



# Environmental Walk-In Chambers



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Walk-In chambers are used for testing or storing products that require a large capacity chamber. Applications include full vehicle testing, automotive components, solar panels, electronic components, packaging, stability testing, biological research, industrial applications and more. CSZ offers a broad selection of various types of walk-in chambers to meet almost any test requirement.

## WM-Series Modular Walk-In Temperature/Humidity Chambers

Offers flexibility for testing larger volumes at an economical price

Modular Walk-In chambers offer flexibility to meet virtually any size or configuration by using pre-fabricated panels. Modular chambers are constructed of 4" thick polyurethane-foamed panels that lock together to form a tightly sealed chamber with stainless steel interior and aluminum or white embossed exterior. Available in a variety of temperature ranges to meet your specific testing needs.

### Modular Walk-In Specifications

#### Size

200 to 8,000 cu. ft. (Custom Sizes Available)

#### Temperature Range

Single Stage: -34°C to 93°C (-30°F to 200°F)

Tundra®: -45°C to 93°C (-49°F to 200°F)

Tundra® II: -54°C to 93°C (-65°F to 200°F)

Cascade: -68°C to 93°C (-90°F to 200°F)

#### Humidity Range

10% to 95% RH



# Environmental Walk-In Chambers



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## Modular Plenum Conditioning Systems

CSZ walk-In chambers feature our standard conditioning systems, which include refrigeration, air circulation, electrical components, instrumentation and optional humidification needed to control your chamber environment. A variety of different conditioning systems are available to meet your temperature and humidity requirements. Our applications specialists will select the most appropriate, cost-effective system for your application.

These conditioning systems are designed to interface with an assembled Walk-In box without taking up valuable workspace in your chamber. Each conditioning system unit includes hinged service panels for easy access and may be located on either side or the back of your walk-in box.

These systems may also be incorporated with existing Walk-In boxes. They can be ordered separately to replace existing conditioning systems or add additional capacity to current walk-in chambers.

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## WW-Series Welded Walk-In (Solid Construction) Chambers

Rugged construction with higher temperatures and faster cycling

Welded Walk-In chambers provide wider temperature and humidity ranges. These welded walk-in chambers consist of one solid piece, simplifying installation. Welded Walk-In chambers are constructed using a zinc-coated exterior, polyurethane enamel finish and a type 304 stainless steel interior. Fiberglass insulated walls are 6" thick with seams that are continuously welded to form a hermetically sealed chamber. Ideal for rapid temperature change rates, higher temperatures or applications that combine multiple environments.

### Solid Construction Walk-In Specifications

#### Size

200 to 8,000 cu. ft. (Custom Sizes Available)

#### Temperature Range

Single Stage: -34°C to 190°C (-30°F to 375°F)

Tundra®: -45°C to 190°C (-49°F to 375°F)

Tundra® II: -54°C to 190°C (-65°F to 375°F)

Cascade: -68°C to 190°C (-90°F to 375°F)

#### Humidity Range

10% to 95% RH



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### Which type of walk-in room is most appropriate for your application?

	Modular Panel	Welded
Economical	X	
Easy Move-In	X	
Easy Installation	X	X
Choice of Interior and Exterior Finishes	X	
Extended Temperature Range		X
Extended Humidity Range		X
Fast Change Rate	X	X
Combined Environments		X
Altitude Simulation		X
Vibration Integration	X	X

# Drive-In Environmental Chambers

## Drive-In Series Chambers

Designed for full vehicle testing - from small cars to full semi-trucks

CSZ drive-in environmental test chambers are ideal for full vehicle testing. Testing procedures include noise, vibration, climate conditions, suspension systems, shocks, squeaks and rattles. Every chamber can be tailor-designed to meet different requirements and specifications.

Four post road simulator with temperature, humidity, vibration and solar simulation.



## Drive-In Chamber for Semi-Truck

This drive-in chamber was 33,750 cu. ft. with exterior dimensions of 48'W x 65'D x 27'H. To meet the specific testing requirements, this vast chamber required an extensive refrigeration system. The system included a total of (6) modular plenums, (6) 30-30 cascade refrigeration systems and (6) remote air cooled condensers with a combined air flow of 24,000 cfm.



# EZT-570i Touch Screen Controller

## Time-Saving Features to Test Faster EZ→Programming EZ→Datalogging EZ→To be Connected to Your Test World

CSZ's EZT-570i controller offers a 7" or 10" touch screen and the latest in test chamber programming. Flexible configurations along with a full range of user-friendly features combine to simplify programming and save valuable time for greater return on your investment. Intuitive controller includes built-in data security & safeties to protect your chamber and product under test.



### Communications & Connectivity

- Ethernet capability to remotely monitor and control multiple test chambers. Wired, wireless, local area network or World Wide Web Ethernet connectivity provides anytime, anywhere access using a PC or PDA device.
- Alarm notification system sends email and/or text phone messages in the event of a test chamber alarm, saving valuable tests while reducing downtime.
- Integrated email sends data files directly from the controller with a touch of a button.

### Data Logging

- Data logging with custom file names, batch & lot numbers, operator events & digital signatures.
- Automated "Ethernet" back-up of data files provides "hassle free" file management.
- Easily download profiles, alarm files, audit trail files and data files to USB memory stick in a compatible .CSV file format. Also import profiles to other chambers saving valuable profile entry time.
- Access data files directly from controller or PC.



### User Convenience & Flexibility

- Real time & historical trend graphs. Print graphs directly to a printer.
- Profile status view provides details on the profile with stop date and time.
- Profile autostart allows profiles to begin at a date, day and time.
- Help menu provides text and voice assistance in multiple languages (English, Spanish, French or Chinese).



### Enhanced Functionality

- Adapt-a-tune technology provides the ultimate in chamber performance and control stability.
- Product control feature accelerates temperature cycling of the device under test.
- Product high/low limit protects product.
- Selectable power failure/recovery options.
- Fully configurable alarm settings.
- Full system security allows up to 30 different users with three different levels of security.

The screenshot shows a 'RUNNING PROFILE: RH TEST' status window with a table of parameters and values.

Description	Value
PROFILE STATUS:	SOAKING
START DATE:	09/08/10-14:03
ESTIMATE STOP DATE:	09/10/10-08:04
CURRENT STEP:	2
STEP TIME LEFT:	00:30:27
WAIT FOR INPUT:	NOT WAITING
WAIT SETPOINT:	NOT WAITING
TEMPERATURE SP:	42.3
HUMIDITY SP:	12.0
PRODUCT SP:	0.0

EDITING PROFILE: RH TEST.MI

# Features & Options meet your Needs

## Walk-In Chambers Customized to Meet Your Needs

Walk-In Chambers are configured to meet your requirements with conditioning systems that may be mounted in your location of choice, remote instrument consoles, custom fixtures, and more. A variety of options are available for enhanced performance and combined environments with custom configurations designed to meet your specific requirements.

### Standard Features

- Modular Panel or Welded Construction
  - Stainless Steel Interior
  - Safety Release Latches
  - Heated Windows
  - Vapor Proof Interior Lights
  - EZT-560/ Programmable Controller
  - Temperature Limit & Alarm
  - RS-232/485 Computer Interface
  - Solid State Humidity Sensor\*
  - Refrigeration High Temperature Protection
  - Refrigeration Pressure Gauges
  - Compressor Overload Protection
  - Refrigeration Service Taps
  - Water-Cooled Condenser
  - Zero Ozone Depletion Refrigerants
  - High and Low Pressure Switches (3HP & Over)
- \*Humidity Units Only

### Optional Accessories & Custom Capabilities

- Access Ports
  - Additional/Oversize Doors
  - Automatic Door Operation
  - Entry Ramp
  - Reinforced Treaded Floor
  - Remote Refrigeration System
  - Explosion-Proof Electrical
  - LN2/CO2 Boost Cooling
  - Ultra Low Temperature
  - Ultra High Temperature
  - Custom Control Interface
  - Reverse Osmosis Water System
  - Dry Air Purge System
  - Windows-Based Software
  - Redundant Temp. Limit & Alarm
  - IEEE-488 Computer Interface
  - Running Time Meter
  - 50 Hz. Operation
  - Temperature Recorders
  - Electrical Disconnect Switch
  - Remote Instrument Console
  - Hydro Carbon/Carbon Monoxide Monitor
  - Refrigeration Sound
  - Deadening Package
  - Extended Relative Humidity Range
  - Compliance to Special Wiring Standards
  - Internal or External Emergency Stop Switch
- \* Humidity Units Only  
Certain options not available on stability rooms

### Combined Environments

- Solar Simulation
- Infrared Lighting
- Vibration Simulation
- Altitude Simulation
- Rain Simulation

## The Experience you Rely on...

Cincinnati Sub-Zero (CSZ) Products, Inc. is an ISO-9001 certified company with over 70 years of industry experience designing and manufacturing temperature-controlled products of the highest quality, with a commitment to total customer satisfaction.

At CSZ, we offer a complete line of both standard and custom-designed environmental simulation chambers including:

- Temperature Cycling
- Humidity
- Stability Cabinets & Rooms
- Thermal Shock
- Stress-Screening
- Altitude
- AGREE Vibration
- Freezers
- Liquid Chillers
- Liquid Chillers
- Wind & Rain
- Sand & Dust
- Other Temperature Management Solutions

*Sizes range from benchtop to full walk-in/drive-in chambers.*

## TESTING SERVICES

CSZ Testing Services is an A2LA Accredited Test Laboratory utilizing the latest test technology. CSZ is your one stop source for all of your environmental simulation testing needs. Our testing laboratory is here to help with your product qualification testing, overflow testing and /or third party product validation. Testing capabilities include Temperature, Humidity, and/or Vibration, Thermal Shock, Burn-in, Altitude, Vibration, Shock, Salt Spray, and Cyclic Corrosion test. Serving you from two locations in Cincinnati, OH and Sterling Heights, MI. For more information please call CSZ Testing headquarters at 513-793-7774 or visit [www.csztesting.com](http://www.csztesting.com).



## CSZ is your one stop solution for ...

- Environmental Chambers
- Freezers
- System Upgrades
- Preventative Maintenance
- Calibration Services
- Contract Testing Services

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