

**Universal  
electromagnetic systems  
for dynamic testing**

# EMT Series



Universal electromagnetic dynamic testing machines servopulsers EMT series - developed by Shimadzu Company for conducting high-frequency fatigue tests.

Thanks to the rigidity of the main frame and the modern multifunctional controller, the system allows for highly accurate testing with high reproducibility of results.

- **High speed system**

The maximum achievable test frequency is 200 Hz!

- **Accuracy**

The combination of the 4830 controller's powerful digital electronics, highly rigid main frame and high-precision load cell ensures accurate results with high repeatability.

- **Simplicity**

Since there is no need to use compressed air, hydraulic oil or water, the system can be installed in ultra-clean laboratories. All that is needed is a power supply.

- **Low noise level**

Due to the low noise level, the machine can be installed in any room; sound insulation is not required.

- **Compactness**

The system is designed to make the most economical use of laboratory workspace.

- **Safety**

Special safety features and an emergency stop button help prevent accidents. Additionally, the machine can be equipped with a special protective screen.

- **Wide range of accessories**

Captures;  
Compression and bending test fixtures;  
Extensometers;  
Thermo- and cryochambers;  
Devices for testing in various environments;  
and much more.

## Basic specification in combination with 4830 controller

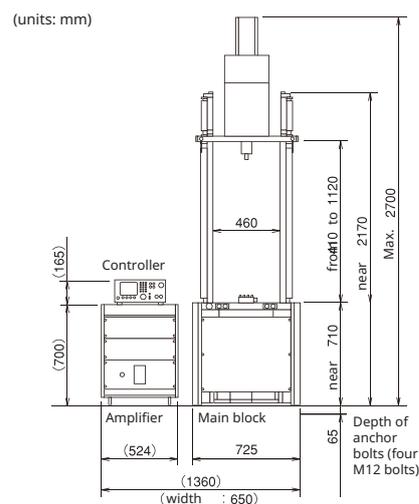
Model name	EMT-1kNV-30	EMT-1kNV-50
Strength of the test	± 1kN (dynamic/static)	
Piston stroke	± 30 mm	± 50 mm
Speed	1 m/s	2 m/s
Maximum frequency	200 Hz	
Controlled elements	Test force, piston stroke	
Accuracy of power	Within ±0.5% of the specified value or within ±0.02% of the maximum dynamic test force, whichever is greater	
Accuracy of movement	Within ±1% of the specified value or within ±0.1% from the maximum stroke, the highest value is selected	
Movement system traverses	Electric motor	
Working test area	Distance between columns 460 mm, distance between clamps from 0 to 700 mm	
Weight	Main unit: 510 kg; Amplifier: 60 kg; Controller: 8 kg	
Noise level	62 dB (at a distance of 1 m from the main unit and 1 m from the floor)	
Requirements by power supply *	50/60 Hz, 3 phases, 220 V, 4 kVA	50/60 Hz, 3 phases, 220 V, 5 kVA
Power consumption at max load	4 kW	5 kW

\* Modification to European power supply standard is possible.

## Controller 4830

- Reliable, multifunctional, easy to use controller for a full range of materials testing.
- Create a wave with excellent reproducibility Fully digital control with automatic adjustment of control parameters, waveform distortion correction function.
- Special functions (push" function) for testing real objects Stable control of peak values in all test areas (even when sample compliance changes).
- High accuracy and reproducibility of results Thanks to the high-resolution 24-bit AD converter and the detector output linearization function, a loading accuracy of 0.5% is achieved for standard systems.
- Waveform display functions These functions, installed as standard, allow you to display time graphs, XY graphs and peak graphs.

## Installation example



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