

SERVO HYDRAULIC UNIVERSAL TESTING MACHINE



Servo Hydraulic Universal Testing Machine TT-MSH Series are ideal for high-capacity tension, compression, bend/flex, and shear testing. Designed to comply with BS, EN, ISO, ASTM, JIS, GB, and numerous other testing standards, these machines feature dual spaces, enabling users to quickly switch between tension and compression testing without removing heavy fixtures.



APPLICATIONS

Be confident with High Precision of measurements as well as durability

- Extra-length screws and columns with an adjustable lower crosshead to increase the available test space for longer specimens
- Rigid 4-column load frame construction provides superior axial and lateral stiffness with minimal maintenance and low reaction at specimen failure
- Equipped with a digital displacement transducer for optimal positioning and measuring accuracy
- Includes a grip control system mounted directly on the machine
- Comes with tools for tension, compression, bend/flex, shear, and other tests
- Chrome-plated columns for easy cleaning and extended durability

Servo Hydraulic Universal Testing Machine

Wide Range of Applications:

The frames are available in capacities ranging from 600kN (134,890 lbf) to 2000kN (450,000 lbf). They are designed to accommodate a wide range of materials including metals, sheet materials, bar stock, composites, fasteners, rebar, strapping, strands, and other similar materials.

Large Test Space:

The double-acting crossbeam allows quick accommodation of specimens of varying lengths. By adding extra column length, the maximum testing space can be adjusted to suit longer specimens. Optional extra-height load frames are also available for pretested concrete strands.

Rugged Load Frame:

The four-column construction offers exceptional load frame rigidity.

Front-Open Only Wedge Grips:

Front-open wedge grips facilitate easy insertion and removal of specimens, enhancing productivity and operator safety. The interchangeable design enables a limited number of jaw faces to accommodate a wide range of specimen sizes.

FEATURES

- **High stiffness:** Our machines offer unmatched stiffness among global manufacturers.
- **Spherical bearing design:** Enables self-alignment loading for tests, a unique feature among manufacturers.
- **Stainless steel components:** We use stainless steel for oil cabinets and accessories, ensuring rustproof durability.
- **Semi-open front hydraulic wedge clamps:** Make loading and unloading specimens easier and faster, with enhanced grip stiffness compared to fully open grips available in the market.

For more information on our Servo Hydraulic Universal Testing Machine, visit our website or contact us directly.



TECHNICAL SPECIFICATIONS

Capacity	kN / lb.f	600 kN / 135,000 lb.f	1000 kN/ 225,000 lb.f	2000 kN / 450,000 lb.f	3000 kN / 675,000 lb.f
Structure	Space	Upper for tension, lower for compression			Upper for compression, lower for tension
Grip Type	Front/Fully	Fully open	Semi-Front open only		

Alignment		Self-alignment with spherical bearing			
Machine specifications	Ram Stroke				
	mm	250 (customizable)			
	Adjustable crosshead speed				
	mm/min	350	410	330	260
	Max. Distance between grips				
	mm	750 (STD) 900 (XTRA)	810 (STD) 900 (XTRA) 1100 (PLUS)	760 (STD) 890 (XTRA) 950 (PLUS)	900(STD)
	Max. Distance between platens				
	mm	750 (STD) 900 (XTRA)	810 (STD) 900 (XTRA) 1000 (PLUS)	760 (STD) 890 (XTRA) 950 (PLUS)	900(STD)
	Space reduction				
mm	Space reduction 240	On every 240mm, maximumly 480mm reduced			
Accessories	Jaw inserts for tension				
	Rounds (mm)	Ø6~Ø16 Ø13~Ø27 Ø27~Ø40	Ø6~Ø20 Ø20~Ø40 Ø40~Ø60	Ø5~Ø16 Ø15~Ø45 Ø40~Ø70	Ø20~Ø50 Ø50~Ø80 Ø80~Ø110
	Flats (mm)	0-30 (Width=<90)	0-40 30-60 (Width=<110)	0-40 30-70 (Width=<150)	0-50 50-100 (Width=<180)
	Platen dimensions				
	mm	Ø178	Ø200	300*300	Ø280

Dimensions	W*D*H mm	940*580*2320 940*580*2470	1030*640*2490 1030*640*2580 1030*640*2640	1290*900*2915 1290*900*3045 1290*900*3105	1380*990*4930
Weight	Kg	3320 3400	4120 4240 4380	8020 8170 8200	18000

General Specifications

Load Measurement Accuracy:

±0.5% of the reading to 1/50 of the load weighing system capacity, meeting or exceeding the requirements of ISO 7500-1, EN 10002-2, ASTM E4, and JIS B7721.

Strain Measurement Accuracy:

±0.5% of the reading to 1/50 of full scale with most ASTM E83 class B or ISO 9513 class 0.5 extensometers, meeting or exceeding ASTM E83, ISO 9513, and EN 10002-4 standards.

Speed Accuracy:

- Set speed < 10% Max. Speed: ±1%
- Set speed ≥ 10% Max. Speed: ±0.5%

Position Measurement Accuracy:

±0.5% of the reading or 0.001 mm, whichever is greater.

Power Supply:

Standard optional voltages of 400VAC, 50-60 Hz. The power supply must be free of spikes and surges exceeding 10% of the nominal voltage.

Operating Temperature:

0 to +38°C (+32 to +100°F)

Humidity Range:

10% to 90% non-condensing

Storage Temperature:

-40 to +66°C (-40 to +150°F)

Note:

1. Extra height frames are available.
2. The power supply system is fully customizable.
3. Specifications are subject to change without notice.



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