NEXTGEN MATERIAL TESTING

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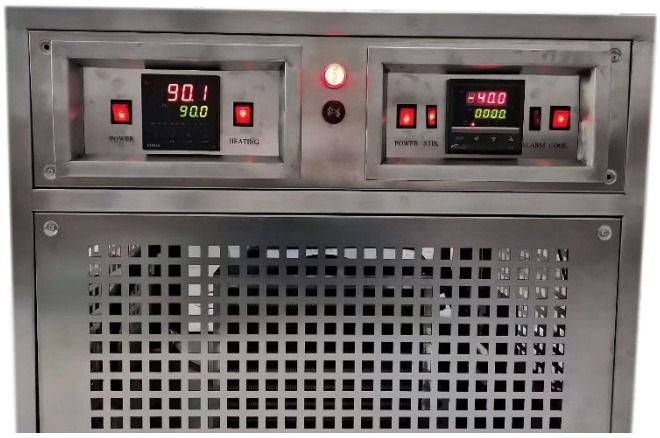
Impact Specimen Cooling and Heating Temperature Chamber

GenChamber



- ULTIMATE USER-FRIENDLINESS
- LEADING DEPENDABILITY AND RELIABILITY
- STRICT COMPLIANCE WITH INDUSTRY STANDARDS
- STOCKED CONSUMABLES AND SPARES
- TRUSTED AFTER SALES TECHNICAL SUPPORT
- LIFETIME PRODUCT SUPPORT ADVANTAGE

Standards: ASTM E23, ASTM E74 (Class AA), ISO 148

GET A QUOTE

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Description

The **Impact Specimen Cooling and Heating Temperature Chamber – GenChamber** is a high-performance dual-function system engineered for precise temperature conditioning of **Charpy and Izod** impact specimens. Designed to meet the requirements of **ISO 148-1** and **ASTM E23**, this chamber supports both low-temperature soaking and high-temperature stabilization for metallic materials prior to impact testing.

The low-temperature mode uses an advanced compressor-based refrigeration system combined with thermal equilibrium and circulating stirring mechanisms, delivering automatic cooling and uniform temperature control down to **-80°C**. This ensures consistent preparation of impact notch specimens and supports repeatable, reliable test results. Built-in safety protections guard against overheating and overcurrent conditions. Additionally, an integrated alarm notifies the user when the target temperature is reached, guaranteeing precise timing for specimen preparation.

The high-temperature function features a durable stainless-steel electric heating system with forced air circulation and internal ventilation for uniform heat distribution. The system is equipped with PID temperature control and offers high-resolution monitoring with a **0.1°C display accuracy**, maintaining stable conditions throughout the heating process. A centrifugal fan ensures continuous airflow and temperature uniformity, meeting industry-standard temperature gradient requirements.

This temperature conditioning chamber is ideally suited for materials testing laboratories, research and development facilities, and quality control departments that require consistent and reliable preparation of Charpy and Izod impact test specimens.

Technical Specifications

Model	GenChamber
Range of Control Temperature	**Low temperature:** +30℃ to -80℃ (ambient temperature ≤ 25°C) **High temperature:** +30℃ to 100℃ (ambient temperature ≤ 25°C)
Temperature Control Accuracy	**Low temperature:** ≤ ±0.5°C **High temperature:** < ±1°C
Display Resolution	0.1°C
Cooling Speed	+30°C to 0°C: approx. 2°C/min 0°C to -20°C: approx. 1.5°C/min -20°C to -60°C: approx. 1°C/min -60°C to -80°C: approx. 0.7°C/min
Heating Speed	+20°C to +50°C: approx. 2°C/min +50°C to +100°C: approx. 3°C/min
Working Area (L × W × H)	**Low Temperature Chamber:** 5.9 × 5.5 × 4.7 in (150 × 140 × 120 mm) **High Temperature Chamber:** 5.9 × 5.5 × 4.7 in (150 × 140 × 120 mm)
Specimen Capacity	60–120 specimens *(Standard size: 10 × 10 × 55 mm)*
Outer Dimensions (L × W × H)	25.6 × 20.0 × 29.9 in (650 × 510 × 760 mm)
Timer	1 to 99 minutes, 1-second resolution
Cooling Medium	**Cooling chamber:** Ethyl alcohol (≥ 99.5% purity recommended) **Heating chamber:** Air
Stirring Motor Power	23 W
Power Supply	Single-phase, 110 V, 60 Hz, 2.5 kW

High-Temperature and Low-Temperature Chambers of the GenChamber System

Standard Configuration

Model	GenChamber
Main Unit	One set
Cooling Compressor	One set
Stainless Steel Heating Pipes	One set
High-Precision Intelligent Temperature Controller	One set
Stainless-Steel Inner Chamber	Corrosion-resistant and anti-aging
Sample Baskets	3 pieces for the high-temperature chamber 3 pieces for the low-temperature chamber
Power Transformer	Included (110V input to 220V output)

Request a Quote

Need help confirming the right GenChamber configuration for your Charpy or Izod specimen conditioning process? Our team can answer technical questions and help you match the chamber's temperature range, capacity, and timing features to your testing workflow.

Request an online quote or contact us with your requirements, and we'll respond as quickly as possible.

GET A QUOTE