



CV-Series



AV-Series



# Temperature/Humidity AGREE Vibration Chambers

**CSZ**  
Cincinnati Sub-Zero

# Vibration Chambers

Cincinnati Sub-Zero's AV/CV-Series chambers offer rapid temperature change rates to reduce product development time and improve product reliability. These chambers are available for temperature & vibration testing or temperature, humidity and vibration. All models are designed for compatibility with your choice of electrodynamic or mechanical vibration systems. While each model is manufactured to standard designs, they may also be custom engineered to meet a wide range of stringent test requirements.

## Features & Benefits

- Simulates up to 3 Combined Environments in one Chamber
- Versatile - Chamber may interface with your existing vibration shaker or new shaker of your choice
- Dual Purpose - May be operated as a separate temperature/humidity chamber maximizing your investment
- High performance with fast change rates for accelerated stress testing
- Customizable design to meet stringent test requirements
- User-friendly controls for easy integration into your test system
- Refrigeration design protects compressors and prolongs life keeping cool during all operating conditions
- Refrigeration design uses less power saving operating costs
- An electronic humidity sensor is used on all humidity models for accuracy and minimal maintenance\*
- Humidity water filtration system is included to filter impurities and protect your chamber interior\*



### Temperature Range

Cascade: -70°C to +190°C (-94°F to +375°F)  
 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)

### Humidity Range

10% to 95% relative humidity as limited by a +85°C (+185°F) maximum dry bulb and +7°C (+45°F) minimum dewpoint.

## Standard Features

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| <ul style="list-style-type: none"> <li>• 2.875" Access Port</li> <li>• Non-Settling Fiberglass Insulation</li> <li>• Fog-Free Wiperless Window</li> <li>• Diaphragm Interface to Shaker</li> <li>• Adjustable Chamber Height**</li> <li>• Rear Sliding Door</li> <li>• Brushed Stainless Steel Interior</li> <li>• High Volume Air Flow</li> <li>• EZT-570i Touch Screen Controller</li> <li>• Internal Light with Switch</li> </ul> | <ul style="list-style-type: none"> <li>• Fused Electrical Components</li> <li>• EIA-232/485 Computer Interface</li> <li>• Solid State RH Sensor*</li> <li>• Refrigeration Service Taps</li> <li>• Digital Display Temp. Limit &amp; Alarm</li> <li>• Zero Ozone Depletion Refrigerants</li> <li>• Refrigeration High Temperature Protection</li> <li>• Water Cooled Condenser</li> <li>• Refrigeration Pressure Gauges</li> <li>• Humidity Demineralizer Water System*</li> </ul> |
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\* Humidity units only \*\* AV-Series Only

## Optional Accessories & Custom Capabilities

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| <ul style="list-style-type: none"> <li>• Casters</li> <li>• Shelving</li> <li>• Additional Access Ports</li> <li>• Vertical Lift Door</li> <li>• Vibration Sound Deadening</li> <li>• Cable Notch</li> <li>• Solid Floor Plug</li> <li>• Custom-Size Chambers</li> <li>• Remote Instrument Console</li> </ul> | <ul style="list-style-type: none"> <li>• IEEE-488 Computer Interface</li> <li>• Running Time Meter</li> <li>• 50 Hz. Operation</li> <li>• Electrical Disconnect Switch</li> <li>• EZ-View Software</li> <li>• Explosion-Proof Electrical</li> <li>• Ultra High &amp; Low Temperatures</li> <li>• Compliance to all Wiring Standards</li> <li>• Custom Control Interface Capability</li> </ul> |
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Our AV-Series AGREE (Advisory Group on Reliability of Electronic Equipment) chambers combine temperature/humidity and vibration for commercial and military testing. The AV-Series models have the optional capability to interface with both horizontal and vertical electrodynamic vibration systems with rear or vertical sliding doors.



## AV-Series Specifications

Model	Cooling Performance Empty Chamber in Minutes			Heating Performance Empty Chamber in Minutes			Live Load Capacity in Watts		Workspace Dimensions	Overall Dimensions	Maximum Vibration Table Size
	24°C to			24°C		-68°C	-40°C	-54°C	Inches (cm)	Inches (cm)	Inches (cm)
	-40°C	-54°C	-68°C	93°C	190°C	24°C					
AV-14-6-6	8	13	26	10	20	10	2,500	2,000	28" x 28" x 30" (71 x 71 x 71)	110" x 74" x 94" (279 x 188 x 239)	24" x 24" (61 x 61)
AV-33-7.5-7.5	7	10	21	10	20	10	4,000	3,300	40" x 40" x 36" (102 x 102 x 91)	122" x 74" x 94" (310 x 188 x 239)	36" x 36" (91 x 91)
AV-33-15-15	5	8	14	7	15	10	6,000	4,500	40" x 40" x 36" (102 x 102 x 91)	128" x 82" x 112" (325 x 208 x 284)	48" x 30" (122 x 76)
AV-41-7.5-7.5	8	12	22	10	15	12	4,000	3,300	54" x 36" x 36" (137 x 91 x 91)	136" x 70" x 94" (345 x 178 x 239)	48" x 30" (122 x 76)
AV-41-15-15	6	8	16	7	10	10	6,000	4,500	54" x 36" x 36" (137 x 91 x 91)	142" x 78" x 112" (361 x 198 x 284)	48" x 30" (122 x 76)
AV-41-27-27	5	7	12	7	10	10	10,000	7,000	54" x 36" x 36" (137 x 91 x 91)	142" x 78" x 112" (361 x 198 x 284)	48" x 48" (122 x 122)
AV-61-7.5-7.5	12	15	32	10	25	15	4,000	3,300	54" x 54" x 36" (137 x 137 x 91)	158" x 97" x 112" (401 x 246 x 284)	48" x 48" (122 x 122)
AV-61-15-15	7	10	18	15	35	20	6,000	4,500	54" x 54" x 36" (137 x 137 x 91)	164" x 97" x 112" (417 x 246 x 284)	48" x 48" (122 x 122)
AV-61-27-27	6	8	16	5	15	10	10,000	7,000	54" x 54" x 36" (137 x 137 x 91)	164" x 97" x 112" (417 x 246 x 284)	48" x 48" (122 x 122)
AV-81-7.5-7.5	12	17	32	10	30	15	4,000	3,300	54" x 54" x 48" (137 x 137 x 122)	158" x 97" x 124" (401 x 246 x 315)	48" x 48" (122 x 122)
AV-81-27-27	7	9	17	5	12	10	10,000	7,000	54" x 54" x 48" (137 x 137 x 122)	164" x 97" x 124" (417 x 246 x 315)	48" x 48" (122 x 122)
AV-108-7.5-7.5	13	19	37	10	25	16	4,000	3,300	72" x 54" x 48" (183 x 137 x 122)	176" x 97" x 124" (447 x 246 x 315)	66" x 48" (168 x 122)
AV-108-27-27	7	10	20	6	15	10	10,000	7,000	72" x 54" x 48" (183 x 137 x 122)	182" x 97" x 124" (462 x 246 x 315)	66" x 48" (168 x 122)
AV-117-7.5-7.5	14	21	41	10	25	16	4,000	3,300	78" x 54" x 48" (198 x 137 x 122)	182" x 97" x 124" (462 x 246 x 315)	72" x 48" (183 x 122)
AV-117-27-27	7.5	10	18	6	15	10	10,000	7,000	78" x 54" x 48" (198 x 137 x 122)	188" x 97" x 124" (478 x 246 x 315)	72" x 48" (183 x 122)
AV-121-7.5-7.5	15	22	46	15	35	16	4,000	3,300	66" x 66" x 48" (168 x 168 x 122)	170" x 109" x 124" (432 x 277 x 315)	60" x 60" (152 x 152)
AV-121-27-27	7.5	10.5	34	6	15	10	10,000	7,000	66" x 66" x 48" (168 x 168 x 122)	176" x 109" x 124" (447 x 277 x 315)	60" x 60" (152 x 152)
AV-144-7.5-7.5	16	24	50	15	35	20	4,000	3,300	72" x 72" x 48" (183 x 183 x 122)	176" x 115" x 124" (447 x 292 x 315)	66" x 48" (168 x 122)
AV-144-27-27	8	11	21	6	15	10	10,000	7,000	72" x 72" x 48" (183 x 183 x 122)	182" x 115" x 124" (462 x 292 x 315)	66" x 48" (168 x 122)

Notes: Height is based on a shaker height of 33". Performance based on 60 Hz. operation and +75°F ambient air. For 50 Hz. operation, stated performance and air flow will be approx. 17% less.

# Vibration Chambers

## CV-Series Temperature/Humidity/Vibration Chambers

Combined environmental testing environments with flexibility for use with new or existing vibration systems

The CV-Series temperature/humidity and vibration chambers are designed to integrate with vibration systems in only the vertical mode of operation.

Model	Cooling Performance Empty Chamber in Minutes			Heating Performance Empty Chamber in Minutes			Live Load Capacity in Watts		Workspace Dimensions	Overall Dimensions	Maximum Vibration
	24°C to			24°C			-40°C	-54°C			
	-40°C	-54°C	-68°C	93°C	190°C	24°C			Inches (cm)	Inches (cm)	Body Diameter
CV-8-3.5-3.5	8	12	16	6	12	7	2,050	1,660	24" x 24" x 24" (61 x 61 x 61)	66" x 97" x 72" (168 x 246 x 183)	23
CV-16-3.5-3.5	13	19	25	12	32	14	2,050	1,660	30" x 30" x 30" (76 x 76 x 76)	66" x 103" x 78" (168 x 262 x 198)	29
CV-16-6-6	10	15	25	10	20	10	3,000	2,400	30" x 30" x 30" (76 x 76 x 76)	66" x 103" x 78" (168 x 262 x 198)	29
CV-16-10-10	5	7	14	6	13	7	4,080	3,300	30" x 30" x 30" (76 x 76 x 76)	66" x 103" x 78" (168 x 262 x 198)	29
CV-32-3.5-3.5	20	27	37	12	32	17	2,060	1,600	38" x 38" x 38" (97 x 97 x 97)	66" x 112" x 86" (168 x 284 x 218)	36
CV-32-6-6	12	17	27	12	32	17	3,000	2,400	38" x 38" x 38" (97 x 97 x 97)	70" x 114" x 86" (178 x 290 x 218)	36
CV-32-10-10	9	12	17	9	22	12	4,080	3,300	38" x 38" x 38" (97 x 97 x 97)	70" x 114" x 86" (178 x 290 x 218)	36
CV-32-15-15	7	9	12	8	18	10	5,300	4,300	38" x 38" x 38" (97 x 97 x 97)	76" x 121" x 86" (193 x 307 x 218)	36
CV-64-3.5-3.5	32	42	62	22	72	27	2,060	1,660	48" x 48" x 48" (122 x 122 x 122)	66" x 128" x 100" (168 x 325 x 254)	46
CV-64-6-6	22	27	37	22	72	27	3,000	2,400	48" x 48" x 48" (122 x 122 x 122)	76" x 128" x 100" (193 x 325 x 254)	46
CV-64-10-10	11	17	24	12	27	14	4,080	3,300	48" x 48" x 48" (122 x 122 x 122)	76" x 128" x 100" (193 x 325 x 254)	46
CV-64-15-15	9	11	17	10	22	12	5,300	4,300	48" x 48" x 48" (122 x 122 x 122)	76" x 136" x 100" (193 x 345 x 254)	46

Notes: Height is based on a shaker height of 33". Performance based on 60 Hz. operation and +75°F ambient air. For 50 Hz. operation, stated performance and air flow will be approx. 17% less.

# CSZ EZT-570i 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" (18 cm or 25 cm) 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.

## 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 a 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.



Remote control from smart phone or tablet

## User Convenience & Flexibility

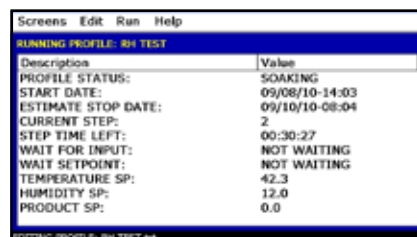
- Real time & historical trend graphs. Print graphs directly to a printer.
- Profile status view provides details on the profile with stop date and time.
- Profile autostart allows profiles to begin at a date, day and time.
- Help menu provides text and voice assistance in multiple languages (English,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



File utility screen

## 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.



Profile status screen

## 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
- HALT/HASS
- Freezers
- 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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