ETM-W-H Series Universal Testing Systems(Load up to 1000 kN）

Introduction

ETM series electromechanical testing machines offer force, displacement or deformation closed loop testing in tension, compression, flexure, shear, tear and peel etc. The machine can be equipped with a variety of accessories including: grips, fixtures, compression frames, thermal cabinets and extensometers covering all relevant applications as testing of rubber, plastics, foils, films, textiles, adhesives, paper, foods, foams, timber, wires or other metallic or non-metallic specimens and medical, electronic and other components. The load frames are rigid constructed, providing superior axial and lateral stiffness.

Application range

Load meets or exceeds the following standards: ASTM E4, ISO7500-1, EN 10002-2, BS1610, DIN 51221.
Strain measurement meets or exceeds the following standards: ASTM E83, ISO 9513, BS 3846, EN 10002-4.
Safety: This machine shall conform to all relevant European CE Health and Safety Directives EN 50081-1, 580081-1, 73/23/EEC, EN 61010-1

Rigid and reinforced Plastics/ Composites:

EN ISO 6259 - parts 1/2/3 Determination of tensile properties of thermoplastic pipes;
EN ISO 527-1 - parts 1/2/3 Determination of tensile properties on plastics;
ASTM D638 Standard Test Method for Tensile Properties of Plastics

ISO 604 Plastics - determination of compressive properties
ASTM D695- Plastics -- Standard Test Method for Compressive Properties of Rigid Plastics
EN ISO 9969 Determination of ring stiffness on thermoplastic pipes;
ISO 14125 Flexural Properties of Fiber-Reinforced Plastic Composites
ASTM D3846 Standard Test Method for In-Plane Shear Strength of Reinforced Plastics;
EN ISO 13968 Plastics piping and ducting systems -Thermoplastics pipes-Determination of ring flexibility;
EN ISO 844 Determination of compression properties;

Geo-textiles：

BS EN ISO 10319 Geotextiles —Wide-width tensile test;
ASTM D3950 Standard Specification for Strapping, Nonmetallic (and Joining Methods);
JBT 8521(EN 1492-2): Textile slings. Safety. Round slings, made of man-made fibers, for general purpose use;
ASTM D 6775-02 Standard Test Method for Breaking Strength and Elongation of Textile Webbing, Tape and Braided Material;

Metal：

ASTM E8 Standard Test Methods for Tension Testing of Metallic Materials;
ISO 6892 Metallic materials — Tensile testing — Method of test at ambient temperature;
BS EN 10002-1Determination of tensile properties on metals;
BS EN 10002-5: Metallic materials —Part 5: Method of test at elevated temperatures;
ASTM E21: Standard Test Methods for Elevated Temperature Tension Tests of Metallic Materials;
IS0 783: Metallic materials -Tensile testing at elevated temperature;
EN ISO 7438 Determination of flexure tests on metals;
ASTM F606: Standard Test Methods for Determining the Mechanical Properties of Externally and Internally Threaded Fasteners, Washers, Direct Tension Indicators, and Rivets;
ISO 14589: Blind rivets - Mechanical testing;
SAE J429: Mechanical and Material Requirements for Externally Threaded Fastener;

Main Specifications

MODEL	ETM505W-H	ETM605W-H	ETM106W-H
Load Capacity	500kN	600kN	1000kN
Calibration standard	Class 0.5		Class 0.5
Testing Load Accuracy	±0.5%		±0.5%
Testing Load Range	0.4%～100%FS		0.4%～100%FS
Load Resolution	1/±500000FS		1/±500000FS
Deformation measuring range	0.2%～100%FS		0.2%～100%FS
Deformation accuracy	≤±0.5%		≤±0.5%
Deformation resolution	1/±500000FS of the max deformation		1/±500000FS of the max deformation
Test control mode	Three closed loop control, stress, strain and displacement		Three closed loop control, stress, strain and displacement
Displacement accuracy	Within ±0.5% of the value		Within ±0.5% of the value
Displacement resolution	0.04μm		0.04μm
Constant force control range	0.001%～5%FS/s		0.001%～5%FS/s
Constant force control	When the rate is < 0.05%FS/s, it is		When the rate is < 0.05%FS/s, it is

accuracy	within ±2% of the set value; when the rate is ≥0.05%FS/s, it is within ±0.5% of the set value;	within ±2% of the set value; when the rate is ≥0.05%FS/s, it is within ±0.5% of the set value;
Constant deformation control range	0.005～5%FS/s	0.005～5%FS/s
Constant deformation control accuracy	When the rate is < 0.05%FS/s, it is within ±2% of the set value; when the rate is ≥0.05%FS/s, it is within ±0.5% of the set value;	When the rate is < 0.05%FS/s, it is within ±2% of the set value; when the rate is ≥0.05%FS/s, it is within ±0.5% of the set value;
Crosshead speed range	0.001～500mm/min	0.001～300mm/min
Crosshead speed accuracy	≤±0.2%	≤±0.2%
Testing space (Crosshead Travel)	900mm	900mm
Max. Tensile Testing Space	800mm	800mm
Test width	700mm	800mm
Overall Dimensions	1450 x 1140 x 2730mm	1700 x 850 x 3500mm
Weight	about 4000kg	about 8000kg
Power supply	6KW, AC380V±10%,50Hz/60Hz	6KW, AC380V±10%,50Hz/60Hz