

## Product Information

### PrecisionLine Vario - testing machines for low loads



#### Range of application

The latest-generation spring test devices are suitable for use in the production line, as well as in development/design and in receiving inspections. Their large measuring range enables testing of a wide variety of springs used in powerful miniaturized mechanisms and electro-mechanical assemblies. Standard interfaces enable connection of additional measuring devices such as dial gages, callipers, micrometers and sensors.

#### Advantages/Characteristics

- Automated test sequence and recording of the complete compression stress-strain characteristics without stopping at the measuring points (dynamic measurement of characteristics)
- Customer-specific test sequences and special evaluation methods can be realized
- Rapid, simple operation without the need to set measuring stops
- 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
  - Integrated mechanical overload protection for load cell
- The user-oriented testXpert® II software includes the following options:
  - Archiving of test programs and test series
  - Statistical evaluation, representation of Gaussian (normal) distributions and quality control charts

- Connection to QA systems and central test-program administration
- Connection of barcode scanners
- Durch die Archivierungsfunktionen und dietestXpert® 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

#### Options

- Protective screen with electrical interlock and tumbler
- Interchangeable precision compression platens, diam. 36, 60, 100 mm (hardened steel or ground ceramic faces)
- Load cell 200 N, 500 N, 1000 N or 2500 N with mechanical deformation compensation (the load cell is permanently installed and cannot be replaced)
- Compression die with diameter 2 mm and spherical surface
- Adapter for standard connections Ø 8 mm and Ø 20 mm
- Mounting plate with five T slots 8 DIN 650 and centering device Ø 30 H7 and M28 x 1.5
- Mounting plate with hole pattern Ø 5 H7
- Base plate with integral load cell 50 N and compression platen Ø 30 mm with ceramic surface

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Type Item number	PLV 035455
<b>Load frame</b>	
Stroke	70 mm
Testing area	max. 300 mm
Weight (incl. compression platen)	50 kg
Dimensions (width x height x depth)	290 x 815 x 307 mm
Ambient temperature	+10 ... +35 °C
Air humidity	20 ... 90 %
Conformity	to ISO 9000 and CE
<b>Measurement and control electronics</b>	
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 (with compensation)	0,0996 µm (0,1 µm)
Measurement range	up to 165 % of $F_N$
Real resolution in tensile/compression direction	162.000 ... 912.000 Points (dependant on integration time)
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
<b>Power ratings</b>	
Electrical connections (adjustable)	100 V to 250 V (1 Ph, N, PE)
Power rating	0.44 kVA
Mains frequency	50/60 Hz

#### Accessories/Options

Description	Item Number
Load cell 200 N type II with mechanical overload protection in compression direction & connection system with dia. 16 mm	<b>035518</b>
Load cell 500 N Xforce HP with mechanical overload protection in compression direction & connection system with dia. 16 mm	<b>032507</b>
Load cell 2.5 kN Xforce HP with mechanical overload protection in compression direction & connection system with dia. 16 mm	<b>035453</b>
Load cell 200 N type II - with mechanical compensation of the load cell deformation	<b>035454</b>
Load cell 500 N Xforce HP - with mechanical compensation of the load cell deformation	<b>036113</b>
Load cell 2.5 kN Xforce HP - with mechanical compensation of the load cell deformation	<b>036112</b>
Mounting platform for PrecisionLine Vario with T-slots	<b>035864</b>
Mounting platform for PrecisionLine Vario with mounting hole for Alufix system and x-y table	<b>035865</b>
Base plate with load cell 50 N for PrecisionLine Vario	<b>043160</b>
Leveling element for adjustment of compression platen	<b>043162</b>
CE-conformity, electrically operated interlock Safety device (Macrolon pane 6 mm)	<b>035866</b>
Adapter for connection system diameter 8 mm on diameter 16 mm	<b>035867</b>
Adapter for connection system diameter 20 mm	<b>038732</b>
Mounting kit for laserXtens Compact	<b>040219</b>
Standard Test Program of <i>testXpert</i> ® II portfolio	<b>on request</b>
Master Test Program of <i>testXpert</i> ® II portfolio	<b>on request</b>