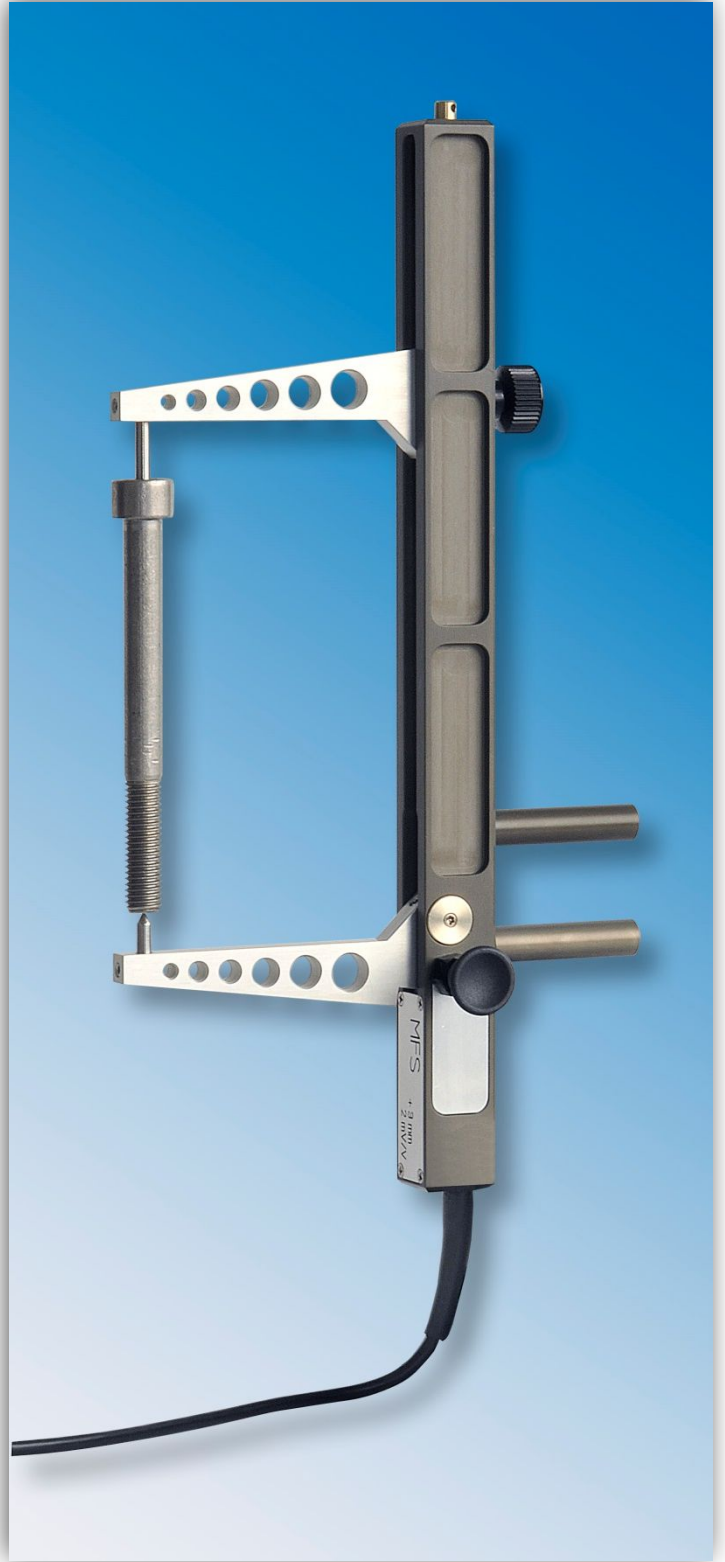


MFS 150

Extensometer for screws



P r e c i s i o n t e s t i n g o f l i n e a r s t r a i n

Area of application

The extensometer MFS 150 is suitable for the evaluation of the linear strain of screws under axial load. The strain of the screw sample is recorded by means of measuring tips over the whole length. The screws have to be prepared with centering bore at both ends for the measuring tips. For the tensile test the screw sample itself has to be fixed in a special clamping device with openings at the side for the measuring arms of the MFS 150.

Design and function

In a stable profile made from high-strength aluminum alloy two measuring arms are arranged. The upper measuring arm can be adjusted parallel in order to fit the sample length. The lower, revolving measuring arm evaluates the strain of the sample (screw) by means of a strain gauge applied spring. A locking bolt fixes the lower measuring arm in its "zero" position while the sample length is adjusted by the parallel moving of the upper measuring arm. A possible weight compensation for the MFS 150 can be accomplished by means of an eyelet for a tension spring at the upper end of the profile.

Operation

In order to adjust the length of the sample (screw) the lower measuring arm has to be fixed by means of the locking bolt. Therefore the locking bolt has to be turned to its locking position. By slightly turning the lower measuring arm the locking bolt automatically will be engaged. Now, the lower measuring arm is in its "zero" position. After undoing the clamping screw of the upper measuring arm the sample (screw) has to be clamped between the measuring tips with little play. In this position the upper measuring arm has to be clamped again. Then the locking bolt has to be disengaged and the sample (screw) can be taken out by opening the measuring arms with the handles. Now the MFS 150 is ready for a tensile test of the sample (screw) adjusted right before.

Note

The clamping of the upper measuring arm works with a disc spring. By clamping the screw of the upper arm slightly, the measuring arm can be moved parallel sensitively without getting jammed. For the final test the screw has to be clamped tight again.

Calibration

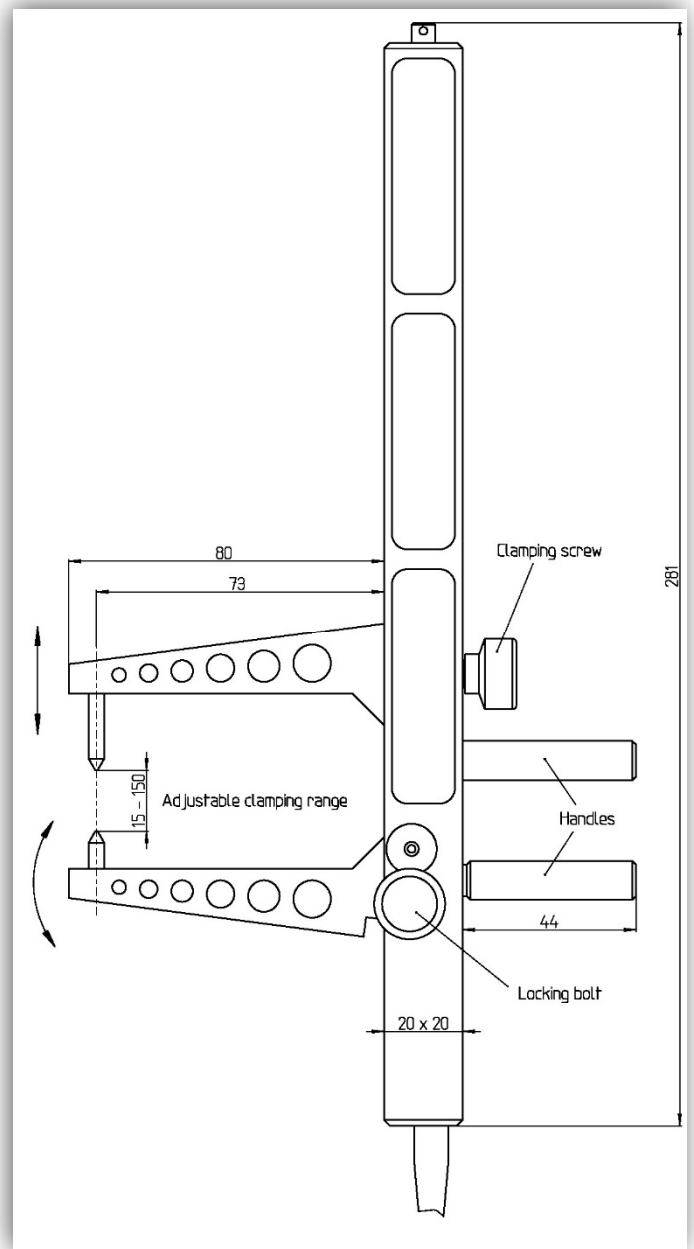
A calibration of the MFS 150 with a calibrator only can be done with special measuring devices which allow to clamp the MFS 150 with its measuring tips. Delivery on request.

Delivery scope

1 MFS 150 with 5 mtr. cable

Technical data

	MFS
Accuracy class ISO 9513	0.5
Principle of measurement	strain gauge full bridge
Travel	4 mm (optional 8 mm)
Sensitivity	2 mV/V
Nominal resistance of the bridge	350 Ω
Clamping force	8 N
Smallest screw length	15 mm
Greatest screw length	150 mm (optional 220 mm)
Weight (without cable)	250 g
Temperature range	+ 1° C ... + 60° C
Cable length	5 mtr.



Drawing 1: MFS 150 Overall view