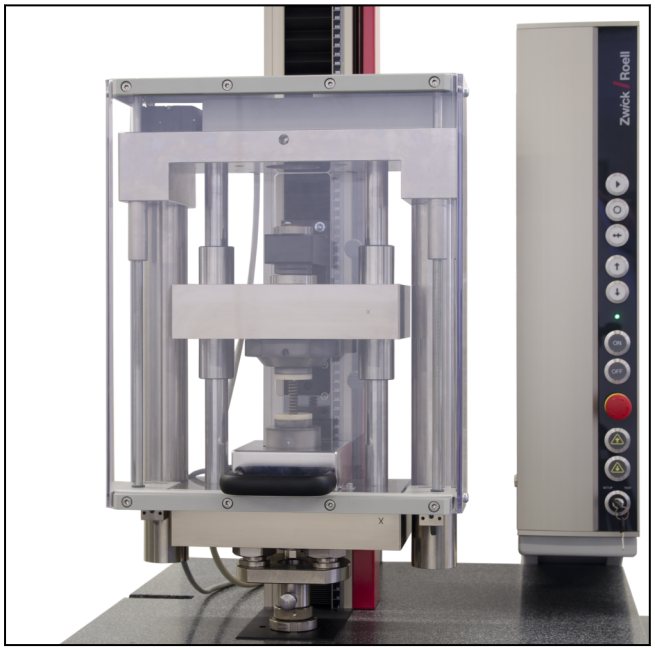
Zwick / Roell

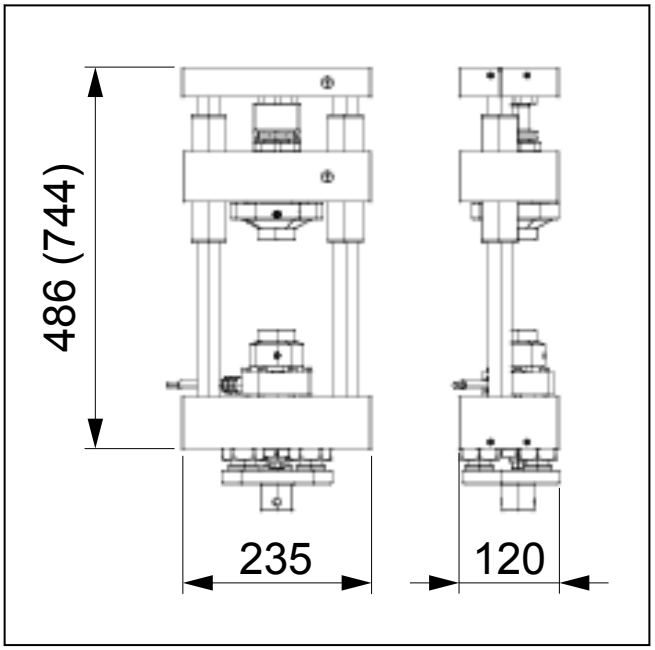
Product Information

Precision compression spring test device with electrically interlocked safety device

CTA: 102037 40896

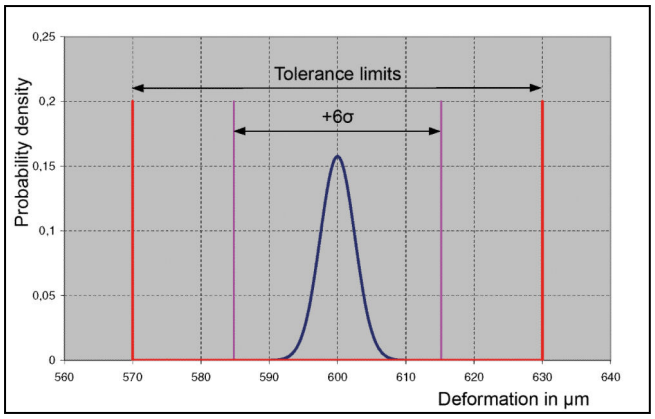


Precision compression spring test fixture

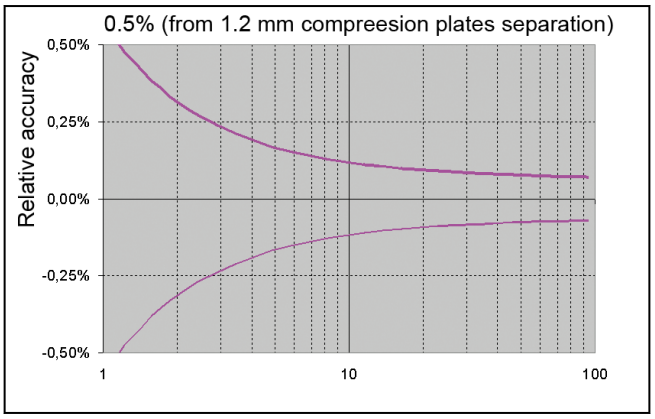


Precision compression spring test fixture, Type 100. (Height 744 mm applies to Type 350)

CTA: 40899 40900



Example of measurement system analysis verification (customer's method)



Spring test device in conjunction with zwicki Z2.5: relative displacement measurement error

Applications

Compression spring test devices specifically for testing precision springs in a range from 1 to 2500 N (Accuracy Class 0.5) or 0.5 to 2500 N (Accuracy Class 1). The compression spring test frame Type 350 can also be used for tensile tests (calibrated for compression as standard).

- **Specimen material:**
  Cylindrical helical compression springs with spring height up to max. 350 mm and spring diameter up to max. 95 mm.

Advantages and features

- The load cells are resistant to transverse forces.
- All load cells are designed in accordance with ISO 7500-1, Supplement 2. They include a precision alignment unit and mechanical protection against overload (see load cell table below). A manufacturer test certificate M to DIN 55350-18 is included.
- The compression platens are conveniently located in front of the guide columns and can be aligned simply and precisely.

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- The spring test device includes overload protection, which goes into effect to protect the machine in the event of an impermissibly high increase in force
- Electrically interlocked safety device with vertical operation for convenient working conditions and minimum machine footprint. Equipped with operating mechanism for automatic raising and lowering of an optional anti-buckling guide spigot.
- Parallelism of these precision compression platens (optionally including measuring transducer) in unloaded condition is max. 1 µm/10 mm diameter. The platens have a polished surface and are demagnetized. For compression platens with measurement transducer the maximum transducer travel is 30 mm, measurement uncertainty ± 1 µm and resolution 0.1 µm.
- The compression spring test frame Type 350 can also be used for tensile tests (calibration for tensile direction upon request).
- Direct spring height measurement is optionally possible.

All data at ambient temperature.

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Precision compression spring test device with electrically interlocked safety device

Technical data

Type Item No.	Compression spring test frame Type 100 with electrically operated safety device 1088043	Compression spring test frame Type 350 with electrically operated safety device 1088044	
Test load F_{max}	2.5	2.5	kN
Test stroke, maximum	100	350	mm
Connection, lower	Stud Ø 20	Stud Ø 20	mm
Connection, upper	Moving crosshead, zwickiLine	Moving crosshead, zwickiLine	
Ambient temperature	+10 ... +35	+10 ... +35	°C

Accessories required

Load cell package

By default, the load cell packages are calibrated for compression. Conversion of the load cell packages can only be carried out by ZwickRoell.

Nominal force F_{nom} [kN]	Limit force [kN]	Class 0.5 to ISO 7500-1 [N]	Class 1 to ISO 7500-1 [N]	Overload protection	Item No.
0.05	0.055	1 ... 50	0.5 ... 50	Yes	1079311[1)]
0.2	0.22	2 ... 200	1 ... 200	Yes	1079312[1)]
0.5	0.55	10 ... 500	5 ... 500	Yes	1088045
2.5	2.75	20 ... 2500	10 ... 2500	Yes	1088046

1) Adjustment of the overload studs

Compression platens (1 x required)

Description	Item number
Precision compression platens Platen diameter 40 mm Scope of delivery 1 pair	**325397**
Precision compression platens Platen diameter 60 mm Scope of delivery 1 pair	**325399**
Precision compression platens Platen diameter 100 mm, for load cells with Fmax 500 and 2500 N only Scope of delivery 1 pair	**325401**
Precision compression platens with digital measuring transducer[1)] Platen diameter 40 mm Scope of delivery 1 pair	**325405**
Precision compression platens with digital measuring transducer[1)] Platen diameter 60 mm Scope of delivery 1 pair	**325407**
Precision compression platens with digital measuring transducer[1)] Platen diameter 100 mm, for load cells with Fmax 500 and 2500 N only	**325409**

All data at ambient temperature.

Product Information

Precision compression spring test device with electrically interlocked safety device

Description	Item number
Scope of delivery 1 pair	
Ceramic precision compression platens Platen diameter 40 mm, with polished surface Scope of delivery 1 pair	**325494**
Ceramic precision compression platen Platen diameter 60 mm, with polished surface Scope of delivery 1 pair	**325497**
Ceramic precision compression platen Platen diameter 100 mm, with polished surface Scope of delivery 1 pair	**325500**

1) Required for this: incremental measurement module

Optional accessories

- testXpert III Standard Test Program specifically for spring testing.
- Additional options upon request, for example:
  - Anti-buckling guide spigot plus associated compression platens
  - Clamping fixtures for tensile springs
  - Measurement system analysis verification
  - Calibration for tension under 100 N
  - Calibration for tension from 100 N to 2.5 kN