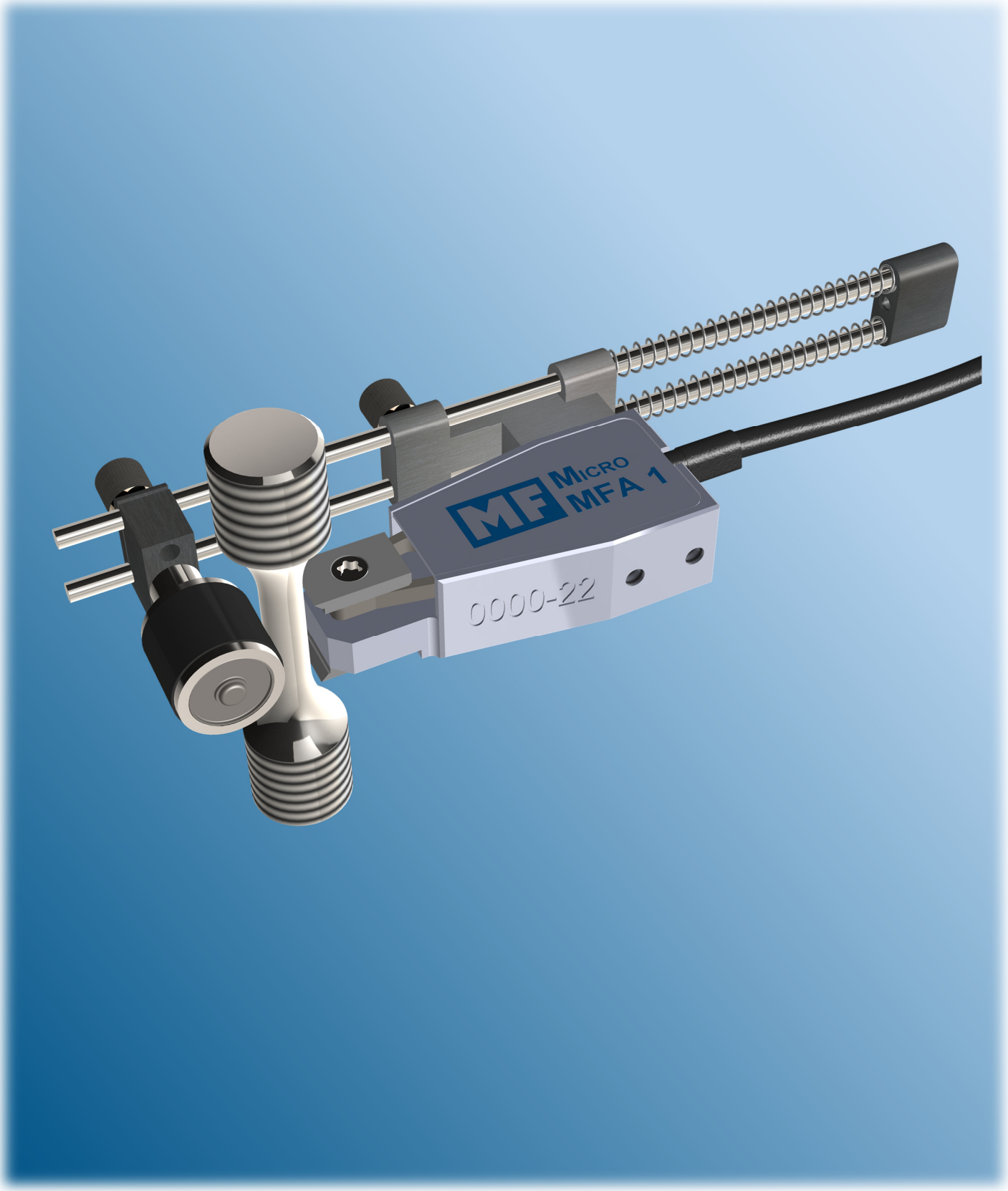
Mess- & Feinwerktechnik GmbH



Micro MFA 1

Clip-On high precision extensometer

Area of application

The Micro MFA 1 extensometer can be used on specimens up to Ø 25 mm (25 x 25 mm). It has been specially developed for use in confined spaces and is lightweight. Highest resolution and accuracy allow the elastic modulus to be determined as well as the strain limits and technical yield point. Its measuring accuracy exceeds all requirements of the European standard EN ISO 9513.

The measuring device enables quick and easy testing of even large quantities. Due to its low weight and minimal activating force, it is also highly suitable for small and notch-sensitive samples. The measuring travel is 1 mm in the tensile direction and 1 mm in the compression direction. The large adjustment range of the contact force allows optimum adaptation to the specimen material and dimension.

Construction and function

The measuring spring is located in a housing made of high-strength aluminium. The measuring spring is applied with a temperature-compensated strain gauge full bridge, which is calibrated to 2 mV/V for the measuring travel.

The extensometer has a gauge length of 10 mm. This can be adjusted to a minimum of 7 mm by turning the low-wear knife edges

The clamping device of the Micro MFA 1 allows quick and easy attachment and detachment. With the two-sided clamping device, two Micro MFAs can be attached on the sample for measurements with averaging.

The rectangular knife edges are particularly recommended for the double-sided Micro MFA 1 and thin round samples.

Advantages at a glance

- Low weight of 25 g (without clamping device)
- Minimum height of only 11 mm
- Low–wear knive edges increase service life.

Scope of delivery

	Single Extensometer
1	Micro MFA
1	Clamping device
2	Torx counterscrew M2,5 T8
1	Grip screwdriver T8
1	Test report
1	Micro MFA 1 storage case

	Double-sided Extensometer
2	Micro MFA
1	Double-sided clamping device
3	Torx counterscrew M2,5 T8
1	Grip screwdriver T8
1	Test report
1	Storage case

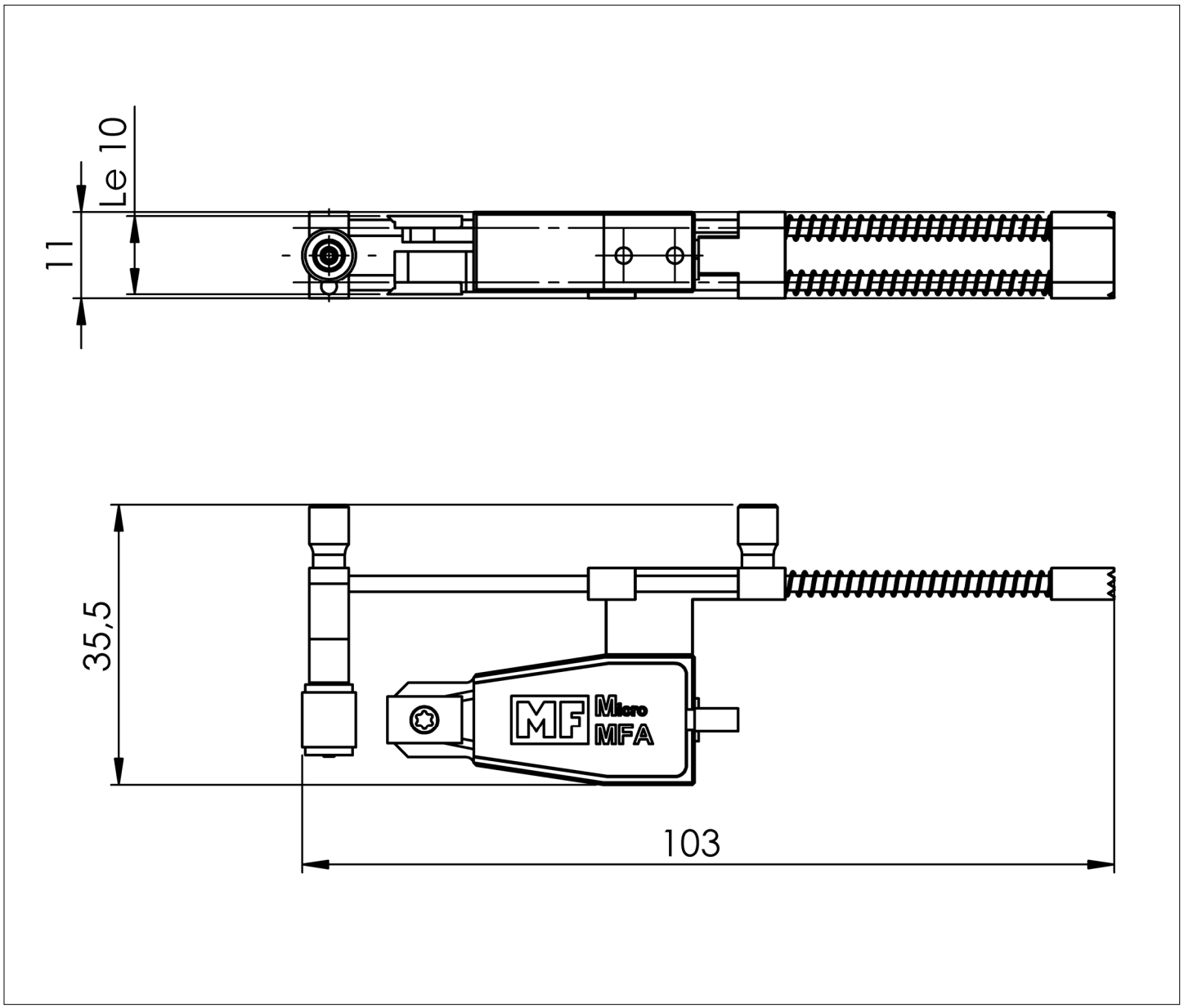
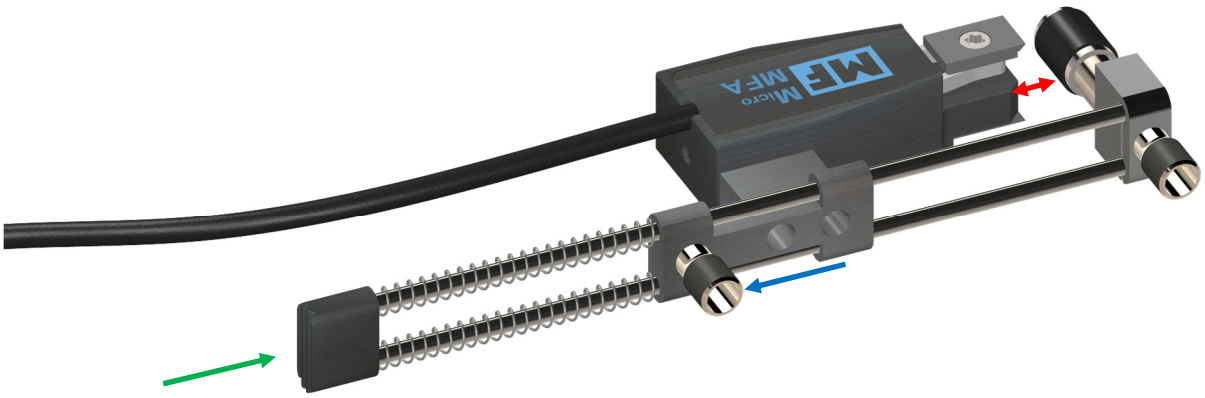


Image 1: Micro MFA 1

Micro MFA 1 Operation / Clamping



Clamping the Micro MFA 1:

1. Open the clamping device with your thumb and index finger and first place the lower knive edge on the sample.
2. It is important to operate the device with only one hand and to apply pressure only to the clamping device.
3. Start the measurement

The knive edges and clamping device can be loosened using the enclosed Torx screwdriver.

Spare parts and accessories

Single Extensometer
Clamping device
Round knive edges Ø 9,5 mm
Rectangular knive edges 6x 9,5 mm
Torx countersunk screw M2,5 x 3 T8 for upper knive edge
Torx countersunk screw M2,5 x 6 T8 for lower knive edge
Prismatic counter roller

Spare parts and accessories

Double-sided Extensometer
Clamping device
Round knive edges Ø 9,5 mm
Rectangular knive edges 6x 9,5 mm
Torx countersunk screw M2,5 x 3 T8 for obere Schneide
Torx countersunk screw M2,5 x 6 T8 for lower knive edge
Prismatic counter roller

Technical data	Micro MFA
Accuracy class EN ISO 9513	0,2
Measurement principle	Strain gauge full bridge
Range in tensile direction	1 mm
Range in compressive direction	1 mm
Sensitivity	2 mV/V
Rated resistance of the bridge	350 Ohm
Max. voltage input	10 V
Standard gauge length	10 mm
Temperature range	+1°C to +60°C
Sample widths	Up to 25 mm
Sample thickness and Ø	Up to 25 mm
Weight	25 g