

Product Information

lightXtens extensometer



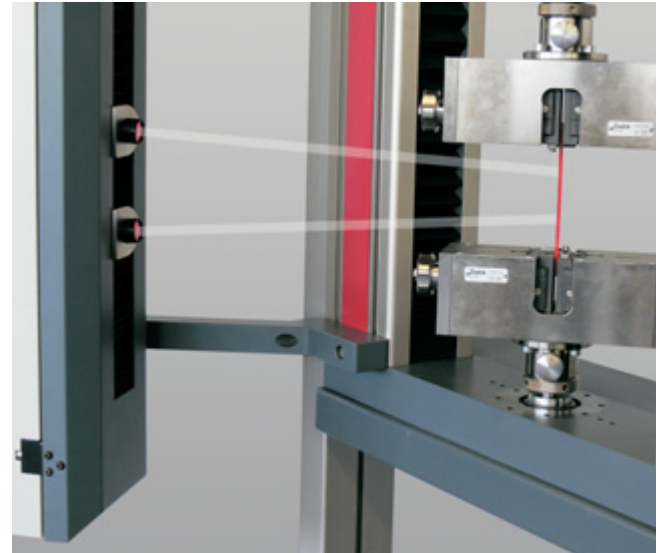
Applicational range

This optical extensometer is ideal for providing reliable, accurate measurements in tensile tests on highly ductile, highly elastic and touch-sensitive materials such as elastomers and latex plus all types of foil.

It is suitable for all specimens that exhibit high fracture energy and whiplash at break and are therefore liable to damage mechanical, contact-measuring systems. This is often the case with belts, ropes and steel litz wire, for example.

It provides accurate, non-contact strain measurement, even over extended temperature ranges in temperature chambers.

lightXtens' robustness in test conditions and ease of operation make it an attractive alternative to video or laser-based extensometers.



Advantages of lightXtens

- Non-contact operation - suitable for tensile and compression tests
- Suitable for use over an extended temperature range when employed in conjunction with temperature chambers as changing between ambient and raised temperature requires no special set-up operations
- Connection to *testControl* electronics via a digital bus system, with synchronized force-travel measurement
- Automatic gauge mark recognition
- Initial gauge length is measured automatically during the test and transmitted to testXpert
- Wear-free, low-maintenance operation
- Operating lightXtens is very easy:
 - Straightforward specimen preparation
 - No need to adjust or configure optics
 - Automatic test sequence (including automatic measurement of initial gauge length and automatic positioning of extensometer at start location
 - Insensitive to varying environmental conditions such as extraneous light

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Item number	031081	
lightXtens extensometer with mounting arms for attachment to an Allround-Line materials testing machine		
Accuracy class	1 to EN ISO 9513 from 3 mm	
Initial gage length L_0	10 ... 900 mm	
Measurement path	1000 - L_0 mm	
Resolution	1.5 μ m	
Optical grab range of the scan heads in horizontal and vertical directions	3 mm	
Positioning speed	1800 mm/min	
Distance sensor head - specimen	490 mm	
Light source	Laser, red, Class 1 no protective measures required	
Electrical requirements	100 - 240 V – 50/60 Hz	
Power consumption	50 W	
Dimensions (width x height x depth)	192 x 1760 x 280 mm	
Follow-up accuracy	0.01 mm at 50 mm/min sensor head speed 0.02 mm at 100 mm/min sensor head speed 0.03 mm at 250 mm/min sensor head speed	
Automatic correction of gage length L_0 on reaching pre-load.		
Required:		Item number
1 CAN Module		318872
Mounting lightXtens at an Allround-Line machine	left front	031213
	left rear	031214
<i>testXpert</i> ® II Version V3.1 or higher		
Recommended:		
Enhanced testControl remote control, especially recommended (In the event of frequent retooling)		320837

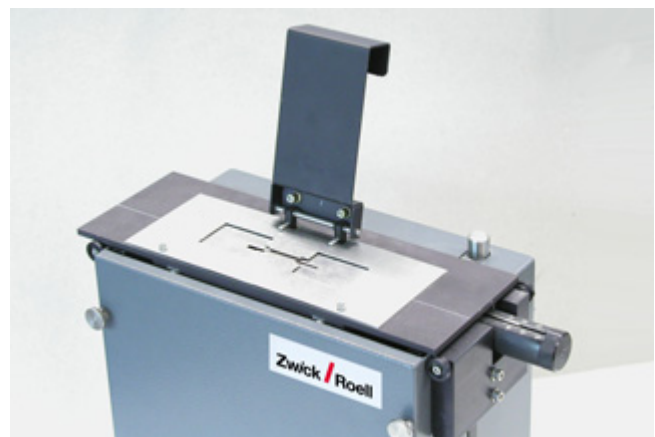
Please note:

Danger of misting exists when using the extensometer with CO₂ and LN₂ temperature chambers at certain humidity and temperature of - 20 ... 0 °C, then there may be several minutes to wait until the test can be started.

The temperature range is restricted to - 40 ... + 120 °C in operation with a temperature chamber because of the measurement markers.

Additionally available:

Marking units and further accessories



Gauge length marking device