



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	304 Stainless Steel	Brushed Unfinished Stainless Steel
External Dimensions	17.5 "H x 15.5"W x 20"D + connection	
Chassis Material / Finish	304 Stainless Steel 18 Gauge	Brushed finish
Approximate Weight	42 lbs. plus controller 7 Lbs (37.2kg)	
Temperature Range	-75 to +175°C	
Heating Rate	8-12°C/Min or as specified	Heaters and coolant type/flow can be specified
Cooling Rate	12.5°C/Min Using Liquid Nitrogen	
Controller (Two Choices)	Synergy Nano Color Touchscreen	Watlow PM6 Economy Model optional
FACILITY REQUIREMENT	Power requirements may vary. 120v, 15 A. typical	Liquid Nitrogen coolant typical 75-120 psi.

High Pressure L-N2 75-125 psi is the Standard Coolant

Low Pressure L-N2 Pressure below 30 psi Available Upon Request for improved performance on bulk systems

High Pressure L-CO2 Pressure 900 psi Available Upon Request recommended for infrequent cooling requirements

Low Pressure L-CO2 Pressure below 300 psi Available Upon Request for improved performance on bulk systems or Dewars

BC144 For information on Temperature Chamber Models that are cooled using Mechanical Refrigeration. Consult factory

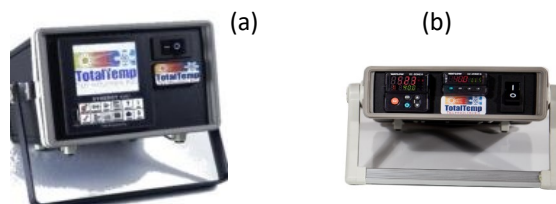
High performance Hybrid version of this product available which combines convection plus conductive heat transfer with independently controllable Thermal Platform in base. HBC144: <https://www.totaltemptech.com/totaltemp-hybrid-benchtop-chamber/> or see larger

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

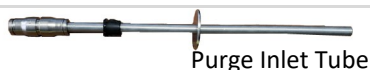
Controller Options and Accessories

The (a) Synergy Nano Benchtop chamber controller has a Color LCD touch screen – Easy to use, easy to read with graphing capability, logging, multi sensor, multi conditional outputs, comm ready, GPIB Upgradeable 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.



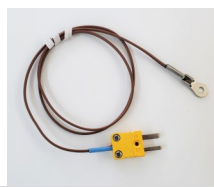
Simple needle valve flowmeter



**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 SQM and flexible hoses for venting are also available.



14-0010 Super Quiet Muffler (SQM)

Greatly reduces the noise level of coolant being spent

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

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