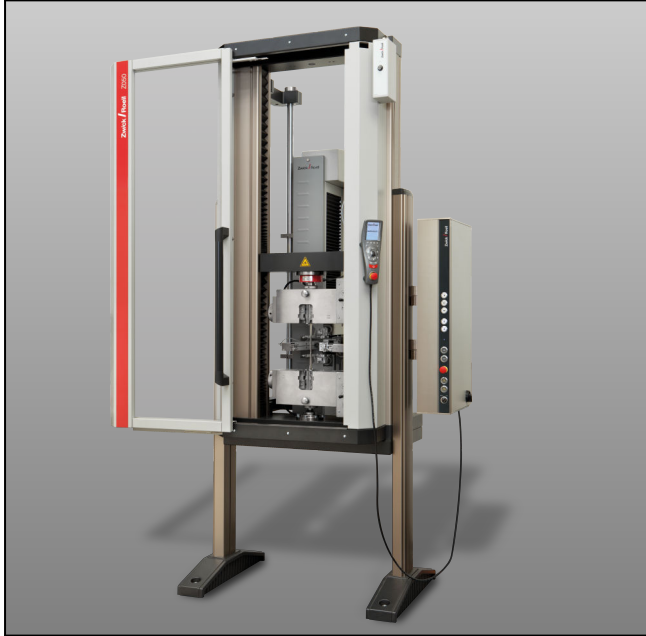


Product Information

multiXtens

CTA: 42585 44120



multiXtens

Applications

multiXtens is a versatile, high-precision extensometer. It is ideal for tensile, compression, flexure and cyclic tests on plastics, composites, elastomers and hard foams, as well as tests on metals and composites.

Very high measurement accuracy combined with an extremely large measurement range makes multiXtens the ideal choice for varying requirements (e.g. testing plastics and elastomers or plastics and metals).

Advantages and features

- Can be used up to specimen break, even with high loads and brittle specimen material.
- Maximum precision even with large measurement travel (up to 700 mm) and in temperature chambers
- Accuracy Class 0.5 to EN ISO 9513
- Maximum error $\pm 1 \mu\text{m}$ in the differential displacement measurement between two measurement points in the range of $20 \mu\text{m}$ to $200 \mu\text{m}$, fully satisfying the additional requirement in ISO 527-1 (2011)
- multiXtens is already calibrated from a measurement travel of $20 \mu\text{m}$ in Class 0.5
- The low drag force and ability to adjust the contact pressure of the sensor arms as required means enables reliable, traceable testing of sensitive specimens.



multiXtens with two measurement carriages

- Deformation of the specimen is recorded in the elastic and plastic deformation ranges throughout the entire test.
- multiXtens is suitable for cyclic tests.
- Compression and flexure tests can be performed by simply changing the sensor arms.
- Tilting knife edges prevent damage to the sensor arms and knife edges at specimen break.
- A third measurement-carriage enables fully automatic fitting of transverse strain and fine strain extensometers to multiXtens. This is very important for accurate determination of Young's modulus and determination of r and n -values, and Poisson's ratio
- The sensor arms can be changed without tools and are automatically recognized by multiXtens.
- Operation with temperature chambers is possible using suitable sensor arms.
- Fully automated system:
 - measurement of free space between specimen grips
 - centering of multiXtens measurement carriages
 - automatic attachment and removal of sensor arms
 - automatic gauge-length setting.
- multiXtens is approved for closed loop strain rate control to ISO 6892-1 (2009) Method A (1) and to ASTM E8 – 09 Method B

Product Information

multiXtens

Technical data

multiXtens for mounting on an AllroundLine testing system

Item No.	325063	325135	
Base unit	With 2 measurement carriages for connecting the sensor arms for extension measurement		
Third measurement carriage for attaching a fine strain and/or transverse strain extensometer	Retrofitting possible		
Initial gauge length (dependent upon the sensor arms used)	5/10	5/10	mm
Measurement travel, max. ($\Delta L + L_0$)	700 - L_0	700 - L_0	mm
Drag force	≤ 0.02	≤ 0.02	N
Resolution (dependent upon the sensor arms used)	0.02 ... 0.04	0.02 ... 0.04	μm
Specimen thickness, max.	30	30	mm
Speeds:			
Measurement speed, max.	500	500	mm/min
Return speed, max.	800	800	mm/min
Accuracy with sensor arm length			
300 mm	Accuracy Class 0.5 to EN ISO 9513		
450/600 mm	Accuracy Class 1 to EN ISO 9513		
Dimensions without measuring heads			
Height	1285	1285	mm
Width	235	235	mm
Depth	405	405	mm
Electrical supply:			
Voltage	100 ... 240	100 ... 240	V, 1Ph/N/PE
Included in the scope of supply	expanded remote control (for attaching the sensor arms)		

Accessories required

Description	Item number
CAN Bus measurement module	057857

Sensor arms for tensile tests

Item No.	325067	325069	325071	325316 ¹⁾²⁾	
Lever arm length	300	450 ³⁾			mm
Fine measurement range	± 7	± 10.5			mm
Resolution	0.02	0.03	0.04	0.02	μm
Ambient temperature	+10 to +35	-70 to +250	-70 to +250	+ 10 to + 35	°C

1) Initial gauge length ≥ 5 mm. Important: grip-to-grip separation ≥ 25 mm required

2) On-site retrofit possible by service technician only

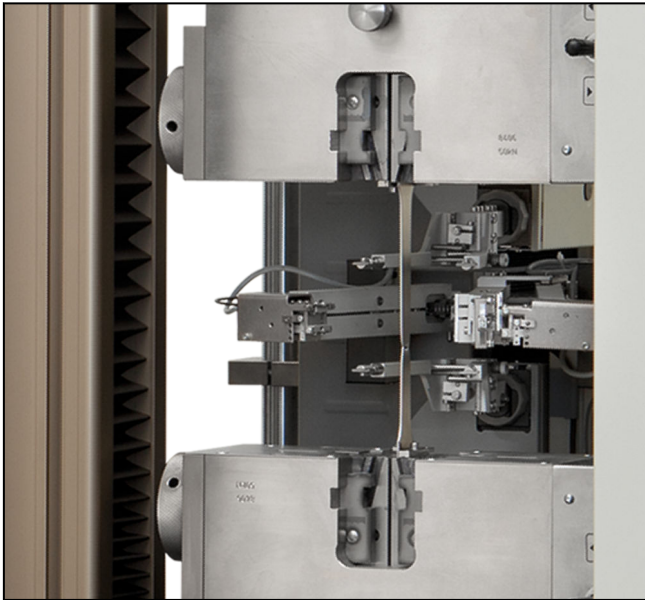
3) Lever arm length of 450 mm suitable for temperature chambers with a width of 400 mm, lever arm length of 600 mm suitable for temperature chambers with a width of 600 mm (outer dimensions)

Product Information

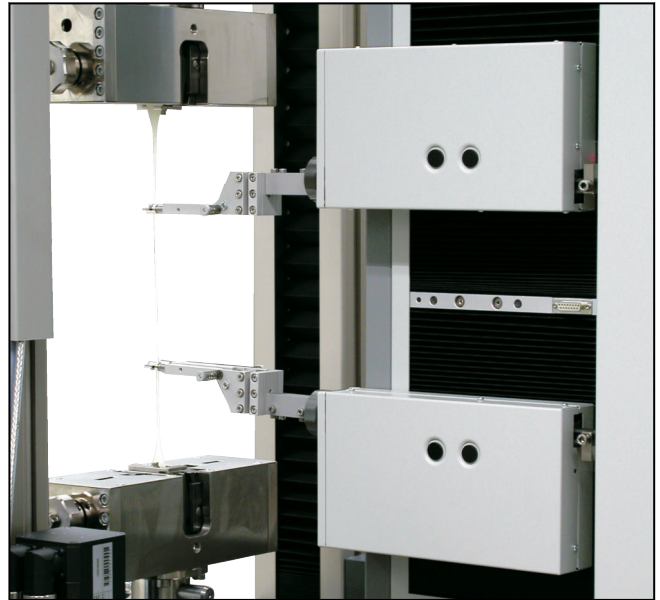
multiXtens

Optional accessories

CTA: 44270 44120



Fine strain and transverse strain extensometers



multiXtens measuring heads

Transverse strain extensometer (contact type, absolute measurement)

- 90° swiveling transverse strain extensometer with measurement in 1, 2, or 4 cross-sectional planes (each available in two resolutions)
- 15° swiveling transverse strain extensometer with measurement in 2 cross-sectional planes (each available in two resolutions)¹⁾
- Additionally required: drive unit

Fine strain extensometer (contact type)

- Inductive extensometer with combined signal or two separate signals for fine-strain measurement
- Additionally required: USC measurement module and free module bus slot in testControl II

Transverse strain extensometer (optical): videoXtens transverse strain extensometer

- When used with multiXtens the result is an ideal system combining contact and optical strain measurement
- Additionally required: videoXtens basic package, free module bus slot in testControl II and mounting kit

¹⁾ Only this type is possible in conjunction with fine strain extensometers.

All data at ambient temperature.

We reserve the right to make technical changes in the course of ongoing development.