

Technical Data Sheet TI-STB10 SITEMA Rod Attachment STB

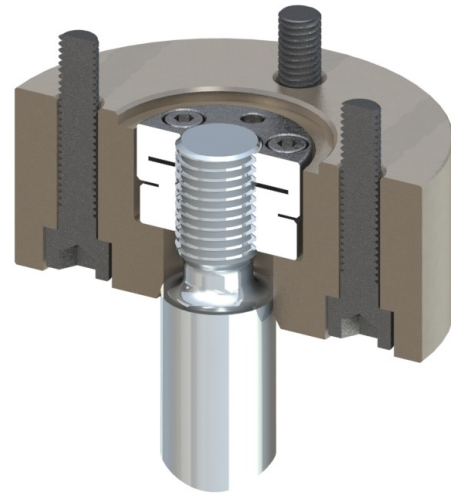


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1 General Information

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.

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

3 Axial play

To ensure a safe function, the projection length of the rod must be adjusted exactly, so that the end of the rod projects 0.5 ($\pm 0,1$) mm 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.

i 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.

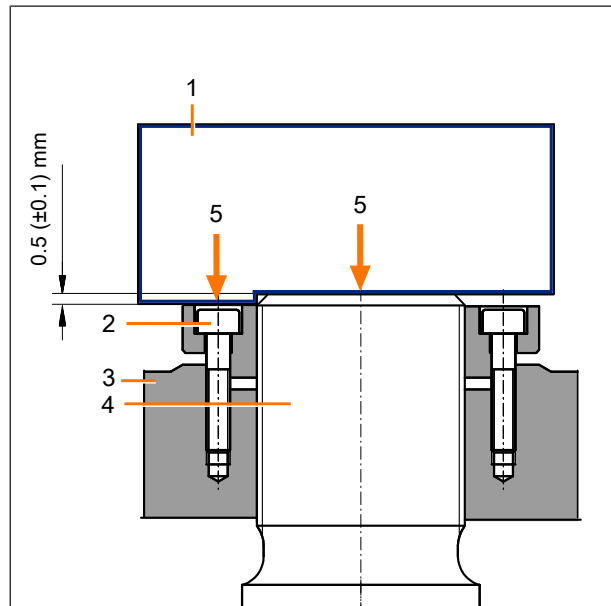


Fig. 1: Usage of the adjustment tool

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

Dimensions

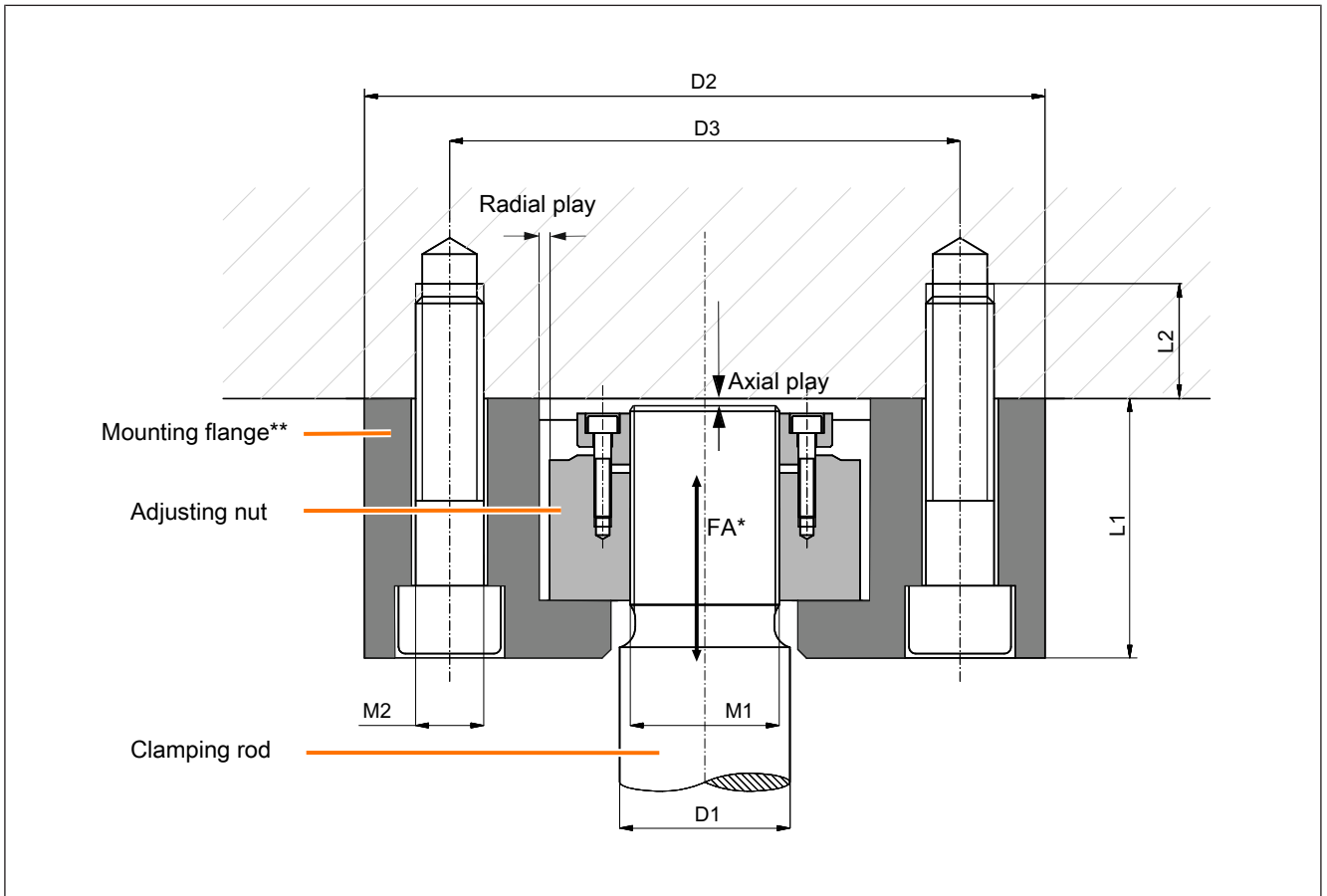


Fig. 2: Dimensions of the rod attachment STB

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 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 = permitted value for axial force. **The surface of the mounting flange has a zinc nickel coating. Subject to modification without prior notice

5 Requirements of the clamping rod

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

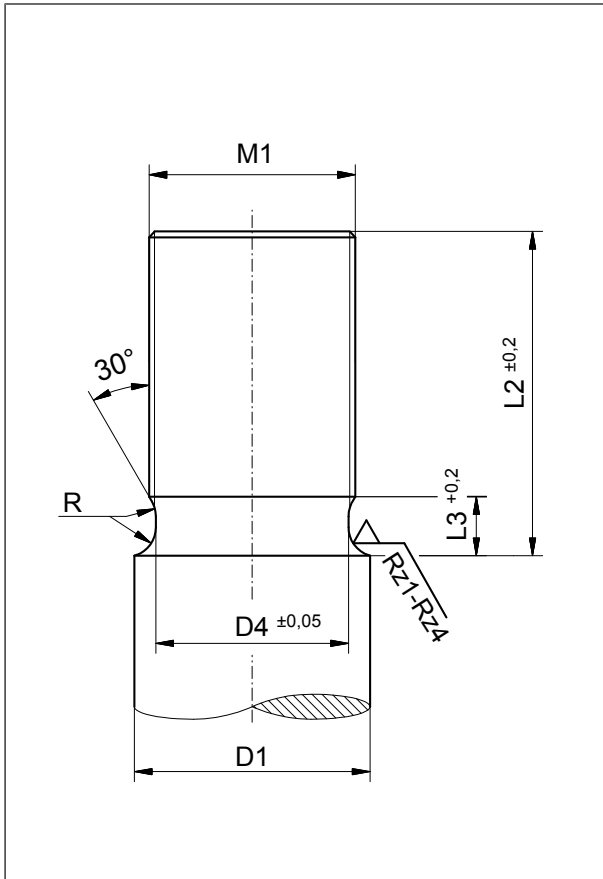


Fig. 3: Requirements of the clamping rod

Requirements:

- Minimum yield strength of rod material: min. Re min. 580 N/mm²
- Rod thread at least according to tolerance class "medium": tolerance field 6g, DIN 13, part 21 to 25
- surface roughness of thread undercut: Rz = 1 to 4 µm (Ra 0.15 - 0.3 µm)

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

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 20	20	15.7	M18x1.5	22	29	9	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 30	30	22.7	M25x1.5	90	55	13	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 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

Subject to modification without prior notice