



TORONTECH



CHARPY IZOD PENDULUM IMPACT TESTER

Charpy Izod Pendulum Impact Tester - Toron50J™

Charpy Izod Pendulum Impact Tester – Toron50J™ is a precision impact testing system designed to measure the impact resistance and toughness of non-metallic materials under controlled conditions. Utilizing the Charpy and Izod pendulum impact test methods, this instrument determines the energy absorbed by a specimen at fracture, providing critical insight into material brittleness, strength, and failure behavior.

Engineered with a digital display system and PLC touchscreen control, the Toron50J™ delivers accurate, repeatable, and automated impact test results. Automatic energy loss correction, real-time calculation, and digital data storage ensure reliable performance for quality control, research, and compliance testing laboratories.

APPLICATIONS

Charpy Izod Pendulum Impact Tester - Toron50J™ Applications

The Toron50J™ Charpy Izod Pendulum Impact Tester is widely used for impact strength evaluation in:

- Plastics and polymer materials, including rigid plastics and reinforced nylon
- Fiber-reinforced composites, such as FRP and thermosetting materials
- Electrical insulation materials, assessing resistance to sudden mechanical stress
- Ceramics and cast stone, for brittle fracture characterization
- Research laboratories and universities, supporting material science studies
- Quality control and inspection departments, ensuring compliance with impact strength standards



Standards

The Charpy Izod Pendulum Impact Tester is designed and verified in accordance with internationally recognized impact testing standards, including:

- ISO 179-1: Defines the Charpy impact test method for determining the impact properties of plastics using a pendulum impact tester.
- ISO 9854 series: Specifies Charpy impact test conditions and methods for evaluating the impact resistance of thermoplastics pipes.
- ISO 180: Defines the Izod impact test method for measuring the impact strength of plastics with a pendulum impact tester.
- ISO 13802: Specifies requirements and procedures for verifying and calibrating pendulum impact testing machines used for plastics (Charpy/Izod).
- ASTM D6110: Covers the Charpy impact resistance test for notched plastic specimens using a pendulum impact tester.
- ASTM D256: Covers the Izod pendulum impact resistance test for plastics, commonly using notched specimens.

FEATURES

Charpy Izod Pendulum Impact Tester – Toron50J™ Key Features

- Dual-Function Charpy and Izod Testing Supports both Charpy and Izod impact test methods in a single instrument.
- Wide Impact Energy Range Configurable impact energies for different material types and specimen sizes.
- Digital Display with PLC Touchscreen Intuitive operation, clear test visualization, and real-time result display.
- Automatic Energy Loss Correction Improves accuracy by compensating for friction and air resistance losses.
- Data Storage and Export Built-in USB data storage enables result export, editing, printing, and reporting.

- High Measurement Accuracy Delivers stable, repeatable results suitable for professional laboratories.
- Robust Safety Enclosure Fully enclosed test chamber enhances operator safety during impact testing.

TECHNICAL SPECIFICATIONS

Charpy Izod Pendulum Impact Tester - Toron50J™ Technical Specifications

Parameter	Charpy Test	Izod Test
Impact Energy	25 J, 50 J	11 J, 22 J
Impact Speed	3.8 m/s	3.5 m/s
Pendulum Angle	150°	150°
Strike Center Distance	395 mm	335 mm
Striker Radius	(2 ± 0.5) mm	R = 0.8 ± 0.2 mm

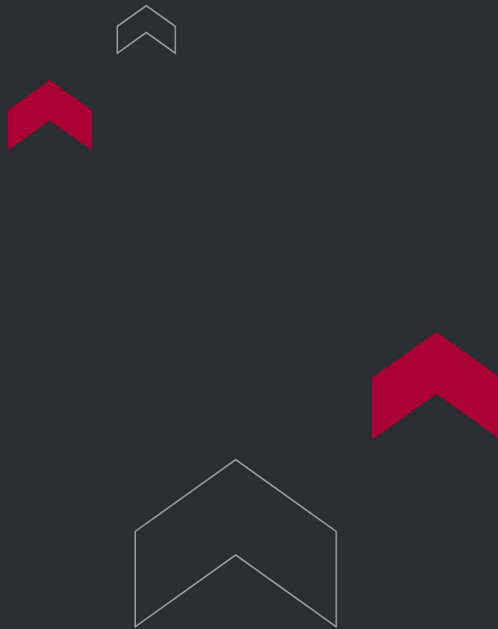
General System Specifications

Item	Specification
Instrument Type	Charpy Izod Pendulum Impact Tester
Control System	PLC touchscreen digital display
Voltage	Single-phase 220 VAC, 50 Hz (110V is also available)
Power Consumption	100 VA
Machine Dimensions (L × W × H)	420 × 250 × 650 mm

Item	Specification
Weight	Approx. 130 kg
Installation Space Required	Front/back: 0.4 m; sides: 1.5 m; top: 1.5 m

Standard Configuration

- Main testing machine (1 set)
- Pendulums: 25 J / 11 J (2 pcs)
- Counterweights: 50 J and 22 J (1 pair each)
- Combined jaws (1 pair)
- Center specimen support plate (1 pc)
- Hex key set (3–8 mm)
- Power cable



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