



Impact Specimen Cooling Temperature Chamber – NG-ISCC Series

Standards: [ISO 148](#), [ASTM E23](#), [ASTM E74 \(Class AA\)](#)



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Description

The **NG-ISCC Series Low Temperature Chamber** is designed to condition Charpy impact specimens at controlled sub-zero temperatures prior to testing. It cools specimens uniformly and maintains a stable setpoint to support consistent, repeatable results.

Available conditioning targets include -30°C , -60°C , -80°C , -100°C , and -196°C , depending on the selected model.

The system is engineered around thermal balance and circulation to help minimize temperature gradients between specimens and across the chamber volume. A high-precision self-adjusting controller and platinum-iridium sensor provide accurate monitoring and straightforward operation.

For cooling performance across the full range, the series uses two proven approaches. NG-ISCC-60 and NG-ISCC-80 rely on compressor-based refrigeration for stable low-temperature conditioning. For extended ultra-low capability, NG-ISCC-100 and NG-ISCC-196 use liquid nitrogen cooling to reach and maintain the lowest temperature setpoints.



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Typical Applications

The NG-ISCC Series is used in materials testing labs and quality control environments that perform low-temperature Charpy impact testing, where specimens must be conditioned to a defined temperature before being transferred to the pendulum impact tester.

It is commonly applied to metallic materials and alloys evaluated for toughness and brittle-to-ductile transition behavior, including carbon and stainless steels, aluminum alloys, and nickel-based alloys, as well as weld procedure qualification and production lot verification programs.

Technical Specifications

Parameter	NG-ISCC-60	NG-ISCC-80	NG-ISCC-100	NG-ISCC-196
Cooling method	Compressor	Compressor	Liquid nitrogen	Liquid nitrogen
Cooling temperature range	-60°C to +30°C	-80°C to +30°C	-100°C to +30°C	-196°C to +30°C
Temperature control accuracy	≤ ±0.5°C	≤ ±0.5°C	≤ ±0.5°C	≤ ±0.5°C
Instrument resolution	0.01°C	0.01°C	0.01°C	0.01°C
Cooling medium	Ethanol or other non-freezing solution	Ethanol or other non-freezing solution	Ethanol or other non-freezing solution	Ethanol or other non-freezing solution

Request a Quote

Need help selecting the right NG-ISCC model or confirming specifications for your Charpy testing workflow? Our team can answer technical questions and recommend the best configuration for your required temperature range.

Request an [online quote](#) or [contact us](#) with your details, and we'll get back to you as quickly as possible.

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