

## **402 Series Izod and Charpy Digital Impact Tester**

### **Test Applications**

- ISO 180
- ASTM D256
- ISO 179
- ASTM D6110

TestResources impact testers are designed for the ASTM & ISO Test Standards of ISO 179, ISO 180, ASTM D256 & ASTM D6110 standards for testing the impact resistance of hard plastic materials by IZOD & Charpy method. The 402D Series machine is a high precision digital impact tester that is easy to operate. The 402D Series impact test displays the results of a test on the digital LCD panel directly, allowing for energy readings immediately after the impact test has finished. The internal controller calculates the impact strength of the test specimen by measuring the energy of the pendulum through the test.



### **Design features**

- Variable capacities
- Testing result for Impact Capacity, and Angle.
- Manual operation or Auto start function\* (\*digital machine)
- Digital controller which calculates impact energy, and impact angle
- Automatically calculate the impact stress by simply entering specimen size
- Noncontact sensor reduces the effect of friction during testing\* (\*digital machine)
- Sturdy base that minimizes harmonic oscillations

### **Overview**

The Izod & Charpy digital impact testers from TestResources are low energy impact machines for testing the impact resistance of plastic specimens. The machine can be equipped with different hammers to change the potential energy of the system. The impact resistance can be used to determine impact stress by using the specimen size.. The digital machine used a non-contact sensor to reduce friction while measure the angle of the arm. The Digital machine is equipped with both a manual and automatic start. The 402 Series is built very sturdy to dampen out any harmonic oscillations during the test.

## 402 Series Machine Models

Model	402M-12J	402M-25J	402D-25J	402D-50J
Mode of Operation	Manual	Manual	Digital	Digital
Test Type	Izod / Charpy	Izod / Charpy	Izod / Charpy	Izod / Charpy
Applicable Standards	<b>IZOD:</b> ASTM D256 ISO 180 <b>Charpy:</b> ASTM D6110 ISO 179	<b>IZOD:</b> ASTM D256 ISO 180 <b>Charpy:</b> ASTM D6110 ISO 179	<b>IZOD:</b> ASTM D256 ISO 180 <b>Charpy:</b> ASTM D6110 ISO 179	<b>IZOD:</b> ASTM D256 ISO 180 <b>Charpy:</b> ASTM D6110 ISO 179
Maximum Capacity	12J	25J	25J	50J
Best Test Range	20-80% of full capacity	20-80% of full capacity	10-90% of Pendulum Capacity	10-90% of Pendulum Capacity
Impact Angle	150 Degrees	150 Degrees	150 Degrees	150 Degrees
Dimensions	~ 90x30x76 cm	~ 90x38x76 cm	~ 88x42x80 cm	~ 88x42x80 cm
Weight	~ 100kg	~ 160kg	~ 200kg	~ 200kg

## Accessories

### Vices

Model	402-Izod-ASTM D256 Vise	402-Izod-ISO 180 Vise	402-Charpy-ASTM D6110 Vise	402-Charpy-ISO 179 Vise
Radius	N/A	0.2 mm	3.17 mm	1.0 mm
Test Type	Izod	Izod	Charpy	Charpy
Applicable Standards	ASTM D256	ISO 180	ASTM D6110	ISO 179

### Striker Pendulums

Model	402-Izod-ASTM D256 1J	402-Izod-ASTM D256 2.75J & 5.5J	402-Izod-ASTM D256 11J & 22J	402-Izod-ASTM D256 25J & 50J
Test Type	Izod	Izod	Izod	Izod
Applicable Standards	ASTM D256	ASTM D256	ASTM D256	ASTM D256
Impact Energy	1J	2.75J & 5.5J	11J & 22J	25J & 50J
Radius of Striker Edge	0.8mm	0.8mm	0.8mm	0.8mm
Impact Velocity	3.46 m/s	3.46 m/s	3.46 m/s	3.46 m/s

Model	402-Izod-ISO 180 1J	402-Izod-ISO 180 2.75J & 5.5J	402-Izod-ISO 180 11J & 22J	402-Izod-ISO 180 25J & 50J
Test Type	Izod	Izod	Izod	Izod
Applicable Standards	ISO 180	ISO 180	ISO 180	ISO 180
Impact Energy	1J	2.75J & 5.5J	11J & 22J	25J & 50J
Radius of Striker Edge	0.8mm	0.8mm	0.8mm	0.8mm
Impact Velocity	3.46 m/s	3.46 m/s	3.46 m/s	3.46 m/s

Model	402-Charpy ASTM D6110 1J	402-Charpy- ASTM D6110 2.7J	402-Charpy- ASTM D6110 5.4J	402-Charpy- ASTM D6110 11J	402-Charpy- ASTM D6110 50J
Test Type	Charpy	Charpy	Charpy	Charpy	Charpy
Applicable Standards	ASTM D6110	ASTM D6110	ASTM D6110	ASTM D6110	ASTM D6110
Impact Energy	1J	2.7J	5.4J	11J	50J
Radius of Striker Edge	3.17mm	3.17mm	3.17mm	3.17mm	3.17mm
Impact Velocity	3.46 m/s	3.46 m/s	3.46 m/s	3.46 m/s	3.46 m/s

Model	402-Charpy-ISO 179 1J	402-Charpy- ISO 179 2J	402-Charpy-ISO 179 4J	402-Charpy-ISO 179 5J	402-Charpy-ISO 179 22J	402-Charpy- ISO 179 50J
Test Type	Charpy	Charpy	Charpy	Charpy	Charpy	Charpy
Applicable Standards	ISO 179	ISO 179	ISO 179	ISO 179	ISO 179	ISO 179
Impact Energy	1J	2J	4J	5J	22J	50J
Radius of Striker Edge	2.0mm	2.0mm	2.0mm	2.0mm	2.0mm	2.0mm
Impact Velocity	2.9 m/s	2.9 m/s	2.9 m/s	2.9 m/s	2.9 m/s	2.9 m/s