
PRODUCT BRIEF: BENCHTOP THERMAL CHAMBER 100

OVERVIEW

The BTC-100 is Frontier Engineering's latest offering, a compact, easy-to-use, thermal bench top chamber. It was designed for engineers, technicians and scientists who need to conduct experiments in a temperature controlled environment at their workstation.

Our innovative design harbors many features and benefits, providing the user with a convenient platform to investigate temperature effects on their products or experiments.

It is so easy to use, push button input, a 16x4 LCD character display to show you the target and actual temperature of the chamber. An embedded microcomputer automatically tracks to the selected temperature to within +/-1 C° once the chamber temperature has stabilized. A small cut-out in the door allows you to connect cables, wires or tubes to your test object. All these features and more, in a compact unit that can sit on your bench or desk.

The internal chamber is fabricated from stainless steel to minimize and absorb harmful ESD effects and the smooth surfaces allow easy cleaning if chemical or biological agents are spilled. An internal stainless steel mesh keeps everything a few millimeters off the floor of the chamber to improve air circulation around the item(s) being tested and protects operators and objects from interfering with the internal fans.

TARGET MARKETS

The BTC-100 is targeted for all R&D, Engineering, Manufacturing, Quality & Service Organizations, and the scientific communities in Laboratories, Schools and Universities.

KEY BENEFITS

The BTC-100 thermal chamber is compact, relatively light, easy-to-use and very affordable. The design of the BTC-100 ensures it is maintenance free, reliable and allows continuous operation 24 hours a day.

SPECIFICATIONS

- EXTERNAL DIMENSIONS: (Inches) 23W X 11H X 18D
- INTERNAL CHAMBER VOLUME: (available user space) 800cu Inches
- WEIGHT: 46 lbs.
- POWER CONNECTION: 3 x 10 AWG 4 ft cable with plug to disconnect
- POWER REQUIREMENTS: 13 to 14VDC @ 26Amps
- TEMPERATURE RANGE: (dependant upon ambient & heat load): -5 C° to +60 C° (see note below)



- ACCURACY: +/- 1 C°
- COOLING / HEATING: 4 INDEPENDENT 90 WATT PELTIER THERMO-ELECTRIC HEAT PUMPS
- AMBIENT OPERATING TEMPERATURE: NORMAL OPERATION @ 20 C°, MAXIMUM @ 25 C°
- POWER SUPPLY: EXTERNAL SUPPLY 13 VDC @ 26 Amps
- CONTROL UNIT: EMBEDDED MICRO-CONTROLLER USER PROGRAMMABLE VIA PUSH BUTTONS
- DISPLAY: 4 X 16 BACKLIT LCD DISPLAY

NOTE:

The cooling technology used in the BTC-100 will normally refrigerate the internal chamber from ambient temperature (22 C°) to below 0 C° in approximately 45 minutes. The performance of the BTC-100 will be altered if the radiated heat from the unit under test in the thermal chamber is higher than 5 Watts and / or the external ambient temperature is over 25 C°.

MODEL NUMBERS AND ACCESSORIES

BTC-100 / Bench Top Thermal Chamber

Accessory:

FE SMPS1: Power Supply 13 VDC, 40 Amps

FE BTC IS xx: Internal Shelves for Petri Dishes and Test Tubes Holders (Custom Designed if required)

FE BTC PCxx: Perforated ESD proof plastic cradles for disk drives, PCBA's etc.

FE BTC Spec xx: Custom designed cradles / hardware (Contact Frontier Engineering)

FE BTC RS: RS232 Serial Data Port for Remote Control

DOCUMENTATION

Model BTC 100 Operation & User Manual

PRICE AND AVAILABILITY

- BTC-100: (Introductory Price) \$2,200
- Delivery: 8 to 10 weeks ARO (note: Visa / MC accepted)
- FE SMPS1: 13VDC @ 40 Amps Power Supply \$ 235
- FE BTC-RS: Remote Control Option \$289
- Volume discounts available



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