



**CSZ**  
Cincinnati Sub-Zero

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**MICROCLIMATE®**  
BENCHTOP & COMPACT TEST CHAMBERS



[www.cszproducts.com](http://www.cszproducts.com)

# MicroClimate® Chambers

These chambers are designed to provide users with a compact chamber for testing small components and products for a variety of industries. Whether you need to perform temperature cycling tests or expose your product to steady state temperature environments, these chambers will maintain precise and accurate temperature/humidity control throughout your test. Choose from benchtop and reach in models to fit your laboratory testing needs.



MicroClimate Benchtop Temperature Chamber shown in the stacked position.

## Compact Size Saves Space

Temperature and Humidity testing combined with a small footprint make the MicroClimate the number one choice for testing small components and products. Customers also save valuable floor space in their test laboratory.

## Quality & Reliability

The MicroClimate is designed with quality in mind. Each unit is carefully constructed with fully welded seams and ports to prolong chamber life. Each chamber is inspected at each point of the production process and fully tested prior to leaving our facility.

## Easy Installation

Benchtop and 115V upright models offer easy installation at any location.

## Stackable Design Offers Flexibility

Benchtop models may be stacked saving floor space and allowing for manual thermal shock testing.

## Performance to Fit Your Application

Select from your choice of 115V or 230V models for faster heating & cooling performance. The NEW MC-3-1-1-HAC rapid cycling model now has cooling transition rates of 5°C/min.\*

\*Based on 85°C to -40°C

MicroClimate chambers simulate a full range of temperature and/or humidity conditions.

### Standard Features

- Shelf Supports
- 2" Access Port with Plug (MCB-1.2)
- 3" Access Port with Plug (MC-3)
- Leveling Legs (MC-3)
- Humidity Demineralizer Filter\*
- Solid State Humidity Sensor\*
- EZT-430S Touch Screen Controller
- Ethernet Control and Monitoring
- RS-232 Computer Interface
- Refrigeration Service Taps
- Refrigeration High Temperature Protection
- Zero Ozone Depletion Refrigeration

\* Humidity Units Only



<b>Workspace Volume</b>	<b>1.2 cu. ft. (34 L)</b>	<b>3 cu. ft. (85 L)</b>
<b>Temperature Range</b>	<b>Single Stage:</b> -30°C to +190°C (-22°F to +375°F)	-
	<b>Cascade:</b> -68°C to +190°C (-90°F to +375°F)*	
<b>Optional Humidity</b>	10% to 95% RH	

\*Ultimate low for MC(H)-3-.33-.33-HAC models is -65°C

### Optional Accessories

- Shelves
- Access Ports
- Optional Cart with Casters (MCB)
- Viewing Window with Interior Light
- LN2 Boost
- Recirculating Water
- Dry Air Purge (MC-3)
- IEEE-488 Interface
- Chart Recorder
- Digital Display Temp. Limit & Alarm
- 50 Hz. Operation
- Watlow F4 Controller
- Windows-Based Software Package to control monitor up to 31 chambers



MC-3 shown with optional window and humidity

**Optional equipment is economically priced to enhance performance and customize your chamber to meet your needs. A complete selection of optional accessories are available.**



## The Next Generation Controller with Smartphone Technology

### Communications & Connectivity

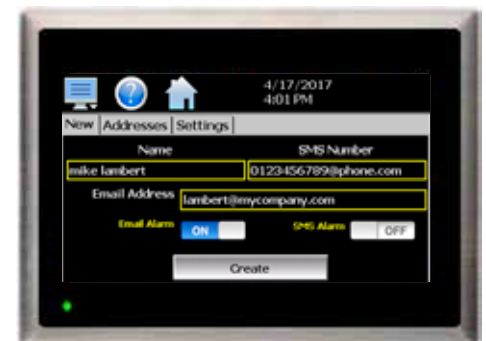
- Remotely monitor and/or Control the chamber for anytime, anywhere access from any device (PC, smartphone or tablet) using LAN/VNC.
- Alarm notification system sends email and/or text phone messages in the event of a test chamber alarm, saving valuable tests while reducing downtime.
- Multiple chambers may also be controlled using VNC or optional EZ-View PC software to monitor control CSZ chambers and download profiles.
- Ethernet TCP/IP, EIA-232, EIA-485 communications.



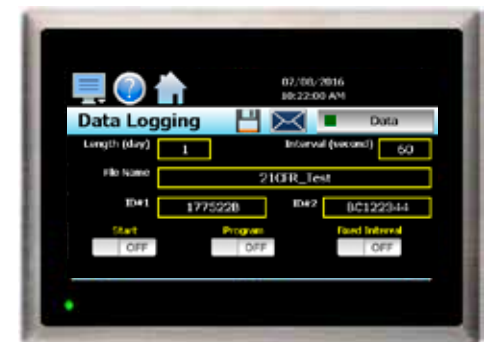
Main View

### Data Logging

- Data logging with custom file names/length, ID numbers, digital signatures and unlimited number of operator notes saved to data file.
- Easily download profiles, alarm files, audit trail files and data files using USB or email from controller in a compatible .csv file format for ease of use. Also import profiles to other chambers saving valuable profile entry time.
- Files may also be automatically backed up daily for hassle-free file management using FTP. FTP/FileWeb/DataWeb (LAN/WAN).
- Access data files directly from controller or PC.
- Open and plot historical data files.
- Data logging supports both system and operator digital signatures for quality and regulatory requirements.
- Audit trail files tracks changes in settings by each user.
- Data Files may be easily graphed with free PC Data Viewer software for printing or saving a graph as a .jpg.
- Email built-in to send data, alarm, audit trail files directly from controller. Also create and send new emails.



Email View



Data Logging



Remotely monitor and control from any device!

Receive email/text message alarms.



## User Convenience & Flexibility

- Real time & historical trend graphs. Plot two sets of data, one on each axis.
- Unlimited number of profiles. Each profile up to 64 steps with up to 3 events per loop.
- Profile status view.
- 11 languages - one setting updates icons, menus and help screen.
- Access alarm history files and view detail for troubleshooting.
- Notification window accessed by pressing the date/time field in the icon bar includes current PV and SP, name of active profile, alarm status, data logging, current user, IP address web/VNC status, and SD storage remaining.



Trend Graph

## Enhanced Functionality

- Selectable power failure/recovery options.
- Fully configurable alarm settings.
- Full system security allows up to 30 different users with four different levels of security.
- Import/export configuration settings to other controllers saving time. (Personalized to your use)



language Setting



Security

# MicroClimate Specifications

## Physical Specifications

Model	MCB(H)-1.2 Benchtop	MC(H)-3 Upright
<b>Workspace Volume</b>	1.2 cu. ft. (34 Liters)	3 cu. ft. (85 Liters)
<b>Interior Dimensions</b>	16" W x 11" D x 12" H (40.64cm x 28cm x 30cm)	17" W x 17" D x 18" H (43.2cm x 43.2cm x 45.7cm)
<b>Exterior Dimensions*</b>	37" W x 32" D x 28" H (94cm x 81cm x 71cm)	27.5" W x 42.5" D x 65.5" H (70cm x 108cm x 166cm)

\* Add approximately 4.5" (11cm) to exterior width for humidity units. Addition of certain options may increase dimensions.

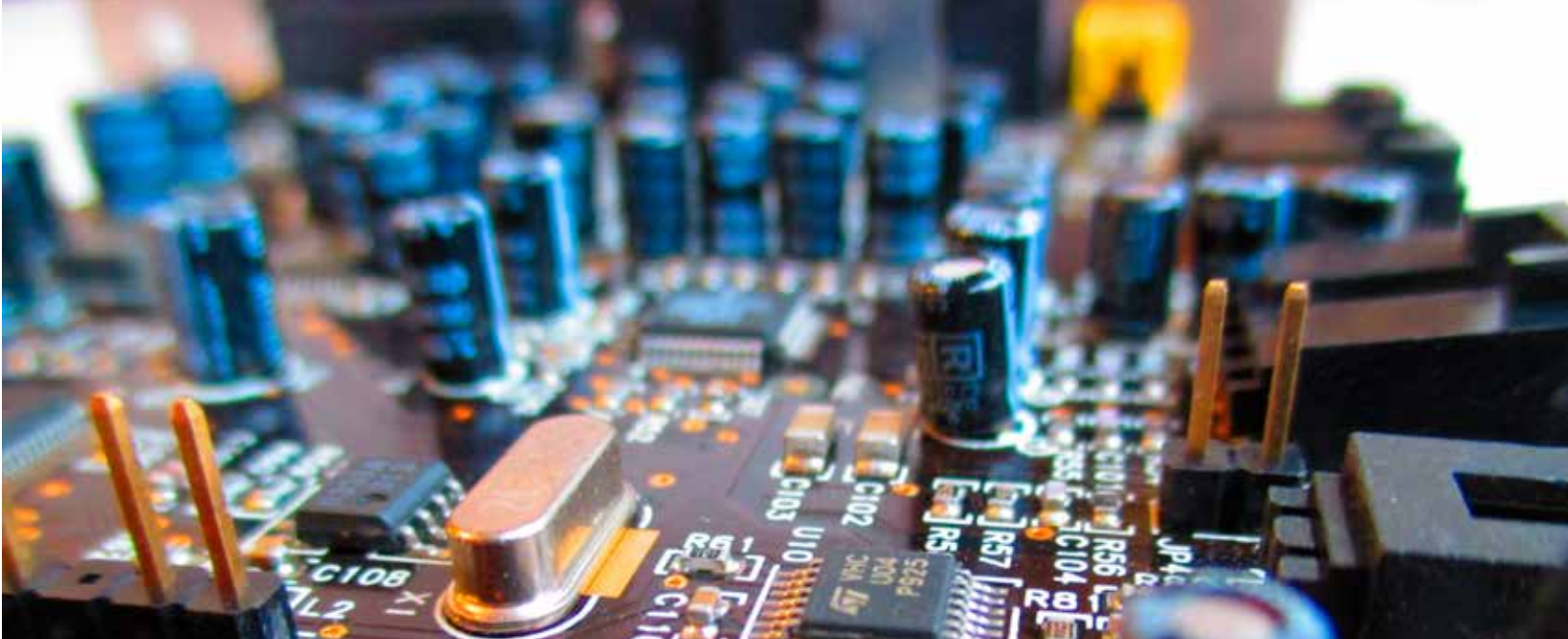
## MicroClimate Performance

	Cooling Performance with Empty Chamber in Minutes from:					Heating Performance with Empty Chamber in Minutes from:				
	24°C					24°C	-25°C	-34°C	-68°C	
	-18°C	-25°C	-40°C	-54°C	-68°C	94°C	190°C	24°C	24°C	24°C
MCB(H)-1.2-.33-H/AC	12	20	-	-	-	10	35	8	-	-
MCB(H)-1.2-.33-.33-H/AC	-	-	25	35	60	10	35	-	10	15
MC(H)-3-.33-.33-H/AC	-	-	35	65	110 <sup>1</sup>	20	75	-	20	25
MC(H)-3-.5-.5-H/AC	-	-	22	32	48	6	18	-	7	8
MC(H)-3-1-1-H/AC	-	-	12	16	24	2.5	10	-	3.5	4
MC(H)-3-1.5-1.5-H/AC	-	-	9	12	20	2	10	-	3.5	4

<sup>1</sup> MC(H) -3-.33.33-H/AC model rated to -65°C

Performance is based on 60 Hz. operation and a 24°C ambient. Certain options may affect performance. For 50 Hz operation, stated performance and air flow will be less. Specifications are subject to change.





Model	Live Load Capacity Watts				Electrical Power Requirements Minimum Amp Service	
	0°C	-18°C	-40°C	-54°C	115V	230V
MCB(H)-1.2-.33-H/AC	200	150	-	-	20	16 <sup>1</sup>
MCB(H)-1.2-.33-.33-H/AC	-	-	175	100	20	16 <sup>1</sup>
MC(H)-3-.33-.33-H/AC	-	-	175	100	20	-
MC(H)-3-.5-.5-H/AC	-	-	350	250	-	30 <sup>2</sup>
MC(H)-3-1-1-H/AC	-	-	800	500	-	40 <sup>2</sup>
MC(H)-3-1.5-1.5-H/AC	-	-	950	600	-	25 <sup>1</sup>

<sup>1</sup> Models available in 230V/50Hz. Contact factory for 230V/60Hz requirements.

<sup>2</sup> Models available in 230V/50/60Hz



Benchtop chamber  
featured with optional cart



Cincinnati Sub-Zero is a product brand of Weiss Technik North America, Inc. Weiss Technik North America is a member of the Weiss Technik group of companies, a division of the Schunk Group with its headquarters in Heuchelheim, Germany. Weiss Technik is the world's largest manufacturer of environmental simulation systems and employs more than 2,900 people in 18 group companies in 15 countries.

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**CSZ**  
**Cincinnati Sub-Zero**  
**The Testing Standard.**

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