

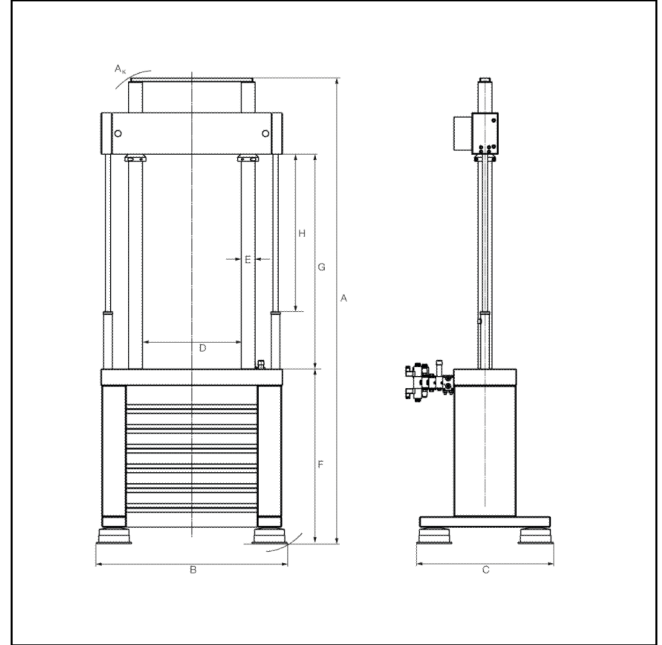
Product Information

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.
- Double-rod cylinder with hydrostatic bearings for tension and compression with reinforced 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.
- Incremental piston displacement 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.
- High-speed data acquisition with MHz (optional 80 MHz) for precise recording of highly dynamic processes.

Product Information

HTM 2512 high-speed testing machine

Type HTM	2512	
Nominal force	25	kN
Test load F_{max}	25	kN
Piston speed	12/0.001	max/min m/s
Piston stroke		
Total	300	mm
Usable	250	mm
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	Incremental	
Dimensions ¹⁾		
A - height of test frame	2665	mm
A_K - topple measure for installation	2850	mm
Max. width of test frame	1090	mm
Max. depth of test frame	750	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 adjustment path	1000	mm
Weight	1600	kg
Item No.		
HTM 2512 load frame	046216	
HTM 2512 actuator	014113	
HTM2512 safety device	1014336	
HTM 2512 safety device (for TEE)	031189	
Required accessories²⁾		
HTM hydraulic distribution unit A-I	072573	
Leak oil drain 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	ArticleNumber
testControl II	1097226
<ul style="list-style-type: none"> • Mounted in electrical cabinet • Width x Height x Depth: 600 x 1000 x 600 • Including charge amplifier and 8-channel transient recorder card 	

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Software

Description	ArticleNumber
testXpert [®] basic program, German	058388
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	ArticleNumber
ProPact correction software <ul style="list-style-type: none">• For optimizing set-value signals, to achieve the best-possible speed constancy	020926
Temperature chamber -80 ... +200 °C	3006158
Guide rail for temperature chamber	064982
Analog measurement amplifier <ul style="list-style-type: none">• Broadband measurement amplifier, bandwidth DC up to 1.5 MHz for use with specimens with strain gauges applied	075699