

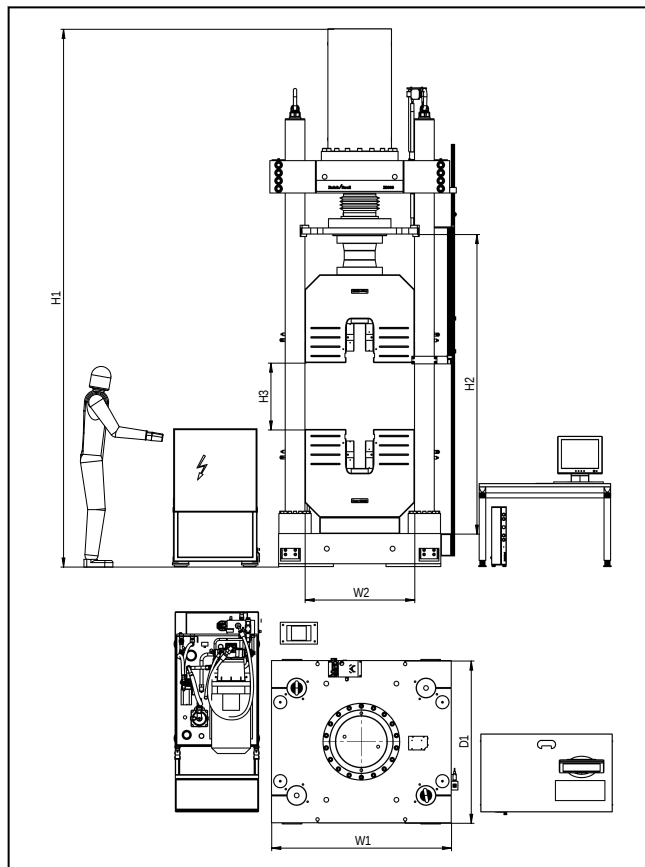
Product Information

Materials Testing Machine with Hydraulic Drive Z3000H and Z4000H

CTA: 210935 208709



ZwickRoell Z3000H with hydraulic grips



Drawing: ZwickRoell Z3000H with hydraulic grips

Key benefits

- Hydraulic materials testing machines have a single central hydraulic drive (differential actuator).
- The materials testing machines are optionally equipped with an adjustable top crosshead to be able to adapt the test area to customer-specific requirements.
- The ergonomic operating height facilitates easy feeding of specimens.
- With the high resolution and channel-synchronized measurement technology, material characteristics are determined with extreme accuracy. Range-switching is not necessary as load signal resolution is available over the full range.
- Force measurement takes place via a DMS load cell and is calibrated in accordance with ISO 7500-1 in Class 0.5 and Class 1.
- The wide measurement range also allows low test loads to be determined precisely, with no need to re-equip the testing machine.
- The testing machine is set on vibration damping rubber mats. A special foundation is not necessary.

Additional advantages and features

- For standard testing with the ZwickRoell testXpert testing software, operator involvement is reduced to the push of a button.
- Modular design throughout the system allows the entire ZwickRoell accessory range to be used, including a wide variety of extensometers, specimen grips and other test fixtures.
- Should new testing requirements arise, additional test fixtures are easily installed via a T-slot or screw system.
- The materials testing machine can be tailored to customer-specific requirements (e.g. test devices, specimen grips, test speed ranges, testing software).

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Technical data

Type Item No.	Z3000H 1067362	Z4000H 1072802	
Load frame			
Fmax	3000	4000	kN
Top crosshead	Adjustable	Adjustable	
Number of guide columns	4	4	
Load frame dimensions			
H1 – height, max.	5205	5200	mm
W1 – Width	1640	1650	mm
D1 – Depth	1480	1550	mm
Test area dimensions			
H2 – height, max.	2834	2520	mm
W2 – Width	1000	1000	mm
H3 – test stroke, max.	600	600	mm
Test speed	200	300	mm/min
Weight			
Without accessories	15000	17000	kg
With specimen grips	23000	27000	kg
Specific floor load (applied via the machine footprint)	4.28	4.1	kg/cm ²
Load cell accuracy class			
0.5 from ...	60	80	kN
1 from ...	12	16	kN
Drive			
Travel resolution of drive	0.16	0.16	µm
Positioning accuracy	± 0,05	± 0,05	mm
Measurement and control electronics			
Number of available slots for measurement and control modules	5 synchronized module bus slots, 1 synchronized PC		
Force measurement	Class 0.5 from 2 % of Fmax / Class 1 from 0.4 % of Fmax, to 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 (optional 2000)		Hz
Zero-point correction	Automatic, at start of measurement		
Measurement signal runtime correction for all channels	Yes		
Interface to PC	Ethernet		

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Installation requirements		
Operating temperature	+10 ... +35	°C
Storage temperature	-25 ... +55	°C
Humidity (non-condensing)	<90	%
Electrical supply		
Power supply voltage 3 Ph/N/PE	400	V
Power frequency	50	Hz
Drive rating	55.5	kVA
Back-up fuse	80	A
Noise level at 1 meter distance	75	dB(A)
Color of housing	RAL 7011 (iron gray) and RAL 7038 (agate gray)	

Accessories

Description	Item number
Load cell 3000 kN	635458
Drive control incl. hydraulic power pack	3006943
Hydraulic grips 3000 kN	635452
Control for specimen grips	3007286
Jaws - flat and round 5.5 ... 20	635449
Jaws - round 20 ... 60	635447
Jaws - round 55 ... 100	635448