Provided by:



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# **CT-Series Test Chambers**

# **High Performance**

Our CT-Series Commercial Temperature Chambers are high performance test chambers with fast changes rates up to \*25°C/min. for accelerated stress testing. Each chamber is tailored to meet your performance criteria with high volume airflow, large horsepower compressors, and optional LN2 cooling.

# **Customizable to Meet Your Needs**

Although our CT model specifications show 16 to 64 cu. Ft., our CT-Series chambers may be designed to meet your size requirements and virtually any performance criteria. All CT-Series Chambers offer heavy-duty construction and a variety of performance options while maintaining the precise temperature and humidity control essential for your product testing.

\*Based upon a 32 cu. ft. chamber with no load, two 15 HP compressors, and a temperature range of 85°C to -40°C

### **Temperature Ranges**

Single Stage: -34°C to +190°C (-30°F to +375°F) Tundra®: -45°C to +190°C (-50°F to +375°F) Cascade: -73°C to +190°C (-100°F to +375°F)

LN2 Boost: -85°C (-120°F) LN2 Cooling Only: -184°C to +190°C

### **Optional Humidity Range**

10% to 98% RH relative humidity as limited by a 85°C (+185°F) maximum dry bulb and +7°C (+45°F) minimum dewpoint.

#### Control

Air temperature control as measured at the control sensor  $\pm 1^{\circ}$ C and relative humidity  $\pm 4\%$  after stabilization.

# **Humidity Specifications**

CTH chambers provide capabilities for humidity and moisture resistance testing, meeting a variety of commercial and military standards. Unlike other manufacturer's models, the following equipment is supplied with CSZ humidity chambers at no extra charge to you.

- Microprocessor direct RH Programming and control
- Unique humidity generation system that provides fast response and tight control
- Humidity water demineralizer included to remove water impurities
- Solid state humidity sensor provides reliability and reduced maintenance to ensure accuracy
- Dehumidification coil tolerates frost build-up at low dewpoint conditions

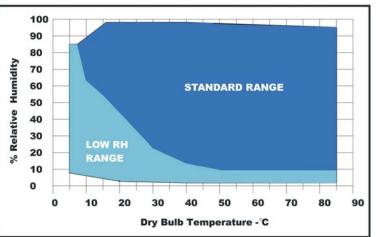
#### **Optional Low RH**

5% to 98% RH as limited by a +85°C (+185°F) maximum dry bulb and -29°C (-20°F) minimum dewpoint.

Standard Features							
Electrical							
Programmable Controller							
Digital Display Temp. Limit & Alarm							
EIA-232/485 Computer Interface							
Interior Light with Switch							
Fused Electrical Components							
Refrigeration							
Refrigeration High Temperature & Pressure Protection							
Refrigeration Pressure Gauges							
Refrigeration Service Taps							
Zero Ozone Depletion Refrigerants							
Cabinet							
2.875" Access Port							
Fog-Free Window							
Non-Settling Low "K" Factor Fiberglass Insulation							
Brushed Stainless Steel Interior							
*Humidity							
Solid State Humidity Sensor							
Humidity Demineralizer Cartridge							

\*Humidity Models Only

# **Std. Humidity Performance**



# **Basic Specifications - Here's what the CT-Series can do...**

CSZ	Electrical Power Requirements CSZ Full Load Amps			Cooling Performance Empty Chamber in Minutes				Heating Performance Empty Chamber in Minutes				Live Load Capacity in Watts at				
Model	208V ±5%	230V ±5%	460V ±5%	24°C to			24	24°C to -34°C -68°C								
Number	3PH, 60Hz	3PH, 60Hz	3PH, 60Hz	-18°C	-34°C	-40°C	-54°C	-68°C	93°C	190°C	to 2	24°C	-18°C	-34°C	-40°C	-54°C
CT-16-6	68	64	35	5	10	-	-	-	10	20	7	-	3600	1800	-	-
CT-16-6-6	104	94	46	-	-	10	15	25	10	20	-	10	-	-	3000	2400
CT-32-6	68	64	35	7	15	-	-	-	10	30	8	-	3600	1800	-	-
CT-32-6-6	104	94	46	-	-	10	20	30	10	30	-	12	-	-	3000	2400
CT-32-7.5	-	-	36	5	10	-	-	-	8	20	6	-	5260	2850	-	-
CT-32-7.5-7.5	-	-	53	-	-	8	15	20	8	20	-	10	-	-	4080	3300
CT-64-3	45	42	21	12	30	-	-	-	25	60	20	-	2560	1400	-	-
CT-64-3-3	63	56	29	-	-	25	35	55	25	60	-	25	-	-	1500	1100
CT-64-6	68	64	35	10	26	-	-	-	15	45	15	-	3600	1800	-	-
CT-64-6-6	104	94	46	-	-	15	20	35	15	45	-	20	-	-	3000	2400
CT-64-7.5	-	-	36	8	18	-	-	-	12	35	10	-	5260	2850	-	-
CT-64-7.5-7.5	-	-	53	-	-	10	15	30	12	35	-	18	-	-	4080	3300
CT-64-10	-	-	43	6	12	-	-	-	15	35	10	-	6400	3400	-	-
CT-64-10-10	-	-	62	-	-	7	12	16	15	35	-	20	-	-	5340	4320
CT-64-15	-	-	54	5	10	-	-	-	15	35	10	-	10880	5300	-	-
CT-64-15-15	-	-	81	-	-	5	9	12	15	35	-	20	-	-	7600	6160

Performance is based on 230 volt operation and a 24°C ambient. If ambient temperature exceeds 30°C, CSZ recommends a water cooled condenser. For 50 Hz. operation, stated performance and air flow will be approximately 17% less. Specifications are subject to change. The addition of live load will affect humidity control.

			Phy	vsical Sp	ical Specifications						
Model	Workspace	Exterior	r in Inch	es (cm)	Interior	in Inche	es (cm)				
	Volume	W	D	H	W	D	H				
CT-16	16 cu. ft.	52	60	84	30	30	30				
	(453 L)	(132)	(152)	(213)	(76)	(76)	(76)				
CT-32	32 cu. ft.	60	67	92	38	38	38				
	(227 L)	(152)	(170)	(234)	(97)	(97)	(97)				
CT-64	64 cu. ft.	71.5	83	100	48	48	48				
	(1812 L)	(182)	(211)	(254)	(122)	(122)	(122)				

# **Optional Accessories**

- Touch Screen
- Windows-Based Software Packages
- IEEE-488 Computer Interface
- Running Time Meter
- 50 Hz. Operation
- Temperature Recorders
- Electrical Disconnect Switch
- CO<sub>2</sub>/LN<sub>2</sub> Boost Cooling
- Dry Air Purge System
- Recirculating Humidity Water Supply
- Low Relative Humidity
- Access Ports
- Casters
- Shelving

# **Custom Capabilities**

- Explosion-Proof Chambers
- Custom-Size Chambers
- Ultra High Temperatures
- Ultra Low Temperatures
- Compliance to all Wiring Standards
- Remote Refrigeration Systems
- Custom Control Interface

# Sixty plus years of **Experience...**

Cincinnati Sub-Zero (CSZ) Products, Inc. is an ISO-9001 certified company with over 60 years of industry experience designing and manufacturing temperature-controlled products of the highest quality, with a commitment to total customer satisfaction.

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

- Temperature cycling
- Thermal shock (liquid & air)
- Altitude
- Freezers
- Wind & Rain
- Other custom chambers

- Humidity
- Stress-screening
   AGREE vibration
- Liquid Chillers
- Elquid Chi
   Dust
- DU

Custom fixtures may also be designed and fabricated for your product needs.

# Quality Assurance

The quality design and engineering of our products is known throughout the industry. We ensure the quality and reliability of every product we manufacture with design review meetings, incoming and in-process inspections, vendor auditing, and validation testing. Our ISO-9001 certification combined with our quality processes ensure you are purchasing the most reliable chamber in the industry.

## Service

Service is the cornerstone at Cincinnati Sub-Zero. Matched by none, CSZ provides a comprehensive service organization to assure product performance. CSZ has factory-trained representatives to provide on-site maintenance and repair of your CSZ products. From the first contact with our customer service department, you will be provided with prompt, courteous, and knowledgeable assistance.

CSZ offers extended product warranties, preventative maintenance programs, upgrades, and A2LA Accredited calibration services. Contact CSZ's service department today for more details.

Protect your investment Reduce cost of ownership Save valuable maintenance time Assure prompt qualified service Enable planned limited expenditures Keep your equipment performing to today's latest standards



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