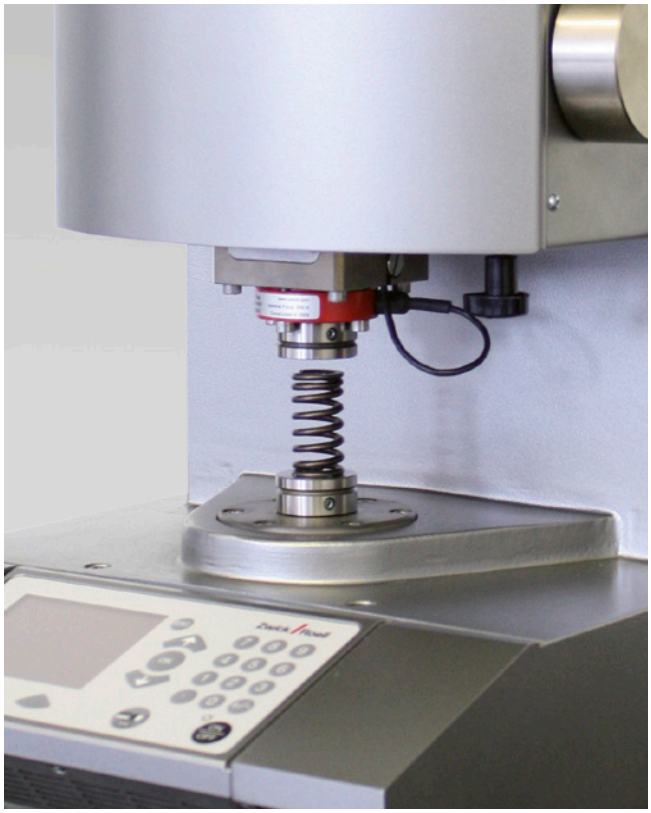
Zwick / Roell

**Zwick**
Materials Testing

# Product Information

## PrecisionLine Manual - 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 manual testing of small compression springs and components. Their large measuring range enables testing of a wide variety of springs used in powerful miniaturized mechanisms and electro-mechanical assemblies. Standard interfaces allow connection of additional measuring devices such as dial gages, callipers, and sensors.

### Advantages/Characteristics

- Records complete spring characteristics without stopping at measuring points (dynamic spring characteristic measurement)
- Quick, easy operation
- Extremely precise manual measurements through:
  - Mechanical deformation compensation
  - Direct load application and travel measurement in the test axis
  - Extremely high frame stiffness
  - Synchronous recording of force and spring travel
- Three adjustable mechanical limit stops for compression platen separation, solid length and minimum test length
- 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 range 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.

### Options

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

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| **Type**<br>**Item number** | **PLM**<br>**032505** |
|---|---|
| **Load frame** | |
| Stroke | 70 mm |
| Testing area | max. 140 mm |
| Weight (incl. compression platen) | 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<br>DIN EN ISO 7500-1 (DIN 51220, DIN 51302),<br>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 | 250 Hz |
| Measurement signal runtime correction for both channels | yes |
| Output interface | USB |
| Required PC connection (for PC operation) | USB |
| **Power ratings** | |
| Electrical connections | 100 V to 240 V (1 Ph, N, PE) / 50/60 Hz |

**Accessories/Options**

| **Description** | **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** |
| Precise compression platen<br>are hardened steel and has a diameter of 36/ 60/ 100 mm, 61 HRC | **035456/ 035860/ 035862** |
| Ceramic compression platen<br>have a ground surface and a diameter of 36/ 60/ 100 mm | **035457/ 035861/ 035863** |
| Basis package PrecisionLine Manual | |
| *testXpert*® II Standard Test Program PrecisionLine Manual | **033281** |
| *testXpert*® II Master Test Program for PrecisionLine Manual | **033279** |

All data at ambient temperature.