# Charpy / Izod Impact Tester

LT-U0150J / LT-U0300J / LT-U0450J | Pendulum impact testing

Notched specimens • Digital energy measurement • Automatic return




## 150 / 300 / 450 J

**THREE ENERGY CAPACITIES**

## Charpy / Izod

**TWO TEST METHODS**

Measurement of impact energy absorbed during fracture of metallic specimens

# Photographs and Components

Pendulum, specimen location, touchscreen and protective test area

The Charpy/Izod Impact Tester measures energy absorbed as notched metallic specimens fracture under sudden loading. A pendulum mechanism strikes the specimen and a digital unit displays the result. Suitable accessories allow both test methods.

**TOUCHSCREEN**

The colour display shows test settings and the absorbed energy result.

**PENDULUM MECHANISM**

The impact hammer is released from its starting position to strike the specimen.

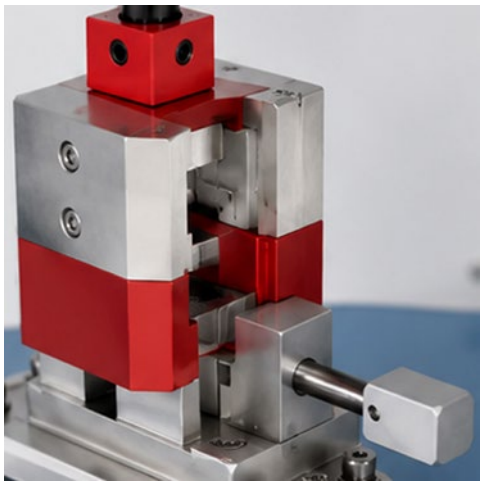


**PROTECTIVE TEST AREA**

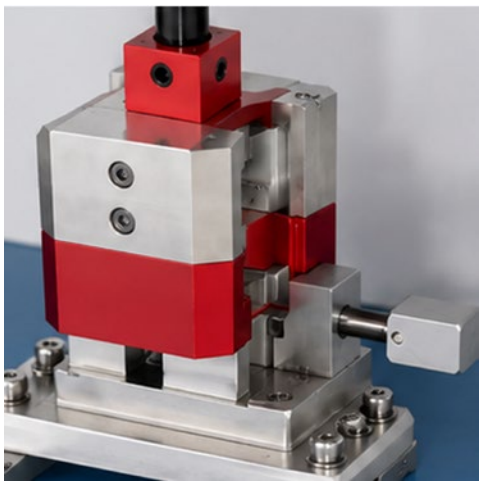
The enclosure limits the spread of broken specimen fragments.

**SPECIMEN / FIXTURE AREA**

Supports, clamps and the striker are configured for the selected test method.



**Impact hammer and specimen location**

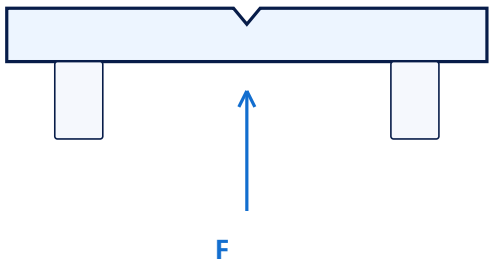


**Close view of the specimen holding and support assembly**

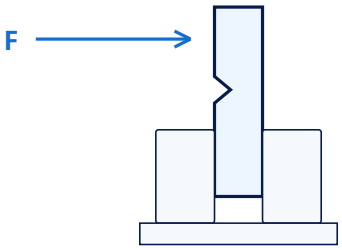
# Charpy and Izod Test Configurations

Horizontal supported specimen • Vertical cantilever specimen • Absorbed energy

**CHARPY | HORIZONTAL SPECIMEN**




**IZOD | VERTICAL SPECIMEN**




## Charpy Arrangement

Place the specimen horizontally on two supports. Strike the face opposite the notch.

## Izod Arrangement

Clamp one end of the specimen vertically. The impact is applied to its free portion.

## Energy Result

The system calculates the difference between initial energy and energy remaining after impact.

Consider the test method, specimen geometry and notch orientation together. Select suitable supports, clamps and impact tools for Charpy or Izod testing. The result is displayed in joules as the energy absorbed during specimen fracture.

## Digital Control and Return

Test settings and energy results are monitored through a colour touchscreen.

After testing, the hammer is automatically secured and the mechanism returns to its starting position.

## Test Methods

ASTM E23 covers Charpy and Izod notched-bar impact testing of metallic materials.

ISO 148-1 describes Charpy V-notch and U-notch test methods for metallic specimens.

# Model Options and Technical Data

Energy capacity, external dimensions, weight and common operating features

| Product Code | Capacity | External Dimensions (mm) | Weight |
|---|---|---|---|
| **LT-U0150J** | 150 J | 2050 × 950 × 2100 | 800 kg |
| **LT-U0300J** | 300 J | 2150 × 950 × 2100 | 1000 kg |
| **LT-U0450J** | 450 J | 2200 × 950 × 2100 | 1150 kg |

| Series Feature | Value / Function |
|---|---|
| **Power Supply** | 220 V, 50-60 Hz, 1 phase |
| **Specimen / Measured Quantity** | Notched metal specimen / absorbed energy (J) |
| **Control** | Digital colour touchscreen |
| **After Testing** | Automatic hammer locking and return to start |
| **Frame / Test Method** | Hardened steel / Charpy and Izod with suitable fixtures |

## Standard References

ASTM E23 • EN 10045 • ISO 148 • GOST 9454 • AS 1544 • JIS Z 2242 • JIS B 7722

## Test Workflow

**01**
**Select Model**
Select capacity for the expected impact energy.

**02**
**Position Specimen**
Choose fixtures and set notch orientation.

**03**
**Apply Impact**
Close the protective area and start the test.

**04**
**Review Result**
Read and record the displayed absorbed energy.

**Product Page | liyatest.com.tr/en/urun/joule-charpy-izod-impact-tester/**