

## Hole reduction sleeve

for TCC clamps, technopolymer

### MATERIAL

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

### STANDARD EXECUTIONS

**TCC-A:** for round tubes with diameter of "d1"  $\pm 0,2$ mm.

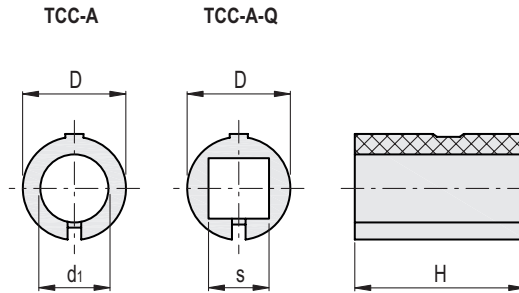
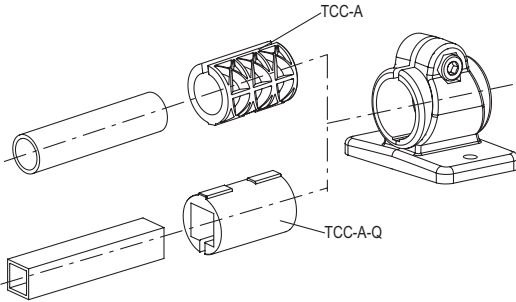
**TCC-A-Q:** for square section tubes "s"  $\pm 0,2$ mm.

### 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



### TCC-A

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

### TCC-A-Q

| Code       | Description      | D  | H  | s  | ⚖  |
|------------|------------------|----|----|----|----|
| 600107-C9  | TCC-AQ-18-10-C9  | 18 | 29 | 10 | 6  |
| 600107-C33 | TCC-AQ-18-10-C33 | 18 | 29 | 10 | 6  |
| 600108-C9  | TCC-AQ-18-12-C9  | 18 | 29 | 12 | 4  |
| 600108-C33 | TCC-AQ-18-12-C33 | 18 | 29 | 12 | 4  |
| 600207-C9  | TCC-AQ-30-20-C9  | 30 | 45 | 20 | 17 |
| 600207-C33 | TCC-AQ-30-20-C33 | 30 | 45 | 20 | 17 |

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-AQ-18-10 | 200    | -       | 400    | -       | 200    | -       | 250    | -       | 250    | -       |
| TCC-AQ-18-12 | 400    | -       | 800    | -       | 400    | -       | 500    | -       | 500    | -       |
| TCC-AQ-30-20 | 900    | -       | 800    | -       | 600    | -       | 1150   | -       | 1000   | -       |

|              | 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-18-12  | 750    | 5       | 700    | 4       | 750       | 5       | 750       | 5       |
| TCC-A-18-14  | 850    | 7       | 900    | 6       | 850       | 7       | 850       | 7       |
| TCC-A-18-15  | 850    | 7       | 900    | 8       | 850       | 7       | 850       | 7       |
| TCC-A-18-16  | 900    | 7       | 950    | 9       | 900       | 7       | 900       | 7       |
| 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-AQ-18-10 | 150    | -       | 200    | -       | 150       | -       | 150       | -       |
| TCC-AQ-18-12 | 350    | -       | 400    | -       | 350       | -       | 350       | -       |
| TCC-AQ-30-20 | 1400   | -       | 1400   | -       | 1400      | -       | 1400      | -       |

|              | 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-18-12  | 750        | 5       | 750       | 5       | 700       | 4       | 700        | 4       |
| TCC-A-18-14  | 850        | 7       | 850       | 7       | 900       | 6       | 900        | 6       |
| TCC-A-18-15  | 850        | 7       | 850       | 7       | 900       | 8       | 900        | 8       |
| TCC-A-18-16  | 900        | 7       | 900       | 7       | 950       | 9       | 950        | 9       |
| 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-AQ-18-10 | 150        | -       | 150       | -       | 200       | -       | 200        | -       |
| TCC-AQ-18-12 | 350        | -       | 350       | -       | 400       | -       | 400        | -       |
| TCC-AQ-30-20 | 1400       | -       | 1400      | -       | 1400      | -       | 1400       | -       |

