



Physical Test Solutions

Innovative Solutions in Material Test Equipment

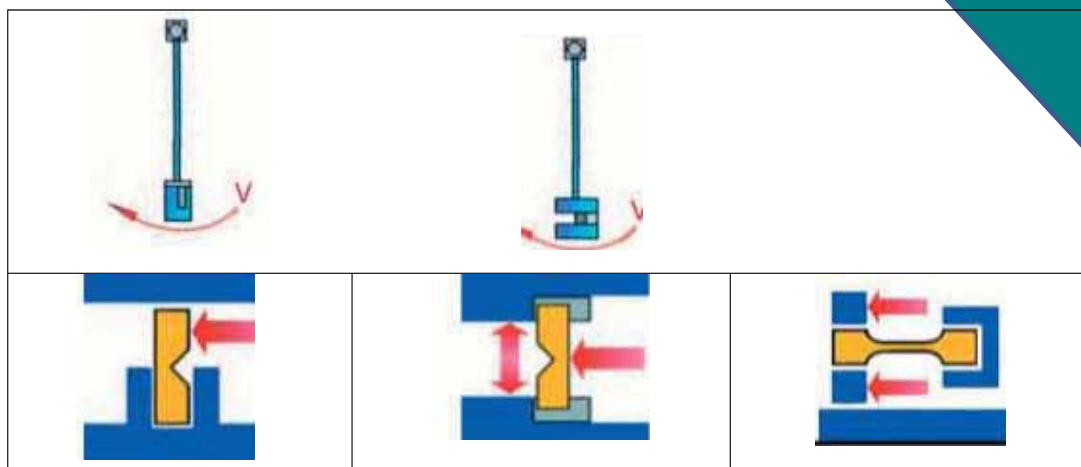
Low-Capacity Impact Testers



IT Series Impact Testers

The **Physical Test Solutions IT Series** of impact testers offers *turn – key solution* packages that include the basic accessories to get started right away. No need to decipher what hammers, tools, and other “recommended” accessories have to be ordered, **PTS** has it all included! Furthermore, **PTS** low capacity impact testers offer automatic release mechanism. All **PTS** impact testers are manufactured in an ISO 9001 certified facility

There are three types of pendulum impact tests; Izod, Charpy and Tensile Impact. The first two are the most common. As a practical guideline, Izod tests are most used in low energy applications for plastics and non-metallic materials, whereas Charpy tests are usually seen in high energy tests in metallic materials.



Izod

Charpy

Tensile Impact

PTS IT Series of Low Capacity Impact Testers

The **IT Series** of low capacity impact testers are used to determine the impact toughness of plastic, glass steel, plastic pipe, strong nylon, ceramic and electric insulator materials. **Physical Test Solutions (PTS)** impact testers conformed to standards; ISO179, 180, GB/T1043, 1843, ASTM D256, JB8762, JB8761, ISO9854, GB18743.

ITA-XJU / XJJ Series

The ITA-XJ series is an analog low² energy series of testers that is available in capacities of 5 Joules (3.69 ft-lb), 5.5 J (4.05 ft-lb), 11 J (8.11 ft-lb), 22 J (16.22 ft-lb), 25 J (18.43 ft-lb) and 50 J (36.46 ft-lb). The XJU series is for Izod tests and the XJJ is for Charpy tests. Combination Izod and Charpy tests are also offered. Model XJL-50 performs tensile impact tests according to ISO8256.



ITD-XJU / XJJ Series

The ITD-XJ series of digital impact testers offers the convenience of a digital readout that provides useful information at the touch of a button. Like the ITA-XJ series, this series is available in capacities of 5J, 5.5J, 22J, 25J and 50 J, models XJU for Izod and XJJ for Charpy or combination Izod-Charpy versions. Likewise, a tensile impact tester is also available. The digital display shows the following data:

- Energy in Joules, ft/lbf, kgf/m and kgf/cm
- Impact Strength
- Angle
- Average

Specifications:

- ❑ Striker energy: Depends on model, 5J, 5.5J, 11J, 22J, 25J and 50J.
- ❑ Impact speed: 3.5m/s
- ❑ Striker elevation: 150°
- ❑ Operation temperature: 15~35 Deg C
- ❑ Specimen-specimen center distance: 335 mm
- ❑ Dimensions: 550x350x700 mm
- ❑ Weight: 75kg(net), 90kg(gross)



ITC-XJU / XJJ Series



The ITC-XJ series of computerized impact testers provides the ultimate step in data acquisition and control. The testers are available in capacities of 5 Joules, 5.5 J, 22 J, 25 J and 50 J. The XJU series is for Izod tests and the XJJ is for Charpy tests. Combination Izod and Charpy tests are also offered. This series features the user friendly "Impactstar" software that takes the pain out of data acquisition and report generation. Through the Impactstar software, the pendulum is automatically released to perform the test.

XJC-2522 Series

The XJC-2522 series of impact testers afford the ultimate versatility in impact testing with standard accessories for both Izod and Charpy tests. Model XJC-2522D is a digital version and model XJC-2522C is a computer controlled version that uses the popular **ImpactStar Software**. The frame design is similar to the ITD-XJ and ITC-XJ series and Complies with ASTM-D256-06a y ASTM-D6110-06, ISO-179:2000 e ISO-180:2000 y ISO-13802:1999.

Features:

- ✓ Izod: Impact energy: 5.5J, 11J and 22J. Impact velocity: 3.5m/s.
- ✓ Charpy: Impact energy: 7.5J, 15J and 25J. Impact velocity: 3.8m/s.
- ✓ Span grip for Charpy: 40, 60, 70 and 95mm.
- ✓ Specimen cross section: 10mm
- ✓ Weight: 80kg
- ✓ Dimensions: 550x350x700mm

Standard Accessories:

- ✓ Hammers for Izod & Charpy for ASTM-D256-06 with capacities of: 2 lbf-ft, 4 lbf-ft, 8 lbf-ft y 16 lbf-ft.
- ✓ Hammers for Izod & Charpy for ISO-179:2000 with capacities of 2.75 J, 5.5 J, 11 J y 22 J.
- ✓ Centering board for specimen (40,60,70,95mm)
- ✓ Adjusting board
- ✓ Grip for Charpy test
- ✓ Grip for Izod test
- ✓ Base block for Izod test
- ✓ Aligning pin for Izod impact and tensile impact
- ✓ Spanner with six angles (4, 5, 6, 8)

Impact 15J, 25J and 50J

Demanding materials require demanding test equipment. For those high-level tests, the series Impact affords the best solution for the job at hand.

Specifications:

- ❖ Structure which contains all electric and mechanical devices with metal guards and plexiglass door.
- ❖ Electronic crosswise levelling system
- ❖ Centering system for Charpy specimens
- ❖ Safety systems:
 - ☐ double "PULL" type hammer release
 - ☐ side safety shield (polycarbonate)
 - ☐ Breaking system slows down the descent of the hammer after the impact.
- ❖ User interface with 7-inch touch-screen display to input test parameters and display the energy and the resilience values after the impact
- ❖ Multilanguage data display and data settings
- ❖ Auto-test functions when switching on and troubleshooting
- ❖ Automatic display of the ascent angle and of both the potential energy and actual speed of the impact
- ❖ Braking system to slow down the descent of the hammer after the impact
- ❖ Storing up to thousand of tests
- ❖ USB port for connection to PC



Izod Impact test:

- ❑ Impact speed; 3.5m/s
- ❑ Impact energy (J): 1, 2.75, 5.5, 11, 22
- ❑ Distance between pendulum center and specimen center: 322mm
- ❑ Raised angle: 160°
- ❑ Pendulum moment:
 - Pd1 = 0.5155N.m
 - Pd2.75 = 1.4177N.m
 - Pd5.5 = 2.8355N.m
 - Pd11 = 5.6711N.m
 - Pd22 = 11.3419N.m
- ❑ Distance between striking edge and upper plane of grip: 22mm
- ❑ Radius of striking edge: 0.8mm
- ❑ Specimen type & size conforms to ISO180-82

Low temperature Chamber:

- Temperature range: room temperature to -40°C
- Temperature accuracy: $\pm 1^{\circ}\text{C}$
- Temperature gradient: $< 4^{\circ}\text{C}$
- Chamber capacity: Specimen box size: 20x130x20 mm
- Chamber Capacity 12 specimens
- Dimension: 460x300x320mm



ImpactStar Software

The **ImpactStar Software** operates in a windows environment and combines a user friendly working operation with powerful data acquisition and control capabilities.

The **ImpactStar Software** has the following features:

- ⌚ Full digital control
- ⌚ Individual or Batch Testing Capabilities
- ⌚ Test Curve Analysis
- ⌚ Convenient and Practical Parameter Settings
- ⌚ Multilevel Security Management
- ⌚ Versatile Operating Interface
- ⌚ Automatic Program Control
- ⌚ Versatile Test Report Generation
- ⌚ Practical Database Management



Drop Weight Impact Testing Machine for Plastics

Model DWI-300



Applications:

This machine is suitable to test the physical & mechanics strength of plastic tube materials, PVC-U, PP and plate materials.

Specifications:

- Main Technical Specifications:
- Max. Impact Energy: 300J
- Max. impact height: 2m
- Accuracy of height: 2mm
- Weight mass: 0.25~15 kg increment: 0.125 Kg
- Stroke: 0~400 mm
- Specimen diameter: 10~400 mm
- Radius of Weight (Hammer): 5mm, 10mm, 30 mm or d25, d90.
- Impact height: 0~2000 mm
- Digital display, the weight is raised automatically.
- Power: 3 ph, 380V, 50Hz,
- Dimensions: 850x950x3350mm

Model DWI-750

Drop Weight Impact Testing Machine with instrumented designed to test impact resistance performance for plastic and composite materials. It is conformed to standards: ASTM D 3763, D 4272, D5628, and ISO 6603-2, 179-2, 7765-2

Drop tower test machines are provided with weights to enable testing at several energy capacities. The machine will allow adjustment of drop height up to the maximum drop height. The drop height can be set to provide any desired energy capacity. The actual impact velocity of acquisition system can acquire the impact velocity for every test using an IR velocity detector which is automatically acquired by the software.

Striker:

Test machine has been designed to accommodate strikers and anvils which meet testing standards. The striker can be easily removed and replaced with other striker geometries and the anvil assembly can be unbolted from the base and replaced with another assembly with different anvils.

Test Specimen Support:

The test machine base is equipped with threaded holes for setting the position of various test specimen supports. In the case of tests performed in accordance with ASTM D 3763, a pneumatically clamped support arrangement with a 76mm diameter hole is provided.

Specifications:

1. Max. Energy: 750J.
2. Max. mass of the weight: 70kg
3. Max. falling speed: 5.0mm/s. (20m/s optional).
4. Max. falling height: 1,100mm.
5. Lifting speed: 1200mm/min.
6. Speed accuracy: $\pm 2\%$ of setting speed
7. Position accuracy: $\pm 1\%$.
8. Power: 1 phase, 220V, 50Hz

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