

Quality is more than a word

ESPEC

Compact Cycling Chamber

Criterion Series



ESPEC NORTH AMERICA, INC.

Features

Fast change rates of 15°C/minute or more

The new BTZ-4200 takes advantage of compact, modern scroll compressors to bring fast temperature cycling to small form factor. The chamber can cycle temperatures at rates up to 15°C/minute without requiring cooling water or liquid nitrogen.

The faster cycle times can be used to meet more aggressive test methods that require thermal stress during transitions. Significant test time can be saved in completing tests, as well.

To demonstrate performance, ESPEC uses the international standard IEC 60068 3-5, measured at the supply air. Temperature cycles are run from hot to cold extremes, and the middle 80% of the transition is timed to determine performance. Your actual cycling results will vary depending on methodology, including the start and end temperatures, and the amount of samples loaded.

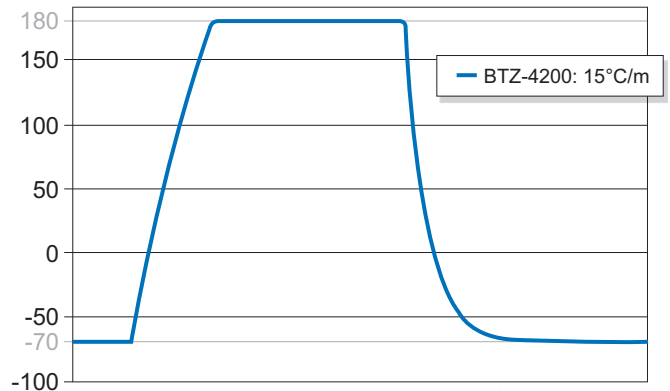
Saves valuable lab space

The BTZ-4200 is based on our space-saving Criterion benchtop series. Its footprint is just 31" x 45". Because it is so small and only requires only electrical utilities, it may be the ultimate portable temperature cycling chamber.

Quality construction

ESPEC is meticulous about making a chamber that is more than just functional, with pleasing design features:

- Stainless steel exterior and interior
- Rounded interior corners for easy cleaning
- Full thermal break around doorframe and door
- Rotating door latch is easy and secure
- One 2" (50mm) diameter cable port on the left, with an impervious, flexible silicone plug
- Easy lift-off service panels
- Pressure relief port to allow air volume changes due to rapid temperature changes



The BTZ-4200 can save 15 minutes or more per cycle, compared to our BTZ-175 model.



Shown with optional features: window, shelf, cable access port on right (instead of left)

Instrumentation

Color Touch-screen Controller with Ethernet

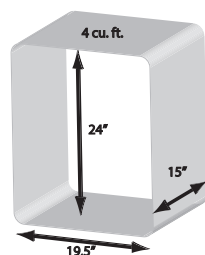
The F4T is the latest programmer/controller from Watlow, now with an easy to use touch-screen. It includes an Ethernet interface with familiar Modbus protocol (serial port optional). An event relay is included for activating other equipment during operation.

Data access options:

- Web Controller with full remote management and datalogging capability.
- Chamber Connect software for basic remote logging & control.
- Connect Library or Modbus for custom software applications.
- USB data acquisition and trend-graphing upgrade for F4T



Model	BTZ-4200	BTZ-4200E
Temperature Range	-70 to 180°C (-100 to 354°F)	
Change Rate*	15°C/m heat-up 15°C/m cool-down	15°C/m heat-up 13°C/m cool-down
Temperature Fluctuation	± 0.5°C per IEC 60068 3-5	
Temperature Gradient	± 1.5°C (up to 100°C) per IEC 60068 3-6	
Live Load Capacity	1000 W at -40°C	
Interior Volume	4 cu. ft (113 L)	
Interior (W x D x H)	19.6" x 15" x 23.6" (498 x 381 x 600 mm)	
Exterior (W x D x H)	31" x 41.5" x 74" (788 x 1055x 1880 mm)	
Heaters	3600 W	
Refrigeration	3-hp x2 (cascade)	
Air Circulation	150 cfm (28 m³/min.)	
Site Requirements		
Electrical Supply	208/230V 1ph 60Hz	220/240V 1ph 50Hz
Recommended Service	50 A	
Weight	790 lbs. (360 kg)	
Sound Level	76 dBA (1 meter away from door)	
Heat to Room	35,000 BTU/hr	
Gravity Drain	1/2" hose barb	



* Change rate per IEC 60068 3-5 with empty chamber, measured at the supply air. Performance assured when room temperature is steady, 18 to 27°C (65 to 80°F).

Options

- Recommended: Dry air purge, to compensate for quickly shrinking air during cooling, as well as to reduce risk of condensation.
- Recommended: Product temperature control, allows feedback from a second sensor on the product. Ensures faster completion of transition steps.
- Water cooling instead of air-cooling
- Liquid nitrogen (LN2) injection boost for faster cooling
- 6"x12" heated window with LED lighting
- Adjustable stainless-steel shelving
- Cable ports: 2", 4", or 6" diameter (50, 100, or 150mm). One 2" port is standard.
- Emergency stop button
- Chino paperless recorder with Ethernet and email alarms
- Honeywell circular-chart recorder
- Analog sensor outputs for external use
- Features for testing lithium-ion batteries or other potentially volatile products.



Window



Cable port

ESPEC NORTH AMERICA, INC.

www.espec.com • sales@espec.com
4141 Central Parkway, Hudsonville, MI 49426, U.S.A.
Tel: 1-616-896-6100

ESPEC EUROPE GmbH

Germany
www.espec.de • info@espec.de
Tel: 49-89-1893-9630

ESPEC ENVIRONMENTAL EQUIPMENT (SHANGHAI) CO., LTD.

China
www.espec.cn
Tel :86-21-51036677

ESPEC SOUTH EAST ASIA SDN. BHD.

Malaysia
www.espec.com.my
Tel: 60-3-8945-1377

ESPEC ENGINEERING (THAILAND) CO. LTD.

Thailand
Tel: 66-3-810-9353

ESPEC CORP.

www.espec.co.jp/english
3-5-6, Tenjinbashi, Kita-ku, Osaka 530-8550, Japan
Tel: 81-6-6358-4741



DANGER

Not for use with specimens which are explosive or flammable, or which contain such substances. To do so could be hazardous, as this may lead to fire or an explosion.