



PRODUCT DATA SHEET

BC144



SMALL PRECISION BENCHTOP TEMPERATURE TEST CHAMBER

DESCRIPTION

The BC144 is a small footprint wide range convection temperature that is designed for convenient benchtop testing. Dual fan motors and ample heating / cooling capacity make this an effective tool for your thermal testing requirements.

PRODUCT INFORMATION

Workspace Dimensions	8.5" high x 13" x 13"	1440 cubic inches
Material / Finish	Stainless Steel	Brushed
External Dimensions	17.5 "H x 15.5"W x 20"D + connection	
Approximate Weight	42 lbs. (37.2kg)	
Temperature Range	-75 to +175°C	
Heating Rate	8-12°C/Minute or as specified	Heaters and coolant can be specified
Cooling Rate	12.5°C/Minute using Liquid Nitrogen	
Controller (Two Choices)	Synergy Nano Color Touchscreen	Watlow PM6 Economy Model optional

FACILITY REQUIREMENT

Power requirements may vary. Most common heater arrangement requires a dedicated 120 Volt 15 Amp circuit.

Coolant: High Pressure L-N₂ 75-125 psi is the standard coolant supplied using Dewars. Low Pressure L-N₂ is available upon request.

L-CO₂ 300 psi or 900 psi is available upon request, recommended for infrequent cooling requirements as low as -60°C.

For information on models that are cooled using mechanical refrigeration, please consult the factory.

High performance Hybrid version of this product available which combines convection plus conductive heat transfer with independently controllable

Thermal Platform in base. HBC144: <https://www.totaltemptech.com/totaltemp-hybrid-benchtop-chamber/> or see larger

TEMPERATURE CHAMBERS: <https://www.totaltemptech.com/custom-temperature-chambers-total-temp-technologies/>

New Leaders in Thermal Test Products. We offers many ways to improve your testing and help choose the best equipment

TotalTempTech.com
Sales@TotalTempTech.com
Phone: 888.712.2228



TotalTemp Technologies, Inc.
3630 Hancock Ste. A
San Diego, CA 92110
Revision 1 May 28th, 2025



Controller Options and Accessories

The (a) Synergy Nano temperature controller has a Color LCD touch screen Easy to use, with on-screen graphing capability, logging, multi sensor, multi conditional outputs, very descriptive menus, GPIB optional and free drivers. [More on the Synergy Nano.](#)



(b) Watlow PM6 is a very robust, economical controller

Dry Nitrogen Purge

Purge systems keeps condensation and frost from accumulating on the surfaces of the DUT (Device Under Test) at cold temperatures. Purging is also used to prevent oxidation of metals surfaces at high temperatures.

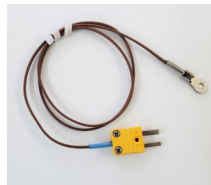
Simple needle valve flowmeter



Dry Nitrogen Purge Regulator with Flowmeter

Device Under Test Temperature Sensors

Preferred 3 wire RTD or thermocouple sensor to read device temperature or deploy two probe advanced temperature control algorithm. Convenient terminal block or in-line connector to attach second probe.



Device Sensors & Connectors



Coolant Delivery Hoses & Exhaust

Liquid Nitrogen and Liquid Carbon Dioxide require different hose configurations. We offer many options for L-N₂ & L-CO₂ applications. Exhaust options the Super Quiet Muffler and flexible hoses for venting are also available.



14-0010 Super Quiet Muffler (SQM)
Greatly reduces the noise level of coolant being spent by a Thermal Platform.

Temperature Logger

Multiple Thermocouple Sensors are available for extended datapoint monitoring using a Synergy Nano Controller see (a) above.



28-00101 Data logger

16-Channel Temperature Monitor Thermocouples, daisy chain up to four of these 16-Channel monitors together and acquire 64 temperatures.

New Leaders in Thermal Test Products. We offers many ways to improve your testing and help choose the best equipment