

Product Information

ZwickRoell 5109 rebound resilience tester

CTA: 45933 45939



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Applications

The ZwickRoell 5109 rebound resilience tester is available in two basic versions, for the following applications and standards.

- For tests on elastomers and rubber to
 - DIN 53512 (elastomers and natural rubber)
 - ISO 4662 (rubber)
- For tests on foam materials to DIN 13014 (polyether foam hospital mattresses).

Advantages and features

Instrument equipment/details

- Resolution 0.06 degrees.
- Extremely low-maintenance - fully automatic sequence with geared motor as sole actuator.
- Frictionless pendulum encoder.
- Wear-free mechanism - ideal for continuous operation.
- Dustproof keyboard.
- Stand-by mode and LCD display for low power consumption.

Operation

- Menu-guided operation.
- Pendulum height is easily adjustable via an eccentric with the help of a setting program.
- Included in the instrument are two test programs for determining oscillation time and friction.

- The required standard can be selected or the sequence configured.
- Multiple languages can be programmed (English, German plus one freely assignable language).
- Connection to a PC and to ZwickRoell's testXpert testing software is possible. ZwickRoell testing software offers comprehensive data transfer options (from instrument to PC) plus evaluation, processing, documentation and storing of test results.
- Integrated routine enables rapid error analysis.

Specimen temperature-conditioning option

The specimen plus interchangeable clamping fixture can be temperature-conditioned externally in a heated chamber.

The specimen clamping fixture is attached to the instrument base by means of a plug fastener, enabling rapid changes. This reduces temperature losses from the temperature-conditioned specimen during insertion into the tester.

A specimen holder with a temperature control unit for a temperature range of up to 100°C that can be electrically heated is available for tests at high temperatures.

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Technical data

Item No.	324802	324804	
Description	Rebound resilience tester for testing elastomers and rubber	Rebound resilience tester for testing foam materials	
Specimen dimensions			
Specimen diameter	Ø 28 ... 50	-	mm
Length of specimen	28 ... 50	80	mm
Width of specimen	28 ... 50	80	mm
Thickness of specimen	0 ... 15	50	mm
Distance from specimen holder to striker	0 ... 60 (stepless adjustment)	0 ... 60 (stepless adjustment)	mm
Pendulum potential energy	0.5	0.2 (Pendulum 1), 0.196 (Pendulum 2)	J
Pendulum striker, hemispherical	Ø 15	- (Pendulum 1), Ø 30 (Pendulum 2)	mm
Rounded end	-	R _K = 40, Cyl. Ø = 40 (Pendulum 1)	
Pendulum length	L _{red} = 200	L _{red} = 200	mm
Pendulum mass	0.252	-	kg
Apparent deformation energy density	426.5	-	kJ/m ³
Angle of fall	90	90	°
Impact velocity	1.98	1.98	m/s
Display	2-line LCD	2-line LCD	
Dimensions			
Height	330	330	mm
Width	450	450	mm
Depth	230	230	mm
Approx. weight	51	51	kg

Optional accessories

Description	Item number
Specimen holder, electrically heated, replaces standard specimen holder ¹⁾ Temperature range: room temperature to 100°C (± 2°C) with PT 100 temperature sensor, specimen grips for Ø 30 ... 65 mm, height 0 ... 12 mm, heating power 200W, length of cable to temperature control unit approx. 0.5 m ¹⁾	324808
Temperature control unit for specimen holder connection Digital temperature pre-selection (0 ... 399°C), steel housing 150 x 200 x 200 mm, electrical supply 220/230 V, 50/60 Hz, power cord (mains lead) with plug, length 2 m	324810
Transformer for connection of specimen holder/temperature control unit to 110V/60 Hz (mains) power supply	324812
Dust cover (plastic film)	324806

¹⁾ Required: Item No. 324810