

# Universal Testing Machine H 5 – H 10 TMN



## General Product Description

With regards to standard-compliant material and component testing in the low load range Richard Hess GmbH has developed the H 5 – H 10 TMN universal testing machine with two different test room heights. The H 5 – H 10 TMN is a cost-effective table-top machine of low weight and high bending stiffness suitable for tensile, compression and bending tests on various materials. In combination with the ergonomic design and the new brushless drive concept, a safe and fast measurement is guaranteed with the simplest operation both in the harsh production environment and in the sterile laboratory area.

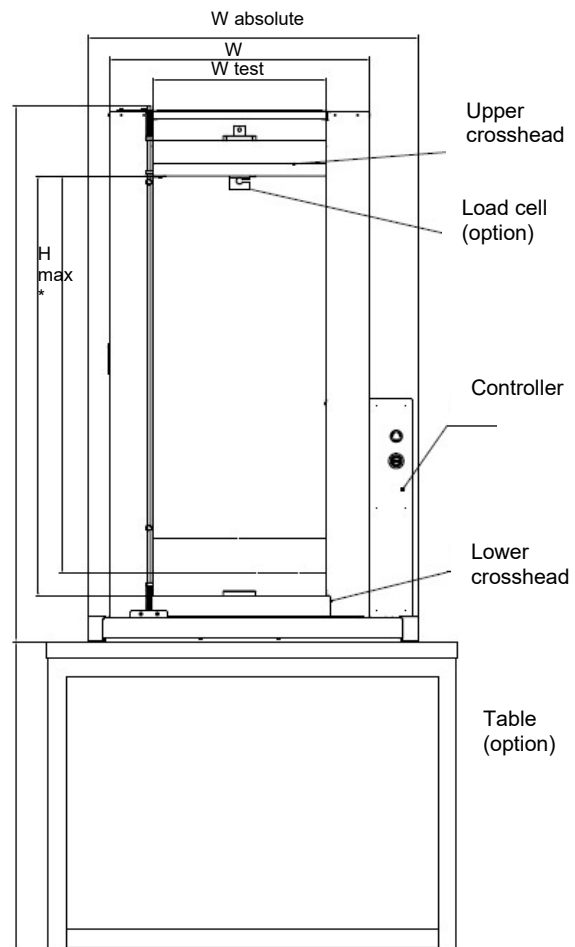
## Essential Characteristics

- Innovative brushless drive without gear drive
- Reduced noise pollution due to low engine speed and optimized frequency range
- Freely selectable control of crosshead travel, force or elongation
- High-precision force measurement by strain gauge load cell
- Compact workplace design
- Designed for both standing and seated work at the worktable due to very flat lower traverse and lateral arrangement of electronics
- Large machine base plate for the adaptation of accessories and the storage of tools or specimen
- Easy cleaning of the machine

## Dimensions in [mm]:

	M	L
H (height)	1305	1605
H test (test room height)	1025	1325
H max * (max. test stroke)	970	1270
W absolute (width with control)		804
W (width)		631
W test (test room width)		420
D (depth)		631
H table (table height)		750 - 1050

\* Crosshead travel without grips, adapter and load cell



View universal testing machine with dimensions

### Frame and Test Room Height

The Two-Spindle Universal Testing Machine H 5 – H 10 TMN has two backlash-free ball screws in H-frame design with spindle protection and innovative brushless drive motor.

The newly developed testing machine is available in two different test room heights and can thus be optimally adapted to individual requirements.

**Test Room Height: 1025 mm**

**Especially tensile tests on plastics, metals (medium elongation) as well as compression and bending tests**



**Test Room Height: 1325 mm**

**Especially tensile tests on plastics, silicones, elastomers (very high elongations)**

### Technical Data:

Test force tension/compression	5 kN or 10 kN	
Mechanical construction	2 backlash-free recirculating ball screws, brushless drive	
Stiffness loadframe	9.4 kN/mm	
Measuring range force	In the range 0.4 - 100 % of nominal load class 1 (optional class 0.5) depending on the force sensor used (according to DIN EN ISO 7500-1, ASTM E4)	
Test speed	at 5 kN: 0.001 mm/min up to 1200 mm/min	at 10 kN: 0.001 mm/min 600 mm/min
Drive path resolution	< 0,025 µm	
Electrical connection	115/230 VAC, 400 VA, 50/60 Hz, 5 – 40 °C, 20 – 80 % humidity	
Weight	H 5 – H 10 TMN M: 83 kg	H 5 – H 10 TMN L: 88 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 and creep testing, elastomer tensile tests Spring testing, foils, textile testing	
Hint	This testing machine series is not designed for connecting external electrical devices (e. g. temperature chambers) to the emergency stop circuit of the machine.	

## Necessary Accessories



Including H&P-factory calibration class 1 acc. to DIN EN ISO 7500 with protocol (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			
3 kN			
5 kN			
10 kN			

## Adapters

Item number	für S-loadcell für R-loadcell
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## Optional Accessories



## Safety Doors

The Safety Door for the H 5 – H 10 TMN Testing Machine is made of transparent material. It is available in round design covering the whole test room (see left) or as front door sliding to the left.

Item	for H 5 – H 10 TMN M	for H 5 – H 10 TMN L
Sliding Door, round, closed on all sides		
Safety Door, front side		
Safety Door, front side with software surveillance		
Safety Door, back side and at the sides		

## Extensometers and Holders

Item number	Item	Extensometer Holder
	Long Distance Extensometer L700, H 2,5 TMN / H 5 – H 10 TMN	
	Long Distance Extensometer L1100, H 2,5 TMN / H 5 – H 10 TMN	
	Video Extensometer	
	Long Distance Extensometer MFX200	
	Long Distance Extensometer MFX500	
	Long Distance Extensometer MFE	

## T-groove Plates

The T-Groove Plates are used for larger specimens and for specimens requiring variable mounting points. In the standard version these cannot be combined with a Safety Door.

Item number	Item
	T-groove Plate

## 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 <b>W: 1 m x D: 0.9 m</b>
	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 <b>W: 1.5 m x D: 0.9 m</b>
	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 <b>W: 2 m x D: 0.9 m with base unit</b>

## Hand Panel

Item number	Item
	Hand Panel RMC 6



