

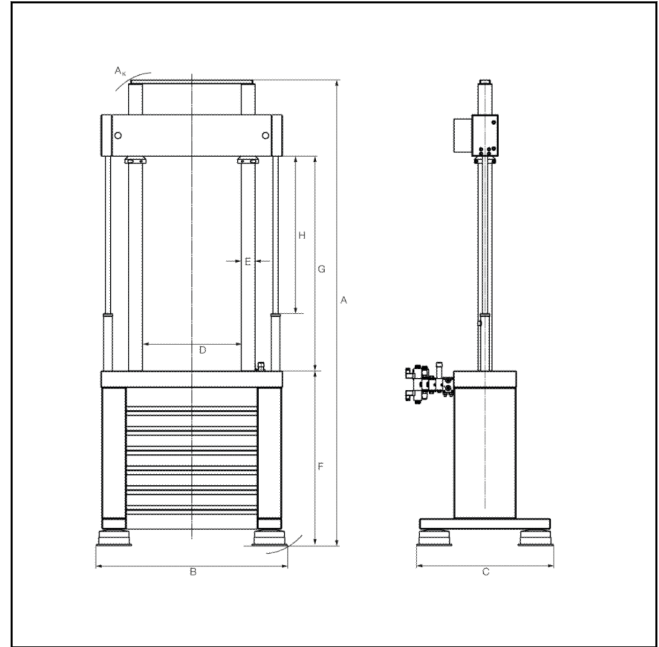
Product Information

HTM 2512 high-speed testing machine

CTA: 27510 27516



HTM 2512 with temperature chamber



Drawing of HTM showing dimensions

Application

The fracture behavior of many materials is dependent (among other things) on the loading rate. Numerical calculation of crash safety requires relevant data and constitutive equations. ZwickRoell's HTM range of servo-hydraulic high-speed testing machines enable strain-rate-dependent characteristic values to be determined over a wide speed range. High-speed punch and tensile tests plus peel and shear tests can be performed on plastics and metals as well as on glued and welded connections, while test speed can be adjusted continuously over a wide range.

Advantages

- Tests can be performed over a very wide loading-rate range from quasi-static to 12 m/s.
- The actuator plus accumulator are integrated into the machine table to save space.
- Clamping of very short tensile specimens also possible.
- With testXpert a uniform software platform is available, from test definition right through to evaluation.
- Easy integration of optical extensometers.
- Machine is mounted on pneumatic springs, allowing installation almost anywhere.

Features

- Effective piston stroke of 200 mm allows highly ductile specimens to be tested or especially long specimens used.
- Extremely stiff 2-column load frame designed to minimize the effects of high impulse peaks during high-speed tests.
- Hydrostatic bearing, double-rod actuator for tension and compression with enhanced end-cushioning.
- System pressure 280 bar for maximum dynamic response.
- Accumulators used to supply hydraulic energy are mounted directly adjacent to the actuator to minimize flow losses.
- Digital piston transducer is temperature-stable, possesses a very high dynamic response and requires no calibration.
- Electronics with integrated high-speed data-acquisition; four channels as standard (can be expanded to eight).
- The safety housing and hydraulic safety-circuit reflect the special demands placed on safety during high-speed tests.

Product Information

HTM 2512 high-speed testing machine

| HTM Type | 2512 | |
|--|---|---------------|
| Nominal force | 25 | kN |
| Piston speed | 12 / 0.001 | max / min m/s |
| Total piston stroke | 250 | mm |
| End cushioning | 2x25 | mm |
| Effective stroke | 200 | mm |
| Nominal pressure | 280 | bar |
| Actuator design | double-rod actuator with hydrostatic bearings | |
| Force measurement | piezo-electric | |
| Displacement measurement | digital | |
| Dimensions ¹⁾ | | |
| A - Height of test frame | 2670 | mm |
| A _K - tople measure for installation | 2850 | mm |
| Max. width of test frame | 1090 | mm |
| Max. depth of test frame | 780 | mm |
| D - Distance between columns | 565 | mm |
| E - Column diameter | 80 | mm |
| F - Height of upper edge of lower crosshead | 1000 | mm |
| G - Max. test area height | 1370 | mm |
| H - Crosshead displacement range | 1000 | mm |
| Weight | 1600 | kg |
| Item No. | | |
| HTM 2512 load frame | 046216 | |
| HTM 2512 actuator | 014113 | |
| HTM 2512 safety device | 1014336 | |
| HTM 2512 safety device (for temperature conditioning device) | 031189 | |
| Accessories required²⁾ | | |
| HTM A-I hydraulic distribution unit | 072573 | |
| Leakage oil pump | 924785 | |

1) Dimensions without safety housing

2) The machine can be connected to a central 280 bar hydraulic supply or to a dedicated hydraulic power unit.

Measurement and control electronics

| Description | Item number |
|---|----------------|
| testControl II | 1050755 |
| <ul style="list-style-type: none"> Mounted in an electrical cabinet Width x height x depth: 600 x 1000 x 600 Including load measurement amplifier and 4-channel transient memory | |
| Workstation for two transient memory cards (009521) | 3005235 |

Software

| Description | Item number |
|--|---------------|
| testXpert [®] basic program, German | 058388 |

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| Description | Item number |
|---|---------------|
| testXpert [®] basic program, English | 058389 |
| Master test program 'Transient Recorder' <ul style="list-style-type: none">• Memory for performing tests with high-speed data logging | 640034 |
| Test program for performing HTM tensile / punch tests | 935674 |

Accessories

| Description | Item number |
|---|---------------|
| Data acquisition <ul style="list-style-type: none">• Additional transient memory card for 4 additional analog inputs | 009521 |
| Measurement amplifier <ul style="list-style-type: none">• Broadband measurement amplifier, DC frequency range up to 1 MHz (-3dB) e.g. for specimens with strain gages applied | 009360 |
| Module housing for up to 4 broadband amplifiers (009360) | 009361 |
| ProPact correction software <ul style="list-style-type: none">• For optimizing set-value signals, to achieve best-possible speed constancy | 020926 |
| Temperature chamber, -100 to +250 °C | 035653 |
| Guide rails for temperature chamber | 064982 |