



MTS Exceed® E21 Series Pendulum Impact Test Systems for Plastics

Highly reliable and stable impact testing for non-metallic materials

Features

- » Rugged cast iron frame absorbs shock and vibration
- » Reliable disc brake for quick pendulum braking
- » Fast pendulum replacement with no additional tools needed
- » Ergonomic control panel with large, tilt-angle LCD display
- » High-resolution, frictionless encoders for accurate measurement of impact angle
- » Safety enclosures to protect from debris
- » CE compliance

Designed for accurate, repeatable impact testing of plastics, nylon, hard rubber and other non-metallic specimens, MTS Exceed Pendulum Impact Test Systems deliver reliable, cost-efficient performance for a wide range of testing applications. These systems can conduct tests in accordance with all common testing standards, including ISO and ASTM.

The MTS Exceed Pendulum Impact system is equipped with an easy-to-operate control system, a full series of pendulums and a frame for testing of multiple samples. The frame allows for Charpy, Izod and tensile impact tests to be conducted on multiple samples accurately and effectively.

The high-quality cast iron base, combined with four large-diameter leveling feet, offers high stiffness and vibration damping for more accurate results. High-efficiency, low-wear disc brakes help ensure accurate pendulum movement during Charpy, Izod, and tensile impact tests.

Integrating a solid test frame with high-resolution electrical control and comprehensive safety features, the MTS Exceed E21 Series Pendulum Impact Test System for Plastics provides highly reliable testing capabilities for QA/QC environments and various high strength tests.

be certain.

Examples of plastics and composite material test standards that can be met with the MTS E21 Pendulum Impact Test System for Plastics.

Examples

Standard	Description
ISO 179-1	Plastics – Determination of Charpy impact properties – Part 1: Non-instrumented impact test
ASTM D6110	Standard Test Method for Determining the Charpy Impact Resistance of Notched Specimens of Plastic
GB/T 1043.1	Plastics – Determination of Charpy impact properties – Part 1: Non-instrumented impact test
ISO 180	Plastics – Determination of Izod impact strength
ASTM D256	Standard Test Methods for Determining the Izod Pendulum Impact Resistance of Plastics
ASTM D4812	Standard Test Method for Unnotched Cantilever Beam Impact Resistance of Plastics
GB/T 1843	Plastics – Determination of Izod impact strength
GB/T 13525	Plastics – Determination of tensile impact

Charpy Pendulum and Fixture

	Pendulum Energy	Pendulum Part Number	Fixture Part Number
ISO	1J	100301698	100301672
ISO	2J	100301696	100301672
ISO	4J	100301532	100301672
ISO	5J	100301695	100301672
ISO	7.5J	100301689	100301684
ISO	15J	100301694	100301684
ISO	25J	100301697	100301684
ASTM	1J	100301686	100301668
ASTM	2.7J	100301666	100301668
ASTM	5.4J	100301670	100301668
ASTM	10.8J	100301533	100301667
ASTM	21.6J	100301665	100301667

Izod Pendulum and Fixture

	Pendulum Energy	Pendulum Part Number	Fixture Part Number
ISO	1J	100301690	100301673
ISO	2.75J	100301688	100301673
ISO	5.5J	100301687	100301673
ISO	11J	100301693	100301685
ISO	22J	100301692	100301685
ASTM	1J	100301690	100301669
ASTM	2.75J	100301688	100301669
ASTM	5.5J	100301687	100301669
ASTM	11J	100301693	100301671
ASTM	22J	100301692	100301671

Specifications

	E21.550	E21.251
Maximum impact energy	5.5J	25J
Impact speed	2.9-3.46 m/s	2.9-3.8 m/s
Dimension of the main tester (W x H x D)	1055 x 1060 x 520 mm	1228 x 1220 x 520 mm
Weight (accessories excluded)	210 kg	250 kg
Impact test results, digital display	Impact energy (J) Impact strength (kJ/m ²)	Impact energy (J) Impact strength (kJ/m ²)
Unit	SI	SI
Functions	Friction loss correction Period of oscillation Automatic calculation of the pendulum length Linkable printer Linkable PC Brake	Friction loss correction Period of oscillation Automatic calculation of the pendulum length Linkable printer Linkable PC Brake
Safety protection	Basic safety protection device	Basic safety protection device
Interface	RS 232	RS 232
Angle resolution	0.045°	0.045°
Power supply	100~240 V AC	100~240 V AC



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