

Product Information

ProLine Long Travel Extensometer

CTA: 99698 99964



Long travel extensometers specially designed for ProLine testing systems

Applications

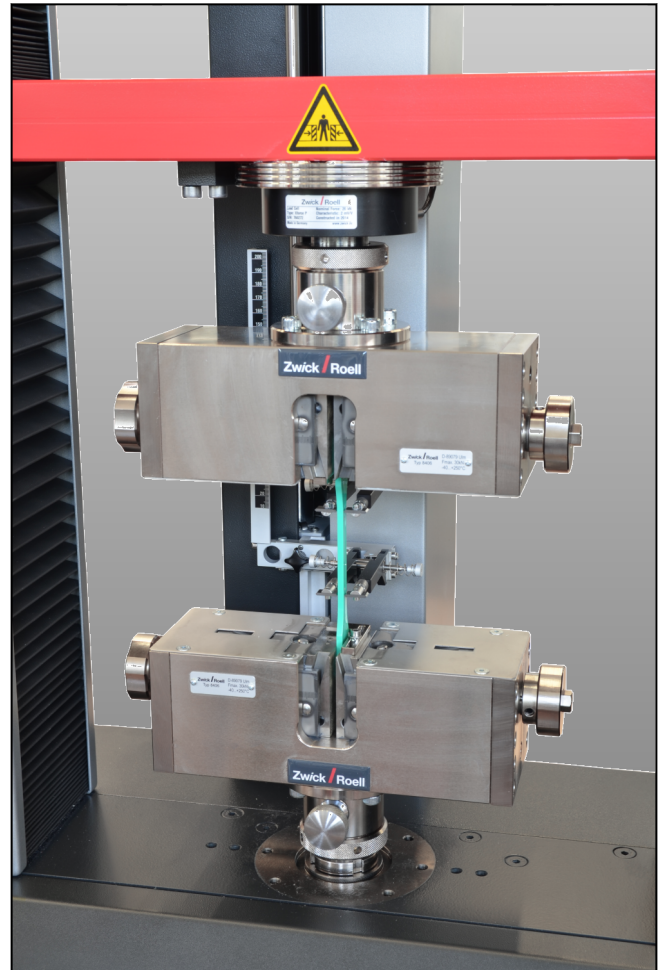
The long travel extensometer is suitable for direct extension measurement on all elastic materials, including elastomers, plastics, leather, textiles, etc. and can be used for exact determination of offset yield and strain at break in tensile tests. Standards-compliant secant modulus or E-modulus determination with the specified initial gauge length is not provided.

The measuring system can be used with almost all materials because of its low drag force.

Function description

The extensometer is a travel measuring system that determines the change in length between two points.

The fundamental component of the extensometers is a precise guide profile with two weight-compensated measurement carriages. The two attached sensor arms



ProLine long travel extensometers, detail view

with interchangeable knife edges are suitable for round and flat specimens, as well as notch-sensitive materials. The gripping force of the sensor arms can be adjusted at the specimen.

The sensor arms and knife edges (round/straight) are included in the extensometer scope of supply.

The ProLine long travel extensometer is attached to the back of the ProLine testing system.

Measuring principle

This involves digital differential displacement measurement of the two carriages which track on the specimen via sensor arms. A digital encoder records the change in position of the carriages. The pulse signal is captured by the measured value signal processing system and transmitted to the machine electronics of the testing system.

Product Information

ProLine Long Travel Extensometer

Advantages and features

- Very high resolution over the entire measurement range.
- The extensometer has a very large measurement travel (minus L_0).
- The drag forces are very low.
- The extensometer has a robust construction with impact-resistant measurement system.
- Low-friction measuring-carriage mounting minimizes transmission errors.
- Swiveling knife-edges prevent transmission of specimen fracture energy to the measuring system—knife-edges are also protected!

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ProLine Long Travel Extensometer

Technical data

Long travel extensometers for ProLine testing systems

Item No.	1040307	1040308	1040309	
Testing system	Z100	Z005 to Z050 ¹⁾	Z005 TH, Z010 TH, Z030 TN, Z050 TN	
Initial gauge length	10 to 200	10 to 200	10 to 200	mm
Measurement travel, max.	800 - L ₀	800 - L ₀	1000 - L ₀	mm
Resolution	3	3	3	µm
Gauge-length adjustment	manual via scale, stepless adjustment			
Sensor-arm attachment	manual	manual	Manual	
Accuracy to EN ISO 9513	Class 1 from 2 mm	Class 1 from 2 mm	Class 1 from 2 mm	
Drag force, max.	0.2	0.2	0.2	N
Specimen width, max.	60	60	60	mm
Specimen thickness, max.	20	20	20	mm
Dimensions				
Height	1170	1170	1370	mm
Width	82	82	82	mm
Depth	180	180	180	mm
Weight	15	15	21	kg

¹⁾ Not in conjunction with Z010 TH

Accessories required

Required module

Description	ArticleNumber
Incremental measurement module	046637

Optional accessories

Knife-edges for sensor arms

Included in delivery are steel knife-edges, each with one flat and one convex blade (swiveling).

Type	Application	Knife edges	Ambient temperature [°C]	Item No.
Interchangeable knife edges with corundum coating	Soft metal wires, round specimens	straight/straight	-70 ... +80	310876
Interchangeable knife edges with Vulkollan plate	Clamping-sensitive specimens, elastomers, soft materials	Straight/straight	-15 ... +70	031216
Interchangeable carbide knife edges	Metal wires, clamping-sensitive plastics and wires	Straight/round, radius 0.5 mm	-70 ... +250	037646

Product Information

ProLine Long Travel Extensometer

Type	Application	Knife edges	Ambient temperature [°C]	Item No.
Interchangeable measuring insert with O-ring	Elastomers with high break energy	Straight/straight	-30 ... +110	1009207
Interchangeable measuring insert with rollers	Elastomers with high break energy and resilience	Specimen contact, pointed	-55 ... +180	1018413

Scope of delivery: 1 set = 4 pieces

Automatic attachment of sensor arms to specimen (option)

Description	ArticleNumber
Once the test has started the sensor arms are automatically attached to the specimen and removed again following conclusion.	022808