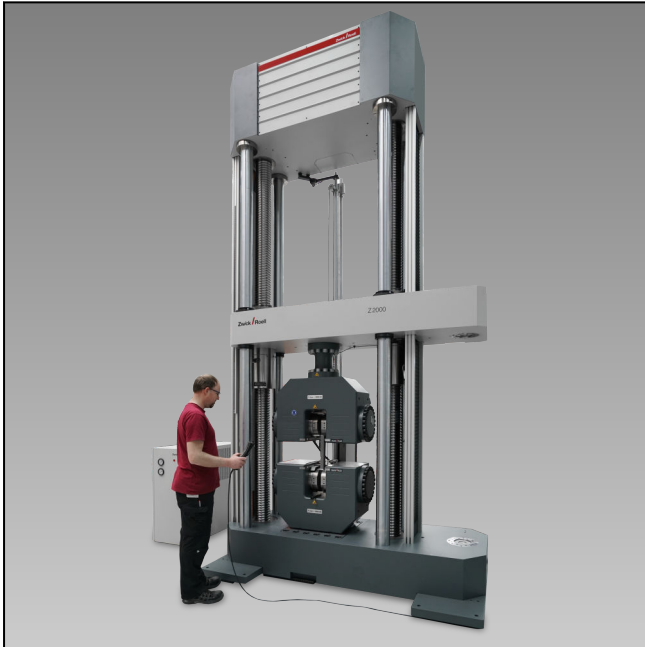


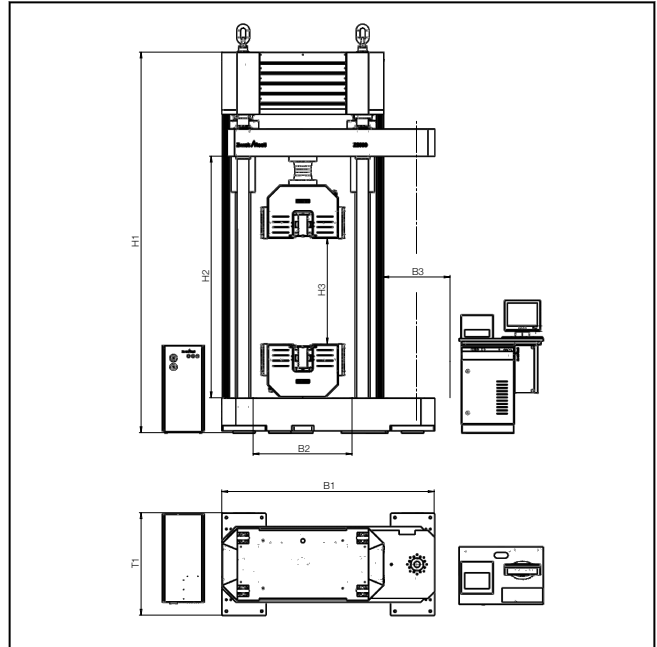
Product Information

Z2000ES / Z2500ES materials testing machines with side test-area

CTA: 198968 196424



Z2000ES with hydraulic grips



Drawing: Z2000ES with hydraulic grips

Advantages and features

Modern load-frame design

- The robust load-frame features four hard-chromed guide-columns and massive base and moving cross-heads, ensuring excellent guidance properties and a high level of machine stiffness.
- Maintenance-free digitally controlled AC drive technology combined with an innovative motor feedback system allows excellent constant speed characteristics to be achieved even at extremely low speeds.
- The backlash-free pre-stressed precision ball-screws with digitally controlled AC servo drive allow virtually maintenance-free operation.
- The large test area combined with low overall height enables specimens and components with a wide range of lengths to be tested.
- The testing machine is positioned directly on the ground with no foundation.

Operator convenience

- Convenient operating height for specimen insertion with grips installed.
- testXpert III's intelligent test environment concept reduces set-up times and increases productivity.

Side test-area

The additional side test-area reduces the need for reconfiguration and re-equipping, saving costs:

- eliminates working time required for alterations to test arrangement
- test-arrangement alignment is preserved
- high level of operator safety and convenience is assured
- maximizes possible applications where space is limited

Innovative electronics

- The new testControl II measurement and control electronics provide the ideal basis for precise, reproducible test results.
- Developed in-house by ZwickRoell, the electronics impress through maximum accuracy, high measured-value rates and flexible modularity.

Optimum safety standards

- The statutory safety requirements of the EC Machinery Directive are implemented in all ZwickRoell testing machines and an EC Declaration of Conformity is provided.
- Only the latest safety technology and proven industrial components are used.
- A high level of safety is guaranteed for user, test results, specimen material and testing system.

Product Information

Z2000ES / Z2500ES materials testing machines with side test-area

| Description | Value |
|---|---|
| Load frame | |
| Paint finish | RAL 7011 iron gray and RAL7038 agate gray |
| Ambient temperature | +10 ... +35 °C |
| Humidity (non-condensing) | 20 ... 90 % |
| Drive | |
| Motor | AC servo motor with concentrated windings, Hiperface® motor feedback system |
| motor holding brake | yes |
| Control, set-value specification | digital (real-time Ethernet, EtherCAT®) |
| Controller/cycle time | adaptive / 1000 Hz |
| Measurement and control electronics | |
| Number of slots available for measurement and control module | 5 synchronized module bus slots, 1 synchronized PCIe slot ¹⁾ |
| Force measurement | Class 0.5 from 1% of Fmax / Class 1 from 0.2 % of Fmax, as per EN ISO 7500-1, ASTM E4, JIS B 7721 |
| Calculated resolution (e.g. load cell in tensile/compression direction) | 24 bit |
| Measured-value sampling-rate, internal | 400 kHz |
| Measured-value transmission rate to PC | 500 (optionally 2000) Hz |
| Zero-point correction | automatic, at start of measurement |
| Measurement signal runtime correction for all channels | yes |
| Interface to PC | Ethernet |
| Eco mode? | yes, power unit automatically switched off (time adjustable) |
| CE compliance? | yes, as per Machinery Directive 2006/42EC |
| Electrical supply data | |
| Mains supply frequency | 50/60 Hz |
| Electrical supply | 400 +/- 10 % V, 3Ph/PE |
| Power consumption | 6.5 - 24.5 (see product data p.3) kVA |

1) A high-quality DCSC measurement module for one load cell is included in delivery (occupies one module bus slot).

Options¹⁾

| Description |
|--|
| testControl II display-equipped remote control |
| Measured-value transmission-rate increase from standard 500 Hz to 2000Hz |
| Add-on table unit for electronics cabinet, with CPU-holder |
| ZwickRoell extensometer attachment (see catalog) |
| Leveling feet |
| Front/rear safety device |
| Lead-screw guard |

1) See catalog for item numbers and further details

Product Information

Z2000ES / Z2500ES materials testing machines with side test-area

| Type | Z2000ES | Z2500ES | |
|---|---------------|---------------|--------------------|
| Item No. | 3003263 | 3005305 | |
| Load frame | | | |
| Test force F_N in tens./comp. direction | | | |
| Main test area | 2000 | 2500 | kN |
| Side test-area | 600 | 600 | kN |
| No. of guide columns | 4 | 4 | |
| No. of drive screws | 2 | 2 | |
| Stiffness of load frame at H2 = 1000 mm | 1643 | 1643 | kN/mm |
| Load-frame dimensions | | | |
| Height - H1 | 4310 | 4310 | mm |
| Width - B1 | 1950 | 2405 | mm |
| Depth - T1 | 1160 | 1160 | mm |
| Dimensions of main test-area | | | |
| Height - H2 | 2836 | 2686 | mm |
| Width - B2 | 1120 | 1120 | mm |
| Dimensions of side test-area | | | |
| Height - H2 | 2836 | 2686 | mm |
| Width - B3 | 750 | 750 | mm |
| Test stroke - H3 (with hydraulic grips) | 1200 | 1150 | mm |
| Weight without attachments | 14300 | 17000 | kg |
| with hydraulic grips | 17000 | 20600 | kg |
| Specific floor loading (with hydraulic grips) | 2.55 | 3.09 | kg/cm ² |
| Noise level at maximum test-speed | <70 | <70 | dBA |
| Drive | | | |
| Crosshead speed | 0.0001 to 325 | 0.0001 to 275 | mm/ min |
| Increased crosshead return speed (at reduced force) | 400 | 350 | mm/ min |
| Displacement resolution of drive | 0.000154 | 0.000154 | µm |
| Power consumption | 24.5 | 24.5 | kVA |