



 **QUALITEST™**

**CHARPY IMPACT TEST
SPECIMEN LOW
TEMPERATURE
CHAMBER - CHARPY-
QUALICH LTC™ 40**



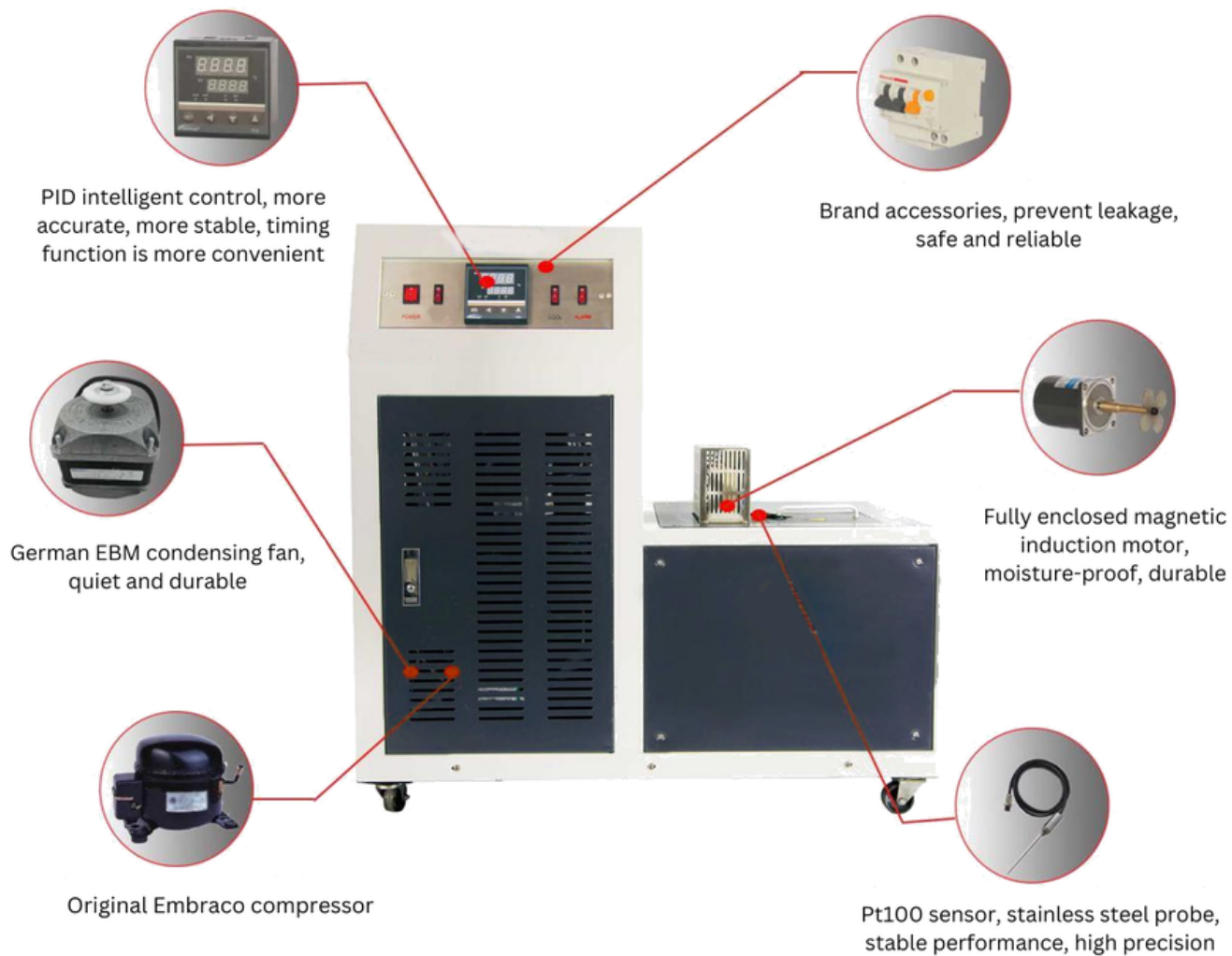
APPLICATIONS

Charpy Impact Test Specimen Low Temperature Chamber - CHARPY-QualiCHLTC™ 40

Charpy Impact Test Specimen Low Temperature Chamber - The CHARPY-QualiCHLTC™ 40 is an advanced compressor refrigeration system designed to fulfill low-temperature testing requirements for Charpy pendulum impact testing of metallic materials, adhering to standards such as ASTM E23-2018, ISO 148, European EN10045, and GB/T 229-2007.

This equipment uses compressor refrigeration technology, heat balance principles, and a circulation stirring method to ensure uniform, automated cooling and precise temperature control for test specimens.

Outfitted with microcomputer technology, the CHARPY-LTC30 delivers accurate control with a digital temperature display, automatic temperature regulation, timing, and alarm functions. Featuring rapid cooling, a spacious chamber, and high temperature precision, it is an ideal solution for low-temperature impact testing, sample cooling, and preservation. Its versatility supports other low-temperature testing and detection applications, providing dependable, user-friendly performance across a wide range of testing requirements.



Applicable Standards

- **ASTM E23-2018**: Metallic materials — Notched specimens impact test method
- **ISO 148-1:2016**: Metallic materials — Charpy pendulum impact test — Part 1: Test method

- **DIN EN 10045-1:1991**: Charpy impact test on metallic materials; Part 1 — Test method
- **JB 5376-1991**: Technical requirements for low temperature constant temperature tank
- **GB/T 229-2007**: Metallic materials — Charpy pendulum impact test method

FEATURES

Charpy Impact Test Specimen Low Temperature Chamber - CHARPY- QualiCHLTC™ 40 Performance Characters

Ergonomic Structure Design: Designed in a practical "L" shape, this machine features distinct high and low sections for optimal functionality. The elevated section contains the control panel, enabling easy monitoring, temperature adjustment, and operation, while the lower section holds the freezing tank for convenient sample placement and clamping. Its height aligns with the impact testing machine, allowing for quick and precise sample positioning.

Premium Refrigeration Components: Outfitted with a fully enclosed compressor and high-quality core components, the system is built for stable, long-term operation. The condensing fan operates with low noise and an extended lifespan, supporting environmentally friendly refrigerants.

Accurate Temperature Control: A high-precision temperature control instrument with automatic PID adjustment ensures stable temperatures. The high-performance platinum resistance sensor and stainless steel probe deliver accuracy, while the fully enclosed, low-noise magnetic stirring motor is engineered for durability in low-temperature, high-humidity settings. The tank's forced agitation and high-quality stainless steel heater provide uniform temperature distribution.

High Sample Capacity: Three sample baskets allow the freezing of up to 60 standard-sized samples (10 x 10 x 55 mm) simultaneously, with additional capacity for smaller samples, such as 7.5 x 10 x 55 mm, 5 x 10 x 55 mm, and 2.5 x 10 x 55 mm.

Easy Operation and Mobility: Equipped with universal casters, the unit is easy to maneuver, and the sample baskets simplify handling. A liquid discharge port enables efficient recycling of the cooling medium and makes cleaning hassle-free. Additional features, including temperature alarms and insulation timing, allow operators to plan tasks efficiently.

Comprehensive Protection Features: Built-in protections include overload, leakage, and grounding safeguards, along with compressor overload and medium over-temperature (anti-drying) features, ensuring safe and reliable operation.

Configuration:

- **Compressor:** Fully enclosed compressor with original packaging and serial number (1 unit)
- **Condensing Device:** High-efficiency finned condenser with condensing fan (1 unit)
- **Dry Filter:** One dry filter for effective moisture control
- **Heat Insulation:** Rigid polyurethane foam insulation for excellent thermal retention
- **Shell:** Constructed from cold-rolled steel with an electrostatic spray finish for durability
- **Stirring Device:** Complete stirring unit for consistent medium circulation
- **Temperature Control Device:** One unit for precise temperature management
- **Stainless Steel Sample Baskets:** Three baskets, offering durability and ample capacity for samples

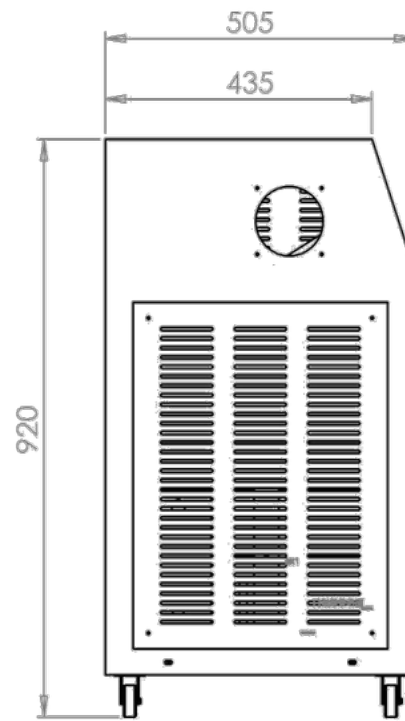
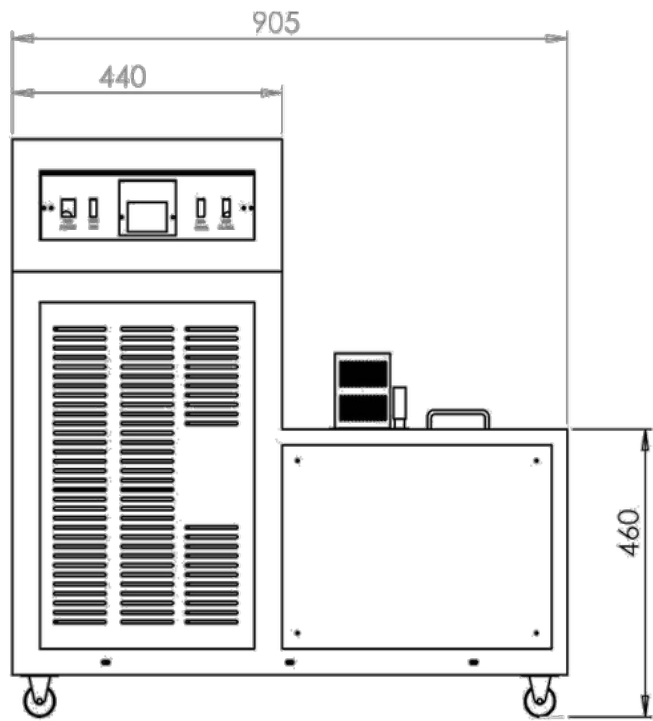
TECHNICAL SPECIFICATIONS

Charpy Impact Test Specimen Low Temperature Chamber - CHARPY- QualiCHLTC™ 40 Technical Specification

Temperature control range	+30□ -40°C	
Temperature control accuracy	≤±0.5°C	
Temperature uniformity	≤1°C	

Cooling speed (when room temperature is 25°C)	Room temperature□ 0°C: 1.5°C/min 0°C□ -20°C: 1.2°C/min -20°C□ -40°C: 1.0°C/min	
Heating speed	3°C/min	
Size of cooling tank	275×160×120mm (Length x Width x Height), 5L	
Effective size of cooling tank	150×140×110mm (Length x Width x Height)	
Specimen capacity	60 pieces (impact specimen size:10×10×55mm)	
Digital timer	1minute ~ 9999 minutes, resolution: 1minute	
Cooling medium	Absolute ethyl alcohol	
Dimensions	905×505×920mm (Length x Width x Height)	
Voltage	AC220V□ 50HZ (110V is also available)	
Power	1.9kW	
Operating environment temperature	5°C□ 30°C	

Dimensions





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