

Technopolymer
connecting clamps and
hinged joints for tubes

STANDARD MACHINE ELEMENTS WORLDWIDE

elesa®

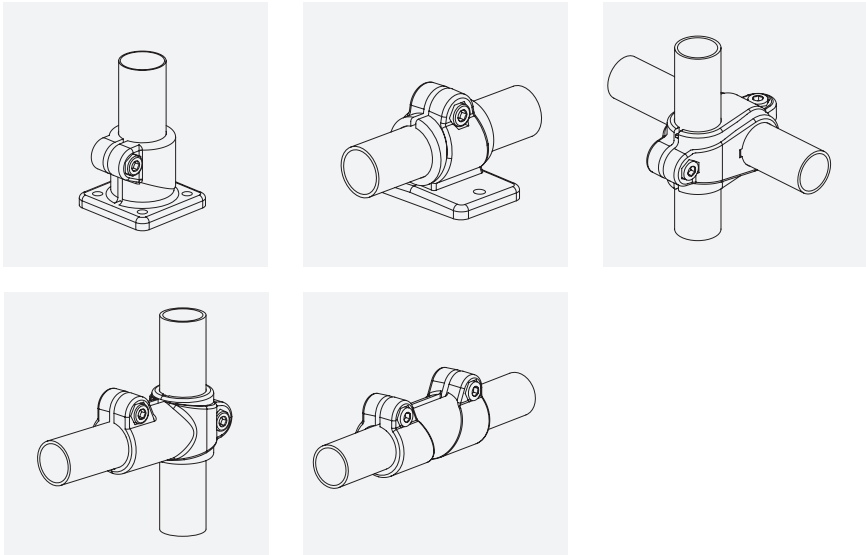


Technopolymer connecting clamps and hinged joints for tubes

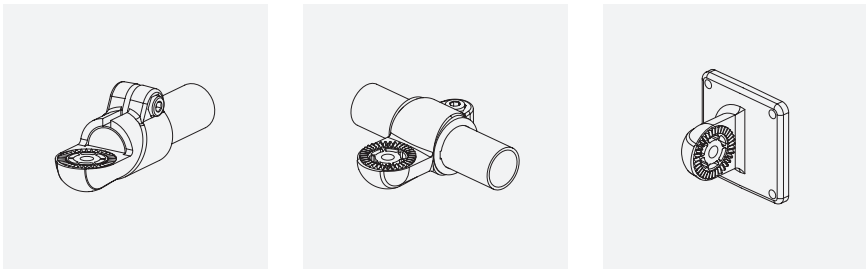
ELESA tube connectors are a complete range of components for the construction of tubular structures that have applications in many industrial sectors, e.g. the food industry, packaging, paint, laboratory equipment and monitor mounts, to mention just a few.

- Lightweight
- Corrosion resistance
- High mechanical strength
- Flexibility to adapt to different tube diameters due to the reduction sleeve
- Hinged joints to adapt the structure to all required angles
- AISI 304 stainless steel screws for outdoor applications and for greater resistance to corrosive agents
- Clamping kit for frequent adjustment
- Easy cleaning due to a design free from corners and edges with a smooth surface
- Resistance to tube rotation and pull-out guaranteed at tightening torque
- Compatible with all commercial tubes (diameter tolerance of ± 0.2 mm)
- Black or grey colour

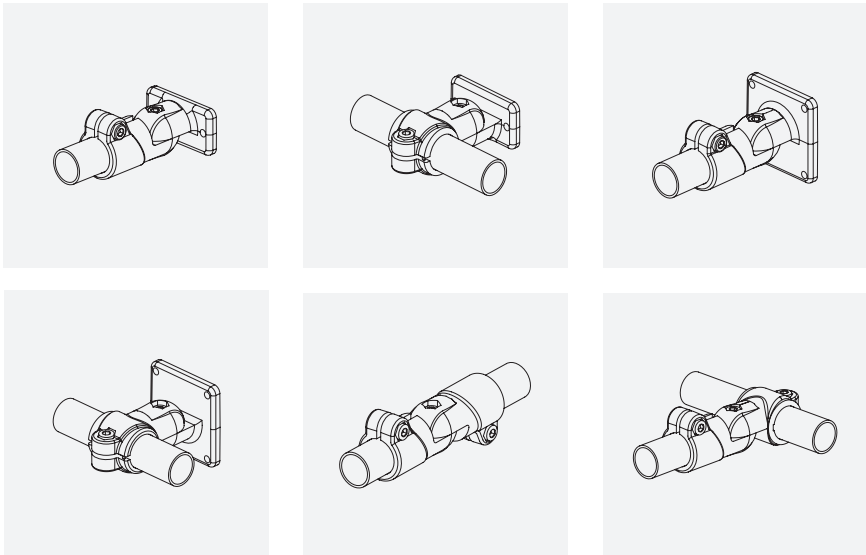
Connecting clamps for tubes



Clamps for hinged joints

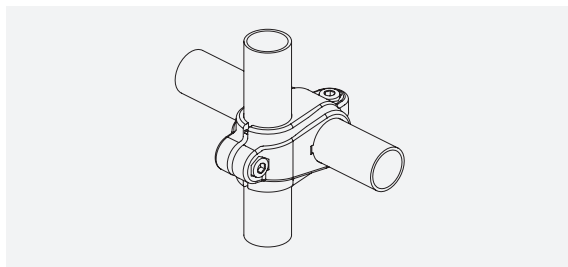


Hinged joints for tubes

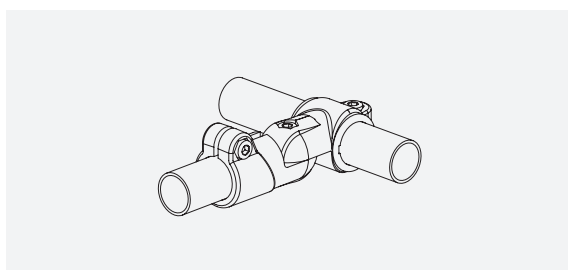


General information

The range includes various items made entirely from glass-fibre reinforced polyamide based (PA) technology and includes **bases, connecting clamps with mounting plate and sleeve, T-shaped** and **two-way connecting clamps** that enable axial and perpendicular fitting of round tubes with 18 mm and 30 mm diameter.

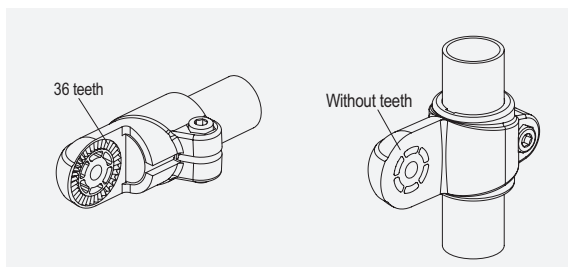


The range also includes **hinged joints** that allow the various parts of the structure to be connected at an angle. The angle is adjusted by joining two clamps or bases equipped with coaxial circular crowns that can be locked in the desired position.

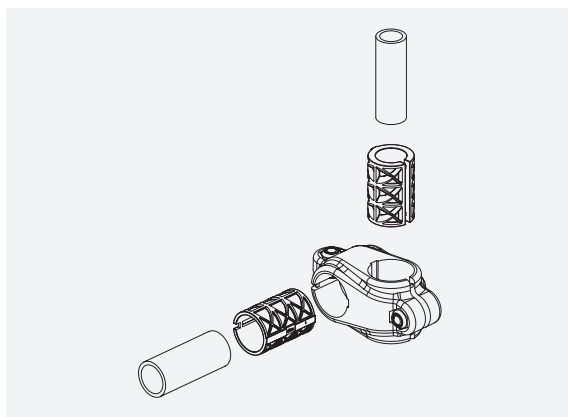


The **toothed version** (36 teeth) can be positioned at any angle with a 10° pitch with the joint having a high resistance value.

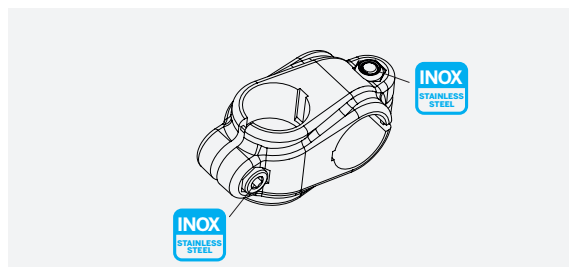
The **version without teeth** can be positioned at any angle. It has a lower resistance value but guarantees maximum flexibility, for example for sensor positioning.



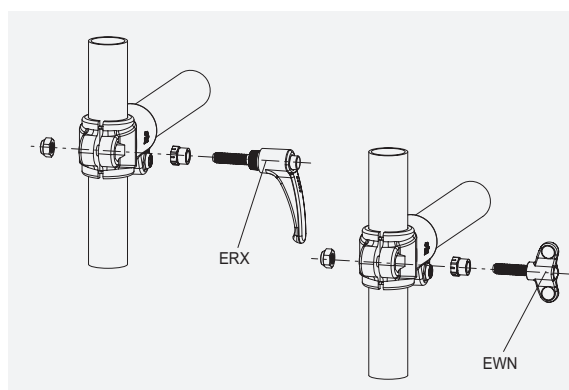
Reduction sleeve, equipped with a keyway that engages with the slot in the clamp on which it is mounted, allows the assembly with tubes with smaller diameters from 12 mm.



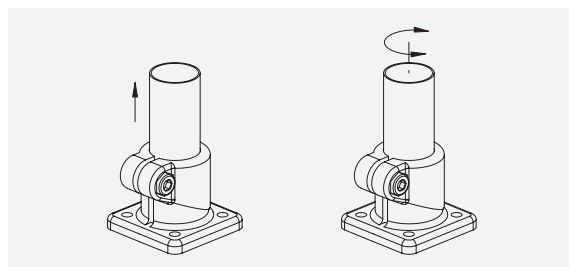
The clamps are supplied with **self-locking screws and nuts in AISI 304 stainless steel** to enable them to be used in outdoor applications or in environments where chemical agents are present (paints) or in the presence of humidity (beverage sector). The cylinder head screws with hexagon socket are supplied with **anti-seizure** treatment to facilitate repeated locking operations.



The **clamping kits** that complete the range comprise ELESa manual clamping parts (ERX adjustable handles or EWN wing nuts) that, using the distance bushings, can replace the screws supplied with the various elements so that the tube can be locked without using a hexagonal key. This solution speeds up the operation when frequent locking and unlocking is required.



Particularly high **rotational and pull-out resistance** values are ensured by tightening the torque to the values indicated for the various versions.

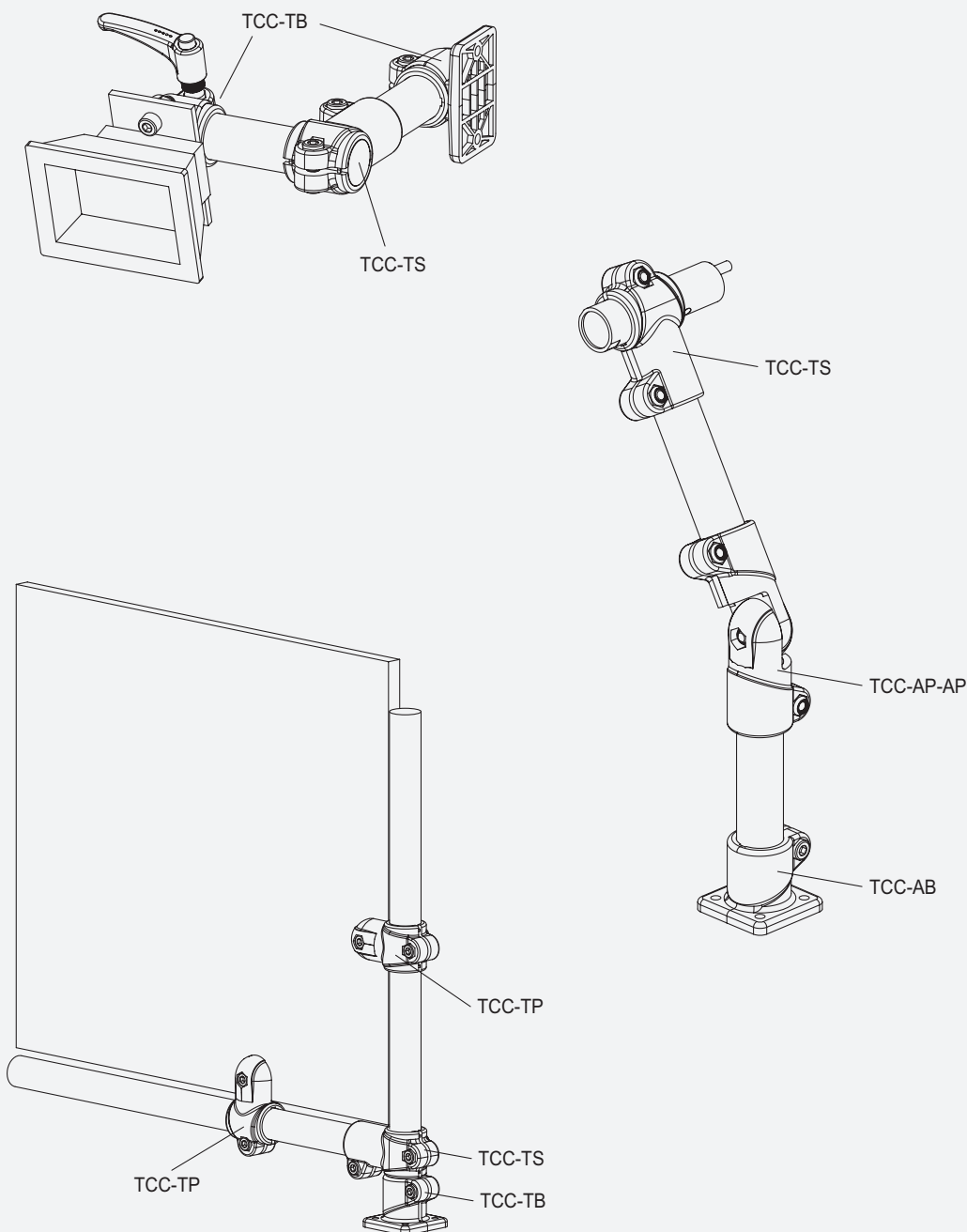


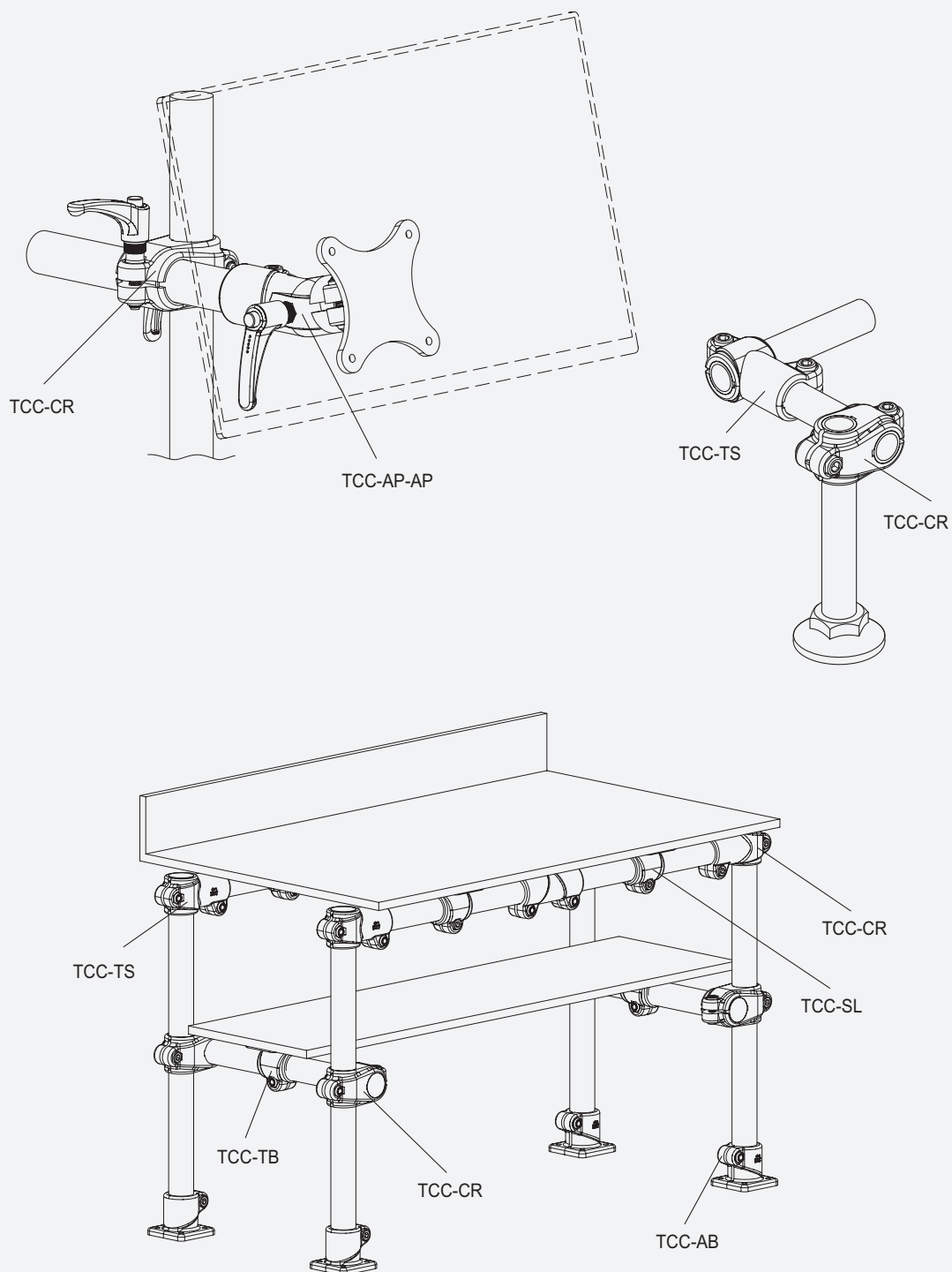
Elesa connecting clamps have been designed to guarantee the highest mechanical resistance, while their surface, free from no sharp corners, helps to maintain it clean, improves aesthetics and provides a **distinctive design**.

The tube connecting clamps are available in **black or grey** for better aesthetic matching with the natural aluminium colour.



















| | |
|---|--|
|  C9 |  C33 |
| RAL9005 | RAL7040 |

Application examples





Photographic index

| | | |
|---|---|---|
|  <p>TCC-AB Connecting clamps with mounting base <i>Technopolymer</i></p> <p>INOX STAINLESS STEEL</p> <p>page 9</p> |  <p>TCC-TB Connecting clamps with mounting plate <i>Technopolymer</i></p> <p>INOX STAINLESS STEEL</p> <p>page 10</p> |  <p>TCC-CR Two-way connecting clamps <i>Technopolymer</i></p> <p>INOX STAINLESS STEEL</p> <p>page 11</p> |
|  <p>TCC-TS T-shaped connecting clamps <i>Technopolymer</i></p> <p>INOX STAINLESS STEEL</p> <p>page 12</p> |  <p>TCC-SL Connecting clamps with sleeve <i>Technopolymer</i></p> <p>INOX STAINLESS STEEL</p> <p>page 13</p> |  <p>TCC-PBF Mounting base for hinged joints <i>Technopolymer</i></p> <p>INOX STAINLESS STEEL</p> <p>page 14</p> |
|  <p>TCC-PB Mounting base for hinged joints <i>Technopolymer</i></p> <p>INOX STAINLESS STEEL</p> <p>page 15</p> |  <p>TCC-AP Clamps for hinged joints <i>Technopolymer</i></p> <p>INOX STAINLESS STEEL</p> <p>page 16</p> |  <p>TCC-TP Clamps for hinged joints <i>Technopolymer</i></p> <p>INOX STAINLESS STEEL</p> <p>page 18</p> |
|  <p>TCC-AP-PBF Hinged joint with mounting base and clamp <i>Technopolymer</i></p> <p>INOX STAINLESS STEEL</p> <p>page 20</p> |  <p>TCC-TP-PBF Hinged joint with mounting base and clamp <i>Technopolymer</i></p> <p>INOX STAINLESS STEEL</p> <p>page 22</p> |  <p>TCC-AP-PB Hinged joint with mounting base and clamp <i>Technopolymer</i></p> <p>INOX STAINLESS STEEL</p> <p>page 24</p> |
|  <p>TCC-TP-PB Hinged joint with mounting base and clamp <i>Technopolymer</i></p> <p>INOX STAINLESS STEEL</p> <p>page 26</p> |  <p>TCC-AP-AP Hinged joints with clamps <i>Technopolymer</i></p> <p>INOX STAINLESS STEEL</p> <p>page 28</p> |  <p>TCC-AP-TP Hinged joints with clamps <i>Technopolymer</i></p> <p>INOX STAINLESS STEEL</p> <p>page 30</p> |
|  <p>TCC-A Hole reduction sleeve for TCC clamps, <i>technopolymer</i></p> <p>page 32</p> |  <p>TCC-KS Clamping kit for TCC <i>Technopolymer</i></p> <p>INOX STAINLESS STEEL</p> <p>page 34</p> |  <p>TCC-KV Screws and nuts for TCC <i>Stainless steel</i></p> <p>INOX STAINLESS STEEL</p> <p>page 35</p> |

CLAMP

Glass-fibre reinforced polyamide based (PA) technopolymer, RAL 9005 (C9) black colour or grey RAL 7040 (C33) colour, matte finish.

SCREW AND NUT (SUPPLIED)

Cylindrical-head screws with hexagon socket in AISI 304 stainless steel with anti-seizure treatment.

Self-locking nut in AISI 304 stainless steel.

FEATURES

Clamps for tubes with a diameter of 18 ± 0.2 and 30 ± 0.2 mm.

For smaller diameter tubes, the hole reduction sleeves TCC-A can be used (ordered separately).

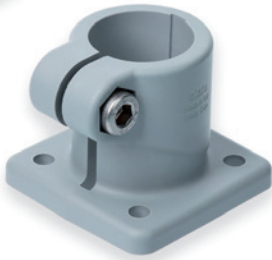
The "s" grub screw may be replaced by the kit TCC-KS.

TECHNICAL DATA

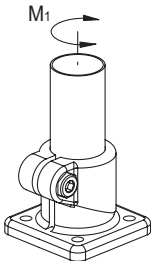
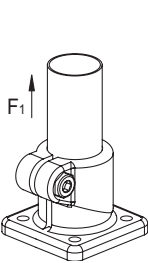
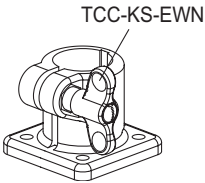
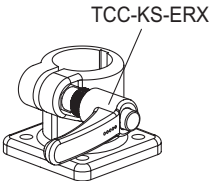
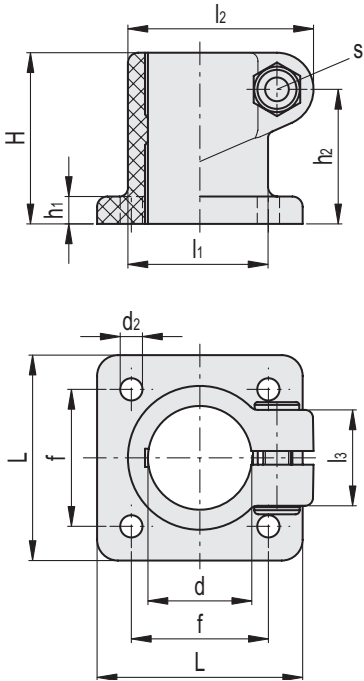
The resistance values shown in the table were measured during laboratory tests at ambient temperature with the screws tightened to the maximum torque "C#".

ACCESSORIES ON REQUEST (TO BE ORDERED SEPARATELY)

- TCC-A (see page 32): reduction sleeves.
- TCC-KS (see page 34): clamping kit.
- TCC-KV (see page 35): screws and clamping nuts.
- GN 990: connecting tubes.



ELESA Original design



C9 RAL9005 C33 RAL7040

INOX STAINLESS STEEL

| Code | Description | d | L | H | d2 | f ±0.2 | h1 | h2 | l1 | l2 | l3 | s | C# [Nm] | F1* [N] | M1** [Nm] | ⚖ |
|------------|---------------|----|----|----|-----|--------|----|----|----|------|----|----|------------|------------|--------------|----|
| 600111-C9 | TCC-AB-18-C9 | 18 | 45 | 34 | 5.3 | 30 | 5 | 25 | 26 | 36.5 | 20 | M6 | 5 | 1050 | 8 | 29 |
| 600111-C33 | TCC-AB-18-C33 | 18 | 45 | 34 | 5.3 | 30 | 5 | 25 | 26 | 36.5 | 20 | M6 | 5 | 1050 | 8 | 29 |
| 600211-C9 | TCC-AB-30-C9 | 30 | 60 | 50 | 6.5 | 40 | 8 | 40 | 40 | 53.5 | 27 | M8 | 12 | 1650 | 33 | 75 |
| 600211-C33 | TCC-AB-30-C33 | 30 | 60 | 50 | 6.5 | 40 | 8 | 40 | 40 | 53.5 | 27 | M8 | 12 | 1650 | 33 | 75 |

Suggested torque for screw assembly.

* Resistance to tube pull out

** Resistance to tube rotation

CLAMP

Glass-fibre reinforced polyamide based (PA) technopolymer, RAL 9005 (C9) black colour or grey RAL 7040 (C33) colour, matte finish.

SCREW AND NUT (SUPPLIED)

Cylindrical-head screws with hexagon socket in AISI 304 stainless steel with anti-seizure treatment.

Self-locking nut in AISI 304 stainless steel.

FEATURES

Clamps for tubes with a diameter of 18 ± 0.2 and 30 ± 0.2 mm. For smaller diameter tubes, the hole reduction sleeve TCC-A can be used (ordered separately).

The "s" grub screw may be replaced by the kit TCC-KS.

TECHNICAL DATA

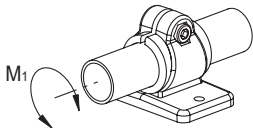
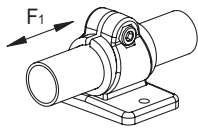
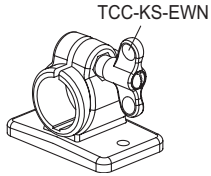
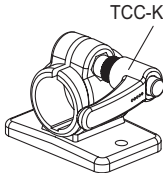
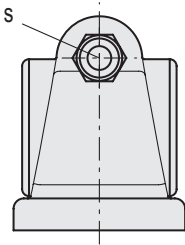
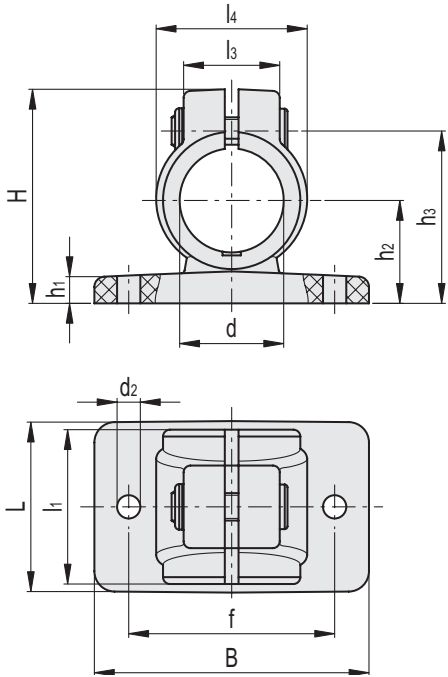
The resistance values shown in the table were measured during laboratory tests at ambient temperature with the screws tightened to the maximum torque "C#".

ACCESSORIES ON REQUEST (TO BE ORDERED SEPARATELY)

- TCC-A (see page 32): reduction sleeves.
- TCC-KS (see page 34): clamping kit.
- TCC-KV (see page 35): screws and clamping nuts.
- GN 990: connecting tubes.



ELESA Original design



C9 RAL9005 C33 RAL7040

INOX STAINLESS STEEL

| Code | Description | d | L | B | H | d2 | f±0.2 | h1 | h2 | h3 | l1 | l3 | l4 | s | C# [Nm] | F1* [N] | M1** [Nm] | ⚖ |
|------------|---------------|----|------|----|------|-----|-------|----|----|------|------|----|----|----|---------|---------|-----------|----|
| 600141-C9 | TCC-TB-18-C9 | 18 | 34.5 | 52 | 41 | 5.3 | 40 | 5 | 18 | 33.5 | 29 | 21 | 29 | M6 | 5 | 1450 | 16 | 29 |
| 600141-C33 | TCC-TB-18-C33 | 18 | 34.5 | 52 | 41 | 5.3 | 40 | 5 | 18 | 33.5 | 29 | 21 | 29 | M6 | 5 | 1450 | 16 | 29 |
| 600241-C9 | TCC-TB-30-C9 | 30 | 49.5 | 80 | 61.5 | 6.5 | 60 | 8 | 30 | 50 | 44.5 | 27 | 44 | M8 | 12 | 1800 | 27 | 84 |
| 600241-C33 | TCC-TB-30-C33 | 30 | 49.5 | 80 | 61.5 | 6.5 | 60 | 8 | 30 | 50 | 44.5 | 27 | 44 | M8 | 12 | 1800 | 27 | 84 |

Suggested torque for screw assembly.

* Resistance to tube pull out

** Resistance to tube rotation

CLAMP

Glass-fibre reinforced polyamide based (PA) technopolymer, RAL 9005 (C9) black colour or grey RAL 7040 (C33) colour, matte finish.

SCREWS AND NUTS (SUPPLIED)

Cylindrical-head screw with hexagon socket in AISI 304 stainless steel with anti-seizure treatment.
Self-locking nuts in AISI 304 stainless steel.

FEATURES

Clamps for tubes with a diameter of 18 ± 0.2 and 30 ± 0.2 mm.
For smaller diameter tubes, the hole reduction sleeve TCC-A can be used (ordered separately).
The "s" grub screws may be replaced by the kit TCC-KS.

TECHNICAL DATA

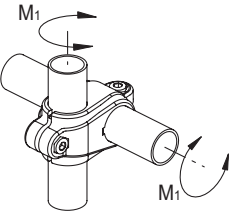
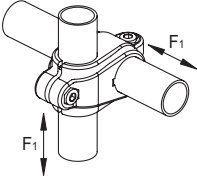
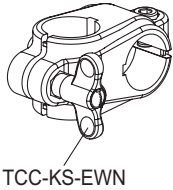
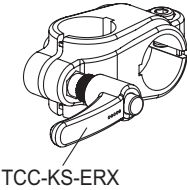
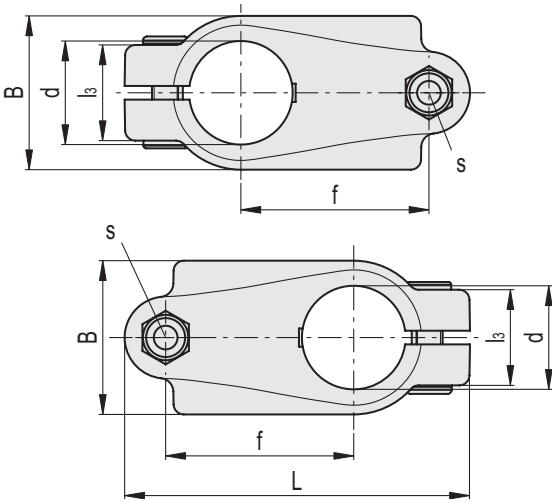
The resistance values shown in the table were measured during laboratory tests at ambient temperature with the screws tightened to the maximum torque "C#".

ACCESSORIES ON REQUEST (TO BE ORDERED SEPARATELY)

- TCC-A (see page 32): reduction sleeves.
- TCC-KS (see page 34): clamping kit.
- TCC-KV (see page 35): screws and clamping nuts.
- GN 990: connecting tubes.



ELESA Original design



C9 RAL9005 C33 RAL7040

INOX
STAINLESS
STEEL

| Code | Description | d | L | B | f | l3 | s | C# [Nm] | F1* [N] | M1** [Nm] | ⚖ |
|------------|------------------|----|-------|----|------|----|----|------------|------------|--------------|-----|
| 600121-C9 | TCC-CR-18-18-C9 | 18 | 65 | 29 | 34 | 21 | M6 | 5 | 2150 | 17 | 41 |
| 600121-C33 | TCC-CR-18-18-C33 | 18 | 65 | 29 | 34 | 21 | M6 | 5 | 2150 | 17 | 41 |
| 600221-C9 | TCC-CR-30-30-C9 | 30 | 100.5 | 45 | 54.5 | 27 | M8 | 12 | 1350 | 21 | 123 |
| 600221-C33 | TCC-CR-30-30-C33 | 30 | 100.5 | 45 | 54.5 | 27 | M8 | 12 | 1350 | 21 | 123 |

Suggested torque for screw assembly.
* Resistance to tube pull out
** Resistance to tube rotation

CLAMP

Glass-fibre reinforced polyamide based (PA) technopolymer, RAL 9005 (C9) black colour or grey RAL 7040 (C33) colour, matte finish.

SCREWS AND NUTS (SUPPLIED)

Cylindrical-head screw with hexagon socket in AISI 304 stainless steel with anti-seizure treatment.
Self-locking nuts in AISI 304 stainless steel.

FEATURES

Clamps for tubes with a diameter of 18 ± 0.2 and 30 ± 0.2 mm.
For smaller diameter tubes, the hole reduction sleeve TCC-A can be used (ordered separately).
The "s" grub screws may be replaced by the kit TCC-KS.

TECHNICAL DATA

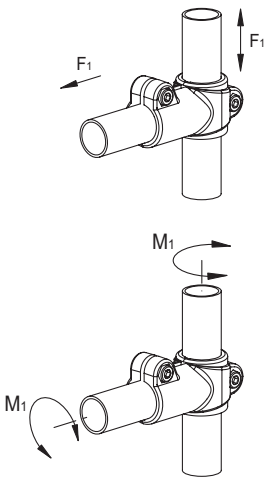
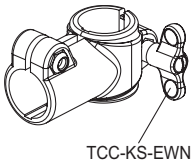
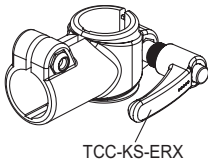
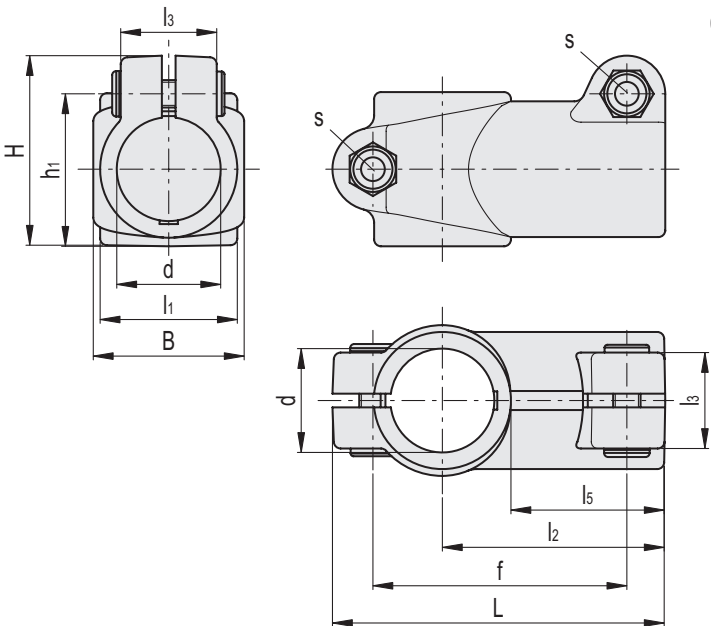
The resistance values shown in the table were measured during laboratory tests at ambient temperature with the screws tightened to the maximum torque "C#".

ACCESSORIES ON REQUEST (TO BE ORDERED SEPARATELY)

- TCC-A (see page 32): reduction sleeves.
- TCC-KS (see page 34): clamping kit.
- TCC-KV (see page 35): screws and clamping nuts.
- GN 990: connecting tubes.



ELESA Original design



C9 RAL9005 C33 RAL7040

INOX STAINLESS STEEL

| Code | Description | d | L | B | H | f | h1 | l1 | l2 | l3 | l5 | s | C# [Nm] | F1* [N] | M1** [Nm] | ⚙ |
|------------|------------------|----|----|----|------|----|----|------|------|------|------|----|------------|------------|--------------|-----|
| 600151-C9 | TCC-TS-18-18-C9 | 18 | 65 | 29 | 35 | 49 | 27 | 26.5 | 43.5 | 20.5 | 30.5 | M6 | 5 | 1450 | 14 | 42 |
| 600151-C33 | TCC-TS-18-18-C33 | 18 | 65 | 29 | 35 | 49 | 27 | 26.5 | 43.5 | 20.5 | 30.5 | M6 | 5 | 1450 | 14 | 42 |
| 600251-C9 | TCC-TS-30-30-C9 | 30 | 96 | 44 | 55.5 | 74 | 44 | 40.5 | 64.5 | 28 | 45.5 | M8 | 12 | 1650 | 17 | 113 |
| 600251-C33 | TCC-TS-30-30-C33 | 30 | 96 | 44 | 55.5 | 74 | 44 | 40.5 | 64.5 | 28 | 45.5 | M8 | 12 | 1650 | 17 | 113 |

Suggested torque for screw assembly.
* Resistance to tube pull out
** Resistance to tube rotation

CLAMP

Glass-fibre reinforced polyamide based (PA) technopolymer, RAL 9005 (C9) black colour or grey RAL 7040 (C33) colour, matte finish.

SCREWS AND NUTS (SUPPLIED)

Cylindrical-head screw with hexagon socket in AISI 304 stainless steel with anti-seizure treatment.

Self-locking nuts in AISI 304 stainless steel.

FEATURES

Clamps for tubes with a diameter of 18 ± 0.2 and 30 ± 0.2 mm.

For smaller diameter tubes, the hole reduction sleeve TCC-A can be used (ordered separately).

The "s" grub screws may be replaced by the kit TCC-KS.

TECHNICAL DATA

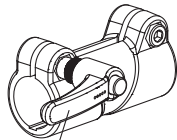
The resistance values shown in the table were measured during laboratory tests at ambient temperature with the screws tightened to the maximum torque "C#".

ACCESSORIES ON REQUEST (TO BE ORDERED SEPARATELY)

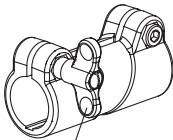
- TCC-A (see page 32): reduction sleeves.
- TCC-KS (see page 34): clamping kit.
- TCC-KV (see page 35): screws and clamping nuts.
- GN 990: connecting tubes.



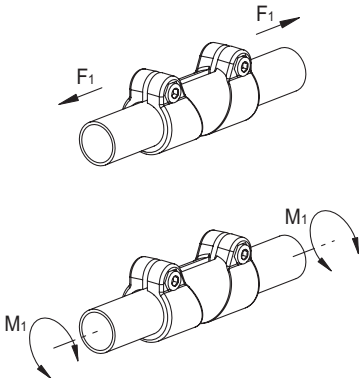
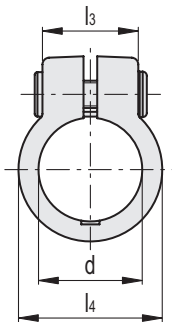
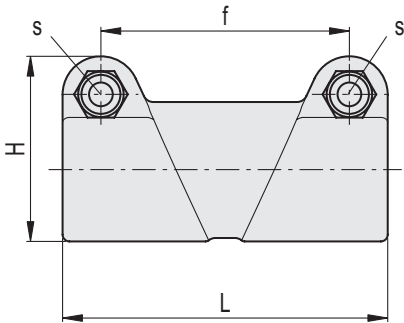
ELESA Original design



TCC-KS-ERX



TCC-KS-EWN



C9 RAL9005 C33 RAL7040

INOX
STAINLESS
STEEL

| Code | Description | d | L | H | f | l3 | l4 | s | C# [Nm] | F1* [N] | M1** [Nm] | ⚖ |
|------------|------------------|----|------|------|----|------|----|----|------------|------------|--------------|-----|
| 600131-C9 | TCC-SL-18-18-C9 | 18 | 64.5 | 35.5 | 48 | 20.5 | 29 | M6 | 5 | 1100 | 13 | 45 |
| 600131-C33 | TCC-SL-18-18-C33 | 18 | 64.5 | 35.5 | 48 | 20.5 | 29 | M6 | 5 | 1100 | 13 | 45 |
| 600231-C9 | TCC-SL-30-30-C9 | 30 | 94.5 | 53.5 | 72 | 27 | 42 | M8 | 12 | 1400 | 25 | 116 |
| 600231-C33 | TCC-SL-30-30-C33 | 30 | 94.5 | 53.5 | 72 | 27 | 42 | M8 | 12 | 1400 | 25 | 116 |

Suggested torque for screw assembly.

* Resistance to tube pull out

** Resistance to tube rotation

BASE

Glass-fibre reinforced polyamide based (PA) technopolymer, RAL 9005 (C9) black colour or grey RAL 7040 (C33) colour, matte finish.

SCREW AND NUT (SUPPLIED)

Cylindrical-head screws with hexagon socket in AISI 304 stainless steel with anti-seizure treatment.

Self-locking nut in AISI 304 stainless steel.

STANDARD EXECUTIONS

- **TCC-PBF-E**: external teeth.
- **TCC-PBF-S**: without teeth.

FEATURES

A base with external teeth can be joined to a clamp with internal teeth, or a base without teeth to a clamp without teeth, to create a hinged joint. Joints comprising bases with external teeth and clamps with internal teeth (36 teeth) have a 10° adjustment angle.

Joints comprising bases and clamps without teeth can be positioned at any angle.

The "s" grub screw may be replaced by the kit TCC-KS.

TECHNICAL DATA

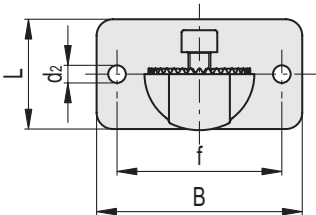
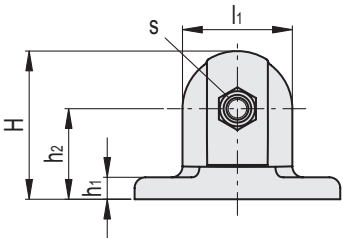
The resistance values shown in the table were measured during laboratory tests at ambient temperature with the screws tightened to the maximum torque "C#".

ACCESSORIES ON REQUEST (TO BE ORDERED SEPARATELY)

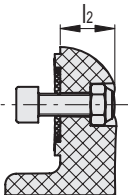
- TCC-KS (see page 34): clamping kit.
- TCC-KV (see page 35): screws and clamping nuts.



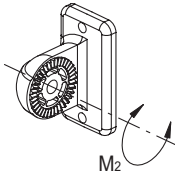
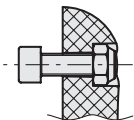
ELESA Original design



TCC-PBF-E



TCC-PBF-S



C9 RAL9005 C33 RAL7040

INOX
STAINLESS
STEEL

TCC-PBF-E

| Code | Description | L | B | H | d2 | f ±0.2 | h1 | h2 | l1 | l2 | s | C# [Nm] | M2*** [Nm] | ⚖ |
|------------|------------------|----|----|----|-----|--------|----|----|----|----|----|------------|---------------|----|
| 600431-C9 | TCC-PBF-30-E-C9 | 40 | 75 | 54 | 6.5 | 60 | 8 | 33 | 40 | 20 | M8 | 12 | 100 | 63 |
| 600431-C33 | TCC-PBF-30-E-C33 | 40 | 75 | 54 | 6.5 | 60 | 8 | 33 | 40 | 20 | M8 | 12 | 100 | 63 |

TCC-PBF-S

| | | | | | | | | | | | | | | |
|------------|-----------------|----|----|----|-----|----|---|----|----|----|----|----|---|----|
| 600435-C9 | TCC-PBF-30-S-C9 | 40 | 75 | 54 | 6.5 | 60 | 8 | 33 | 40 | 20 | M8 | 12 | 7 | 58 |
| 600435-C33 | TCC-PBF-30-S-C9 | 40 | 75 | 54 | 6.5 | 60 | 8 | 33 | 40 | 20 | M8 | 12 | 7 | 58 |

Suggested torque for screw assembly.

*** Resistance to joint rotation.

BASE

Glass-fibre reinforced polyamide based (PA) technopolymer, RAL 9005 (C9) black colour or grey RAL 7040 (C33) colour, matte finish.

SCREW AND NUT (SUPPLIED)

Cylindrical-head screws with hexagon socket in AISI 304 stainless steel with anti-seizure treatment.

Self-locking nut in AISI 304 stainless steel.

STANDARD EXECUTIONS

- **TCC-PB-E**: external teeth.
- **TCC-PB-S**: without teeth.

FEATURES

A base with external teeth can be joined to a clamp with internal teeth, or a base without teeth to a clamp without teeth, to create a hinged joint. Joints comprising bases with external teeth and clamps with internal teeth (36 teeth) have a 10° adjustment angle.

Joints comprising bases and clamps without teeth can be positioned at any angle.

The "s" grub screw may be replaced by the kit TCC-KS.

TECHNICAL DATA

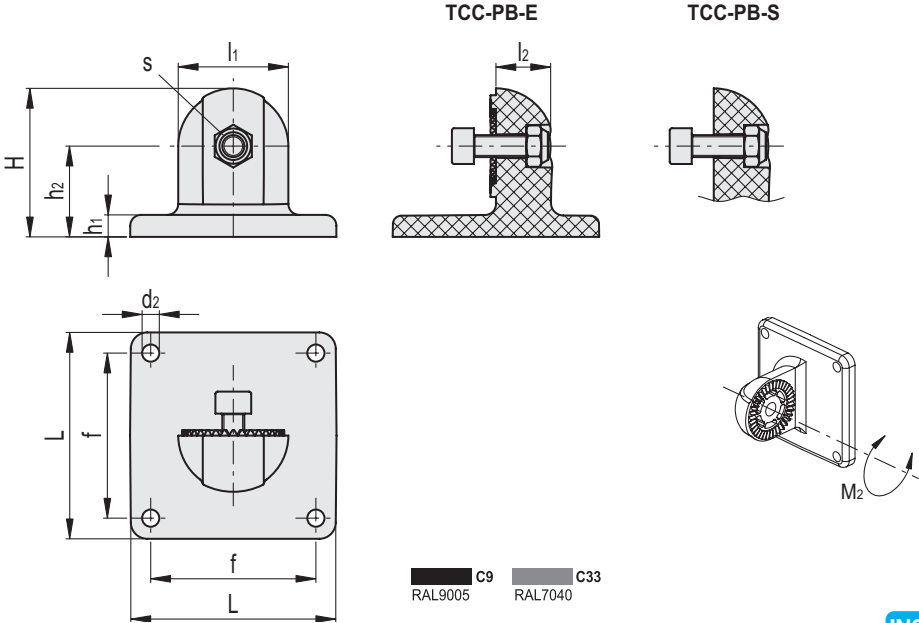
The resistance values shown in the table were measured during laboratory tests at ambient temperature with the screws tightened to the maximum torque "C#".

ACCESSORIES ON REQUEST (TO BE ORDERED SEPARATELY)

- TCC-KS (see page 34): clamping kit.
- TCC-KV (see page 35): screws and clamping nuts.



ELESA Original design



TCC-PB-E

| Code | Description | L | H | d2 | f ±0.2 | h1 | h2 | l1 | l2 | s | C# [Nm] | M2*** [Nm] | ⚖ |
|------------|-----------------|----|----|-----|--------|----|----|----|----|----|------------|---------------|----|
| 600421-C9 | TCC-PB-30-E-C9 | 75 | 54 | 6.5 | 60 | 8 | 33 | 40 | 20 | M8 | 12 | 100 | 78 |
| 600421-C33 | TCC-PB-30-E-C33 | 75 | 54 | 6.5 | 60 | 8 | 33 | 40 | 20 | M8 | 12 | 100 | 78 |

TCC-PB-S

| Code | Description | L | H | d2 | f ±0.2 | h1 | h2 | l1 | l2 | s | C# [Nm] | M2*** [Nm] | ⚖ |
|------------|-----------------|----|----|-----|--------|----|----|----|----|----|------------|---------------|----|
| 600425-C9 | TCC-PB-30-S-C9 | 75 | 54 | 6.5 | 60 | 8 | 33 | 40 | 20 | M8 | 12 | 7 | 73 |
| 600425-C33 | TCC-PB-30-S-C33 | 75 | 54 | 6.5 | 60 | 8 | 33 | 40 | 20 | M8 | 12 | 7 | 73 |

Suggested torque for screw assembly.

*** Resistance to joint rotation.

CLAMP

Glass-fibre reinforced polyamide based (PA) technopolymer, RAL 9005 (C9) black colour or grey RAL 7040 (C33) colour, matte finish.

SCREWS AND NUTS

Cylindrical-head screw with hexagon socket in AISI 304 stainless steel with anti-seizure treatment.

Self-locking nuts in AISI 304 stainless steel.

Supplied: two screws and two nuts for versions TCC-AP-E and TCC-AP-S, one screw and one nut for version TCC-AP-I

STANDARD EXECUTIONS

- **TCC-AP-E**: external teeth.
- **TCC-AP-I**: internal teeth.
- **TCC-AP-S**: without teeth.

FEATURES

Two clamps, one with external teeth and one with internal teeth or two without teeth, can be joined to create a hinged joint.

Joints comprising clamps with external/internal teeth (36 teeth) have a 10° adjustment angle.

Joints comprising clamps without teeth can be positioned at any angle.

Clamps for tubes with a diameter of 30 ± 0.2 mm.

For smaller diameter tubes, the hole reduction sleeve TCC-A can be used (ordered separately).

The "s" grub screws may be replaced by the kit TCC-KS.

TECHNICAL DATA

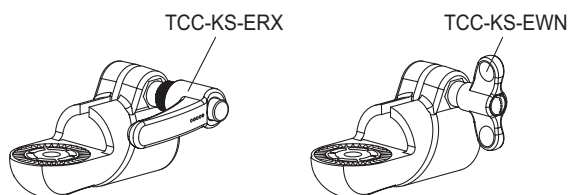
The resistance values shown in the table were measured during laboratory tests at ambient temperature with the screws tightened to the maximum torque "C#".

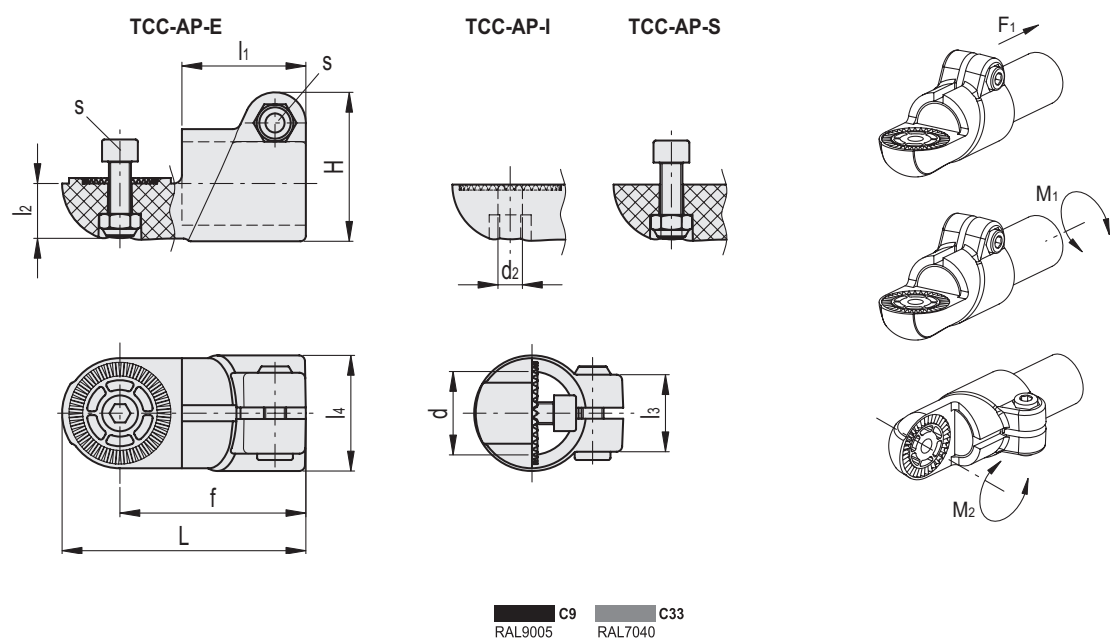
ACCESSORIES ON REQUEST (TO BE ORDERED SEPARATELY)

- TCC-A (see page 32): reduction sleeves.
- TCC-KS (see page 34): clamping kit.
- GN 197: monitor mounts.
- TCC-KV (see page 35): screws and clamping nuts.
- GN 990: connecting tubes.



ELESA Original design





TCC-AP-E

| Code | Description | d | L | H | f | l1 | l2 | l3 | l4 | s | C# [Nm] | F1* [N] | M1** [Nm] | M2*** [Nm] | ⚖️ |
|------------|-----------------|----|----|----|----|----|------|----|----|----|------------|------------|--------------|---------------|----|
| 600401-C9 | TCC-AP-30-E-C9 | 30 | 88 | 54 | 67 | 45 | 16.5 | 27 | 42 | M8 | 12 | 3300 | 33 | 140 | 80 |
| 600401-C33 | TCC-AP-30-E-C33 | 30 | 88 | 54 | 67 | 45 | 16.5 | 27 | 42 | M8 | 12 | 3300 | 33 | 140 | 80 |

TCC-AP-I

| Code | Description | d | L | H | d2 | f | l1 | l2 | l3 | l4 | s | C# [Nm] | F1* [N] | M1** [Nm] | M2*** [Nm] | ⚖️ |
|------------|-----------------|----|----|----|-----|----|----|------|----|----|----|------------|------------|--------------|---------------|----|
| 600403-C9 | TCC-AP-30-I-C9 | 30 | 88 | 54 | 8,1 | 67 | 45 | 16.5 | 27 | 42 | M8 | 12 | 3300 | 33 | 140 | 79 |
| 600403-C33 | TCC-AP-30-I-C33 | 30 | 88 | 54 | 8,1 | 67 | 45 | 16.5 | 27 | 42 | M8 | 12 | 3300 | 33 | 140 | 79 |

TCC-AP-S

| Code | Description | d | L | H | f | l1 | l2 | l3 | l4 | s | C# [Nm] | F1* [N] | M1** [Nm] | M2*** [Nm] | ⚖️ |
|------------|-----------------|----|----|----|----|----|------|----|----|----|------------|------------|--------------|---------------|----|
| 600405-C9 | TCC-AP-30-S-C9 | 30 | 88 | 54 | 67 | 45 | 16.5 | 27 | 42 | M8 | 12 | 3300 | 33 | 6 | 79 |
| 600405-C33 | TCC-AP-30-S-C33 | 30 | 88 | 54 | 67 | 45 | 16.5 | 27 | 42 | M8 | 12 | 3300 | 33 | 6 | 79 |

Suggested torque for screw assembly.
* Resistance to tube pull out
** Resistance to tube rotation
*** Resistance to joint rotation.

CLAMP

Glass-fibre reinforced polyamide based (PA) technopolymer, RAL 9005 (C9) black colour or grey RAL 7040 (C33) colour, matte finish.

SCREWS AND NUTS

Cylindrical-head screw with hexagon socket in AISI 304 stainless steel with anti-seizure treatment.

Self-locking nuts in AISI 304 stainless steel.

Supplied: two screws and two nuts for versions TCC-TP-E and TCC-TP-S, one screw and one nut for version TCC-TP-I

STANDARD EXECUTIONS

- **TCC-TP-E**: external teeth.
- **TCC-TP-I**: internal teeth.
- **TCC-TP-S**: without teeth.

FEATURES

Two clamps, one with external teeth and one with internal teeth or two without teeth, can be joined to create a hinged joint.

Joints comprising clamps with external/internal teeth (36 teeth) have a 10° adjustment angle.

Joints comprising clamps without teeth can be positioned at any angle.

Clamps for tubes with a diameter of 30 ± 0.2 mm.

For smaller diameter tubes, the hole reduction sleeve can be used TCC-A (to be ordered separately).

The "s" grub screws may be replaced by the kit TCC-KS.

TECHNICAL DATA

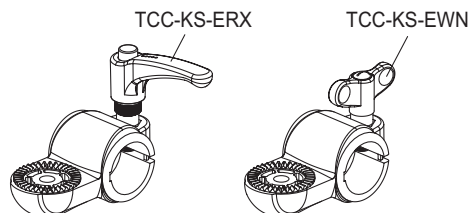
The resistance values shown in the table were measured during laboratory tests at ambient temperature with the screws tightened to the maximum torque "C#".

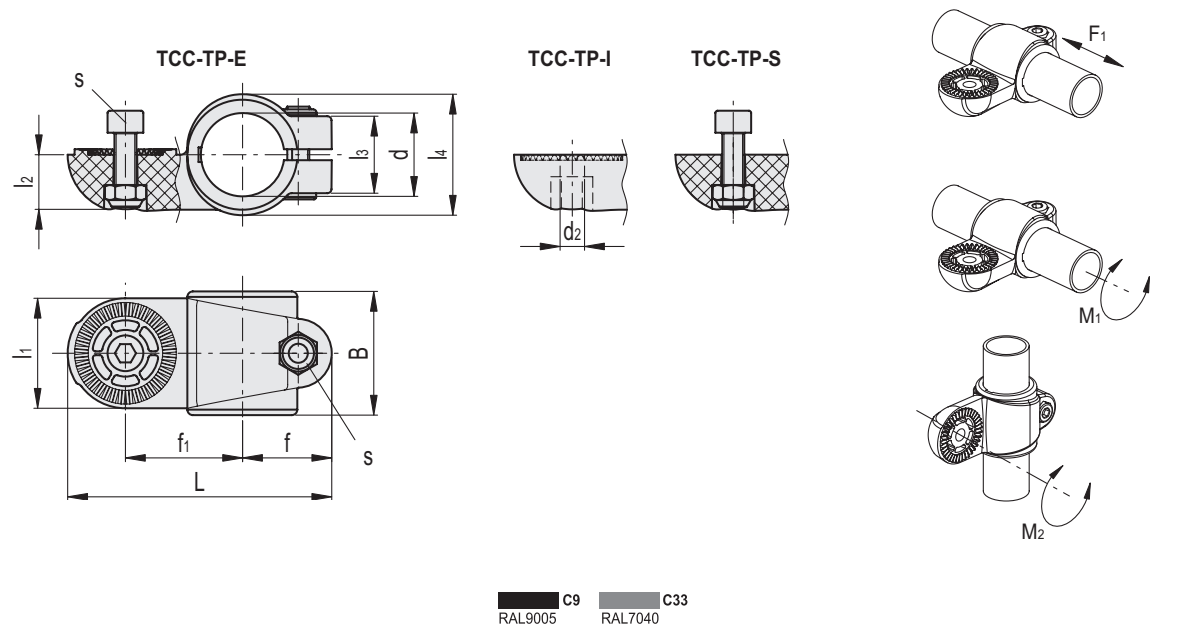
ACCESSORIES ON REQUEST (TO BE ORDERED SEPARATELY)

- TCC-A (see page 32): reduction sleeves.
- TCC-KS (see page 34): clamping kit.
- GN 197: monitor mounts.
- TCC-KV (see page 35): screws and clamping nuts.
- GN 990: connecting tubes.



ELESA Original design





TCC-TP-E

| Code | Description | d | L | B | f | f1 | l1 | l2 | l3 | l4 | s | C# [Nm] | F1* [N] | M1** [Nm] | M2*** [Nm] | ⚖ |
|------------|-----------------|----|----|------|------|----|----|------|----|----|----|------------|------------|--------------|---------------|----|
| 600411-C9 | TCC-TP-30-E-C9 | 30 | 95 | 44.5 | 32.5 | 42 | 40 | 16.5 | 27 | 44 | M8 | 12 | 3000 | 33 | 120 | 83 |
| 600411-C33 | TCC-TP-30-E-C33 | 30 | 95 | 44.5 | 32.5 | 42 | 40 | 16.5 | 27 | 44 | M8 | 12 | 3000 | 33 | 120 | 83 |

TCC-TP-I

| Code | Description | d | L | B | d2 | f | f1 | l1 | l2 | l3 | l4 | s | C# [Nm] | F1* [N] | M1** [Nm] | M2*** [Nm] | ⚖ |
|------------|-----------------|----|----|------|-----|------|----|----|------|----|----|----|------------|------------|--------------|---------------|----|
| 600413-C9 | TCC-TP-30-I-C9 | 30 | 95 | 44.5 | 8,1 | 32.5 | 42 | 40 | 16.5 | 27 | 44 | M8 | 12 | 3000 | 33 | 120 | 82 |
| 600413-C33 | TCC-TP-30-I-C33 | 30 | 95 | 44.5 | 8,1 | 32.5 | 42 | 40 | 16.5 | 27 | 44 | M8 | 12 | 3000 | 33 | 120 | 82 |

TCC-TP-S

| Code | Description | d | L | B | f | f1 | l1 | l2 | l3 | l4 | s | C# [Nm] | F1* [N] | M1** [Nm] | M2*** [Nm] | ⚖ |
|------------|-----------------|----|----|------|------|----|----|------|----|----|----|------------|------------|--------------|---------------|----|
| 600415-C9 | TCC-TP-30-S-C9 | 30 | 95 | 44.5 | 32.5 | 42 | 40 | 16.5 | 27 | 44 | M8 | 12 | 3000 | 33 | 4 | 82 |
| 600415-C33 | TCC-TP-30-S-C33 | 30 | 95 | 44.5 | 32.5 | 42 | 40 | 16.5 | 27 | 44 | M8 | 12 | 3000 | 33 | 4 | 82 |

Suggested torque for screw assembly.
* Resistance to tube pull out
** Resistance to tube rotation
*** Resistance to joint rotation.

CLAMP AND BASE

Glass-fibre reinforced polyamide based (PA) technopolymer, RAL 9005 (C9) black colour or grey RAL 7040 (C33) colour, matte finish.

SCREWS AND NUTS (SUPPLIED)

Cylindrical-head screw with hexagon socket in AISI 304 stainless steel with anti-seizure treatment.

Self-locking nuts in AISI 304 stainless steel.

STANDARD EXECUTIONS

- **TCC-AP-PBF-T**: with teeth.
- **TCC-AP-PBF-S**: without teeth.

FEATURES

Joints comprising bases with external teeth and clamps with internal teeth (36 teeth) have a 10° adjustment angle.

Joints comprising bases and clamps without teeth can be positioned at any angle.

Clamps for tubes with a diameter of 30 ± 0.2 mm.

For smaller diameter tubes, the hole reduction sleeve can be used TCC-A (to be ordered separately).

The "s" grub screws may be replaced by the kit TCC-KS.

TECHNICAL DATA

The resistance values shown in the table were measured during laboratory tests at ambient temperature with the screws tightened to the maximum torque "C#".

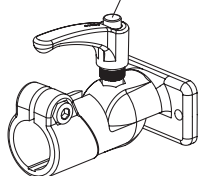
ACCESSORIES ON REQUEST (TO BE ORDERED SEPARATELY)

- TCC-A (see page 32): reduction sleeves.
- TCC-KS (see page 34): clamping kit.
- GN 197: monitor mounts.
- TCC-KV (see page 35): screws and clamping nuts.
- GN 990: connecting tubes.

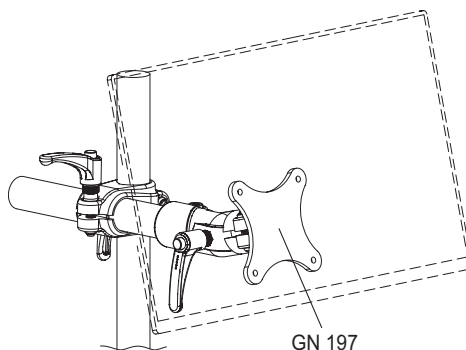
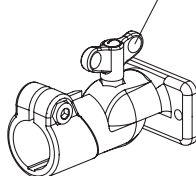


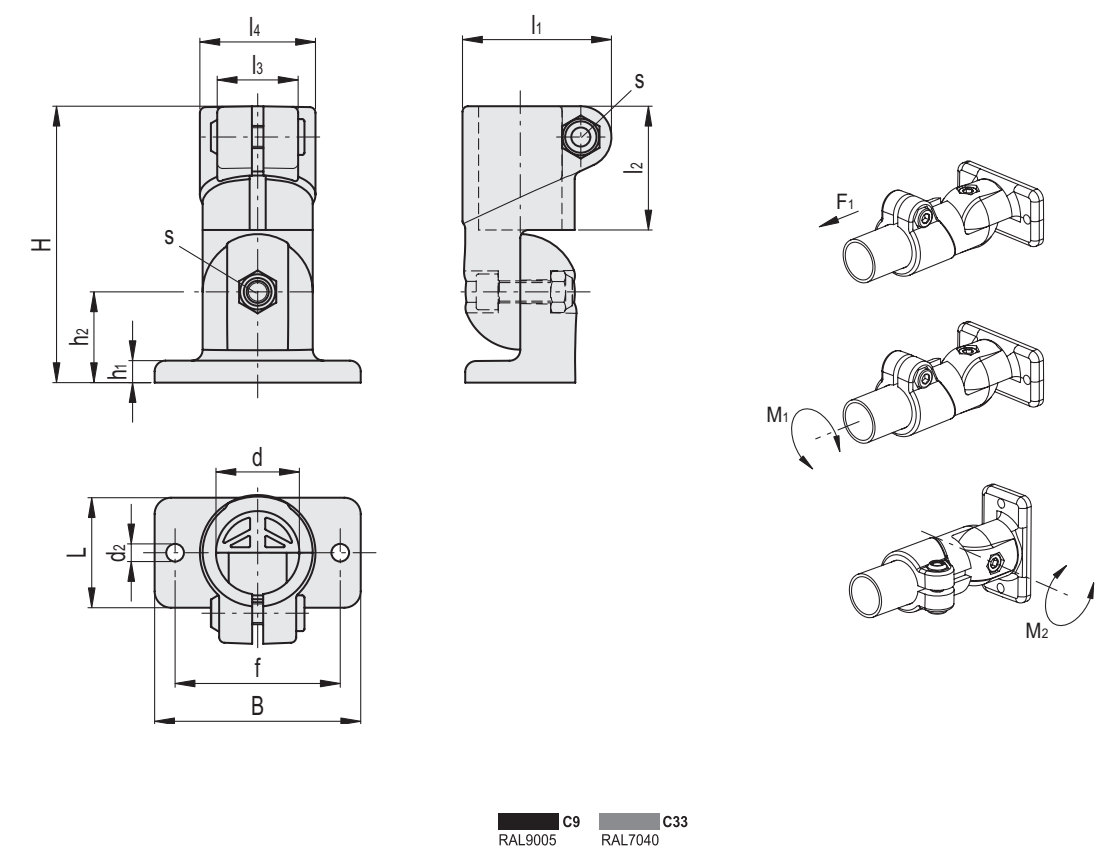
ELESA Original design

TCC-KS-ERX



TCC-KS-EWN





| TCC-AP-PBF-T | | | | | | | | | | | | | | | | | | INOX | STAINLESS STEEL |
|--------------|---------------------|----|----|----|-----|-----|-------|----|----|----|----|----|----|----|------------|------------|--------------|---------------|-----------------|
| Code | Description | d | L | B | H | d2 | f±0.2 | h1 | h2 | l1 | l2 | l3 | l4 | s | C# [Nm] | F1* [N] | M1** [Nm] | M2*** [Nm] | ⚖ |
| 600831-C9 | TCC-AP-PBF-30-T-C9 | 30 | 40 | 75 | 100 | 6.5 | 60 | 8 | 33 | 54 | 45 | 27 | 42 | M8 | 12 | 3300 | 33 | 100 | 142 |
| 600831-C33 | TCC-AP-PBF-30-T-C33 | 30 | 40 | 75 | 100 | 6.5 | 60 | 8 | 33 | 54 | 45 | 27 | 42 | M8 | 12 | 3300 | 33 | 100 | 142 |

| TCC-AP-PBF-S | | | | | | | | | | | | | | | | | | INOX | STAINLESS STEEL |
|--------------|---------------------|----|----|----|-----|-----|-------|----|----|----|----|----|----|----|------------|------------|--------------|---------------|-----------------|
| Code | Description | d | L | B | H | d2 | f±0.2 | h1 | h2 | l1 | l2 | l3 | l4 | s | C# [Nm] | F1* [N] | M1** [Nm] | M2*** [Nm] | ⚖ |
| 600832-C9 | TCC-AP-PBF-30-S-C9 | 30 | 40 | 75 | 100 | 6.5 | 60 | 8 | 33 | 54 | 45 | 27 | 42 | M8 | 12 | 3300 | 33 | 6 | 142 |
| 600832-C33 | TCC-AP-PBF-30-S-C33 | 30 | 40 | 75 | 100 | 6.5 | 60 | 8 | 33 | 54 | 45 | 27 | 42 | M8 | 12 | 3300 | 33 | 6 | 142 |

Suggested torque for screw assembly.
* Resistance to tube pull out
** Resistance to tube rotation
*** Resistance to joint rotation.

CLAMP AND BASE

Glass-fibre reinforced polyamide based (PA) technopolymer, RAL 9005 (C9) black colour or grey RAL 7040 (C33) colour, matte finish.

SCREWS AND NUTS (SUPPLIED)

Cylindrical-head screw with hexagon socket in AISI 304 stainless steel with anti-seizure treatment.

Self-locking nuts in AISI 304 stainless steel.

STANDARD EXECUTIONS

- **TCC-TP-PBF-T**: with teeth.
- **TCC-TP-PBF-S**: without teeth.

FEATURES

Joints comprising bases with external teeth and clamps with internal teeth (36 teeth) have a 10° adjustment angle.

Joints comprising bases and clamps without teeth can be positioned at any angle.

Clamps for tubes with a diameter of 30 ± 0.2 mm.

For smaller diameter tubes, the hole reduction sleeve can be used TCC-A (to be ordered separately).

The "s" grub screws may be replaced by the kit TCC-KS.

TECHNICAL DATA

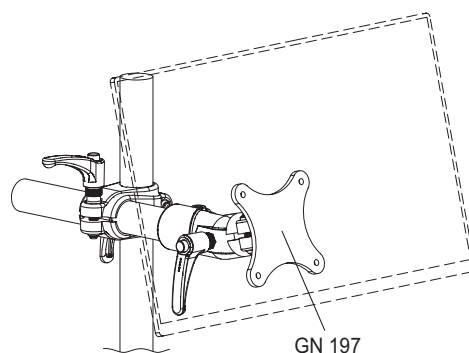
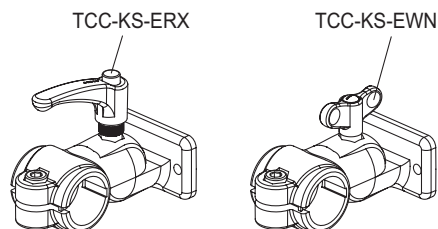
The resistance values shown in the table were measured during laboratory tests at ambient temperature with the screws tightened to the maximum torque "C#".

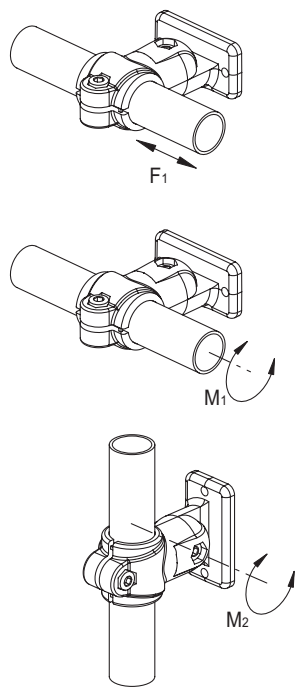
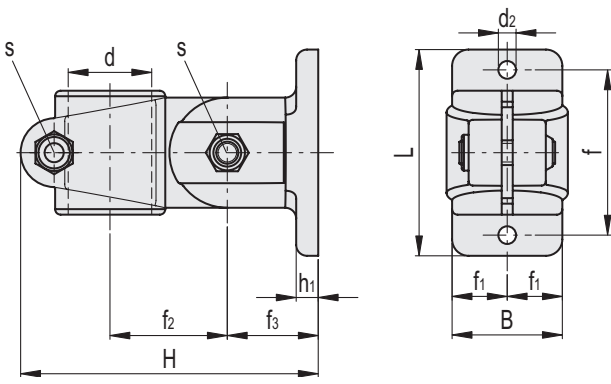
ACCESSORIES ON REQUEST (TO BE ORDERED SEPARATELY)

- TCC-A (see page 32): reduction sleeves.
- TCC-KS (see page 34): clamping kit.
- GN 197: monitor mounts.
- TCC-KV (see page 35): screws and clamping nuts.
- GN 990: connecting tubes.



ELESA Original design







C9RAL9005

C33RAL7040

TCC-TP-PBF-T

| Code | Description | d | L | B | H | d2 | f ±0.2 | f1 | f2 | f3 | h1 | s | C# [Nm] | F1* [N] | M1** [Nm] | M2*** [Nm] |  |
|------------|---------------------|----|----|----|-----|-----|--------|----|----|----|----|----|------------|------------|--------------|---------------|---|
| 600851-C9 | TCC-TP-PBF-30-T-C9 | 30 | 75 | 40 | 108 | 6.5 | 60 | 20 | 42 | 33 | 8 | M8 | 12 | 3000 | 33 | 100 | 145 |
| 600851-C33 | TCC-TP-PBF-30-T-C33 | 30 | 75 | 40 | 108 | 6.5 | 60 | 20 | 42 | 33 | 8 | M8 | 12 | 3000 | 33 | 100 | 145 |

TCC-TP-PBF-S

| Code | Description | d | L | B | H | d2 | f ±0.2 | f1 | f2 | f3 | h1 | s | C# [Nm] | F1* [N] | M1** [Nm] | M2*** [Nm] |  |
|------------|---------------------|----|----|----|-----|-----|--------|----|----|----|----|----|------------|------------|--------------|---------------|---|
| 600852-C9 | TCC-TP-PBF-30-S-C9 | 30 | 75 | 40 | 108 | 6.5 | 60 | 20 | 42 | 33 | 8 | M8 | 12 | 3000 | 33 | 4 | 145 |
| 600852-C33 | TCC-TP-PBF-30-S-C33 | 30 | 75 | 40 | 108 | 6.5 | 60 | 20 | 42 | 33 | 8 | M8 | 12 | 3000 | 33 | 4 | 145 |

INOX

STAINLESS
STEEL

Suggested torque for screw assembly.
* Resistance to tube pull out
** Resistance to tube rotation
*** Resistance to joint rotation.

CLAMP AND BASE

Glass-fibre reinforced polyamide based (PA) technopolymer, RAL 9005 (C9) black colour or grey RAL 7040 (C33) colour, matte finish.

SCREWS AND NUTS (SUPPLIED)

Cylindrical-head screw with hexagon socket in AISI 304 stainless steel with anti-seizure treatment.

Self-locking nuts in AISI 304 stainless steel.

STANDARD EXECUTIONS

- **TCC-AP-PB-T**: with teeth.
- **TCC-AP-PB-S**: without teeth.

FEATURES

Joints comprising bases with external teeth and clamps with internal teeth (36 teeth) have a 10° adjustment angle.

Joints comprising bases and clamps without teeth can be positioned at any angle.

Clamps for tubes with a diameter of 30 ± 0.2 mm.

For smaller diameter tubes, the hole reduction sleeve can be used TCC-A (to be ordered separately).

The "s" grub screws may be replaced by the kit TCC-KS.

TECHNICAL DATA

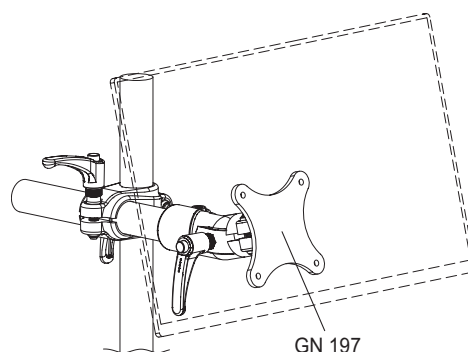
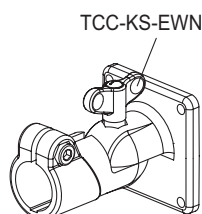
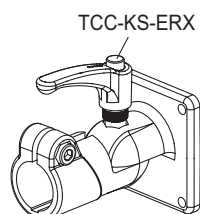
The resistance values shown in the table were measured during laboratory tests at ambient temperature with the screws tightened to the maximum torque "C#".

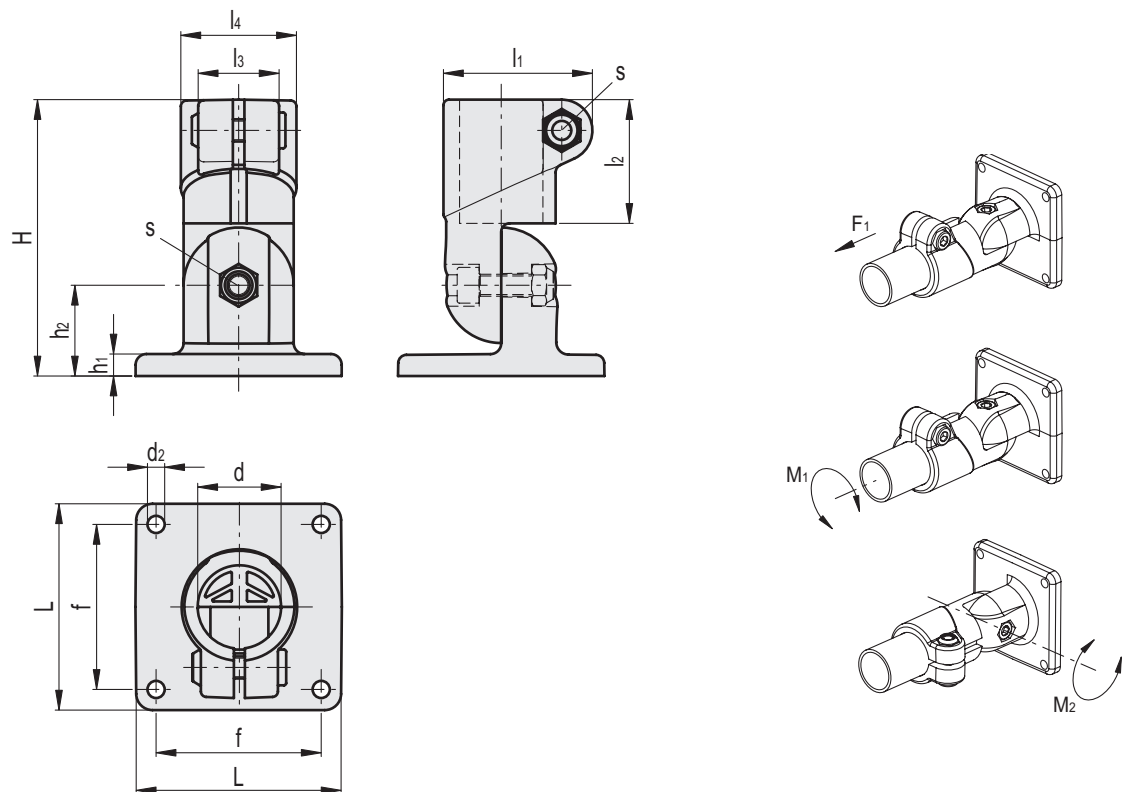
ACCESSORIES ON REQUEST (TO BE ORDERED SEPARATELY)

- TCC-A (see page 32): reduction sleeves.
- TCC-KS (see page 34): clamping kit.
- GN 197: monitor mounts.
- TCC-KV (see page 35): screws and clamping nuts.
- GN 990: connecting tubes.



ELESA Original design





C9 C33
RAL9005 RAL7040

TCC-AP-PB-T

INOX STAINLESS STEEL

| Code | Description | d | L | H | d2 | f ±0.2 | h1 | h2 | l1 | l2 | l3 | l4 | s | C# [Nm] | F1* [N] | M1** [Nm] | M2*** [Nm] | ⚖ |
|------------|--------------------|----|----|-----|-----|--------|----|----|----|----|----|----|----|------------|------------|--------------|---------------|-----|
| 600821-C9 | TCC-AP-PB-30-T-C9 | 30 | 75 | 100 | 6.5 | 60 | 8 | 33 | 54 | 45 | 27 | 42 | M8 | 12 | 3300 | 33 | 100 | 157 |
| 600821-C33 | TCC-AP-PB-30-T-C33 | 30 | 75 | 100 | 6.5 | 60 | 8 | 33 | 54 | 45 | 27 | 42 | M8 | 12 | 3300 | 33 | 100 | 157 |

TCC-AP-PB-S

INOX STAINLESS STEEL

| Code | Description | d | L | H | d2 | f ±0.2 | h1 | h2 | l1 | l2 | l3 | l4 | s | C# [Nm] | F1* [N] | M1** [Nm] | M2*** [Nm] | ⚖ |
|------------|--------------------|----|----|-----|-----|--------|----|----|----|----|----|----|----|------------|------------|--------------|---------------|-----|
| 600822-C9 | TCC-AP-PB-30-S-C9 | 30 | 75 | 100 | 6.5 | 60 | 8 | 33 | 54 | 45 | 27 | 42 | M8 | 12 | 3300 | 33 | 6 | 157 |
| 600822-C33 | TCC-AP-PB-30-S-C33 | 30 | 75 | 100 | 6.5 | 60 | 8 | 33 | 54 | 45 | 27 | 42 | M8 | 12 | 3300 | 33 | 6 | 157 |

Suggested torque for screw assembly.
* Resistance to tube pull out
** Resistance to tube rotation
*** Resistance to joint rotation.

CLAMP AND BASE

Glass-fibre reinforced polyamide based (PA) technopolymer, RAL 9005 (C9) black colour or grey RAL 7040 (C33) colour, matte finish.

SCREWS AND NUTS (SUPPLIED)

Cylindrical-head screw with hexagon socket in AISI 304 stainless steel with anti-seizure treatment.

Self-locking nuts in AISI 304 stainless steel.

STANDARD EXECUTIONS

- **TCC-TP-PB-T**: with teeth.
- **TCC-TP-PB-S**: without teeth.

FEATURES

Joints comprising bases with external teeth and clamps with internal teeth (36 teeth) have a 10° adjustment angle.

Joints comprising bases and clamps without teeth can be positioned at any angle.

Clamps for tubes with a diameter of 30 ± 0.2 mm.

For smaller diameter tubes, the hole reduction sleeve can be used TCC-A (to be ordered separately).

The "s" grub screws may be replaced by the kit TCC-KS.

TECHNICAL DATA

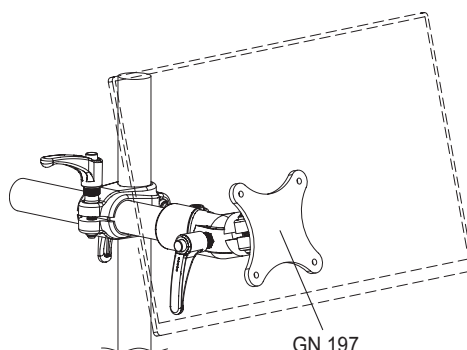
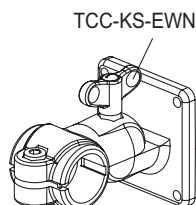
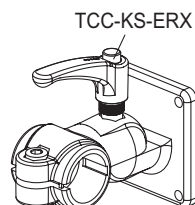
The resistance values shown in the table were measured during laboratory tests at ambient temperature with the screws tightened to the maximum torque "C#".

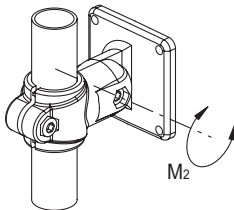
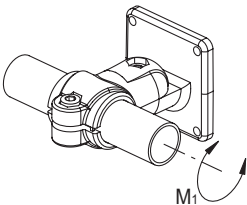
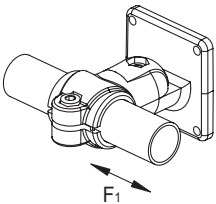
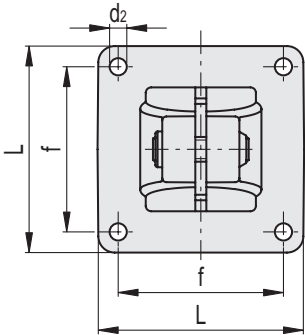
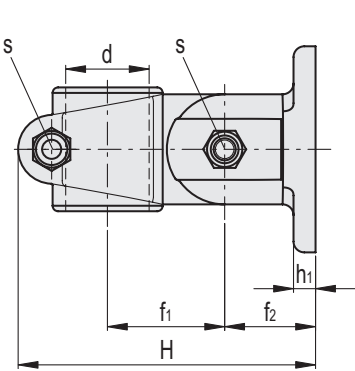
ACCESSORIES ON REQUEST (TO BE ORDERED SEPARATELY)

- TCC-A (see page 32): reduction sleeves.
- TCC-KS (see page 34): clamping kit.
- GN 197: monitor mounts.
- TCC-KV (see page 35): screws and clamping nuts.
- GN 990: connecting tubes.



ELESA Original design





C9

RAL9005


C33

RAL7040

TCC-TP-PB-T

INOX


STAINLESS STEEL

| Code | Description | d | L | H | d2 | f ±0.2 | f1 | f2 | h1 | s | C# [Nm] | F1* [N] | M1** [Nm] | M2*** [Nm] |  |
|------------|--------------------|----|----|-----|----|--------|----|----|----|----|------------|------------|--------------|---------------|---|
| 600841-C9 | TCC-TP-PB-30-T-C9 | 30 | 75 | 108 | 65 | 60 | 42 | 33 | 8 | M8 | 12 | 3000 | 33 | 100 | 160 |
| 600841-C33 | TCC-TP-PB-30-T-C33 | 30 | 75 | 108 | 65 | 60 | 42 | 33 | 8 | M8 | 12 | 3000 | 33 | 100 | 160 |

TCC-TP-PB-S

INOX

STAINLESS STEEL

| Code | Description | d | L | H | d2 | f ±0.2 | f1 | f2 | h1 | s | C# [Nm] | F1* [N] | M1** [Nm] | M2*** [Nm] |  |
|------------|--------------------|----|----|-----|----|--------|----|----|----|----|------------|------------|--------------|---------------|---|
| 600842-C9 | TCC-TP-PB-30-S-C9 | 30 | 75 | 108 | 65 | 60 | 42 | 33 | 8 | M8 | 12 | 3000 | 33 | 4 | 160 |
| 600842-C33 | TCC-TP-PB-30-S-C33 | 30 | 75 | 108 | 65 | 60 | 42 | 33 | 8 | M8 | 12 | 3000 | 33 | 4 | 160 |

Suggested torque for screw assembly.
* Resistance to tube pull out
** Resistance to tube rotation
*** Resistance to joint rotation.

CLAMPS

Glass-fibre reinforced polyamide based (PA) technopolymer, RAL 9005 (C9) black colour or grey RAL 7040 (C33) colour, matte finish.

SCREWS AND NUTS (SUPPLIED)

Cylindrical-head screw with hexagon socket in AISI 304 stainless steel with anti-seizure treatment.

Self-locking nuts in AISI 304 stainless steel.

STANDARD EXECUTIONS

- **TCC-AP-AP-T**: with teeth.
- **TCC-AP-AP-S**: without teeth.

FEATURES

Joints comprising clamps with external/internal teeth (36 teeth) have a 10° adjustment angle.

Joints comprising clamps without teeth can be positioned at any angle.

Clamps for tubes with a diameter of 30 ± 0.2 mm.

For smaller diameter tubes, the hole reduction sleeve can be used TCC-A (to be ordered separately).

The "s" grub screws may be replaced by the kit TCC-KS.

TECHNICAL DATA

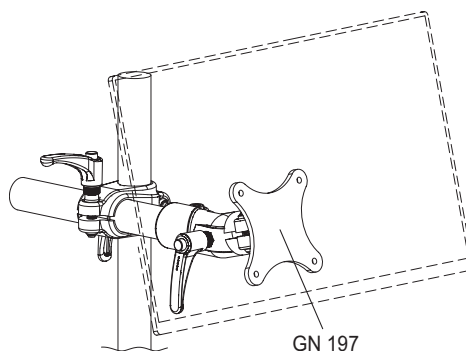
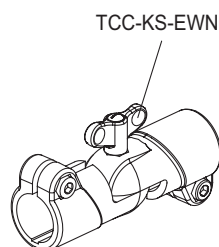
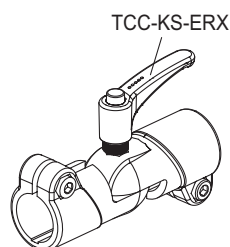
The resistance values shown in the table were measured during laboratory tests at ambient temperature with the screws tightened to the maximum torque "C#".

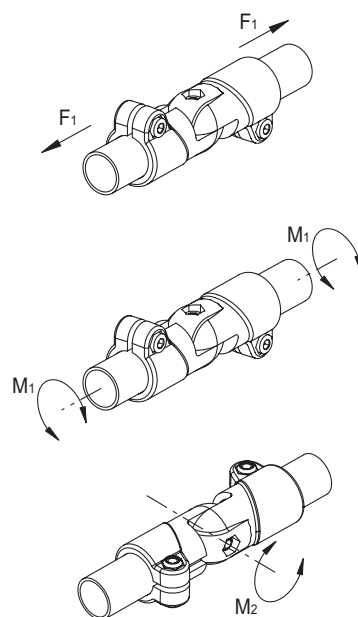
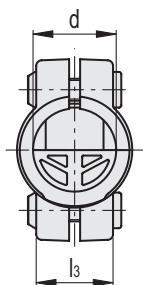
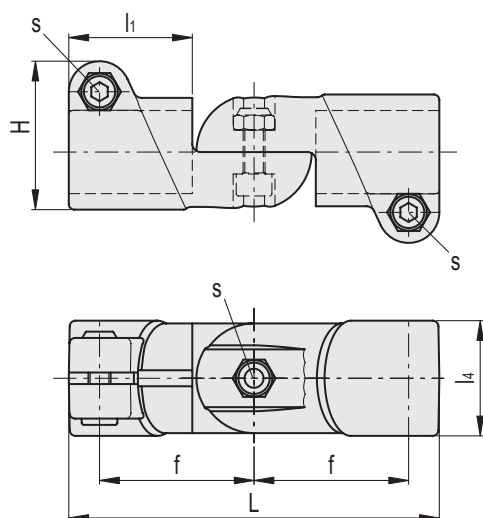
ACCESSORIES ON REQUEST (TO BE ORDERED SEPARATELY)

- TCC-A (see page 32): reduction sleeves.
- TCC-KS (see page 34): clamping kit.
- GN 197: monitor mounts.
- TCC-KV (see page 35): screws and clamping nuts.
- GN 990: connecting tubes.



ELESA Original design






 **C9**
RAL9005

 **C33**
RAL7040


TCC-AP-AP-T



| Code | Description | d | L | H | f | l1 | l3 | l4 | s | C# [Nm] | F1* [N] | M1** [Nm] | M2*** [Nm] |  |
|------------|--------------------|----|-----|----|----|----|----|----|----|------------|------------|--------------|---------------|---|
| 600801-C9 | TCC-AP-AP-30-T-C9 | 30 | 135 | 54 | 56 | 45 | 27 | 42 | M8 | 12 | 3300 | 33 | 140 | 178 |
| 600801-C33 | TCC-AP-AP-30-T-C33 | 30 | 135 | 54 | 56 | 45 | 27 | 42 | M8 | 12 | 3300 | 33 | 140 | 178 |

TCC-AP-AP-S



| Code | Description | d | L | H | f | l ₁ | l ₃ | l ₄ | s | C# [Nm] | F1* [N] | M1** [Nm] | M2*** [Nm] |  |
|------------|--------------------|----|-----|----|----|----------------|----------------|----------------|----|------------|------------|--------------|---------------|---|
| 600802-C9 | TCC-AP-AP-30-S-C9 | 30 | 135 | 54 | 56 | 45 | 27 | 42 | M8 | 12 | 3300 | 33 | 6 | 178 |
| 600802-C33 | TCC-AP-AP-30-S-C33 | 30 | 135 | 54 | 56 | 45 | 27 | 42 | M8 | 12 | 3300 | 33 | 6 | 178 |

Suggested torque for screw assembly.

* Resistance to tube pull out

** Resistance to tube rotation

*** Resistance to joint rotation.

CLAMPS

Glass-fibre reinforced polyamide based (PA) technopolymer, RAL 9005 (C9) black colour or grey RAL 7040 (C33) colour, matte finish.

SCREWS AND NUTS (SUPPLIED)

Cylindrical-head screw with hexagon socket in AISI 304 stainless steel with anti-seizure treatment.

Self-locking nuts in AISI 304 stainless steel.

STANDARD EXECUTIONS

- **TCC-AP-TP-T**: with teeth.
- **TCC-AP-TP-S**: without teeth.

FEATURES

Joints comprising clamps with external/internal teeth (36 teeth) have a 10° adjustment angle.

Joints comprising clamps without teeth can be positioned at any angle.

Clamps for tubes with a diameter of 30 ± 0.2 mm.

For smaller diameter tubes, the hole reduction sleeve can be used TCC-A (to be ordered separately).

The "s" grub screws may be replaced by the kit TCC-KS.

TECHNICAL DATA

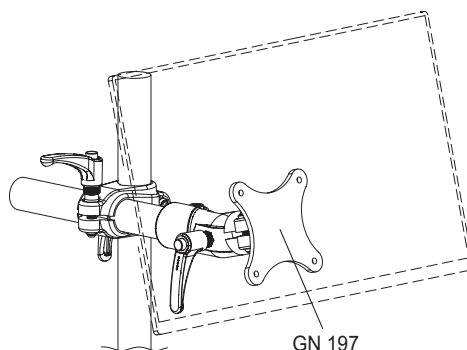
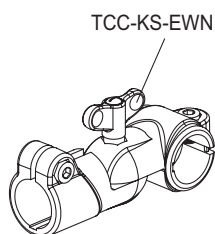
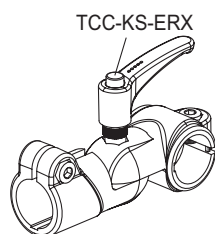
The resistance values shown in the table were measured during laboratory tests at ambient temperature with the screws tightened to the maximum torque "C#".

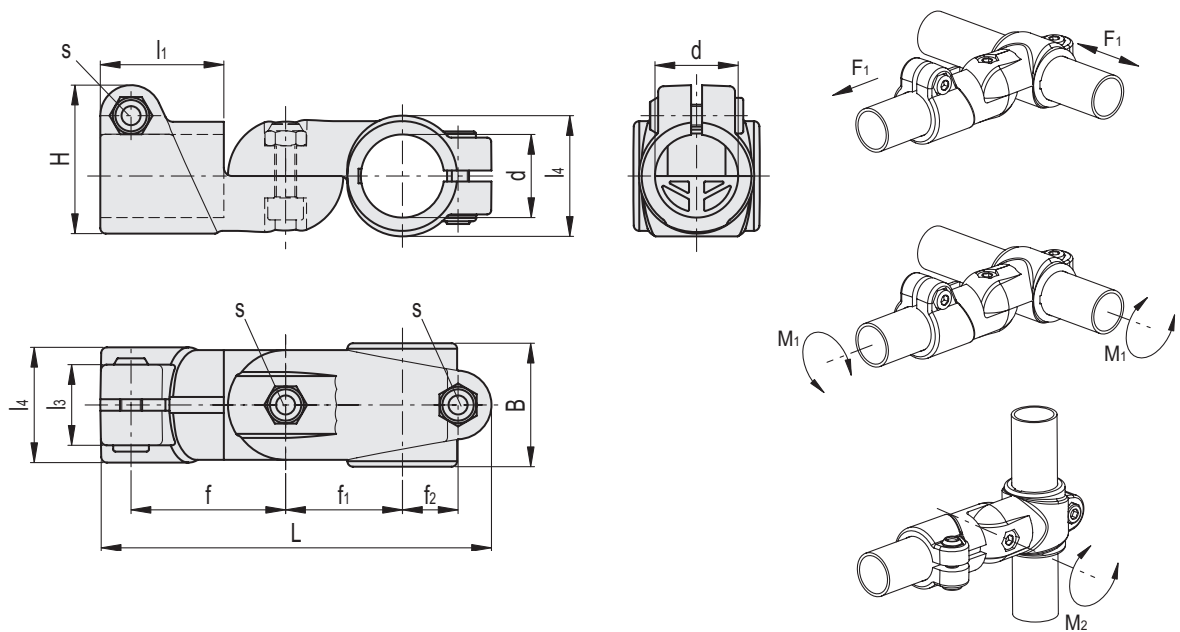
ACCESSORIES ON REQUEST (TO BE ORDERED SEPARATELY)

- TCC-A (see page 32): reduction sleeves.
- TCC-KS (see page 34): clamping kit.
- GN 197: monitor mounts.
- TCC-KV (see page 35): screws and clamping nuts.
- GN 990: connecting tubes.



ELESA Original design





C9RAL9005

C33RAL7040

TCC-AP-TP-T

INOXSTAINLESS STEEL

| Code | Description | d | L | B | H | f | f1 | f2 | l1 | l3 | l4 | s | C# [Nm] | F1* [N] | M1** [Nm] | M2*** [Nm] | ⚖ |
|------------|--------------------|----|-----|------|----|----|----|------|----|----|----|----|------------|------------|--------------|---------------|-----|
| 600811-C9 | TCC-AP-TP-30-T-C9 | 30 | 142 | 44.5 | 54 | 56 | 42 | 20.5 | 45 | 27 | 44 | M8 | 12 | 3000 | 33 | 120 | 181 |
| 600811-C33 | TCC-AP-TP-30-T-C33 | 30 | 142 | 44.5 | 54 | 56 | 42 | 20.5 | 45 | 27 | 44 | M8 | 12 | 3000 | 33 | 120 | 181 |

TCC-AP-TP-S

INOXSTAINLESS STEEL

| Code | Description | d | L | B | H | f | f1 | f2 | l1 | l3 | l4 | s | C# [Nm] | F1* [N] | M1** [Nm] | M2*** [Nm] | ⚖ |
|------------|--------------------|----|-----|------|----|----|----|------|----|----|----|----|------------|------------|--------------|---------------|-----|
| 600812-C9 | TCC-AP-TP-30-S-C9 | 30 | 142 | 44.5 | 54 | 56 | 42 | 20.5 | 45 | 27 | 44 | M8 | 12 | 3000 | 33 | 4 | 181 |
| 600812-C33 | TCC-AP-TP-30-S-C33 | 30 | 142 | 44.5 | 54 | 56 | 42 | 20.5 | 45 | 27 | 44 | M8 | 12 | 3000 | 33 | 4 | 181 |

Suggested torque for screw assembly.
* Resistance to tube pull out
** Resistance to tube rotation
*** Resistance to joint rotation.

MATERIAL

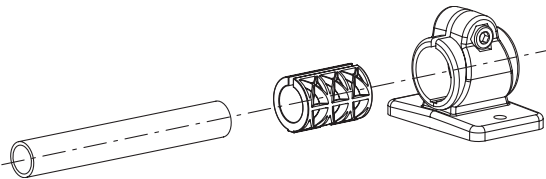
Glass-fibre reinforced polyamide based (PA) technopolymer, RAL 9005 (C9) black colour or grey RAL 7040 (C33) colour, matte finish.

FEATURES

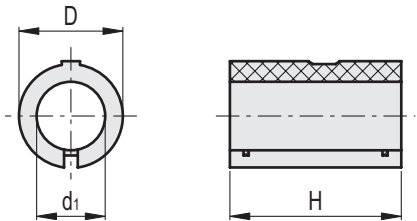
Hole reduction sleeve for tubes with diameter "d1" ± 0.2 mm.
The hole reduction sleeve fits into the housing hole of the TCC clamps so that smaller diameter tubes can be used.

TECHNICAL DATA

The resistance values shown in the table were measured during laboratory tests at ambient temperature with the screws tightened to the maximum torque of 5 Nm for TCC-A-18 and 12 Nm for TCC-A-30.

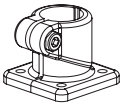
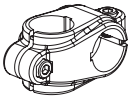
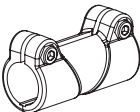
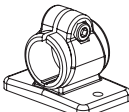
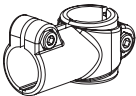



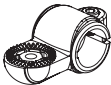
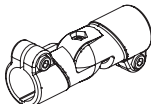
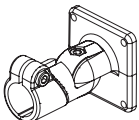
ELESA Original design

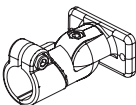
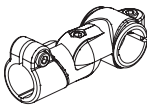
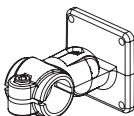
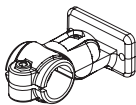


| Code | Description | Code | Description | D | H | d1 | ⚖ |
|-----------|----------------|------------|-----------------|----|----|----|----|
| 600101-C9 | TCC-A-18-12-C9 | 600101-C33 | TCC-A-18-12-C33 | 18 | 29 | 12 | 5 |
| 600102-C9 | TCC-A-18-14-C9 | 600102-C33 | TCC-A-18-14-C33 | 18 | 29 | 14 | 4 |
| 600103-C9 | TCC-A-18-15-C9 | 600103-C33 | TCC-A-18-15-C33 | 18 | 29 | 15 | 4 |
| 600104-C9 | TCC-A-18-16-C9 | 600104-C33 | TCC-A-18-16-C33 | 18 | 29 | 16 | 3 |
| 600201-C9 | TCC-A-30-20-C9 | 600201-C33 | TCC-A-30-20-C33 | 30 | 45 | 20 | 15 |
| 600202-C9 | TCC-A-30-25-C9 | 600202-C33 | TCC-A-30-25-C33 | 30 | 45 | 25 | 10 |

Resistance to tube pull-out (F1) and rotation (M1) with the hole reduction sleeves inserted in the different types of clamps

| | TCC-AB | | TCC-CR | | TCC-SL | | TCC-TB | | TCC-TS | |
|-------------|---|------------|---|------------|---|------------|---|------------|---|------------|
| |  | |  | |  | |  | |  | |
| | F1 [N] | M1 [Nm] | F1 [N] | M1 [Nm] | F1 [N] | M1 [Nm] | F1 [N] | M1 [Nm] | F1 [N] | M1 [Nm] |
| TCC-A-18-12 | 900 | 5 | 1250 | 5 | 900 | 5 | 900 | 5 | 900 | 5 |
| TCC-A-18-14 | 1000 | 7 | 1650 | 10 | 1400 | 7 | 1050 | 8 | 1200 | 7 |
| TCC-A-18-15 | 1000 | 7 | 1650 | 14 | 1400 | 10 | 1100 | 13 | 1200 | 11 |
| TCC-A-18-16 | 1050 | 7 | 2000 | 14 | 1300 | 11 | 1200 | 14 | 1250 | 12 |
| TCC-A-30-20 | 1000 | 8 | 1000 | 5 | 1000 | 6 | 1150 | 7 | 1000 | 6 |
| TCC-A-30-25 | 1350 | 11 | 1300 | 7 | 1300 | 7 | 1600 | 7 | 1400 | 7 |

| | TCC-AP | | TCC-TP | | TCC-AP-AP | | TCC-AP-PB | |
|-------------|---|------------|---|------------|---|------------|---|------------|
| |  | |  | |  | |  | |
| | F1 [N] | M1 [Nm] | F1 [N] | M1 [Nm] | F1 [N] | M1 [Nm] | F1 [N] | M1 [Nm] |
| TCC-A-30-20 | 1600 | 12 | 1600 | 12 | 1600 | 12 | 1600 | 12 |
| TCC-A-30-25 | 2700 | 15 | 2700 | 15 | 2700 | 15 | 2700 | 15 |

| | TCC-AP-PBF | | TCC-AP-TP | | TCC-TP-PB | | TCC-TP-PBF | |
|-------------|---|------------|---|------------|---|------------|---|------------|
| |  | |  | |  | |  | |
| | F1 [N] | M1 [Nm] | F1 [N] | M1 [Nm] | F1 [N] | M1 [Nm] | F1 [N] | M1 [Nm] |
| TCC-A-30-20 | 1600 | 12 | 1600 | 12 | 1600 | 12 | 1600 | 12 |
| TCC-A-30-25 | 2700 | 15 | 2700 | 15 | 2700 | 15 | 2700 | 15 |

ADJUSTABLE HANDLE AND WING NUT

Glass-fibre reinforced polyamide based (PA) technopolymer, grey-black colour, matte finish.

DISTANCE BUSHING

Glass-fibre reinforced polyamide based (PA) technopolymer, black colour, matte finish.

SELF-LOCKING NUT

AISI 304 stainless steel.

STANDARD EXECUTIONS

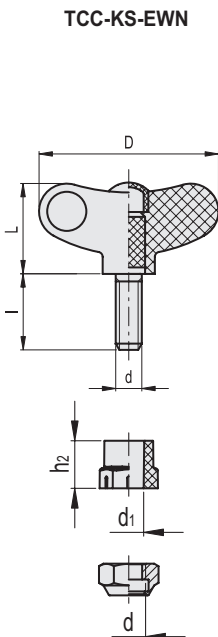
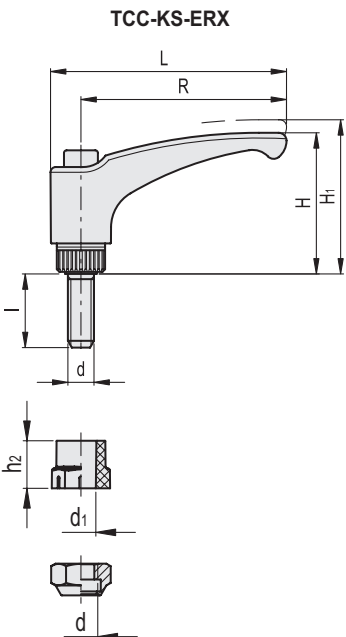
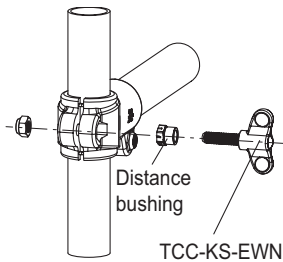
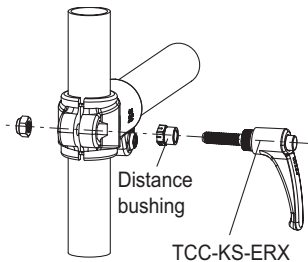
- **TCC-KS-ERX**: adjustable handle with AISI 303 stainless steel threaded stud, chamfered flat end UNI 947 : ISO 4753 (see Technical data on page A-11), with black push button.
- **TCC-KS-EWN**: wing nuts with AISI 303 stainless steel threaded stud, chamfered flat end UNI 947 : ISO 4753 (see Technical data on page A-11), with black cap.

FEATURES AND APPLICATIONS

The clamping kit for TCC, comprising a distance bushing, an adjustable handle or a wing nut and nut, is used when clamping operations are required.



ELESA Original design



TCC-KS-ERX

| Code | Description | d | R | L | H | H1 | d1 | h2 | l | For TCC | △ |
|-----------|------------------------------|----|----|------|------|------|-----|----|----|---------|----|
| 600509-C1 | TCC-KS-ERX.30-SST-p-M6x30-C1 | M6 | 30 | 37.5 | 30 | 33.5 | 6,3 | 8 | 30 | TCC-18 | 21 |
| 600519-C1 | TCC-KS-ERX.44-SST-p-M6x30-C1 | M6 | 44 | 52 | 32.5 | 36 | 6,3 | 8 | 30 | TCC-18 | 23 |
| 600525-C1 | TCC-KS-ERX.63-SST-p-M6x30-C1 | M6 | 63 | 72.5 | 43 | 47 | 6,3 | 8 | 30 | TCC-18 | 25 |
| 600541-C1 | TCC-KS-ERX.63-SST-p-M8x40-C1 | M8 | 63 | 72.5 | 43 | 47 | 8,3 | 12 | 40 | TCC-30 | 47 |
| 600557-C1 | TCC-KS-ERX.78-SST-p-M8x40-C1 | M8 | 78 | 89.5 | 54 | 58 | 8,3 | 12 | 40 | TCC-30 | 56 |

INOX STAINLESS STEEL

TCC-KS-EWN

| Code | Description | d | D | L | d1 | h2 | l | For TCC | △ |
|-----------|------------------------------|----|----|----|-----|----|----|---------|----|
| 600607-C1 | TCC-KS-EWN.48-SST-p-M6x30-C1 | M6 | 47 | 24 | 6,3 | 8 | 30 | TCC-18 | 18 |
| 600619-C1 | TCC-KS-EWN.55-SST-p-M8x40-C1 | M8 | 55 | 28 | 8,3 | 12 | 40 | TCC-30 | 36 |

INOX STAINLESS STEEL

MATERIAL

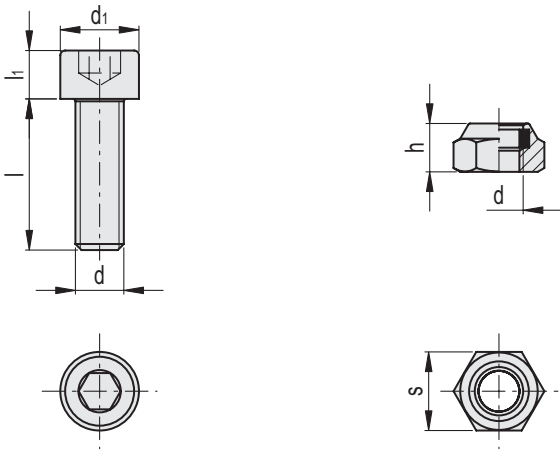
AISI 304 stainless steel.

STANDARD EXECUTION

Cylindrical-head screw with hexagon socket with anti-seizure treatment and self-locking nut.



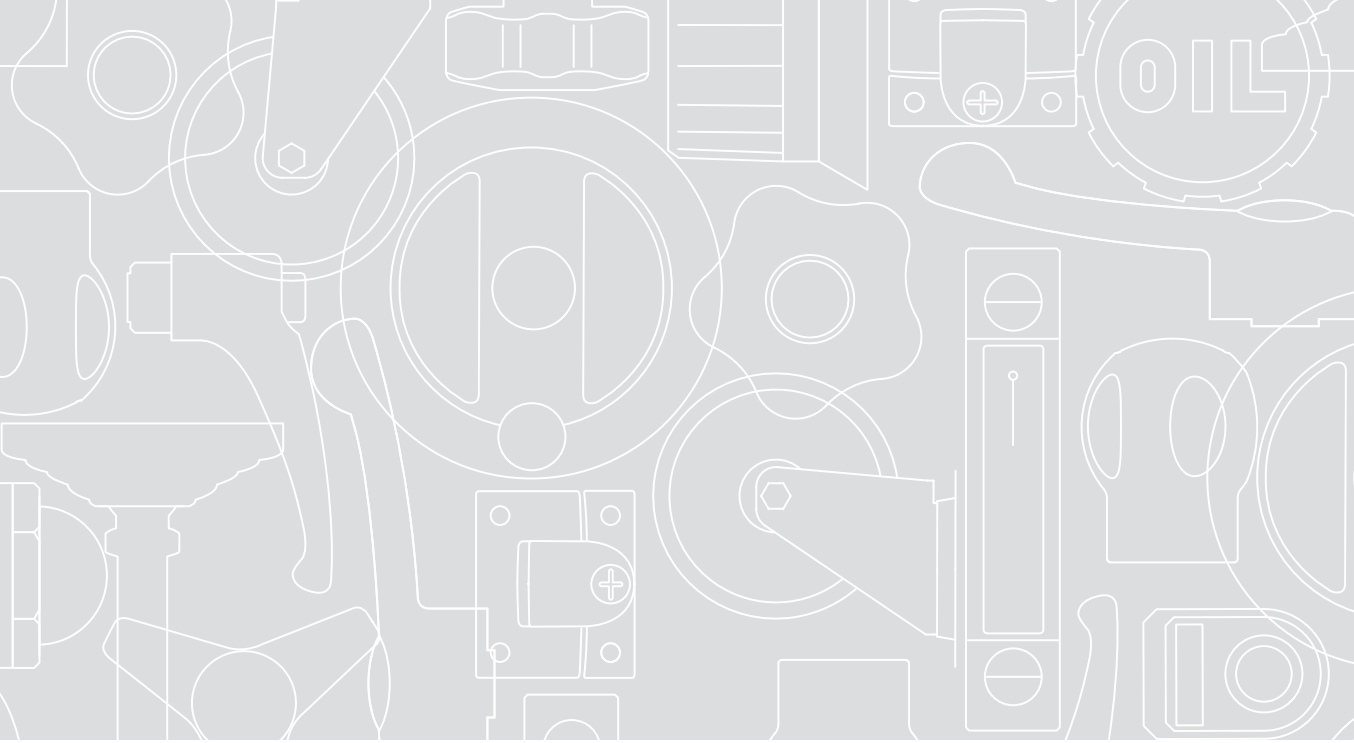
ELESA Original design



INOX

STAINLESS
STEEL

| Code | Description | d | d1 | h | l | l1 | s | ⚖ |
|--------|-------------|----|----|---|----|----|----|----|
| 600706 | TCC-KV-M6 | M6 | 10 | 6 | 18 | 6 | 10 | 8 |
| 600708 | TCC-KV-M8 | M8 | 13 | 8 | 25 | 8 | 13 | 19 |



ELESA. More and more...



elesa[®]

ELESA (UK) LTD
26 Moorlands Estate
Metheringham
Lincolnshire LN4 3HX
Phone +44 (0) 1526 322670
Fax +44 (0) 1526 322669

sales@elesa.co.uk

elesa.com

© Copyright ELESA 2022