

## Motorized test stand MH2 series

- High repeatability with constant testing speed and direction
- The horizontal design for easy sample setting
- Simple digital setting of testing modes and speed
- Various functions with force gauge



MH2-500N



MH2-2500N

### Special Features

#### High Repeatability

- Constant testing speed and direction for applying compression and tensile force
- Rugged design minimizes influence of deformation (0.5mm or less)

#### Easy Operation

- Inclined control panel for easy operation
- Easy dial operation for digital value
- Three testing modes to meet testing requirements

#### High Versatility for various testing.

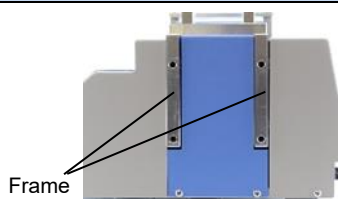
- Ideal for durability test by setting the number of test cycles to repeat
- Useful timer function for compression testing allows pausing at a set force value. (\*)
- The table is able to fix various attachments.
- Optional functions for various purposes
- Convenient frame for fixing a table and attachment.

#### Functions for efficient testing

- Easy setting of travel distance according to the sample size.
- Automatically changes traveling and measuring speed at a set force value. (\*)
- Software records automatically according to stand operation. (\*)

\* Required certain models of force gauge and optional cable.

### Frame features (only for MH2-2500N)



#### Improve convenience of measurement

- Allows to fix your own attachment or table easily.
- Enables to measure large size samples.
- Useful to mount suitable attachments for samples.

## [Application Example and Configurations]

### [Optional Cable]

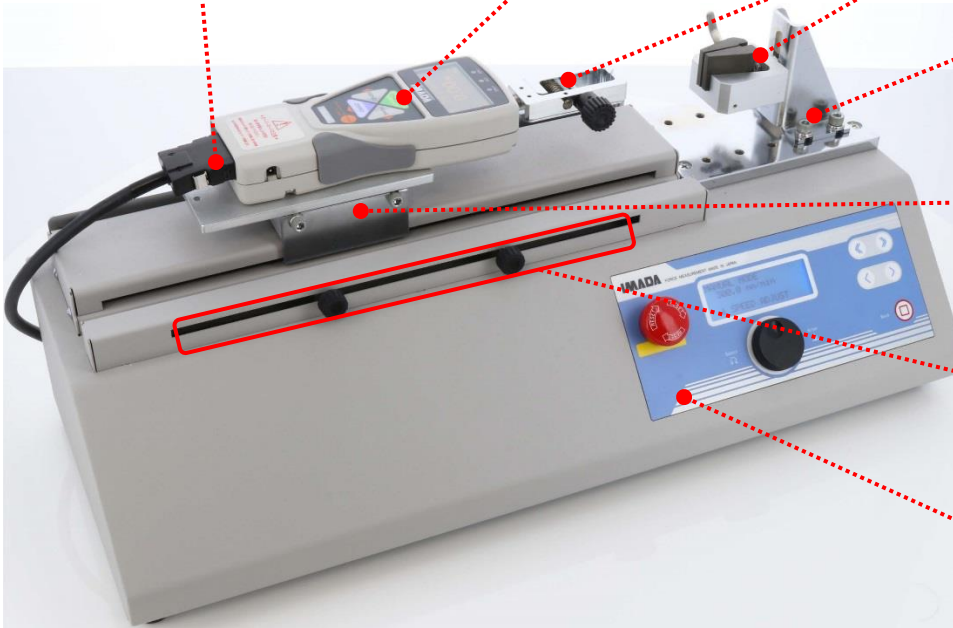
Connects force gauge and test stand to activate various functions.

### [Force Gauge]

Measures tensile, peel, strength etc.  
Mountable to test stand with bolts.

### [Optional Attachments]

Integral components to complete a testing system, selectable from a wide range of attachments.



### [Table]

Fix an attachment and sample.  
Adjustable horizontally and vertically.

### [Head]

Horizontal movement to push/pull a sample.

### [Stroke Limit]

Set limits of stroke easily with these knobs.

### [Operation Panel]

For measurement unit settings and emergency stop.

\*This stand is MH2-500N model.  
\*Force gauge, optional attachments and optional cable are sold separately.

## [Operation Panel]

### [Emergency Button]

Press for emergency stops.

### [Push Dial]

For measuring unit settings by turning and pressing.





### [LCD]

Shows status and settings

### [Operation Buttons]

Press to move the head.

## [Applications] Use suitable attachments for varieties of measurements.

Wire crimp pull test	Coefficient of friction test
Tests the strength of crimped terminal by measuring the tensile force required to remove a crimped terminal.	Measures kinetic and static coefficient of friction by pulling the weight on film or paper sample.
	

**[Basic Operations]**

<p><b>Adjusting speed</b></p>		<p>Testing speed is easily adjustable by dialing.</p> <p>Setting resolution: [10-20mm/min: 0.5mm/min] [20-100mm/min: 5mm/min] [100-300mm/min: 10mm/min]</p> <p>Adjustable speed types: Start, Measuring, Return</p>
<p><b>Three measuring modes</b></p>		<p>Three testing modes according to purpose.</p> <ul style="list-style-type: none"> <li>- Manual mode: Moves while operation buttons are pressed.</li> <li>- JOG mode: Minute feeding by turning dial (approx. 0.05mm per 1 turn)</li> <li>- Cycle mode: Travels between stroke limit knobs for cycles.</li> </ul>
<p><b>Other functions</b></p>		<p>Cycle mode allows to set the number of tests to repeat and pausing time.</p> <p>Counter (number of tests to repeat): Max. 65535 times Timer (pausing time): Up to 99 min 59 sec 9 (by 0.1 sec)</p>

**[Main Options]**

<p><b>Speed change (-V)</b></p> <p>Changes the speed range. Useful for tests required faster/slower speed condition.</p>	<p><b>Length meter (-S)</b></p> <p>Built in digital screen indicates travel distance of force gauge.</p>
<p><b>FA option (-FA)</b></p> <p>Provides built in liner scale. Allows displaying displacement data on force gauge together with force value and drawing FS curves in PC via USB. *ZTA series force gauge and optional cable are required. *Force-displacement measurement unit FSA series includes the necessary products are also available.</p>	<p><b>External signal input (-CN)</b></p> <p>The connector for external signal input. Allows inputs such as start, stop, and interlock.</p>

## [Specifications]

Model	MH2-500N	MH2-2500N
Capacity	500N	2500N
Speed	Digital 10 to 300mm/min [10 - 20mm/min: by 0.5mm/min] [20 - 100mm/min: by 5mm/min] [100 - 300mm/min: by 10mm/min]	
Max. Sample Height (*1)	Approx. 245mm	Approx. 340mm
Rigidity	[Standard models] 0.5mm or below	
Stroke Limit	Controllable with horizontal knob	
Measuring Modes	Manual / Jog / Cycle mode	
Functions	Counter (number of tests to repeat): Max. 65535 times Timer (pausing time): Up to 99 min 59 sec 9 (by 0.1 sec)	
Control	Emergency stop, force control (*2), overload prevention (*2, *3)	
Operating temperature humidity	0 to +40 degree Celsius 35 to 70% (avoid condensation)	
Voltage	AC100 to 240V, 50/60Hz (Select from 100, 120 and 230V. Accessories are provided accordingly.)	
Power Consumption	50W	
Dimensions	Refer to dimensions shown in the diagram page 6/7	
Weight	Approx. 14kg	Approx. 27kg
Accessories	Operation manual, power cable, spare fuse, tools, grip mounting plate, warranty certificate	Operation manual, power cable, spare fuse, tools, attachment mounting plate (GF-2), warranty certificate
Available Options (*4) (*5)	-CN: External signal input -S: Length scale -FA: Inbuilt linear scale -V45: Speed 1.5 to 45mm/min -V90: Speed 3 to 90mm/min -V450: Speed 15 to 450mm/min -V600: Speed 20 to 600mm/min -V900: Speed 30 to 900mm/min	-CN: External signal input -S: Length scale -FA: Inbuilt linear scale -V75: Speed 2.5 to 75mm/min -V150: Speed 5 to 150mm/min
Mountable Force Gauge (*6)	Mechanical Force Gauge: FB, PS, PSM series Digital Force Gauge: DST, DSV, ZTS, ZTA series (1000N or lower) Load cell: DPU series (500N or lower)	Mechanical Force Gauge: FB, PS, PSM PSH series Digital Force Gauge: DST, DSV, ZTS, ZTA series Load cell: DPU series (500N or lower), DPU series (1000~5000N)(*7)

\*1 Max. sample height refers to the distance between the table and the tip of force gauge measuring shaft when the head is at the top.  
(With up to 1000N model of ZTS/ZTA series)

\*2 ZTS/ZTA series force gauge and optional cable CB-518 are required.

\*3 It does not guarantee complete protection against overloading.

\*4 Add the option code after the model name to complete the model with options.  
e.g. When adding long stroke option to MH2-500N ... Model: MH2-500N-L

\*5 Capacity is reduced as below by some speed change options of MH2-500N.  
-V600 capacity 250N, -V900 capacity 150N

\*6 Ensure to use within the capacity of force gauge and test stand regardless of the mountable models.

\*7 Mounting block is required to be attached to the DPU series (1000~5000N)

## [User Mounted Unit (only for MH2-2500N)]

OP-MH225-S : Length Scale	OP-MH225-FA : FA version *1
It digitally indicates travel distance of a force gauge.	It builds a linear scale into a test stand to output travel distance of a force gauge and allows to utilize it for analysis of force-displacement relations.

\* Requires to fix the unit to current MX2-5000N by yourself.

\* Amplifier such as ZTA or FA Plus2 (sold separately) or Software are required to record measuring value of linear scale.

\*1 Select -FA option if the test stand with built in linear scale is required.

**[Related Products]**

Digital Force Gauge ZTS/ZTA series		Software Force Recorder series	Force – Displacement Measurement Unit FSA series
Precise measurement with high sampling rate of 2000Hz. Cable connection enables link with MH2 series.		Able to start and stop automatically based on the trigger setting of MH2 test stand function.	Draws a detailed graph of force and displacement suitable for tactile test, material evaluation and more. Includes a force gauge, a test stand with a linear scale, a cable and a graphing software.
Cable	<b>CB-518</b>	For connecting with force gauge ZTS/ZTA series: Enables useful functions	
	<b>CB-706</b>	For –CN option: Open end cable to connect with external device	
	<b>CB-718</b>	For –FA option: Connects ZTA series force gauge and test stand to enable force and displacement measurement. (Motion control and related functions are also available.)	

**[Control Functions]** Able to be used by connecting ZTS/ZTA series and CB-518.

- <b>Overload sensor failure prevention:</b> Prevents the sensor from malfunction due to overloading. (Does not guarantee complete protection against overloading.)
- <b>Force control:</b> Sets a applying or stopping force value.
- <b>Measuring speed setting:</b> Enables automatic speed change at a point of contact by set force value.
- <b>Automatic measurement:</b> Automatically performs zero reset of force gauge and software recording

\* Refer to 'Advanced Functions of Test Stands' for details.

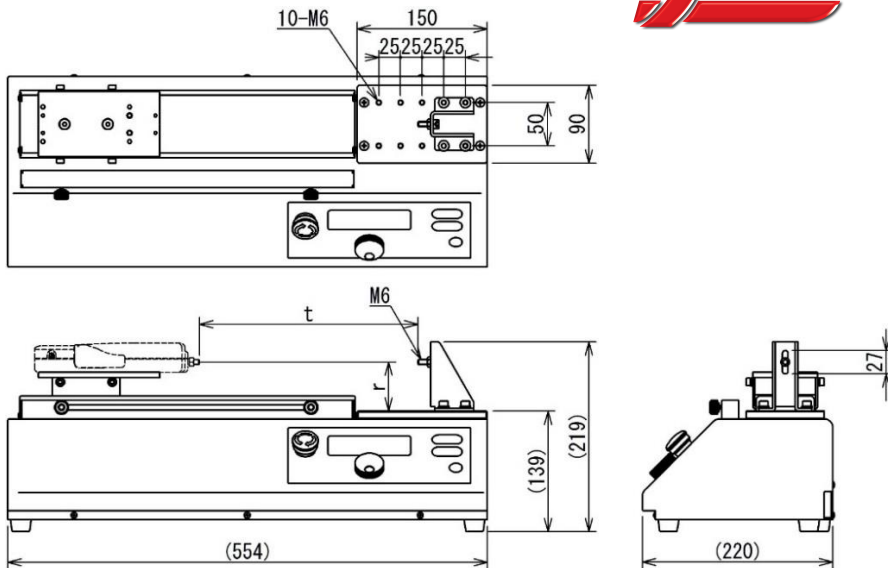
**[Examples of Customized Solutions]**

External signal input: -CN option		Interlock: -CN option	
For switching on/off operation, foot pedal can be connected.		At the time of door opening, measuring operation stops automatically with correspondent safety regulations requirements.	
Large Sample testing attachment		Controller-separated Model	
For testing larger size samples, those not possible to be placed fully on the test stand table, measuring with the multiple sample points with push/pull action is recommended.		Recommended usage - Fix to own equipment. - Fix controller/drive part to a specific place. - Keep distance to avoid risks during test.	

\*Images above show examples of vertical type test stand.



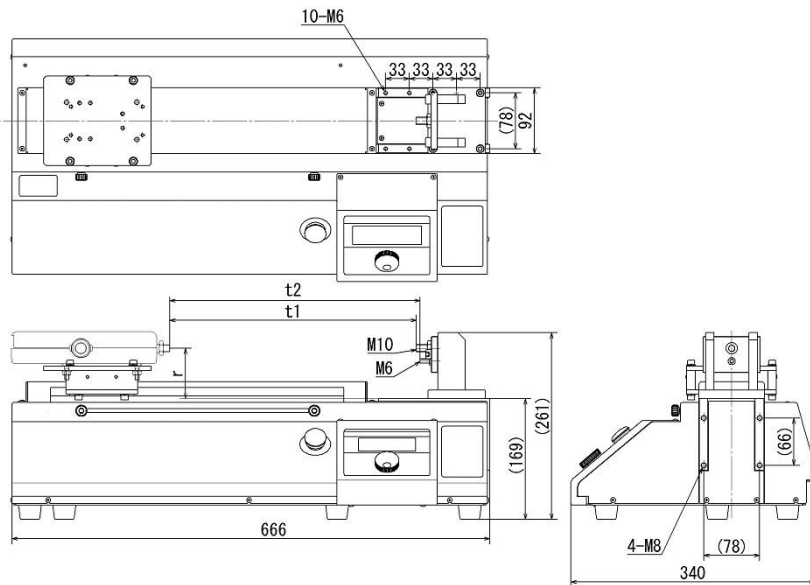
**[MH2-500N Dimensions]**



Model		MH2-500N
r	DST/DSV/ZTS/ZTA (2N~500N)	56
	DPU (500N or lower)	54
t	DST/DSV	250
	ZTS/ZTA (2N~500N)	245
	DPU (2N~10N)	270
	DPU (20N~500N)	260

Unit: mm

**[MH2-2500N Dimensions]**



Model		MH2-2500N
r	ZTS/ZTA (2500N or higher)	70.5
	ZTS/ZTA (1000N or lower)	57.5
	DPU (1000N~5000N) (mounting block is sold separately)	70.5
	DPU (500N or lower)	55.5
t1	ZTS/ZTA (2500N or higher)	0-340
	DPU (1000N~5000N) (mounting block is sold separately)	0-310
t2	ZTS/ZTA (1000N or lower)	0-300
	DPU (500N or lower)	0-350

Unit: mm

**[Cautions]**

- Information in this document is subject to change without prior notice.
- This document is product descriptions and handling precautions, and do not guarantee various characteristics or safety.
- This product is designed for force measurement purpose only.
- Do not copy and use this content without authorization.
- A force gauge (sold separately) is required to use this product.
- Do not use this product in the environments including fierce temperature changes, high temperature, high humidity, near water, dusty place.