

Universal Testing Machine H 2,5 TMN



General Product Description

With regard to material and component testing in the small load range, the Richard Hess GmbH has developed the H 2,5 TMN universal testing machine series in three different test room heights.

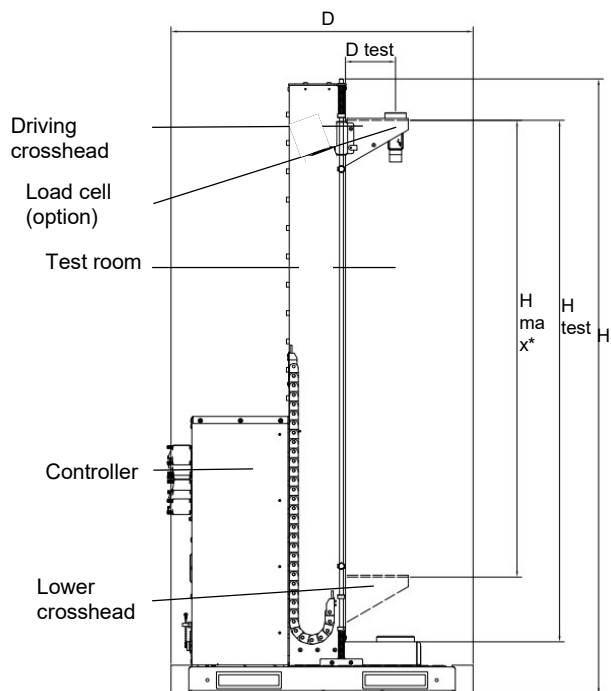
The H 2,5 TMN is a cost-efficient table-top device with low weight, high bending stiffness and suitable for tensile, compression and bending tests on various materials. In combination with the ergonomic design and the new brushless drive concept, a reliable and fast measurement is guaranteed with simple operation both in harsh production environments and in sterile laboratories.

Essential Characteristics

- innovative brushless drive without gear drive
- reduced noise pollution due to low motor speed and optimized frequency range
- control by crosshead travel, speed or load
- high-precision force measurement using strain gauge force transducers
- compact workplace design
- designed for standing and seated operation at the work table due to very flat lower crosshead and lateral arrangement of the electronics
- large machine base plate for setting up accessories and storing tools or samples
- easy cleaning of the machine

Dimensions in [mm]:

	H 2,5 TMN S	H 2,5 TMN M	H 2,5 TMN L
H (height)	705	1305	1605
H test (test room height)	475	1075	1375
H max * (max. test stroke)	365	965	1265
W absolute (width with control)	631		
D test (depth room width)	105		
D (depth)	631		



* Crosshead travel without grips, adapter and load cell

View universal testing machine with dimensions

Frame and Test Room Height

The H 2,5 TMN Single-Spindle Universal Testing Machine has a Ball Screw that is free of play in a C-Frame design with spindle protection and an innovative brushless drive motor.

The H 2,5 TMN Universal Testing Machine is available in three different test room heights and can thus be optimally adapted to individual requirements.

H 2,5 TMN M

Test Room Height: 1075 mm

especially Tensile Tests on Plastics,
Metals

H 2,5 TMN L

Test Room Height: 1375 mm

especially Tensile Tests on Plastics, Silicones,
Elastomers (very high strains)

H 2,5 TMN S

Test Room Height: 475 mm

especially
Bending/Compression Tests



Technical Data

Test Load Tension/Compression	2.5 kN		
Mechanical Design	1 Zero Play Recirculating Ball Screws, 1 Rail, Brushless Drive		
Force Measurement	Measuring Range: class 1 in the range of 0.2 to 100 % of nominal load (optionally class 0.5) depending on the Force Sensor used (according to DIN EN ISO 7500-1, ASTM E4)		
Stiffness	H 2,5 TMN S 3.6 kN/mm	H 2,5 TMN M 3.1 kN/mm	H 2,5 TMN L: 3.0 kN/mm
Crosshead Speed	0.005 mm/min to 1200 mm/min		
Drive Systems Travel Resolution	< 0,025 µm		
Power Ratings	115/230 VAC, 400 VA, 50/60 Hz, 5 – 40 °C, 20 – 80 % humidity		
Weight	H 2,5 TMN S: 48 kg	H 2,5 TMN M: 55 kg	H 2,5 TMN L: 60 kg
Data Processing	USB 2.0 Interface or LAN, Data Transfer Rate to PC: 200 Hz (50 Hz standard), Internal Data-Processing Rate 1000 Hz (1 ms)		
Controller	EDC 220		
Application	Testing of Plastics, Lightweight Materials and Components, Component Tests, Elastomer Tensile Tests Spring Testing, Foils, Textile Testing		

Necessary Accessories

S-load cell



R-load cell



Standard Load Cells

Including H&P-factory calibration report class 1 acc. DIN EN ISO 7500-1 (class 0,5 optional, DAkkS calibration optional)

Force measuring range	S-load cell	R-load cell Cross Load Stability up to 100 % up to class 1 acc. to ISO 7500	R-load cell Cross Load Stability up to 50 % up to class 0.5 acc. to ISO 7500
10 N			
20 N			
50 N			
100 N			
200 N			
500 N			
1 kN			
2 kN			
2,5 kN			*

*for H 2,5 TMN L and H 2,5 TMN M and pressure tests on H 2,5 TMN S

Adapters

Item number	for S-load cell for R-load cell
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Optional Accessories



Safety Doors

The round Safety Door for the H 2,5 TMN Testing Machine is made of transparent material and can be opened by sliding to the left without electrical interlocking. The safety door encloses the entire test area. When using the safety door, the Hand Panel RMC7 is necessary.

Item	for H 2,5 TMN S	for H 2,5 TMN M	for H 2,5 TMN L
Round Safety Door, closed on all sides			

Extensometers and Holders

The use of Long Distance Extensometers, Video Extensometers and Extensometer Holders is also possible.

Item number	Item	Extensometer holders
	Long Distance Extensometers L700, H 2,5 TMN / H 5 – H 10 TMN	
	Long Distance Extensometers L1100, H 2,5 TMN / H 5 – H 10 TMN	
	Video Extensometers MERCURY Video-Track	
others on request		

Organization System for Tools

The T-Wall with storage options for clamping devices, load cells and accessories can be mounted directly on the base plate of the machine. However, it cannot be combined with a safety door.

Item number	Item
	Organization System for Tools

Workbenches

An ergonomically designed workplace with functional equipment is the basis for an efficient performance of tasks. In order to facilitate the design of the measuring workplace, we offer you the following accessories.

Item number	Item
	Color Frame RAL 9006, 40 mm Strong Bench Wood Panel, Cable Gland, Cable Duct, Working Height Adjustable from 0.75 to 1.05 m, Load Capacity up to 500 kg Area Load W: 0.75 m x D: 0.7 m
	Color Frame RAL 9006, 40 mm strong Bench Wood Panel, Computer Holder, Cable Gland, Cable Duct, Working Height Adjustable from 0.75 to 1.05 m, Load Capacity up to 1250 kg Area Load W: 1.5 m x D: 0.9 m
	Color Frame RAL 9006, 40 mm Strong Bench Wood Panel, Computer Holder, Cable Gland, Cable Duct, Working Height Adjustable from 0.75 to 1.05 m, Load Capacity up to 1250 kg Area Load W: 2 m x D: 0.9 m with base unit

Hand Panel

Item number	Item
	Hand Panel RMC 6
	Hand Panel RMC 7 (with Emergency Stop Function) - necessary for the operation with a Safety Door

