



Model IT30 ASTM

UNITEK UniTek Products
by CCSi

CCSi features these reliable, direct reading Charpy and Izod Impact Testers for the determination of the resistance of plastics and metals to breakage by flexural shock as indicated by the energy extracted from a beam arm apparatus employing either a pendulum-type hammer (Charpy Model) or an adjustable combination cantilever-pendulum beam arrangement (Dual Model).



Model IT30 DUAL

The tests require specimens made with a milled notch, hence the test is often referred to as the "notched bar impact test". In both the Charpy and Izod Tests, the notch produces a stress concentration which promotes a brittle, rather than a ductile, fracture.


The results are reported in terms of energy absorbed per unit of specimen width, or more specifically, the energy absorbed in breaking the specimen which is equal to the difference between the potential energy at the moment of impact and the residual energy.

The beam arm is supported by a self indexing mechanism which is released by the operating lever. The Dual Model features two starting positions, the uppermost for the Charpy Test ([ASTM D256](#)) and the lower position for performing the Izod Test ([ASTM D1822](#), [ASTM D4508](#), [ASTM D4812](#), [ASTM D6110](#) and [ASTM E23](#)). The beam arm is mounted in frictionless bearings, providing high levels of reproducibility and repeatability.

The energy utilized to break the specimen is clearly indicated by the position of the maximum pointer against the dial. The Dual Model features two large angular scales with 2 J graduations, the innermost for the Izod Test and the outermost for the Charpy Test.

The UniTek™ IT30 Series Testers are ideally suited for:

- IT30 Dual: Charpy and Izod Tests;
- IT30 0.42: Izod Tests on plastics, ceramics, glass, etc.;
- IT30 1.4: Izod Tests on nonferrous metals & plastics;
- IT30 ASTM: [ASTM E23](#) Charpy Tests.

 Index Terms: impact resistance; Izod impact; notch sensitivity; notched specimen; reverse notch impact; 29.035.20; electrical insulating solids; plastics (general); tension (tensile) properties/tests-plastics; tensile-impact energy to break plastics/electrical materials; D1822M; breaking energy; cantilever impact; chip impact strength; impact plastics; impact testing; microcracks; pendulum; plastics; small specimen impact; weathered impact strength; 83.080.01; cantilever beam; impact resistance; plastic molding; unnotched; charpy impact; impact resistance; notched specimen; charpy test; fracture appearance; Izod test; impact test; notched specimens; pendulum machine; 77.040.10.

UniTek™ Charpy & Izod Impact Testers Model IT30: Specifications

IT30 MODEL:	IT30 Dual		IT30 ASTM	IT30 0.42	IT30 1.4
	Charpy	Izod			
Capacity:	300 J	168 J	300 J	0.42 kgf/m	1.4 kgf/m
Scale Graduation:	2 J	2 J	2 J	0.005 kgf/m	0.01 kgf/m
Striking Velocity: (m/s)	5 – 5.5 m/s	3 – 4 m/s	3 – 6 m/s	2.45 m/s	2.45 m/s
Dimensions: (W x D m)	1.1 x 0.45	1.32 x 0.45	1.4 x 0.5	0.5 x 0.3	
Dimensions: (Height m)	1.65	1.05	1.9	0.52	
Weight: (kg)	375	375	450	68	71

Optional Accessories:

- Caliper Gauge (for checking specimen 'V' notch);
- Templates (for checking specimen cross section);
- Depth Notch Gauge (for checking 'V' & 'U' angle and radius);
- Izod Support for 0.450 in. Ø Izod 'rounds';
- Self Centering Tong (centers Charpy specimen);
- 'V' Notch Milling Cutter;
- 'U' Notch Milling Cutter.

List Price:

[Please Submit a Request for Quotation \(RFQ\)](#)

Copyright © 2006 CCSi, Inc. • All Rights Reserved • Published February, 2006