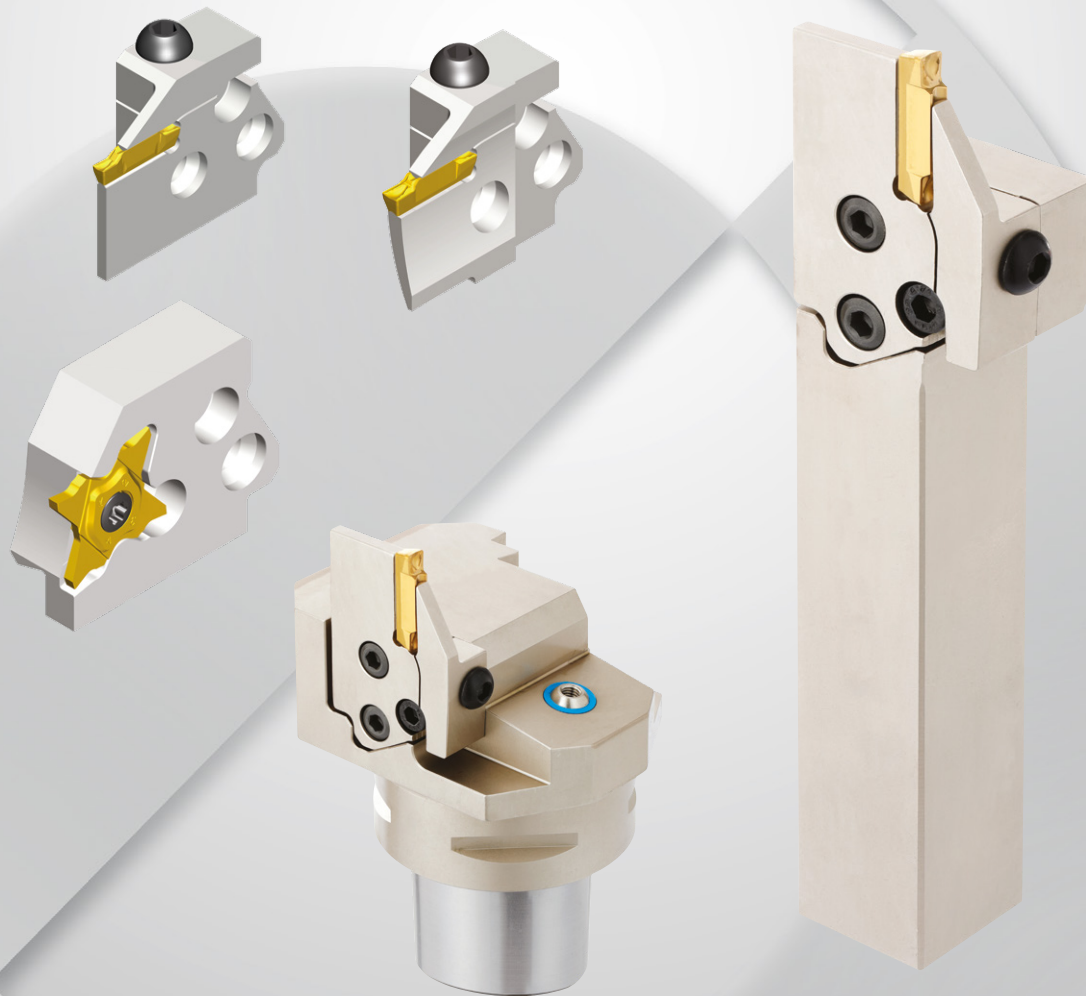




TCLAMP^{ULTRA+}
NEW CARTRIDGES AND HOLDERS

**NEW CARTRIDGES AND HOLDERS FOR
EXTERNAL TURNING AND GROOVING**

- Cartridges of different sizes fit in the same holders •*
- Unique clamping mechanism •*
- Stable cutting performance with excellent rigidity and precision •*
- Shorter set-up time, increased productivity and simplified inventory •*



Product Overview

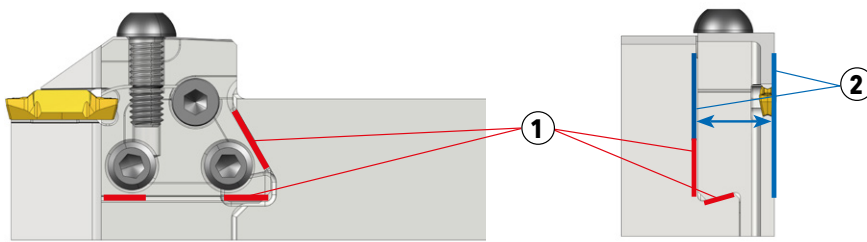
The **TClampUltra+** cartridge family for external turning and grooving is a convenient system that allows end-users the flexibility to replace cartridges of different sizes in the same holder - in doing so, the highly efficient new system shortens set-up time, increases productivity and simplifies inventory.

The new cartridges feature an upgraded fastening structure compared to the existing three-screw fastening method, resulting in stable cutting performance with excellent rigidity and precision.

The new cartridges are available in three types; external grooving (TCAER/L), face grooving (TCAFR/L) and **GoldFlex** inserts (TCAQR/L) that provide 1:1 replacement of existing cartridges.

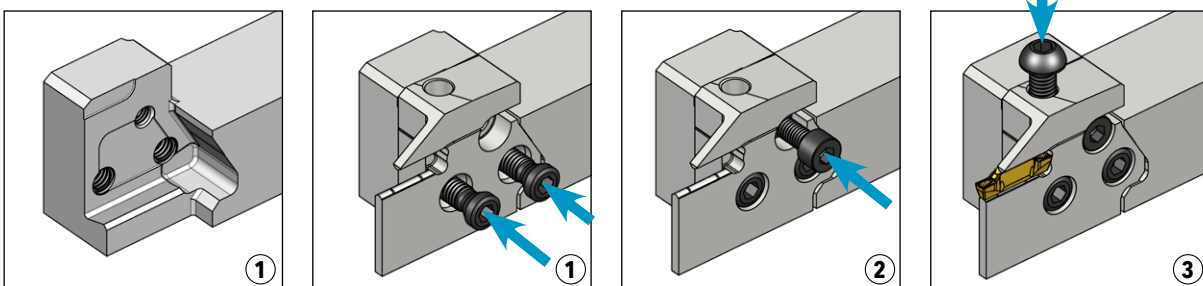
Technical Features & Advantages

- Unique clamping mechanism improves rigidity and prevents chattering
- Compatible with parallel and perpendicular type holders and C-Adaptors
- Applicable to **TClampUltra+** and **GoldFlex** products



- ① The two way, anti-rotation wedge design is ideal for parting, grooving and turning operations
- ② Increased cartridge thickness to compensate for stiffness during operation

Cartridge Assembly Sequence

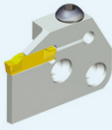

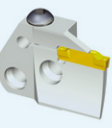
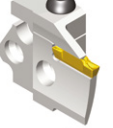
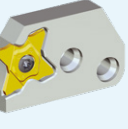

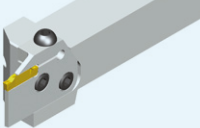
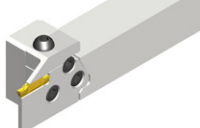
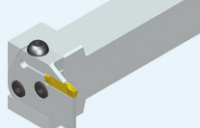

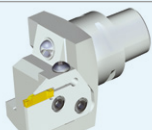

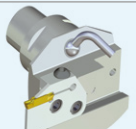
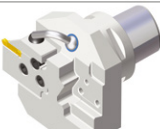


- ① Install the cartridge and tighten the 2 offset screws
- ② Tighten the security screw
- ③ Tighten the insert with the screw

Please refer to the above information.

Not following the above instructions sequentially ② → ① may impair tool performance.

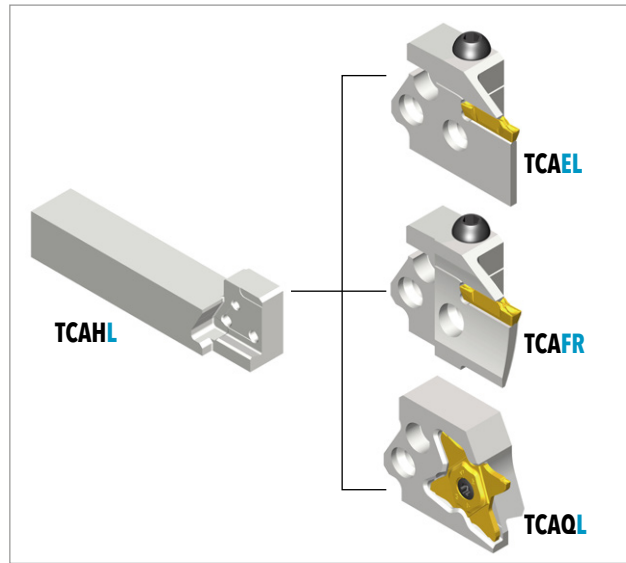
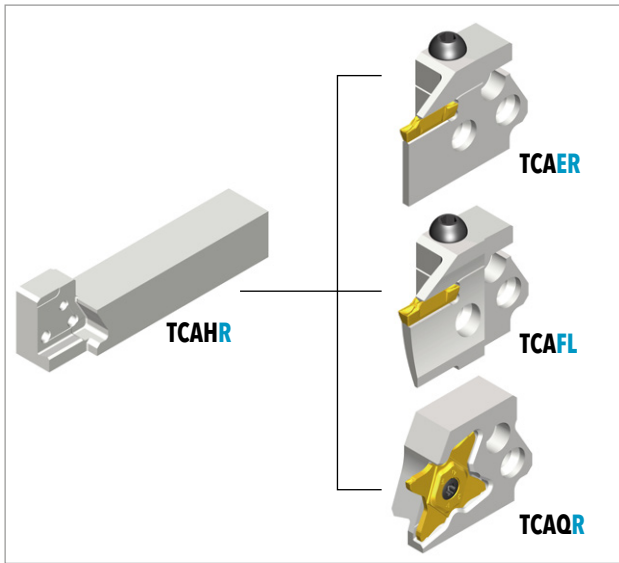
Overview New Cartridges & Holders

| | | Phased out items | | Replacements | |
|------------------|------------------------|------------------|---|--------------|---|
| Cartridge | External grooving | TCER/L |  | TCAER/L |  |
| | External face grooving | TCFR/L |  | TCAFR/L |  |
| | GOLD FLEX | TQCR/L |  | TCAQR/L |  |
| Holder | Parallel type | TCHR/L |  | TCAHR/L |  |
| | Perpendicular type | TCHPR/L |  | TCAHPR/L |  |
| C-Adaptor | Parallel type | C4-TCHN |  | C4-TCAHN |  |
| | Perpendicular type | C4-TCHPN |  | C4-TCAHPN |  |

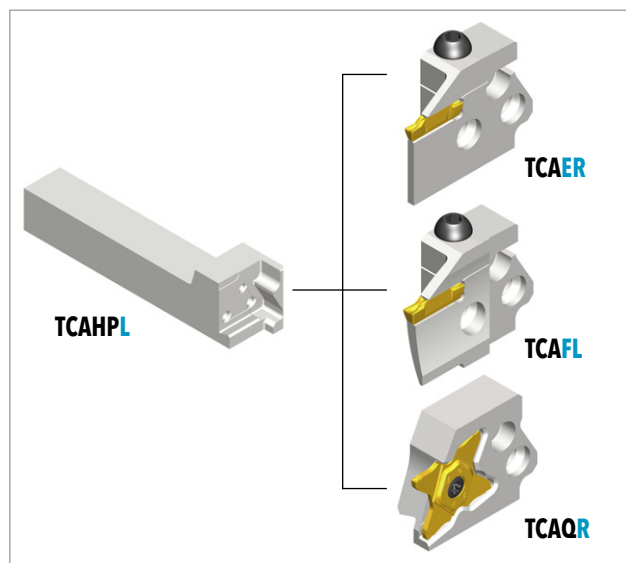
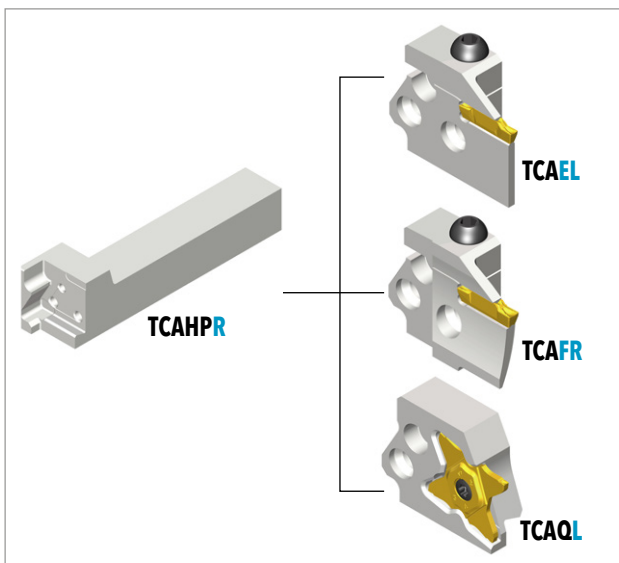
The new items will be available after existing inventory is exhausted.

Cartridge & Holder Selection

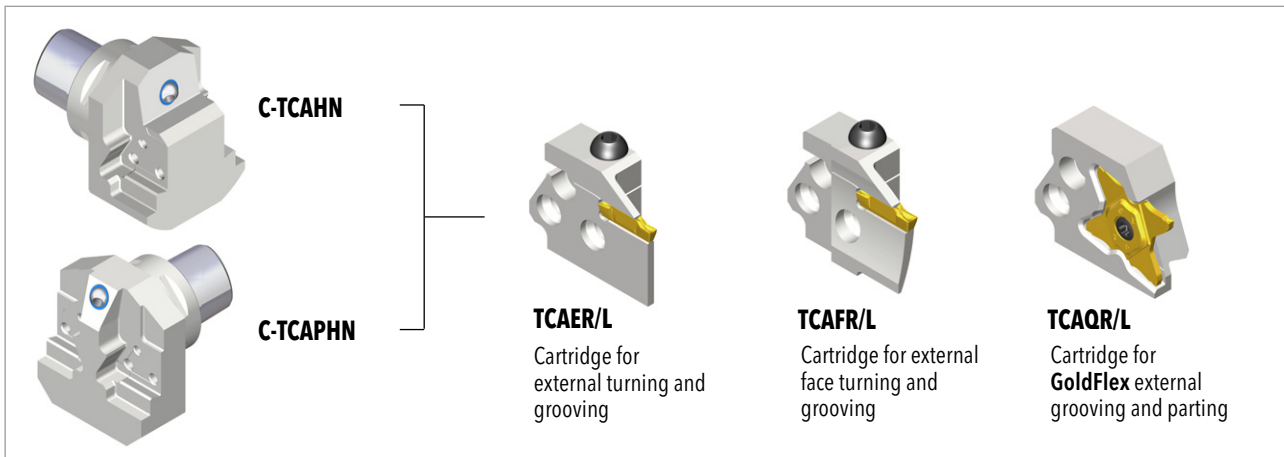
Parallel type



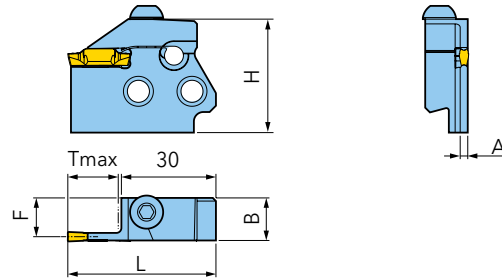
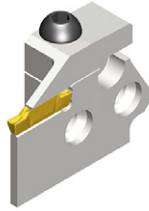
Parallel type





C-Adapter



MODULAR CARTRIDGES FOR GROOVING AND PARTING ON SWISS-TYPE MACHINES

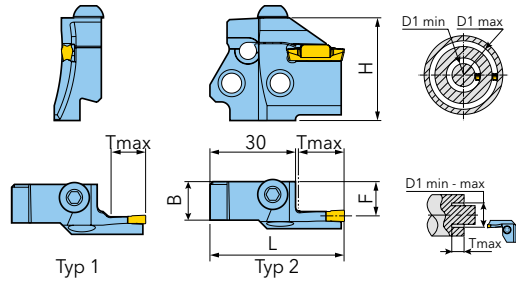


| Designation | L | H | A | B | F | Tmax | insert-S | holder | kg |  |  |
|--------------|------|----|-----|------|------|------|----------|--------|-------|---|---|
| TCAEL 1.4T12 | 47 | 36 | 1,0 | 13,5 | 13,0 | 12 | 1 | TCA_ | 0,105 | BH M6X1X20 | LW 4 |
| TCAEL 2T16 | 47 | 36 | 1,8 | 13,5 | 12,6 | 16 | 2 | TCA_ | 0,105 | BH M6X1X20 | LW 4 |
| TCAEL 2T22 | 53 | 36 | 1,8 | 13,5 | 12,6 | 22 | 2 | TCA_ | 0,105 | BH M6X1X20 | LW 4 |
| TCAEL 3T16 | 47 | 36 | 2,4 | 13,5 | 12,3 | 16 | 3 | TCA_ | 0,105 | BH M6X1X20 | LW 4 |
| TCAEL 3T22 | 53 | 36 | 2,4 | 13,5 | 12,3 | 22 | 3 | TCA_ | 0,105 | BH M6X1X20 | LW 4 |
| TCAEL 4T16 | 47 | 36 | 3,0 | 13,5 | 12,0 | 16 | 4 | TCA_ | 0,105 | BH M6X1X20 | LW 4 |
| TCAEL 4T22 | 53 | 36 | 3,0 | 13,5 | 12,0 | 22 | 4 | TCA_ | 0,105 | BH M6X1X20 | LW 4 |
| TCAEL 5T20 | 51,5 | 36 | 3,9 | 13,5 | 11,6 | 20 | 5 | TCA_ | 0,105 | BH M6X1X20 | LW 4 |
| TCAEL 5T25 | 56 | 36 | 3,9 | 13,5 | 11,6 | 25 | 5 | TCA_ | 0,105 | BH M6X1X20 | LW 4 |
| TCAEL 6T20 | 51,5 | 36 | 4,9 | 13,5 | 11,1 | 20 | 6 | TCA_ | 0,105 | BH M6X1X20 | LW 4 |
| TCAEL 6T25 | 56 | 36 | 4,9 | 13,5 | 11,1 | 25 | 6 | TCA_ | 0,105 | BH M6X1X20 | LW 4 |
| TCAER 1.4T12 | 47 | 36 | 1,0 | 13,5 | 13,0 | 12 | 1 | TCA_ | 0,105 | BH M6X1X20 | LW 4 |
| TCAER 2T16 | 47 | 36 | 1,8 | 13,5 | 12,6 | 16 | 2 | TCA_ | 0,105 | BH M6X1X20 | LW 4 |
| TCAER 2T22 | 53 | 36 | 1,8 | 13,5 | 12,6 | 22 | 2 | TCA_ | 0,105 | BH M6X1X20 | LW 4 |
| TCAER 3T16 | 47 | 36 | 2,4 | 13,5 | 12,3 | 16 | 3 | TCA_ | 0,105 | BH M6X1X20 | LW 4 |
| TCAER 3T22 | 53 | 36 | 2,4 | 13,5 | 12,3 | 22 | 3 | TCA_ | 0,105 | BH M6X1X20 | LW 4 |
| TCAER 4T16 | 47 | 36 | 3,0 | 13,5 | 12,0 | 16 | 4 | TCA_ | 0,105 | BH M6X1X20 | LW 4 |
| TCAER 4T22 | 53 | 36 | 3,0 | 13,5 | 12,0 | 22 | 4 | TCA_ | 0,105 | BH M6X1X20 | LW 4 |
| TCAER 5T20 | 51,5 | 36 | 3,9 | 13,5 | 11,6 | 20 | 5 | TCA_ | 0,105 | BH M6X1X20 | LW 4 |
| TCAER 5T25 | 56 | 36 | 3,9 | 13,5 | 11,6 | 25 | 5 | TCA_ | 0,105 | BH M6X1X20 | LW 4 |
| TCAER 6T20 | 51,5 | 36 | 4,9 | 13,5 | 11,1 | 20 | 6 | TCA_ | 0,105 | BH M6X1X20 | LW 4 |
| TCAER 6T25 | 56 | 36 | 4,9 | 13,5 | 11,1 | 25 | 6 | TCA_ | 0,105 | BH M6X1X20 | LW 4 |

Description of the modular system can be found in the technical manual.

① = clamp screw ② = wrench

MODULAR CARTRIDGES FOR GROOVING AND PARTING ON SWISS-TYPE MACHINES

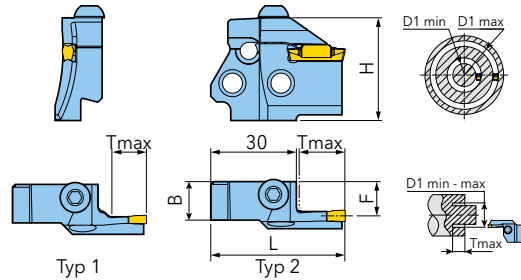
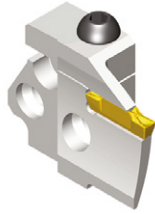


| Designation | D1 min. | D1 max. | L | H | B | F | Tmax | type | insert-S | holder | kg | ① | ② |
|-----------------------|---------|---------|------|----|------|------|------|-------|----------|--------|------|------------|------|
| TCAFL 3T10-29-40 RN | 40 | 29 | 40 | 36 | 13,5 | 12,4 | 10 | Typ 1 | 3 | TCA_ | 0,11 | BH M6X1X20 | LW 4 |
| TCAFL 3T12-40-55 RN | 55 | 40 | 47 | 36 | 13,5 | 12,4 | 12 | Typ 1 | 3 | TCA_ | 0,11 | BH M6X1X20 | LW 4 |
| TCAFL 3T12-55-75 RN | 75 | 55 | 47 | 36 | 13,5 | 12,4 | 12 | Typ 1 | 3 | TCA_ | 0,11 | BH M6X1X20 | LW 4 |
| TCAFL 3T12-75-100 RN | 100 | 75 | 47 | 36 | 13,5 | 12,4 | 12 | Typ 1 | 3 | TCA_ | 0,11 | BH M6X1X20 | LW 4 |
| TCAFL 3T12-100-140 RN | 140 | 100 | 47 | 36 | 13,5 | 12,4 | 12 | Typ 1 | 3 | TCA_ | 0,11 | BH M6X1X20 | LW 4 |
| TCAFL 3T12-140-200 RN | 200 | 140 | 47 | 36 | 13,5 | 12,4 | 12 | Typ 1 | 3 | TCA_ | 0,11 | BH M6X1X20 | LW 4 |
| TCAFL 4T16-34-50 RN | 50 | 34 | 47 | 36 | 13,5 | 12 | 16 | Typ 2 | 4 | TCA_ | 0,11 | BH M6X1X20 | LW 4 |
| TCAFL 4T16-50-70 RN | 70 | 50 | 47 | 36 | 13,5 | 12 | 16 | Typ 2 | 4 | TCA_ | 0,11 | BH M6X1X20 | LW 4 |
| TCAFL 4T16-70-100 RN | 100 | 70 | 47 | 36 | 13,5 | 12 | 16 | Typ 2 | 4 | TCA_ | 0,11 | BH M6X1X20 | LW 4 |
| TCAFL 4T16-100-150 RN | 150 | 100 | 47 | 36 | 13,5 | 12 | 16 | Typ 2 | 4 | TCA_ | 0,11 | BH M6X1X20 | LW 4 |
| TCAFL 4T16-150-250 RN | 200 | 150 | 47 | 36 | 13,5 | 12 | 16 | Typ 2 | 4 | TCA_ | 0,11 | BH M6X1X20 | LW 4 |
| TCAFL 4T16-250 RN | - | 250 | 47 | 36 | 13,5 | 12 | 16 | Typ 2 | 4 | TCA_ | 0,11 | BH M6X1X20 | LW 4 |
| TCAFL 5T20-55-80 RN | 80 | 55 | 51,5 | 36 | 13,5 | 11,5 | 20 | Typ 2 | 5 | TCA_ | 0,11 | BH M6X1X20 | LW 4 |
| TCAFL 5T20-80-120 RN | 120 | 80 | 51,5 | 36 | 13,5 | 11,5 | 20 | Typ 2 | 5 | TCA_ | 0,11 | BH M6X1X20 | LW 4 |
| TCAFL 5T20-120-180 RN | 180 | 120 | 51,5 | 36 | 13,5 | 11,5 | 20 | Typ 2 | 5 | TCA_ | 0,11 | BH M6X1X20 | LW 4 |
| TCAFL 5T20-180-300 RN | 300 | 180 | 51,5 | 36 | 13,5 | 11,5 | 20 | Typ 2 | 5 | TCA_ | 0,11 | BH M6X1X20 | LW 4 |
| TCAFL 5T20-300 RN | - | 300 | 51,5 | 36 | 13,5 | 11,5 | 20 | Typ 2 | 5 | TCA_ | 0,11 | BH M6X1X20 | LW 4 |
| TCAFL 6T25-60-90 RN | 90 | 60 | 56 | 36 | 13,5 | 11 | 25 | Typ 2 | 6 | TCA_ | 0,11 | BH M6X1X20 | LW 4 |
| TCAFL 6T25-90-150 RN | 150 | 90 | 56 | 36 | 13,5 | 11 | 25 | Typ 2 | 6 | TCA_ | 0,11 | BH M6X1X20 | LW 4 |
| TCAFL 6T25-150-250 RN | 250 | 150 | 56 | 36 | 13,5 | 11 | 25 | Typ 2 | 6 | TCA_ | 0,11 | BH M6X1X20 | LW 4 |
| TCAFL 6T25-250-400 RN | 400 | 250 | 56 | 36 | 13,5 | 11 | 25 | Typ 2 | 6 | TCA_ | 0,11 | BH M6X1X20 | LW 4 |
| TCAFL 6T25-400 RN | - | 400 | 56 | 36 | 13,5 | 11 | 25 | Typ 2 | 6 | TCA_ | 0,11 | BH M6X1X20 | LW 4 |

Description of the modular system can be found in the technical manual.

① = clamp screw ② = wrench

MODULAR CARTRIDGES FOR GROOVING AND PARTING ON SWISS-TYPE MACHINES



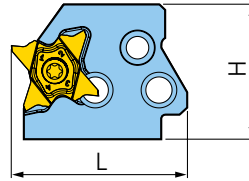
| Designation | D1 min. | D1 max. | L | H | B | F | Tmax | type | insert-S | holder | kg | ① | ② |
|-----------------------|---------|---------|------|----|------|------|------|-------|----------|--------|------|------------|------|
| TCAFR 3T10-29-40 RN | 40 | 29 | 40 | 36 | 13,5 | 12,4 | 10 | Typ 1 | 3 | TCA_ | 0,11 | BH M6X1X20 | LW 4 |
| TCAFR 3T12-40-55 RN | 55 | 40 | 47 | 36 | 13,5 | 12,4 | 12 | Typ 1 | 3 | TCA_ | 0,11 | BH M6X1X20 | LW 4 |
| TCAFR 3T12-55-75 RN | 75 | 55 | 47 | 36 | 13,5 | 12,4 | 12 | Typ 1 | 3 | TCA_ | 0,11 | BH M6X1X20 | LW 4 |
| TCAFR 3T12-75-100 RN | 100 | 75 | 47 | 36 | 13,5 | 12,4 | 12 | Typ 1 | 3 | TCA_ | 0,11 | BH M6X1X20 | LW 4 |
| TCAFR 3T12-100-140 RN | 140 | 100 | 47 | 36 | 13,5 | 12,4 | 12 | Typ 1 | 3 | TCA_ | 0,11 | BH M6X1X20 | LW 4 |
| TCAFR 3T12-140-200 RN | 200 | 140 | 47 | 36 | 13,5 | 12,4 | 12 | Typ 1 | 3 | TCA_ | 0,11 | BH M6X1X20 | LW 4 |
| TCAFR 4T16-34-50 RN | 50 | 34 | 47 | 36 | 13,5 | 12 | 16 | Typ 2 | 4 | TCA_ | 0,11 | BH M6X1X20 | LW 4 |
| TCAFR 4T16-50-70 RN | 70 | 50 | 47 | 36 | 13,5 | 12 | 16 | Typ 2 | 4 | TCA_ | 0,11 | BH M6X1X20 | LW 4 |
| TCAFR 4T16-70-100 RN | 100 | 70 | 47 | 36 | 13,5 | 12 | 16 | Typ 2 | 4 | TCA_ | 0,11 | BH M6X1X20 | LW 4 |
| TCAFR 4T16-100-150 RN | 150 | 100 | 47 | 36 | 13,5 | 12 | 16 | Typ 2 | 4 | TCA_ | 0,11 | BH M6X1X20 | LW 4 |
| TCAFR 4T16-150-250 RN | 200 | 150 | 47 | 36 | 13,5 | 12 | 16 | Typ 2 | 4 | TCA_ | 0,11 | BH M6X1X20 | LW 4 |
| TCAFR 4T16-250 RN | - | 250 | 47 | 36 | 13,5 | 12 | 16 | Typ 2 | 4 | TCA_ | 0,11 | BH M6X1X20 | LW 4 |
| TCAFR 5T20-55-80 RN | 80 | 55 | 51,5 | 36 | 13,5 | 11,5 | 20 | Typ 2 | 5 | TCA_ | 0,11 | BH M6X1X20 | LW 4 |
| TCAFR 5T20-80-120 RN | 120 | 80 | 51,5 | 36 | 13,5 | 11,5 | 20 | Typ 2 | 5 | TCA_ | 0,11 | BH M6X1X20 | LW 4 |
| TCAFR 5T20-120-180 RN | 180 | 120 | 51,5 | 36 | 13,5 | 11,5 | 20 | Typ 2 | 5 | TCA_ | 0,11 | BH M6X1X20 | LW 4 |
| TCAFR 5T20-180-300 RN | 300 | 180 | 51,5 | 36 | 13,5 | 11,5 | 20 | Typ 2 | 5 | TCA_ | 0,11 | BH M6X1X20 | LW 4 |
| TCAFR 5T20-300 RN | - | 300 | 51,5 | 36 | 13,5 | 11,5 | 20 | Typ 2 | 5 | TCA_ | 0,11 | BH M6X1X20 | LW 4 |
| TCAFR 6T25-60-90 RN | 90 | 60 | 56 | 36 | 13,5 | 11 | 25 | Typ 2 | 6 | TCA_ | 0,11 | BH M6X1X20 | LW 4 |
| TCAFR 6T25-90-150 RN | 150 | 90 | 56 | 36 | 13,5 | 11 | 25 | Typ 2 | 6 | TCA_ | 0,11 | BH M6X1X20 | LW 4 |
| TCAFR 6T25-150-250 RN | 250 | 150 | 56 | 36 | 13,5 | 11 | 25 | Typ 2 | 6 | TCA_ | 0,11 | BH M6X1X20 | LW 4 |
| TCAFR 6T25-250-400 RN | 400 | 250 | 56 | 36 | 13,5 | 11 | 25 | Typ 2 | 6 | TCA_ | 0,11 | BH M6X1X20 | LW 4 |
| TCAFR 6T25-400 RN | - | 400 | 56 | 36 | 13,5 | 11 | 25 | Typ 2 | 6 | TCA_ | 0,11 | BH M6X1X20 | LW 4 |

Description of the modular system can be found in the technical manual.

① = clamp screw ② = wrench

GOLDFLEX TCAQR/L

MODULAR CARTRIDGES FOR 4-EDGED GROOVING INSERTS

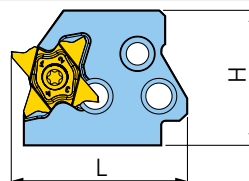
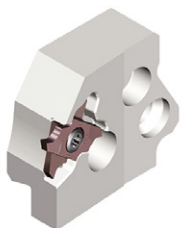


| Designation | L | H | B | F | insert-S | holder | kg | ① | ② |
|-------------|----|----|------|------|----------|--------|------|------------|----------|
| TCAQL 20 | 43 | 36 | 13,5 | 15,5 | 20 | TCA_ | 0,11 | TS 40A100 | T-1508/5 |
| TCAQL 27 | 47 | 36 | 13,5 | 12,3 | 27 | TCA_ | 0,12 | TS 50125I | T 10/20 |
| TCAQL 34 | 47 | 36 | 13,5 | 11,7 | 34 | TCA_ | 0,12 | TS 50125I | T 10/20 |
| TCAQR 20 | 43 | 36 | 13,5 | 15,5 | 20 | TCA_ | 0,11 | TS 40A100L | T-1508/5 |
| TCAQR 27 | 47 | 36 | 13,5 | 12,3 | 27 | TCA_ | 0,12 | TS 50125IL | T 10/20 |
| TCAQR 34 | 47 | 36 | 13,5 | 11,7 | 34 | TCA_ | 0,12 | TS 50125IL | T 10/20 |

① = clamp screw ② = wrench

GOLDFLEX TCAQR/L 20 - TB

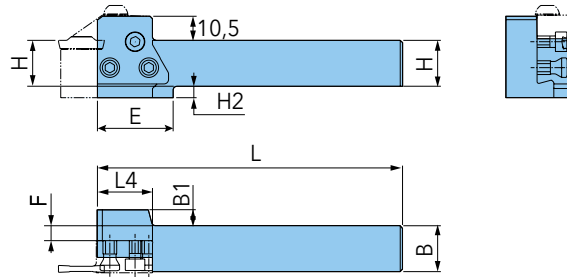
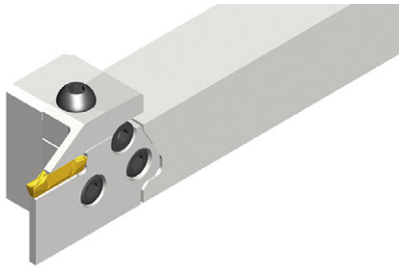
MODULAR CARTRIDGES FOR 4-EDGED GROOVING INSERTS



| Designation | L | H | B | F | insert-S | holder | kg | ① | ② |
|-------------|----|----|------|------|----------|--------|------|------------|----------|
| TCAQL 20-TB | 43 | 36 | 13,5 | 15,5 | 20 | TCA_ | 0,11 | TS 40A100 | T-1508/5 |
| TCAQR 20-TB | 43 | 36 | 13,5 | 15,5 | 20 | TCA_ | 0,11 | TS 40A100L | T-1508/5 |

① = clamp screw ② = wrench

PARALLEL HOLDER FOR MODULAR CARTRIDGES



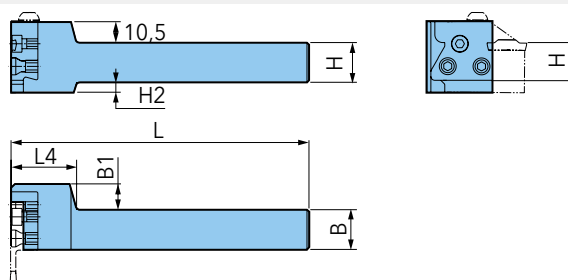
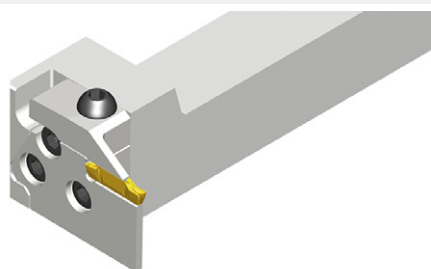
| Designation | L | L4 | H | H1 | H2 | B | B1 | E | F | holder | kg |
|-------------|-----|----|----|------|----|----|----|----|------|--------|-------|
| TCAHL 2020 | 133 | - | 20 | 10,5 | 5 | 20 | 7 | 50 | 6,5 | TCA_ | 0,490 |
| TCAHL 2525 | 133 | 24 | 25 | 10,5 | - | 25 | 2 | - | 11,5 | TCA_ | 0,655 |
| TCAHL 3232 | 153 | 24 | 32 | 10,5 | - | 32 | - | - | 18,5 | TCA_ | 1,235 |
| TCAHR 2020 | 133 | - | 20 | 10,5 | 5 | 20 | 7 | 50 | 6,5 | TCA_ | 0,490 |
| TCAHR 2525 | 133 | 24 | 25 | 10,5 | - | 25 | 2 | - | 11,5 | TCA_ | 0,655 |
| TCAHR 3232 | 153 | 24 | 32 | 10,5 | - | 32 | - | - | 18,5 | TCA_ | 1,235 |

Description of the modular system can be found in the technical manual.

| Designation | ① | ② | ③ |
|-------------|-----------|--------------|------|
| TCAHL 2020 | TS 60190I | SH M5X0.8X16 | LW 4 |
| TCAHL 2525 | TS 60190I | SH M5X0.8X16 | LW 4 |
| TCAHL 3232 | TS 60190I | SH M5X0.8X16 | LW 4 |
| TCAHR 2020 | TS 60190I | SH M5X0.8X16 | LW 4 |
| TCAHR 2525 | TS 60190I | SH M5X0.8X16 | LW 4 |
| TCAHR 3232 | TS 60190I | SH M5X0.8X16 | LW 4 |

① = clamp screw ② = clamp screw ③ = wrench

PERPENDICULAR HOLDER FOR MODULAR CARTRIDGES



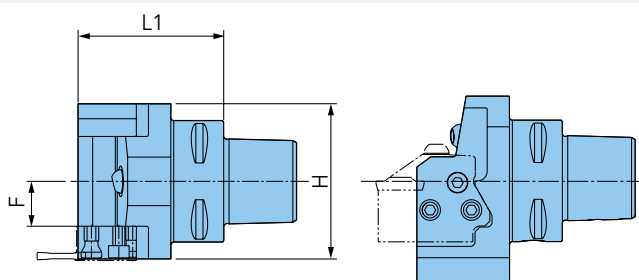
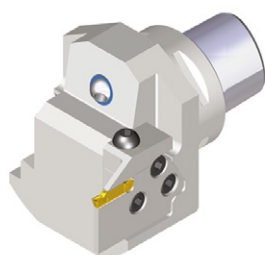
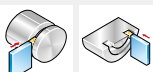
| Designation | L | L4 | H | H1 | H2 | B | B1 | holder | kg | ① | ② | ③ |
|-------------|-----|----|----|------|----|----|----|--------|-------|-----------|--------------|-------|
| TCAHPL 2020 | 150 | 33 | 20 | 10,5 | 5 | 20 | 13 | TCA_ | 0,490 | TS 60190I | SH M5X0.8X16 | L-W 4 |
| TCAHPL 2525 | 150 | 33 | 25 | 10,5 | - | 25 | 8 | TCA_ | 0,655 | TS 60190I | SH M5X0.8X16 | L-W 4 |
| TCAHPL 3232 | 170 | 33 | 32 | 10,5 | - | 32 | 1 | TCA_ | 1,235 | TS 60190I | SH M5X0.8X16 | L-W 4 |
| TCAHPR 2020 | 150 | 33 | 20 | 10,5 | 5 | 20 | 13 | TCA_ | 0,490 | TS 60190I | SH M5X0.8X16 | L-W 4 |
| TCAHPR 2525 | 150 | 33 | 25 | 10,5 | - | 25 | 8 | TCA_ | 0,655 | TS 60190I | SH M5X0.8X16 | L-W 4 |
| TCAHPR 3232 | 170 | 33 | 32 | 10,5 | - | 32 | 1 | TCA_ | 1,235 | TS 60190I | SH M5X0.8X16 | L-W 4 |

Description of the modular system can be found in the technical manual.

① = clamp screw ② = clamp screw ③ = wrench

TCLAMP^{ULTRA+} C-TCAHN PARALLEL TYPE

HOLDER FOR MODULAR CARTRIDGES



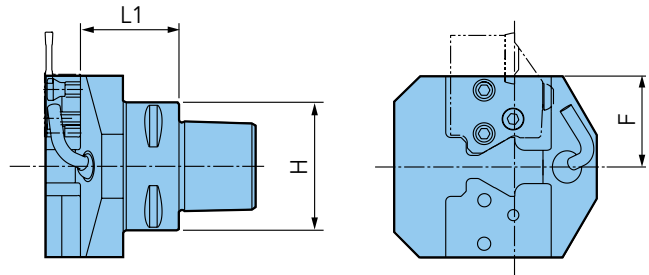
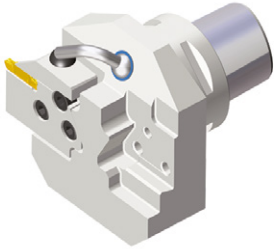
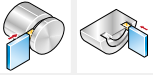
| Designation | L | H | F | holder | kg | ① | ② | ③ | ④ |
|-------------|----|----|------|--------|-----|-----------|--------------|--------|-------|
| C4-TCAHN | 60 | 40 | 18,7 | TCA_ | 0,6 | TS 60190I | SH M5X0.8X16 | NZ 125 | L-W 4 |
| C5-TCAHN | 60 | 50 | 18,5 | TCA_ | 1,1 | TS 60190I | SH M5X0.8X16 | NZ 125 | L-W 4 |
| C6-TCAHN | 60 | 63 | 19 | TCA_ | 1,3 | TS 60190I | SH M5X0.8X16 | NZ 125 | L-W 4 |

Description of the modular system can be found in the technical manual.

① = clamp screw ② = clamp screw ③ = nozzle ④ = wrench

TCLAMP^{ULTRA+} C-TCAHPN PERPENDICULAR TYPE

HOLDER FOR MODULAR CARTRIDGES

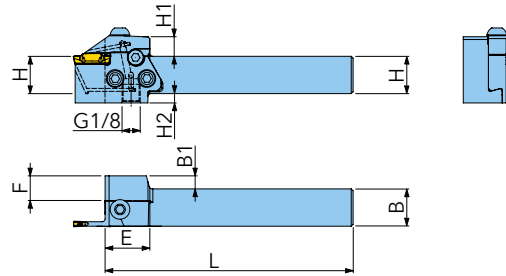


| Designation | L1 | H | F | holder | kg | ① | ② | ③ | ④ | ⑤ |
|-------------|------|----|------|--------|-----|-----------|--------------|--------|-------|------|
| C4-TCAHPN | 40,5 | 40 | 34 | TCA_ | 0,6 | TS 60190I | SH M5X0.8X16 | NZ 125 | NZP 5 | LW 4 |
| C5-TCAHPN | 38,5 | 50 | 35,5 | TCA_ | 1,1 | TS 60190I | SH M5X0.8X16 | NZ 125 | NZP 5 | LW 4 |
| C6-TCAHPN | 38,5 | 63 | 36 | TCA_ | 1,3 | TS 60190I | SH M5X0.8X16 | NZ 125 | NZP 5 | LW 4 |

Description of the modular system can be found in the technical manual.

① = clamp screw ② = clamp screw ③ = nozzle ④ = tube ⑤ = wrench

PARALLEL HOLDERS FOR MODULAR CARTRIDGES WITH HIGH PRESSURE COOLANT



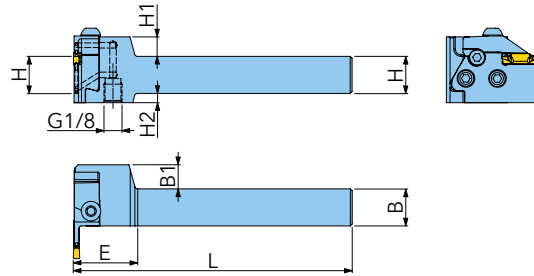
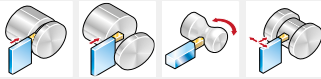
| Designation | L | H | H1 | H2 | B | B1 | E | F | kg | IK |
|---------------|-----|----|------|----|----|----|----|------|------|----|
| TCAHL 2020-TB | 133 | 20 | 10,5 | 5 | 20 | 7 | 24 | 6,5 | 0,44 | ✓ |
| TCAHL 2525-TB | 133 | 25 | 10,5 | - | 25 | 2 | 24 | 11,5 | 0,65 | ✓ |
| TCAHR 2020-TB | 133 | 20 | 10,5 | 5 | 20 | 7 | 24 | 6,5 | 0,44 | ✓ |
| TCAHR 2525-TB | 133 | 25 | 10,5 | - | 25 | 2 | 24 | 11,5 | 0,65 | ✓ |

Description of the modular system can be found in the technical manual.

| Designation | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ | ⑧ |
|---------------|-----------|--------------|----------------|---------------|-------|-------|-------|-------|
| TCAHL 2020-TB | TS 60190I | SH M5X0.8X16 | SS M4X0.7X4-NL | O-RING ID5X1T | TCAEL | - | TCAQR | - |
| TCAHL 2525-TB | TS 60190I | SH M5X0.8X16 | SS M4X0.7X4-NL | O-RING ID5X1T | TCAEL | - | TCAQR | - |
| TCAHR 2020-TB | TS 60190I | SH M5X0.8X16 | SS M4X0.7X4-NL | O-RING ID5X1T | - | TCAER | - | TCAQL |
| TCAHR 2525-TB | TS 60190I | SH M5X0.8X16 | SS M4X0.7X4-NL | O-RING ID5X1T | - | TCAER | - | TCAQL |

① = Clamp screw ② = Clamp screw ③ = Lock screw ④ = O-ring ⑤ = cartridge ⑥ = cartridge ⑦ = cartridge ⑧ = cartridge

PERPENDICULAR HOLDERS FOR MODULAR CARTRIDGES WITH HIGH PRESSURE COOLANT



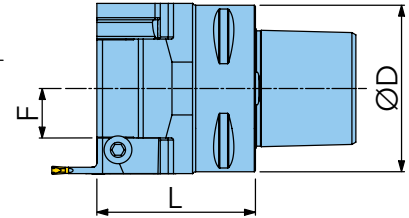
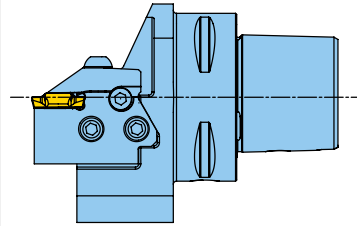
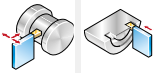
| Designation | L | H | H1 | H2 | B | B1 | E | kg | IK |
|----------------|-----|----|------|----|----|----|----|------|----|
| TCAHPL 2020-TB | 150 | 20 | 10,5 | 5 | 20 | 13 | 33 | 0,44 | ✓ |
| TCAHPL 2525-TB | 150 | 25 | 10,5 | - | 25 | 8 | 33 | 0,65 | ✓ |
| TCAHPR 2020-TB | 150 | 20 | 10,5 | 5 | 20 | 13 | 33 | 0,44 | ✓ |
| TCAHPR 2525-TB | 150 | 25 | 10,5 | - | 25 | 8 | 33 | 0,65 | ✓ |

Description of the modular system can be found in the technical manual.

| Designation | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ | ⑧ |
|----------------|-----------|--------------|----------------|---------------|-------|-------|-------|-------|
| TCAHPL 2020-TB | TS 60190I | SH M5X0.8X16 | SS M4X0.7X4-NL | O-RING ID5X1T | TCAER | - | TCAQR | - |
| TCAHPL 2525-TB | TS 60190I | SH M5X0.8X16 | SS M4X0.7X4-NL | O-RING ID5X1T | TCAER | - | TCAQR | - |
| TCAHPR 2020-TB | TS 60190I | SH M5X0.8X16 | SS M4X0.7X4-NL | O-RING ID5X1T | - | TCAEL | - | TCAQL |
| TCAHPR 2525-TB | TS 60190I | SH M5X0.8X16 | SS M4X0.7X4-NL | O-RING ID5X1T | - | TCAEL | - | TCAQL |

① = clamp screw ② = clamp screw ③ = lock screw ④ = O-ring ⑤ = cartridge ⑥ = cartridge ⑦ = cartridge ⑧ = cartridge

MODULAR TOOL HOLDERS 'PARALLEL TYPE'



| Designation | D | L | F | kg | IK |
|-------------|----|----|------|------|----|
| C4-TCAHN-TB | 40 | 55 | 11,5 | 0,58 | ✓ |
| C5-TCAHN-TB | 50 | 58 | 13,7 | 1,10 | ✓ |
| C6-TCAHN-TB | 63 | 60 | 18,7 | 1,71 | ✓ |

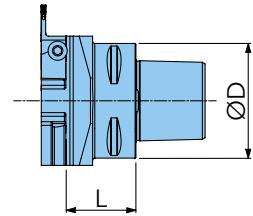
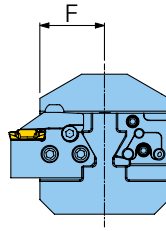
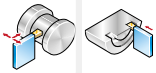
Description of the modular system can be found in the technical manual.

| Designation | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ | ⑧ |
|-------------|-----------|--------------|----------------|--------------------|-------|-------|-------|-------|
| C4-TCAHN-TB | TS 60190I | SH M5X0.8X16 | SS M4X0.7X4-NL | O-RING ID5.28X1.78 | L-W 4 | L-W 2 | TCA_L | TCA_R |
| C5-TCAHN-TB | TS 60190I | SH M5X0.8X16 | SS M4X0.7X4-NL | O-RING ID5.28X1.78 | L-W 4 | L-W 2 | TCA_L | TCA_R |
| C6-TCAHN-TB | TS 60190I | SH M5X0.8X16 | SS M4X0.7X4-NL | O-RING ID5.28X1.78 | L-W 4 | L-W 2 | TCA_L | TCA_R |

① = clamp screw ② = clamp screw ③ = lock screw ④ = O-ring ⑤ = wrench ⑥ = wrench ⑦ = cartridge ⑧ = cartridge

COOLBURST C-TCAHPN-TB

MODULAR TOOL HOLDERS 'PERPENDICULAR TYPE'



| Designation | D | L | F | kg | IK |
|--------------|----|------|------|------|----|
| C4-TCAHPN-TB | 40 | 36,5 | 34 | 0,60 | ✓ |
| C5-TCAHPN-TB | 50 | 36,5 | 35 | 0,10 | ✓ |
| C6-TCAHPN-TB | 63 | 38,5 | 35,5 | 1,80 | ✓ |

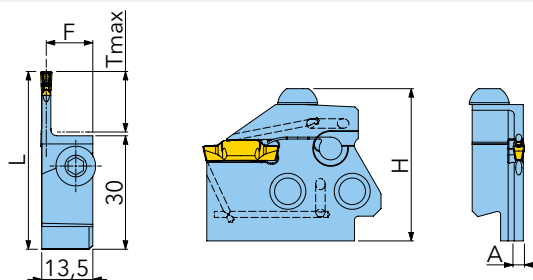
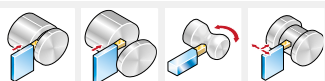
Description of the modular system can be found in the technical manual.

| Designation | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ | ⑧ |
|--------------|-----------|--------------|----------------|--------------------|-------|-------|-------|-------|
| C4-TCAHPN-TB | TS 60190I | SH M5X0.8X16 | SS M4X0.7X4-NL | O-RING ID5.28X1.78 | L-W 4 | L-W 2 | TCA_L | TCA_R |
| C5-TCAHPN-TB | TS 60190I | SH M5X0.8X16 | SS M4X0.7X4-NL | O-RING ID5.28X1.78 | L-W 4 | L-W 2 | TCA_L | TCA_R |
| C6-TCAHPN-TB | TS 60190I | SH M5X0.8X16 | SS M4X0.7X4-NL | O-RING ID5.28X1.78 | L-W 4 | L-W 2 | TCA_L | TCA_R |

① = clamp screw ② = clamp screw ③ = lock screw ④ = O-ring ⑤ = wrench ⑥ = wrench ⑦ = cartridge ⑧ = cartridge

COOLBURST TCAER/L-TB

CARTRIDGES FOR EXTERNAL TURNING WITH HIGH PRESSURE COOLANT



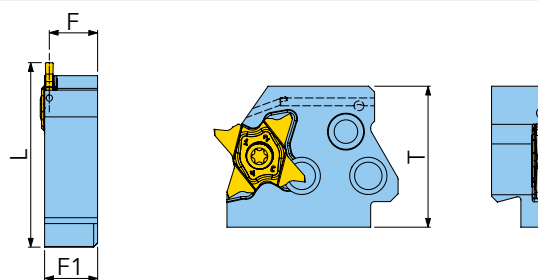
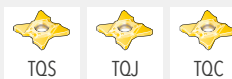
| Designation | L | H | A | F | Tmax | insert-S | kg | IK | ① | ② | ③ | ④ |
|---------------|----|----|-----|------|------|----------|------|----|------------|------|----------|-----------|
| TCAEL 2T16-TB | 47 | 36 | 1,8 | 12,6 | 16 | 2 | 0,06 | ✓ | BH M6X1X16 | LW 4 | TCAHL-TB | TCAHPR-TB |
| TCAEL 3T16-TB | 47 | 36 | 2,4 | 12,3 | 16 | 3 | 0,06 | ✓ | BH M6X1X16 | LW 4 | TCAHL-TB | TCAHPR-TB |
| TCAEL 4T16-TB | 47 | 36 | 3,0 | 12,0 | 16 | 4 | 0,06 | ✓ | BH M6X1X16 | LW 4 | TCAHL-TB | TCAHPR-TB |
| TCAEL 5T20-TB | 51 | 36 | 4,0 | 11,5 | 20 | 5 | 0,07 | ✓ | BH M6X1X16 | LW 4 | TCAHL-TB | TCAHPR-TB |
| TCAER 2T16-TB | 47 | 36 | 1,8 | 12,6 | 16 | 2 | 0,06 | ✓ | BH M6X1X16 | LW 4 | TCAHR-TB | TCAHPL-TB |
| TCAER 3T16-TB | 47 | 36 | 2,4 | 12,3 | 16 | 3 | 0,06 | ✓ | BH M6X1X16 | LW 4 | TCAHR-TB | TCAHPL-TB |
| TCAER 4T16-TB | 47 | 36 | 3,0 | 12,0 | 16 | 4 | 0,06 | ✓ | BH M6X1X16 | LW 4 | TCAHR-TB | TCAHPL-TB |
| TCAER 5T20-TB | 51 | 36 | 4,0 | 11,5 | 20 | 5 | 0,07 | ✓ | BH M6X1X16 | LW 4 | TCAHR-TB | TCAHPL-TB |

Description of the modular system can be found in the technical manual.

① = clamp screw ② = wrench ③ = holder ④ = holder

COOLBURST TCAQR/L 27-TB

MODULAR CARTRIDGES FOR 4-EDGED INSERTS WITH HIGH PRESSURE COOLANT



| Designation | L | F | f1 | T | insert-S | kg | IK | ① | ② | ③ | ④ |
|-------------|----|------|------|----|----------|------|----|------------|---------|----------|-----------|
| TCAQL 27-TB | 47 | 12,3 | 13,5 | 36 | 27 | 0,12 | ✓ | TS 50125I | T 10/20 | TCAHL-TB | TCAHPR-TB |
| TCAQR 27-TB | 47 | 12,3 | 13,5 | 36 | 27 | 0,12 | ✓ | TS 50125IL | T 10/20 | TCAHR-TB | TCAHPL-TB |

Description of the modular system can be found in the technical manual.

① = clamp screw ② = wrench ③ = holder ④ = holder