Zwick / Roell

Zwick
Materials Testing

Product Information

PrecisionLine Automatic - testing machines for low loads

Range of application

The new-generation spring-testing instruments are suitable for use in both production lines and design and development and are used for testing compression springs and components. Very small springs used in powerful miniaturized mechanical and electro-mechanical assemblies can also be tested using the PrecisionLine Automatic. With the *testControl* measurement and control system and *testXpert*® II test software, the PrecisionLine Automatic is the ideal precision testing system for these applications. Standard interfaces enable connection of additional measuring devices such as dial gages, callipers, micrometers and sensors.

Advantages/Characteristics

- Extremely high measurement precision due to:
  - Mechanical deformation compensation
  - Direct load application and travel measurement in the test axis
  - Extremely high frame stiffness
  - Synchronous recording of force and spring travel
- Excellent reproducibility through complete elimination of operator influence
- Integrated mechanical overload protection for load cell
- User-oriented *testXpert*® II software with options including statistical evaluation, quality control chart, central inspection plan management, barcode reader connections and many others
- *testXpert*® II's archiving functions and open interfaces ensure optimum data traceability
- PrecisionLine and its comprehensive selection of accessories and software products are developed and produced at Zwick Roell's own production plant in Germany
- All mechanical, electronic and software components are ideally matched, making PrecisionLine a product with the highest quality standards and allowing Zwick to offer the best possible service.
- Inclusive protective screen

Options

- Interchangeable precision compression platens, diam. 36, 60, 100 mm (hardened steel or ground ceramic faces)
- 200 N, 500 N or 2.5 kN load cells with deformation compensation
- Compression die with diameter 2 mm and spherical surface

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Type **Item number**	**PLA** **035451**
Load frame	
Stroke	70 mm
Testing area	max. 140 mm
Weight (incl. compression platen, without electronics)	33 kg
Dimensions (width x height x depth)	336 x 610 x 396 mm
Ambient temperature	+10 ... +35 °C
Air humidity	20 ... 90 %
Conformity	to ISO 9000 and CE
Measurement and control electronics	
Force measurement	Grade 0.5 / 1 see load cell, to DIN EN ISO 7500-1 (DIN 51220, DIN 51302), ISO R147, ASTM E4, BS 1610 Grade A, NF A 03-501
Stroke resolution	0,1 µm
Measurement range	up to 110 % of F_N
Real resolution in tensile/compression direction	162.000 ... 912.000 Points
Test data group transmission rate to the PC	100 Hz (optional 500 Hz)
Zero-point correction	automatic at start of measurement
Measurement signal runtime correction for both channels	yes
Output interface	RS232
Required PC connection (for PC operation)	COM 1
Power ratings	
Electrical connections	100 V to 240 V (1 Ph, N, PE)
Power rating	0.44 kVA
Mains frequency	50/60 Hz

Accessories/Options

Describtion	**Item Number**
Load cell 200 N type II with mechanical compensation of the load cell deformation and mechanical overload protection in compression direction & connection system with dia. 16 mm	**035454**
Load cell 500 N Xforce HP with mechanical compensation of the load cell deformation and mechanical overload protection in compression direction & connection system with dia. 16 mm	**036113**
Load cell 2.5 kN Xforce HP with mechanical compensation of the load cell deformation and mechanical overload protection in compression direction & connection system with dia. 16 mm	**036112**
Precise compression platen are hardened steel and has a diameter of 36/ 60/ 100 mm, 61 HRC	**035456/ 035860/ 035862**
Ceramic compression platen have a ground surface and a diameter of 36/ 60/ 100 mm	**035457/ 035861/ 035863**
Basis package *testXpert*® II	
Test on tension and compression springs (oder *testXpert*® II Standard Test Program)	**374244**
testXpert® II Master Test Program for Cyclic Tests	**374016**

All data at ambient temperature.