

Technical Data Sheet TI-STB10 SITEMA Rod Attachment STB

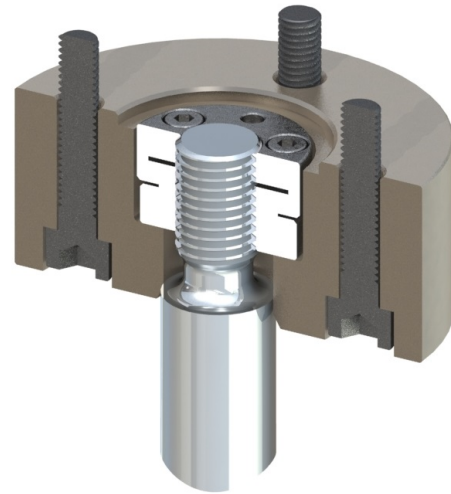


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1 General Information

Purpose

The SITEMA rod attachment STB serves to mount a clamping rod to a machine or system. The rod attachment STB is designed for use with SITEMA clamping heads.

The rod attachment is laid out as loose bearing; it permits an axial play of approximately 0.5 mm and a radial play of 0.5 to 1 mm (depending on design, see Dimensions).

Scope of delivery

In scope of delivery are:

- Mounting flange
- Mounting screws
- Adjusting nut (precision locknut)
- Adjustment tool for adjusting nut

The clamping rod is not included.

2 Attachment

In this data sheet you find the technical data and mounting dimensions for different rod attachment types.

All fastening elements which take up the load must be dimensioned to take up at least 1.3 times the admissible axial force FA. For a detailed description of function, mounting, and performance testing, see *Assembly Instructions MA-STB10*.

If the rod attachment is mounted on a steel fastening element (e.g. 1.0553 / 1.0570), we recommend the following mounting screw tightening torques:

| Thread | Strength class | Tightening torque |
|--------|----------------|-------------------|
| M6 | 10.9 | 11 Nm |
| M8 | 10.9 | 30 Nm |
| M10 | 10.9 | 55 Nm |
| M12 | 10.9 | 85 Nm |
| M16 | 10.9 | 200 Nm |
| M20 | 10.9 | 400 Nm |
| M24 | 10.9 | 750 Nm |
| M30 | 10.9 | 1400 Nm |
| M36 | 10.9 | 2600 Nm |
| M42 | 10.9 | 4000 Nm |

Table 1: Tightening torques

These specifications do not relieve the machinery manufacturer of the responsibility to check in a professional manner that the the screw fittings are suitable for the specific application.



Only use rods which are suitable for the rod attachment STB and for SITEMA clamping heads. See Requirements of the clamping rod and Technical Data Sheet of the clamping head.

3 Axial play

To ensure a safe function, the rod must be adjusted exactly, so that the end of the rod stands exactly 0.5 mm (± 0.1) over the adjusting nut. This results in a 0.5 mm axial play between rod end and machine contact surface.

The safe function is ensured if the test with the supplied adjustment tool shows that the rod projects correctly over the adjustment nut.



To check the correct setting, we deliver an adjustment tool. The adjusting nut must be mounted in such a way that the adjustment tool rests without gap on both the rod end and the adjusting nut; see Fig. 1: Adjustment tool.

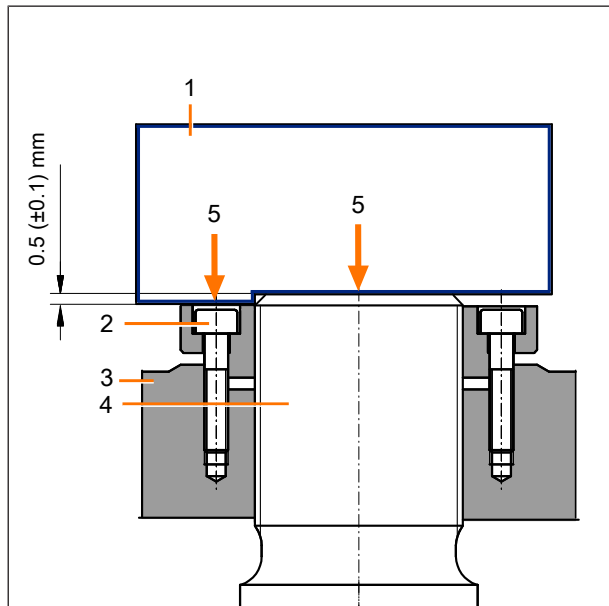


Fig. 1: Usage of the adjustment tool

- 1 Adjustment tool (dimensions 70 × 30 mm)
- 2 Clamping screw
- 3 Adjusting nut
- 4 Clamping rod
- 5 Adjustment tool, no gap

Dimensions

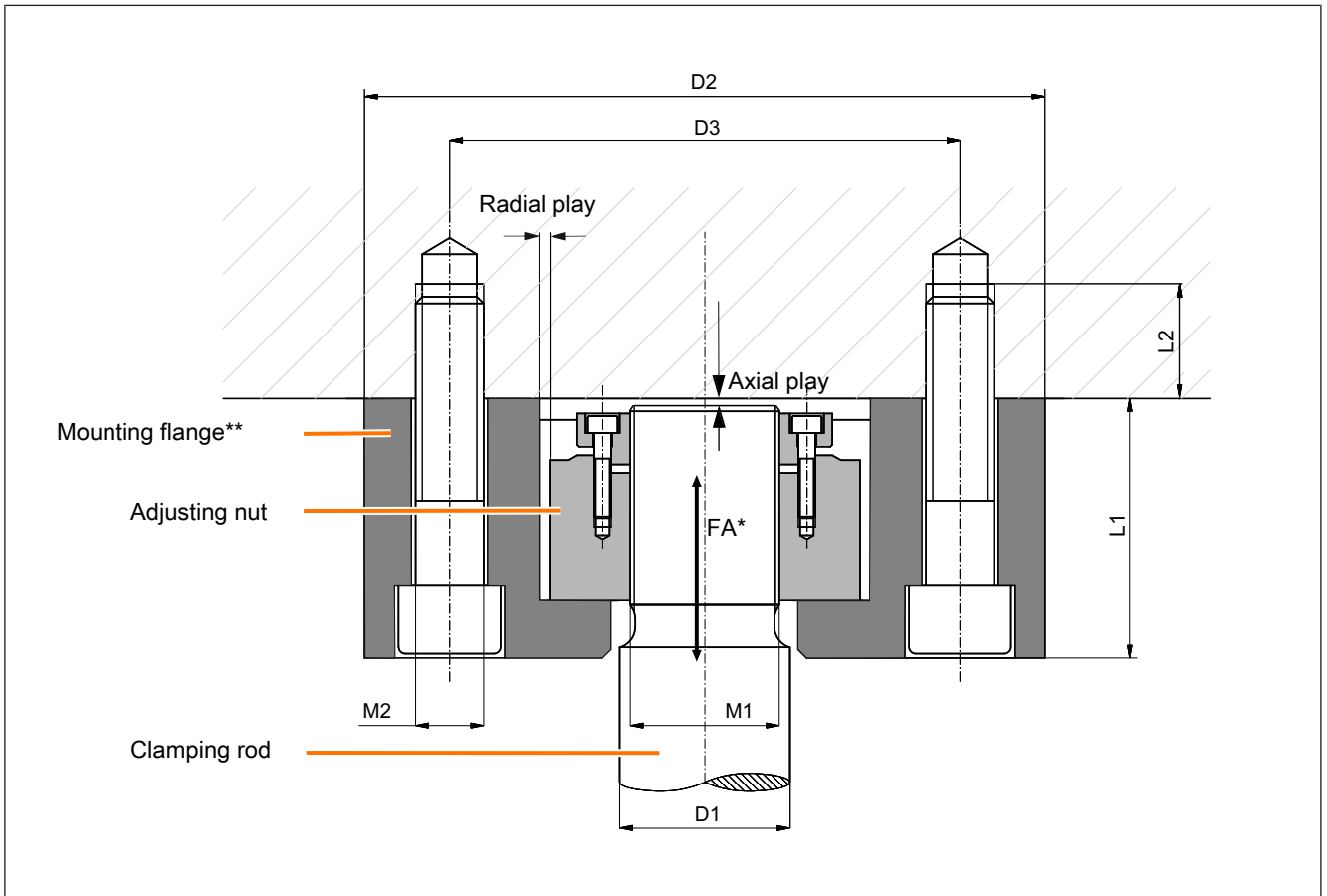


Fig. 2: Dimensions of the rod attachment STB

| Type | ID no. | D1 | FA* | M1 | Adjusting nut | D2 | D3 | L1 | L2 | M2 | Axial play | Radial play | Weight |
|---------|-------------|-----|-----|---------|---------------|-----|-----|-----|----|--------|------------|-------------|--------|
| | (order no.) | mm | kN | | ID no./size | mm | mm | mm | mm | | mm | mm | kg |
| STB 16 | STB 016 01 | 16 | 14 | M12x1.5 | MSR 12x1.5 | 65 | 45 | 27 | 13 | 4xM6 | 0.5 | 0.5 | 0.6 |
| STB 18 | STB 018 01 | 18 | 20 | M16x1.5 | MSR 16x1.5 | 85 | 60 | 30 | 15 | 6xM6 | 0.5 | 0.5 | 1.2 |
| STB 20 | STB 020 01 | 20 | 22 | M18x1.5 | MSR 18x1.5 | 85 | 60 | 31 | 14 | 6xM6 | 0.5 | 0.5 | 1.3 |
| STB 22 | STB 022 01 | 22 | 45 | M20x1.5 | MSW 20.28 | 100 | 70 | 42 | 16 | 8xM8 | 0.5 | 0.5 | 2.3 |
| STB 25 | STB 025 01 | 25 | 53 | M20x1.5 | MSW 20.28 | 100 | 70 | 45 | 18 | 8xM8 | 0.5 | 0.5 | 2.7 |
| STB 28 | STB 028 01 | 28 | 80 | M25x1.5 | MSW 25.40 | 115 | 90 | 57 | 23 | 8xM10 | 0.5 | 0.5 | 4.0 |
| STB 30 | STB 030 01 | 30 | 90 | M25x1.5 | MSW 25.40 | 115 | 90 | 58 | 23 | 8xM10 | 0.5 | 0.5 | 4.2 |
| STB 32 | STB 032 01 | 32 | 110 | M30x1.5 | MSW 30.44 | 130 | 100 | 60 | 28 | 10xM12 | 0.5 | 0.5 | 5.6 |
| STB 36 | STB 036 01 | 36 | 120 | M30x1.5 | MSW 30.44 | 130 | 100 | 65 | 28 | 10xM12 | 0.5 | 0.5 | 6.0 |
| STB 40 | STB 040 01 | 40 | 160 | M35x1.5 | MSW 35.44 | 160 | 120 | 65 | 34 | 8xM16 | 0.5 | 0.5 | 9.3 |
| STB 45 | STB 045 01 | 45 | 180 | M40x1.5 | MSW 40.44 | 160 | 120 | 75 | 34 | 10xM16 | 0.5 | 0.5 | 9.7 |
| STB 50 | STB 050 01 | 50 | 250 | M45x1.5 | MSW 45.44 | 175 | 135 | 75 | 40 | 8xM20 | 0.5 | 0.5 | 12.5 |
| STB 56 | STB 056 01 | 56 | 300 | M50x1.5 | MSW 50.46 | 180 | 140 | 75 | 40 | 8xM20 | 0.5 | 1.0 | 13.0 |
| STB 60 | STB 060 01 | 60 | 320 | M55x1.5 | MSW 55.46 | 200 | 150 | 75 | 40 | 8xM20 | 0.5 | 1.0 | 16.2 |
| STB 63 | STB 063 01 | 63 | 350 | M60x1.5 | MSW 60.46 | 200 | 160 | 80 | 40 | 10xM20 | 0.5 | 1.0 | 15.8 |
| STB 70 | STB 070 01 | 70 | 375 | M65x1.5 | MSW 65.46 | 200 | 160 | 80 | 40 | 10xM20 | 0.5 | 1.0 | 16.8 |
| STB 80 | STB 080 01 | 80 | 550 | M72x1.5 | MSW 72.60 | 260 | 200 | 100 | 55 | 10xM24 | 0.5 | 1.0 | 36.8 |
| STB 90 | STB 090 01 | 90 | 700 | M85x2.0 | MSW 85.60 | 300 | 240 | 110 | 62 | 8xM30 | 0.5 | 1.0 | 54.0 |
| STB 100 | STB 100 01 | 100 | 830 | M85x2.0 | MSW 85.60 | 300 | 240 | 120 | 62 | 10xM30 | 0.5 | 1.0 | 57.8 |

*FA = Admissible axial force. **The surface of the mounting flange is electrolytically galvanized.

Subject to modification without prior notice

5 Requirements of the clamping rod

The admissible axial force F_A may only be applied to the rod attachment, if a clamping rod is attached which fulfills all requirements listed here.

| | |
|--|---|
| Minimum yield strength of rod material | Re min. 580 N/mm ² |
| Rod thread | at least according to tolerance class "medium" tolerance zone 6g, DIN 13 part 21 ... 25 |
| surface roughness of thread undercut | Rz = 1 to 4 µm (Ra 0,15 to 0,3 µm) |

i Also observe the requirements for the clamping rod of the particular clamping head.
 Make sure the rod will not buckle under pressure.

5.1 Dimensions

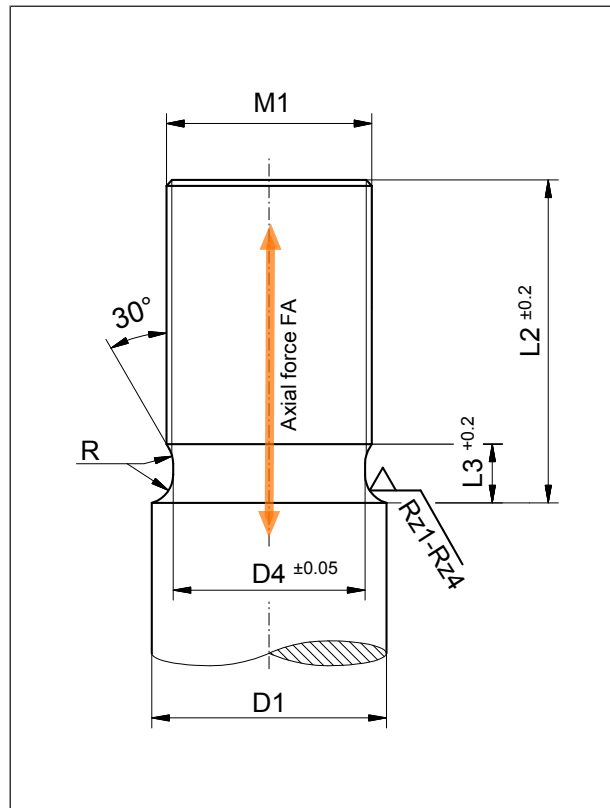


Fig. 3: Dimensions of the clamping rod

| Type | D1 | D4 | M1 | FA | L2 | L3 | R |
|---------|-----|------|---------|-----|----|----|-----|
| | mm | mm | | kN | mm | mm | mm |
| STB 16 | 16 | 9.7 | M12x1.5 | 14 | 24 | 7 | 2.5 |
| STB 18 | 18 | 13.7 | M16x1.5 | 20 | 28 | 8 | 3.5 |
| STB 22 | 22 | 17.7 | M20x1.5 | 45 | 39 | 9 | 4 |
| STB 25 | 25 | 17.7 | M20x1.5 | 53 | 42 | 12 | 5 |
| STB 28 | 28 | 22.7 | M25x1.5 | 80 | 54 | 12 | 5 |
| STB 32 | 32 | 27.7 | M30x1.5 | 110 | 58 | 12 | 5 |
| STB 36 | 36 | 27.7 | M30x1.5 | 120 | 61 | 15 | 7 |
| STB 40 | 40 | 32.7 | M35x1.5 | 160 | 61 | 15 | 7 |
| STB 45 | 45 | 37.7 | M40x1.5 | 180 | 61 | 15 | 7 |
| STB 50 | 50 | 42.7 | M45x1.5 | 250 | 61 | 15 | 7 |
| STB 56 | 56 | 47.7 | M50x1.5 | 300 | 63 | 15 | 7 |
| STB 60 | 60 | 52.7 | M55x1.5 | 320 | 63 | 15 | 7 |
| STB 63 | 63 | 57.7 | M60x1.5 | 350 | 63 | 15 | 7 |
| STB 70 | 70 | 62.7 | M65x1.5 | 375 | 63 | 15 | 7 |
| STB 80 | 80 | 69.7 | M72x1.5 | 550 | 82 | 20 | 8 |
| STB 90 | 90 | 82 | M85x2.0 | 700 | 88 | 25 | 10 |
| STB 100 | 100 | 82 | M85x2.0 | 830 | 88 | 25 | 10 |

Dimensions of the clamping rod

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