



Cryomatic



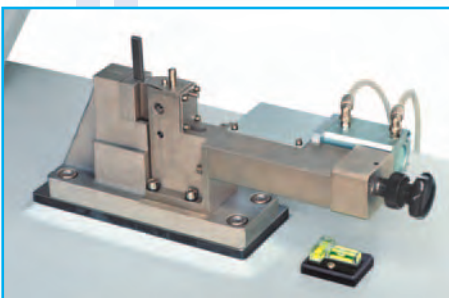
Cryodispenser



Cryobox



Tensile Impact Instrumented Vice



Pneumatic Vice

Ancillary Equipment

Cryomatic - code 7250.000 - 7251.000

The CRYOMATIC is a manual device designed to condition **many** specimens at different temperatures between $-70^{\circ}\text{C} \div +100^{\circ}\text{C}$ and to carry them from the conditioning chamber to the Izod or Charpy vice. The manually-operated handling system assures accurate and repeatable specimen positioning and avoids any contact between the specimen itself and the operator's hands.

Cryobox - code 6956.016

The CRYOBOX, is a cold temperature test chamber designed to condition **one** specimen and carry out Charpy and Izod tests using a Resil Impactor pendulum. The Cryobox is a simple instrument to study the behavior of materials at low temperature, in fact, its cooling system by liquid Nitrogen can perform the test between $-50^{\circ}\text{C} \div +20^{\circ}\text{C}$.

Cryodispenser - code 7260.000

The CRYODISPENSER is a thermostatic chamber for the conditioning of the specimens, usable to carry out Charpy and Izod impact tests at different temperatures. It can be used with all the pendulums and it is equipped with a system that allows to move the specimens, one by one, out of the conditioning chamber. Once out of the chamber, the specimen has to be positioned manually, using a special tool, on the vice. Its conditioning system (cooling by liquid nitrogen and heating by electric resistances) can perform the test from -70°C to $+100^{\circ}\text{C}$.

Specimen temperature reading device - code 6956.012

Non-contact laser thermometer for measuring specimen temperature immediately before impact to accurately determine actual thermal impact conditions. Measurement range: -100 to 200°C .

Remote control hammer release - code 6956.011

Remote I.R. hammer release system available for Resil Impactor model: 6958.000 - 6959.000 - 6956.000 - 6960.000.

To be ordered with instrument (retrofit not possible).

Tensile-Impact Vice used for Instrumented Tensile Determination code 6547.919 - 6547.920

CEAST has developed a new high sensitivity version of the instrumented vice based on the following elements:

- Piezoelectric sensor of extreme rigidity: traditional strain gauge sensors are made up of elastic elements to which the strain gauges are attached, and from their deformation the value of force is obtained. In piezoelectric sensors the deformation can be kept smaller by several degrees of magnitude than in passive strain gauge systems. Thanks to this high degree of rigidity, an extremely broad measuring frequency is achieved, since rigid systems have an inherently higher natural frequency than non rigid ones.
- Ultra-light clamping device: The new tensile impact vice has an ultra-light titanium clamping fixture, so combined with the extremely rigid piezoelectric sensor, it achieves a higher natural frequency of the entire system (around 25 kHz) than any other design. The CEAST tensile-impact vice featuring the aforementioned elements allows the user to obtain the material's impact characteristics with the highest accuracy.

Izod Vices with Adjustable Clamping Force code 6956.030 - 6956.070 - 6956.071

CEAST introduces a new set of accessories for Resil Impactor to measure and adjust the clamping force on Izod specimens. Two kinds of vices are available: manually and pneumatic. The manual vice (code 6956.030) consist of an Izod Vice instrumented with a Strain gauge transducer for measuring the force with which the specimen is clamped.

A new pneumatic vice is also available. The vice is mechanically operated by a foot pedal and is available without load cell (code 6956.070) or with load cell (code 6956.071) to visualize the clamping force on the Resil Impactor LCD display. The ISO 180 Standard, (Plastics, Determination of Izod impact strength), says: "Some plastics are sensitive to clamping pressure. When testing such materials, a means of standardizing the clamping force shall be used and the clamping force shall be recorded in the test report". Therefore, to guarantee consistent repeatability of the test results it is necessary to control the clamping pressure. Until now, this important parameter was solely dependent on the operator's ability and individual subjective criteria, thus generating impact data which could be not comparable between different operators. From now on, thanks to these new CEAST devices the uncertainties of impact tests can be reduced.