINES



Designation

LT

L

L2

f

κ

h

h1

b

kg

IK

35°



QE1B SVXCR 11-TB

37,0

25,0

7,2

3,0

53

16,2

6,0

16,2

0,050

✓

BTVC 1103_

SO 250651

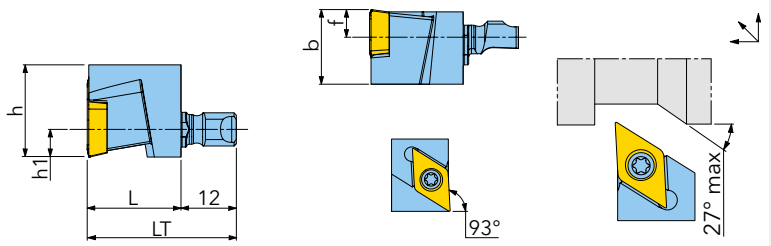
T7

S-CU-TB

① = insert screw ② = wrench ③ = coolant unit

FLEXTURN QE1Y SDJCR

MODULAR HEAD FOR Y-AXIS TURNING ON SWISS-TYPE MACHINES
FOR POSITIVE 55° DC_ INSERTS WITH 7° CLEARANCE ANGLE

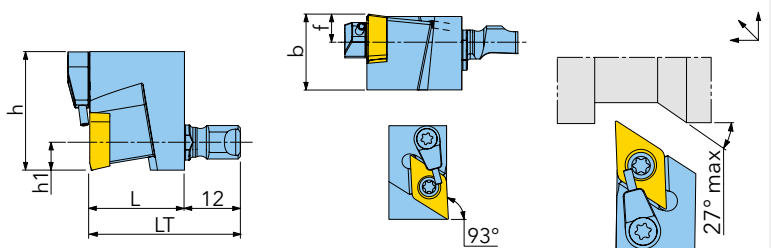


Designation	LT	L	f	κ	h	h1	b	kg			
QE1Y SDJCR 11	32,0	20,0	7,0	93	20,0	6,0	16,2	0,060	DC_11T3_	SO 35080I	T15

① = insert screw ② = wrench

FLEXTURN QE1Y SDJCR-TB

MODULAR HEAD WITH HIGH PRESSURE COOLING FOR TURNING WITH Y-AXIS ON SWISS-TYPE MACHINES
FOR POSITIVE 55° DC_ INSERTS WITH 7° CLEARANCE ANGLE

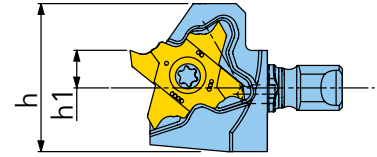
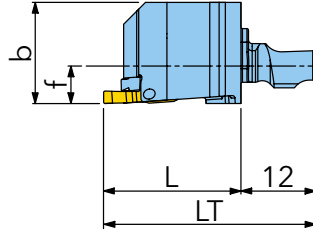


Designation	LT	L	f	κ	h	h1	b	kg					
QE1Y SDJCR 11-TB	32,0	20,0	7,0	93	25,5	6,0	16,2	0,060	✓	DC_11T3_	SO 35080I	T15	S-CUTB

① = insert screw ② = wrench ③ = coolant unit

FLEXTURN QE1 TQHR

MODULAR HEAD FOR PARTING AND GROOVING ON SWISS-TYPE MACHINES

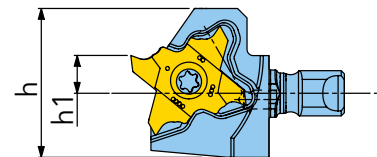
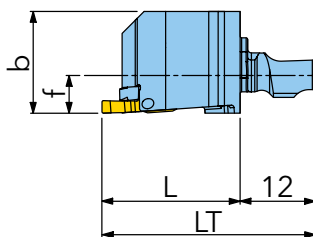


Designation	LT	L	f	h	h1	b	insert-S	kg		
QE1 TQHR 20	34,0	22,0	7,0	23,7	6,0	16,2	20	0,055	TS 40A100L	T-1508/5

① = insert screw ② = wrench

FLEXTURN QE1 TQHR-TB

MODULAR HEAD WITH HIGH PRESSURE COOLANT FOR GROOVING AND PARTING ON SWISS-TYPE MACHINES

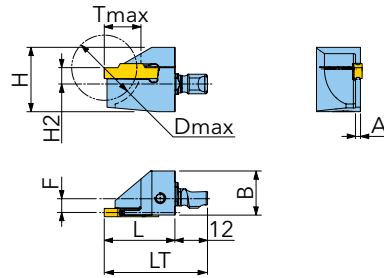


Designation	LT	L	f	h	h1	b	inserts-S	kg			
QE1 TQHR 20-TB	34,0	22,0	7,0	23,7	6,0	16,2	20	0,055	✓	TS 40A100L	T-1508/5

① = insert screw ② = wrench

FLEXTURN QE1 TTER/L

MODULAR HEAD FOR GROOVING AND PARTING ON SWISS-TYPE MACHINES

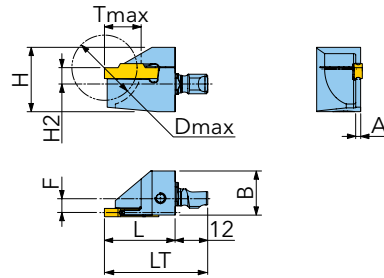


Designation	D max.	LT	L	H	H2	A	B	F	Tmax	inserts-S	kg	①	②
QE1 TTEL 2-12-24	24,0	38,0	26,0	23,7	6,0	1,8	16,0	8,1	12,0	2	0,060	SH M4X0.7X16	WS-0060
QE1 TTEL 2-16-32	32,0	38,0	26,0	23,7	6,0	1,8	16,0	8,1	16,0	2	0,060	SH M4X0.7X16	WS-0060
QE1 TTEL 3-12-24	24,0	38,0	26,0	23,7	6,0	2,4	16,0	7,8	12,0	3	0,060	SH M4X0.7X16	WS-0060
QE1 TTEL 3-16-32	32,0	38,0	26,0	23,7	6,0	2,4	16,0	7,8	16,0	3	0,060	SH M4X0.7X16	WS-0060
QE1 TTER 2-12-24	24,0	38,0	26,0	23,7	6,0	1,8	16,0	8,1	12,0	2	0,060	SH M4X0.7X16	WS-0060
QE1 TTER 2-16-32	32,0	38,0	26,0	23,7	6,0	1,8	16,0	8,1	16,0	2	0,060	SH M4X0.7X16	WS-0060
QE1 TTER 3-12-24	24,0	38,0	26,0	23,7	6,0	2,4	16,0	7,8	12,0	3	0,060	SH M4X0.7X16	WS-0060
QE1 TTER 3-16-32	32,0	38,0	26,0	23,7	6,0	2,4	16,0	7,8	16,0	3	0,060	SH M4X0.7X16	WS-0060

① = insert screw ② = wrench

FLEXTURN QE1 TTER/L-TB

MODULAR HEAD WITH HIGH PRESSURE COOLANT FOR GROOVING AND PARTING ON SWISS-TYPE MACHINES



Designation	D max.	LT	L	H	H2	A	B	F	Tmax	inserts-S	kg
QE1 TTEL 2-12-24-TB	24,0	38,0	26,0	23,7	6,0	1,8	16,0	8,1	12,0	2	
QE1 TTEL 2-16-32-TB	32,0	38,0	26,0	23,7	6,0	1,8	16,0	8,1	16,0	2	
QE1 TTEL 3-12-24-TB	24,0	38,0	26,0	23,7	6,0	2,4	16,0	7,8	12,0	3	
QE1 TTEL 3-16-32-TB	32,0	38,0	26,0	23,7	6,0	2,4	16,0	7,8	16,0	3	
QE1 TTER 2-12-24-TB	24,0	38,0	26,0	23,7	6,0	1,8	16,0	8,1	12,0	2	
QE1 TTER 2-16-32-TB	32,0	38,0	26,0	23,7	6,0	1,8	16,0	8,1	16,0	2	
QE1 TTER 3-12-24-TB	24,0	38,0	26,0	23,7	6,0	2,4	16,0	7,8	12,0	3	
QE1 TTER 3-16-32-TB	32,0	38,0	26,0	23,7	6,0	2,4	16,0	7,8	16,0	3	

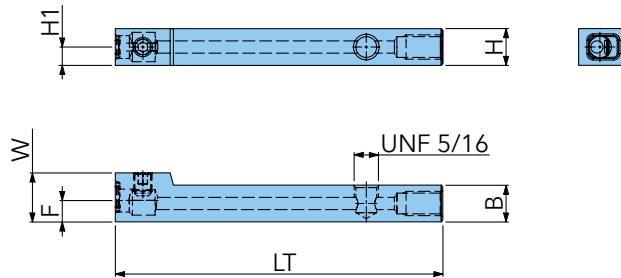
Designation	①	②
QE1 TTEL 2-12-24-TB	SH M4X0.7X16	WS-0060
QE1 TTEL 2-16-32-TB	SH M4X0.7X16	WS-0060
QE1 TTEL 3-12-24-TB	SH M4X0.7X16	WS-0060
QE1 TTEL 3-16-32-TB	SH M4X0.7X16	WS-0060
QE1 TTER 2-12-24-TB	SH M4X0.7X16	WS-0060
QE1 TTER 2-16-32-TB	SH M4X0.7X16	WS-0060
QE1 TTER 3-12-24-TB	SH M4X0.7X16	WS-0060
QE1 TTER 3-16-32-TB	SH M4X0.7X16	WS-0060

① = insert screw ② = wrench

A large, empty rectangular box with rounded corners and a light gray border, intended for taking notes.

FLEXTURN QE1 S12N-TB

HOLDER FOR MODULAR HEADS ON SWISS-TYPE MACHINES

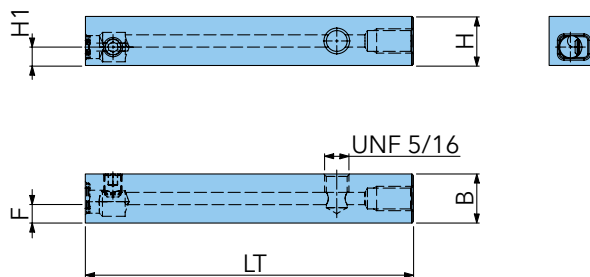


Designation	LT	H	H1	B	f	W	kg	IK	①	②	③	④
QE1 S12N-TB	107,0	12,0	6,0	12,0	7,0	16,0	0,170	✓	SS M6F-7	WS-0060	PLG 5/16 UNF	L-W 5/32

① = lock screw ② = wrench ③ = plug ④ = wrench

FLEXTURN QE1 S16R/L-TB

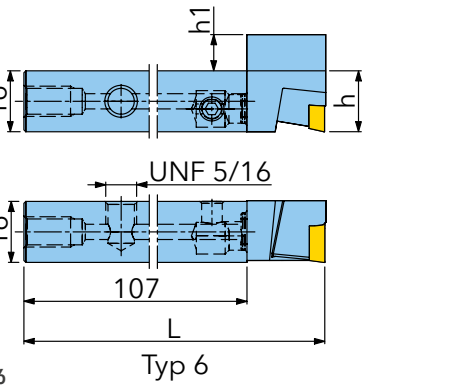
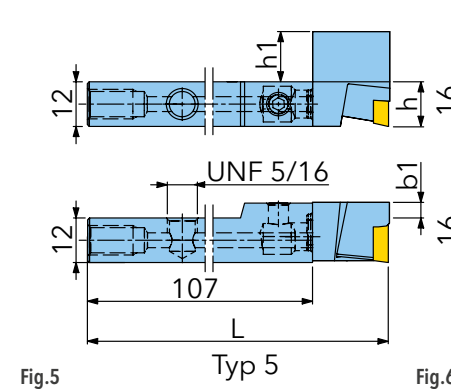
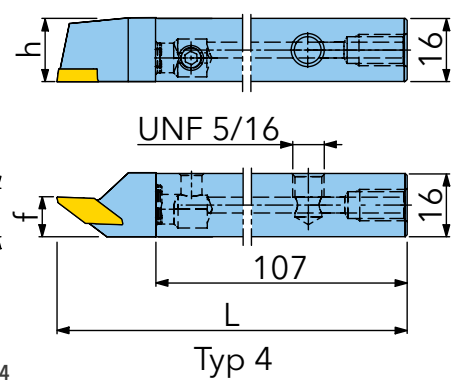
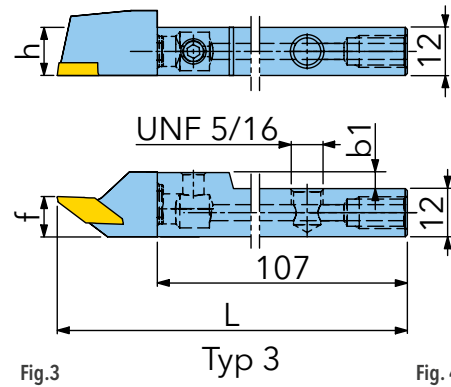
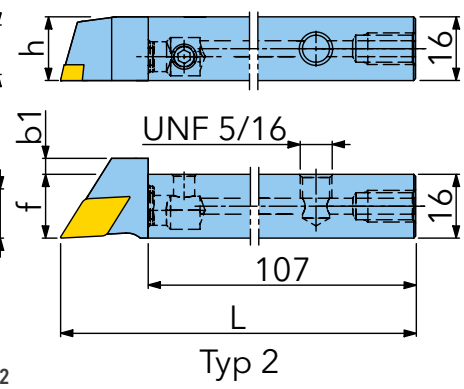
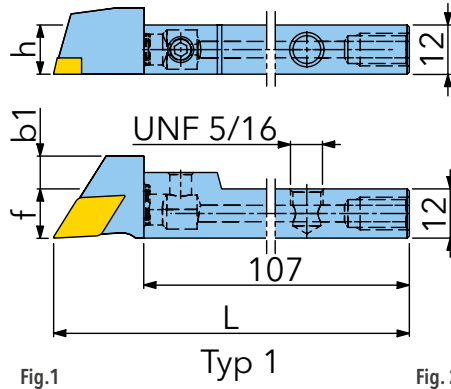
HOLDER FOR MODULAR HEADS ON SWISS-TYPE MACHINES



Designation	LT	H	H1	B	f	W	kg	IK	①	②	③	④
QE1 S16L-TB	107,0	16,0	6,0	16,0	7,0	16,0	0,170	✓	SS M6F-7	WS-0060	PLG 5/16 UNF	L-W 5/32
QE1 S16R-TB	107,0	16,0	6,0	16,0	7,0	16,0	0,170	✓	SS M6F-7	WS-0060	PLG 5/16 UNF	L-W 5/32

① = lock screw ② = wrench ③ = plug ④ = wrench

FLEXTURN ASSEMBLY DIMENSIONS (EXTERNAL TURNING)



Holder	Head	H1	H2	L	F	B1	Fig.
QE1 S12N-TB	QE1 SD...11-TB / QE1 SD...1305-TB	12	4.2	129	12	8	1
	QE1 SD...0803 (-TB) / QE1 SD...11 / QE1 SD...1305	12	4.2	129	12	4.2	1
	QE1 SV...11(-TB)	12	4.2	132	12	4.2	1
	QE1B...11(-TB)	12	4.2	132	10	4.2	3
	QE1Y...11	12	8.0	127	-	4.2	5
	QE1Y...11-TB	12	13.5	127	-	4.2	5
QE1 S16R-TB	QE1 SD...11-TB / QE1 SD...1305-TB	16	-	129	16	4	2
	QE1 SD...0803 (-TB) / QE1 SD...11 / QE1 SD...1305	16	-	129	16	-	2
	QE1 SV...11(-TB)	16	-	132	16	-	2
	QE1B...11(-TB)	16	-	132	10	-	4
QE1 S16L-TB	QE1Y...11	16	4	127	-	-	6
	QE1Y...11-TB	16	9.5	127	-	-	6

FLEXTURN ASSEMBLY DIMENSIONS (PARTING / GROOVING)

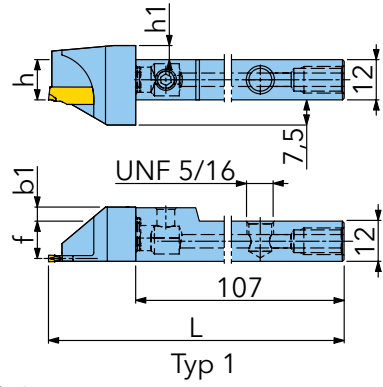


Fig.1

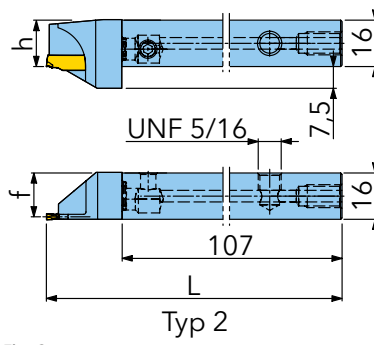


Fig.2

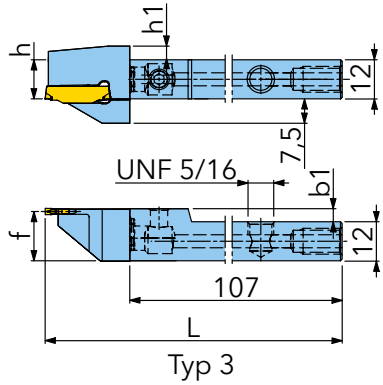


Fig.3

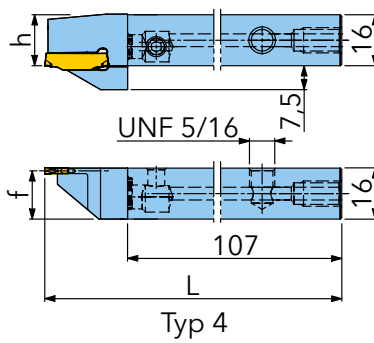


Fig.4

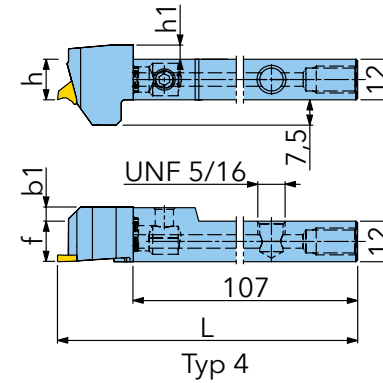


Fig.5

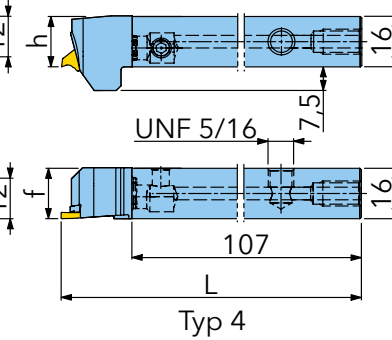
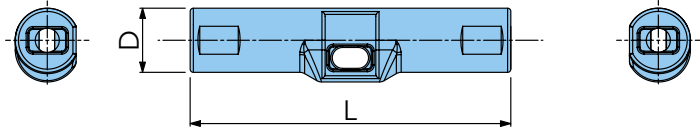


Fig.6

Holder	Head	H1	H2	L	F	B1	Fig.
QE1 S12N-TB	QE1 TTER 2...	12	4.2	133	11.1	4.2	1
	QE1 TTER 3...	12	4.2	133	10.8	4.2	1
	QE1 TTEL 2...	12	4.2	133	15.1	4.0	3
	QE1 TTEL 3...	12	4.2	133	14.8	4.0	3
	QE1 TQHR	12	4.2	129	16	4.2	5
QE1 S16R-TB	QE1 TTER 2...	16	-	133	15.1	-	2
	QE1 TTER 3...	16	-	133	14.8	-	2
	QE1 TTEL 2...	16	-	133	15.1	-	4
	QE1 TTEL 3...	16	-	133	14.8	-	4
	QE1 TQHR	16	-	129	16	-	6

FLEXTURN QE1 FIX-20100

INSERT REPLACEMENT FIXTURE



Designation	L	D
QE1 FIX-20100	100	20

must be ordered separately

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