

## Product Information

### Materials testing machine with ball lead screw drive Z1600E



Figure 1: Zwick Z1600E with hydraulic grips

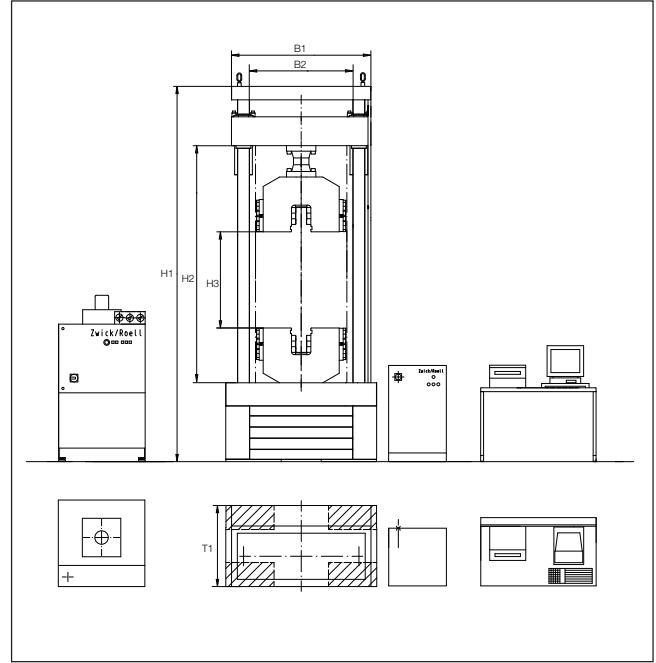


Figure 2: Drawing of Zwick Z1600E with hydraulic grips

#### Key benefits

- These electro-mechanical materials testing machines are fitted with a ball lead screw drive.
- Wide measuring range allows precise determination of even small test loads without re-tooling.
- Long travel combined with comparatively low build-height provides trouble-free specimen clamping and user-friendly testing over a wide range of specimen lengths.
- Low-maintenance, pre-stressed ball lead screws ensure accurate, long-term tensile and compression testing.

#### Further advantages and features

- The load frame is robust and extremely stiff.
- Standard tests using Zwick *testXpert*® software require only single-button operation.
- Modular design throughout the system allows the entire Zwick accessory range to be used, including a wide variety of extensometers, specimen grips and other test tools.
- Should new test requirements arise, additional test tools (e.g. calibration blocks) are easily installed via a T-slot or screw system.
- Can be tailored to customers' specific requirements (e.g. test area dimensions, test devices, specimen grips, test speed ranges, testing software).

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Model	Z1600E
Fmax [kN]	1600
[lb]	360000
Number of lead columns	4
Number of drive columns (ball lead screws)	2
Stiffness of load frame	
crosshead deflection and elongation of lead screw drive approx. [kN/mm]	1600
Dimensions of load frame	
H1 – Height [mm]	3930
B1 – Width [mm]	1569
T1 – Depth [mm]	845
Dimensions of test area	
H2 – Height [mm]	2466
B2 – Width [mm]	955
Test stroke max.	
without tools / specimen grips [mm]	2140
H3 – with hydraulic grips (including load cell) [mm]	1000
Test speed [mm/min]	0.001 – 300
Weight	
without tools / specimen grips (with electronics) [kg]	6800
with specimen grips [kg]	9000
Specific floor loading [kg/cm <sup>2</sup> ]	2.7
Resolution of crosshead travel [µm/Impuls]	0.0041
Position accuracy [µm]	0.5
Item no.	• 032575
	(BPC-F1600EN.R16)

Environmental conditions	
Operating temperature [°C]	+10 ... +35
Storage temperature [°C]	-25 ... +55
Humidity range (not condensing) [%]	< 90
Electrical connection	
Mains voltage 3 Ph/N/PE <sup>1 2</sup> [V]	400
Mains frequency [Hz]	50 / 60
Drive power	
without specimen grips [kVA]	20
with hydraulic grips [kVA]	28.5
Fuse [A]	50
Noise level at 1 m distance [dB(A)]	< 70
Color coating of rack	RAL7011 (iron gray), RAL7038 (agate gray)

<sup>1</sup> Three phase AC motor (L1, L2, L3), neutral wire N, protective earth PE

<sup>2</sup> < ± 10 % related to the mains voltage