



IMPats 15



To perform any tests to determine impact strength of rigid plastics in standard conditions as per IZOD, CHARPY and TENSILE IMPACT methods.

Choosing IMPats15 your laboratory will be equipped with an instrument that's:

- ✓ Reliable thanks to the auto-test function
- ✓ Flexible easily interchangeable test devices
- ✓ Safe being designed in accordance with current EEC safety rules
- ✓ Upgrading either interfacing to a PC or on-board printer

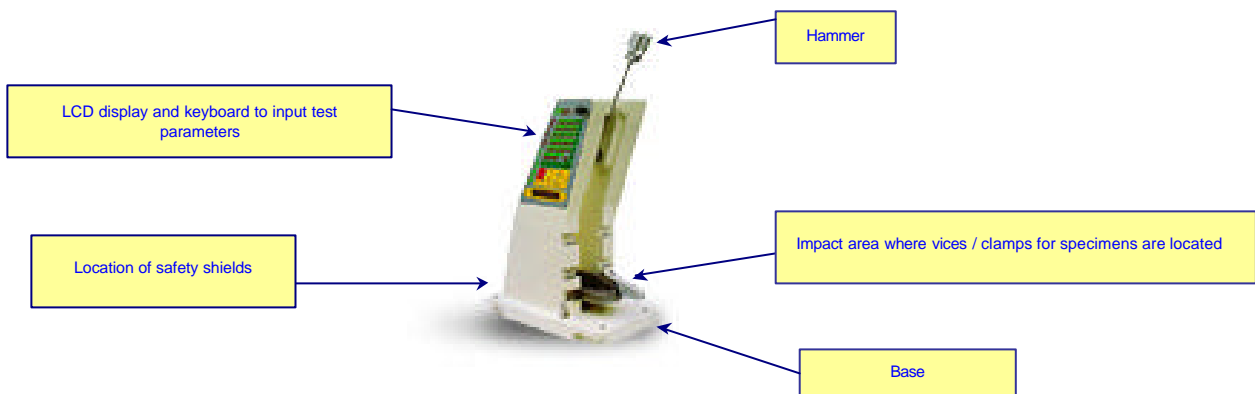
Reference standards:

ISO 179 - ISO 180 - ISO 8256 - ASTM D256 - ASTM D1822 – ASTM D4812 - ASTM D5941 - ASTM D5942 – ASTM D6110 - DIN 53448 – DIN 53453 – DIN 53753 – BS 2782 – AFNOR T51-111 and others equivalent.

Procedure

The various methods allows for the determination of the necessary energy to break a specimen – having a known cross-section - then calculating its resilience value at a given conditions.

Differences among these test methods are related to the way the specimen is mounted and how it is impacted.



Charpy method:

The specimen is positioned horizontally and is broken with one oscillation only of the hammer; the impact line is centered between the two specimen supports.

Izod method:

Here the specimen is blocked at one end in vertical position and is broken with one oscillation only of the hammer; the impact line is at a fixed distance from the blocking point of the specimen.

Tensile impact method:

Specimen is inserted in two blocking brackets and is broken with one only oscillation of the hammer which stresses the specimen along its longitudinal axis. Dumb-bell shaped specimens are required for this test method.

Safety systems:

The instrument is equipped with a shield so that neither the operator nor other people can work near the testing area during the test execution. Hammer release is activated by two buttons, that calls the operator to use both his hands, in the upper position of the pendulum far from the impact testing area. In addition, a breaking system slow down the descent of the hammer after the impact.

Main specifications :

- Pendulum IMPats15 is designed based on a casting mainframe to work up to 15Joule energy or extended to 25Joule by adding an extra base mass (optionally available)
- Electronic crosswise levelling system
- Centering system for Charpy specimens
- Safety double "PULL" type hammer release and side safety shield
- Soft-touch keyboard to input test parameters and LCD display
- Monitoring of the absorbed energy and resilience value after impact
- Auto-test functions when switching on and troubleshooting coding
- Hammer calibration control with display of the reduced length and the swinging period
- Possibility to print-out hammer check report
- Serial and parallel outputs for connection to PC and printer
- Four languages - English, French, German and Italian - display
- Braking system to slow down the descent of the hammer after impact
- Selection of SI or BU measuring units
- Storing and printing of up to 50 tests
- Extra memory file for storing 50 reference tests then, if connected to a printer, to print-out the Instrument Control Chart
- Display of the ascent angle and of both the energy and actual speed at impact
- Dimensions (WxDxH) : mm 510x275x680 (without shields) – mm 900x275x870 (with shields)
- Power supply : 230 V, single phase, 50/60 Hz; 0.1 kVA
- Weight : 125 kg (15J unit) without accessories (40 times heavier than hammers)

Accessories for the tests:

ATS FAAR manufactures a wide range of hammers, to meet standard requirements in the various test methods.

Correct positioning of the hammers in their seat is guaranteed by a pin mounted on the top of them. Correct calibration is guaranteed by their design and manufacture, thanks to which no mounting adapters are necessary on their upper part.

Standard hammers for any test method cover a range of impact energy up to 25 Joules.

Hammer calibration reports may be obtained interfacing the instrument with a printer.

Shoulders and spacers for Charpy impact tests can be positioned in their seats with no possibility of assembling or dimensional errors. The seats, designed in strict accordance with the standards, are part of the main structure to guarantee necessary rigidity during the impact, while the centering tool installed on the instrument guarantees the exact positioning of the Charpy specimen.

Izod tests can be performed with standard or fast clamping vice; the latter is equipped with a notch centering system, and guarantees a constant pressure on the specimen, in accordance with the standards.



Firmware:

The built-in microprocessor control system allows also for the printing of test reports complete with average values and standard deviations for up to 50 specimens.

In addition, operator can input, storing and display several characterisation data, such as:

- Name and department of the laboratory
- Number and code of the test
- Test reference standard
- Temperature of the specimen
- Code or any reference of the tested material
- Name or reference of the raw material's supplier
- Specimen conditioning after its notching or before the test
- Name of the operator
- Description (type) of the notch and reference standard

Optional accessories:

- Variable angle device, for varying impact velocity
- High velocity data acquisition system to be used together with instrumented hammers that are equipped with integrated energy sensor for studying the full breaking process of the specimens.

Indications reported in this bulletin may be changed without notice, Codes and references for informative purposes only.

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