

## Product Information

### Materials testing machine with hybrid drive Z1200Y



Figure: Zwick Z1200Y with hydraulic grips

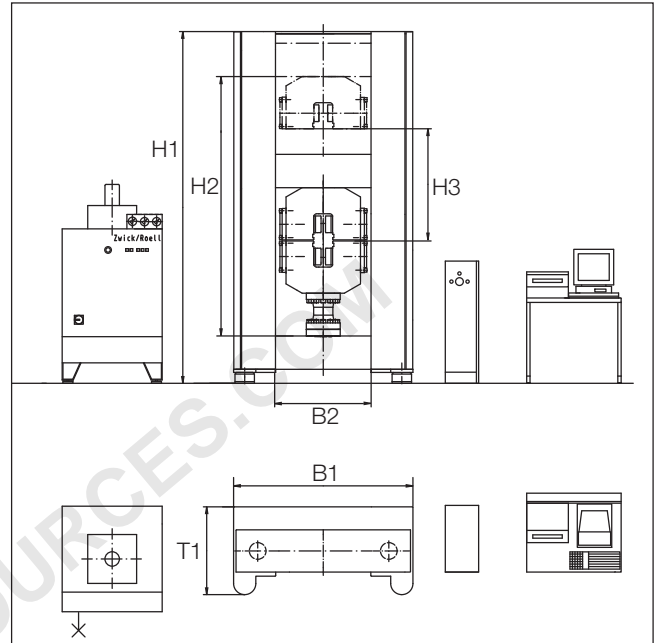


Figure: Drawing of Zwick Z1200Y with hydraulic grips

#### Key benefits

- These patented materials testing machines are fitted with a hybrid drive and two hydraulic working cylinders, on each side of the test area.
- High-resolution, channel-synchronized measurement technology provides extremely precise, accurate determination of material characteristic values. No range-switching is necessary as load signal resolution is available over the whole range.
- Patented Zwick hybrid drive for large test loads covers the widest possible specimen range.
- Hybrid drive combines the advantages of hydraulic load application (simple load generation, robust, low wear) with mechanical precision (high positional accuracy of  $\pm 1 \mu\text{m}$  under load).
- Hybrid drive concept separates load generation from drive control, allowing test conditions to be reproduced with a very high degree of accuracy.

#### Further advantages and features

- Wide measuring range allows precise determination of even small test loads without re-tooling.
- Long travel combined with comparatively low build-height ensures trouble-free specimen clamping and convenient testing over a wide range of specimen lengths.
- Standard tests using Zwick *testXpert*<sup>®</sup> 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) can very easily be installed by means of a T-slot or screw system.
- Can be tailored to customers' specific requirements (e.g. test devices, specimen grips, test speed ranges, testing software).

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| Model  | Z1200Y            |
|--|-------------------|
| Fmax [kN]  | 1200              |
| [lb]   | 270000            |
| Number of drive columns                                | 2                 |
| Stiffness of load frame                                |                   |
| crosshead deflection and elongation of columns [kN/mm] | 1400              |
| including load cell, hydraulic grips and drive [kN/mm] | 770               |
| Dimensions of load frame                               |                   |
| H1 – Height [mm]                                       | 3166              |
| B1 – Width [mm]  | 1614              |
| T1 – Depth [mm]  | 790               |
| Dimensions of test area                                |                   |
| H2 – Height [mm]                                       | 2330              |
| B2 – Width [mm]  | 860               |
| Test stroke max.                                       |                   |
| H3 – with hydraulic grips (including load cell) [mm]   | 1000              |
| Test speed [mm/min]                                    | 0.001 – 250       |
| Weight   |                   |
| without tools / specimen grips (with electronics) [kg] | 5000              |
| including pair of specimen grips [kg]                  | 6300              |
| Specific floor loading [kg/cm <sup>2</sup> ]           | 9                 |
| Accuracy grade of load cell                            |                   |
| 0,5 from ... on [kN]                                   | 12                |
| 1 from ... on [kN]                                     | 2.4               |
| Resolution of crosshead travel [µm/Impuls]             | 0.05              |
| <b>Item no.</b>  | <b>• 358429</b>   |
|  | (BPC-F1200YN.R11) |

| 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  |
| Drive power [kVA]                          | 15  |
| Fuse [A]                                   | 32  |
| Noise level in 1m distance [dB(A)]         | 67  |
| 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