



ENVIRONMENTAL TEST CHAMBERS FOR THE ELECTRONICS INDUSTRY



The Testing Standard.

www.cszproducts.com

Electronics Testing

Our chambers are also used every day to assist in the development of new technologies for the industry.



For the right testing solution, with the right team behind it—turn to CSZ. We have over 80 years' of experience providing environmental test chamber solutions designed with the features you need, to deliver the value you've come to expect along with our commitment to customer satisfaction.

We provide a full selection of test chambers to assist manufacturers in building robust and reliable products that people use every day. Environmental chambers are utilized in the electronics industry to test various types of components such as ICs, circuit boards, semi-conductors, transducers, storage drives, power supplies, surge protectors, touch panels, fuses, capacitors, sensors, switches, connectors, electronic assemblies and more.

We offer a vast array of test chambers supplied to the electronics market to meet a variety of industry standards such as IEC, IPC, JEDEC, Mil-Std and more. Choose from small benchtop temperature/humidity chambers for testing small electronics to large reach-in and walk-in rooms designed for specific testing applications.



Z-Plus Temperature/Humidity Chambers

From basic to accelerated stress testing

Whether you need to perform basic temperature cycling or rapid cycling, the Z-Plus offers a variety of sizes, temperature ranges and performance packages that meet your testing needs with over 150 different models to select from with and without humidity. Designed for ease-of-use, reliability and performance, this line of temperature and/or humidity chambers incorporates customer-requested features with extended performance packages up to 30°C/min for accelerated stress screening and for faster temperature change rates.

Workspace Volume	8 cu. ft. to 96 cu. ft. (230L to 2718L)	
Temperature Ranges	Single Stage:	-34°C to +190°C (-30°F to +375°F)
	Tundra®:	-45°C to +190°C (-49°F to +375°F)
	Cascade:	-70°C to +190°C (-94°F to +375°F)
Optional Humidity Range	10% to 98% RH Optional Low 5% RH	



Reach-In Chambers

ZPB Stackable Benchtop Chambers

Flexible to meet your test space and requirements

Our new 8 cu. ft. benchtop test chamber is ideal for the most common testing applications, available as temperature only unit or temperature and humidity chamber. This particular model is designed for multiple use cases, offering flexibility and the ability to test more product in the same workspace. The chamber may be used in a variety of configurations:

- 1. Standard benchtop model, placed on existing table top.
- 2. Single chamber with optional cart provides storage for test equipment on the supplied shelf, saving space.
- 3. Stacked chamber configuration with the optional cart, saves floors space, **doubling test capacity in the same footprint. Run two different tests in separate chambers without taking up additional space in your lab.**

Workspace Volume	8 cu. ft. (230L)
Temperature Range	Tundra®: -45°C to +190°C (-49°F to 375°F)
Humidity Range Optional Range	10% to 98% RH 5% to 98% RH



MicroClimate® Temperature/Humidity Chambers

Compact chamber takes minimal floor space

MicroClimate chambers simulate a full range of temperature and/or humidity conditions. These chambers are designed to provide users with a compact chamber for testing small components and products. Two sizes are available which include a 1.2 cu. ft. (33 L) benchtop model and a 3 cubic ft. (84 L) floor models with casters. The floor model is available in three different models for faster heating & cooling performance.

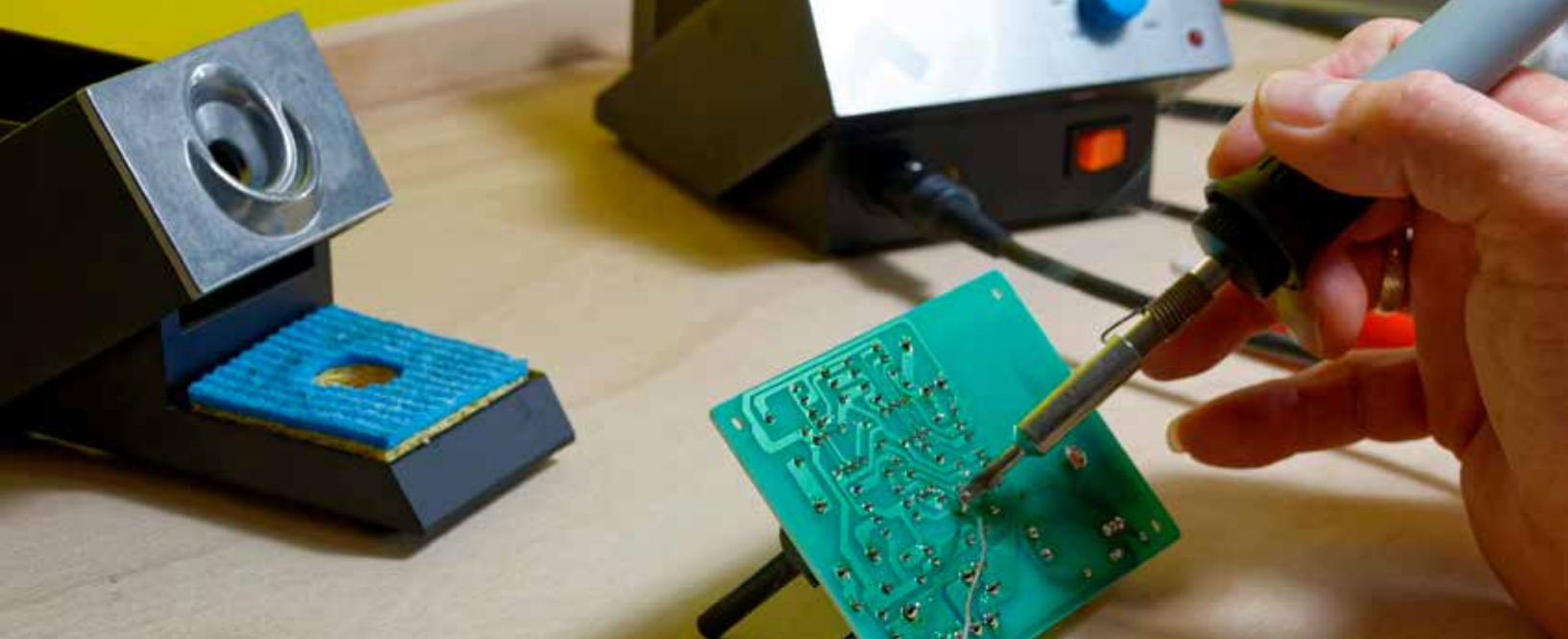
Workspace Volume	1.2 cu. ft. (34 L)	3 cu. ft. (85 L)
Temperature Range	Single Stage: -30°C to +190°C (-22°F to +375°F)	-
	Cascade: -68°C to +190°C (-90°F to +375°F)	
Optional Humidity	10% to 98% RH	



Benchtop Model



MC-3 Model



Thermal Shock/ESS Chambers

Detect product defects before they get to your customer

Thermal shock / ESS chambers are capable of producing optimum stress levels for detecting product flaws by stimulating defects at the lowest level of assembly, before they get to your customer. The return on investment in both actual savings and customer confidence adds significant value.

Vertical Thermal Shock, Air-To-Air Chambers

Superior performance in a smaller footprint

Vertical Thermal Shock (VTS) chambers consist of separately controlled hot and cold zones. Product is transferred between these zones for rapid product temperature change. The refrigerated zone of the VTS Chamber will also perform as a fully functional, independent environmental test chamber.

Workspace Volume	1 to 11 cu. ft. (28 L to 311 L)
Temperature Range	*Hot Chamber: +50°C to +210°C (+122°F to +410°F) Hot/Cold Chamber: -75°C to +190°C (-103°F to +375°F)

*VTS-9 Hot Chamber +115°C (+239°F)
Custom Sizes Available



Our unique chamber design passes equal volumes of high velocity conditioned air over the product, resulting in rapid product temperature changes.

Thermal Shock/ESS Chambers



Immediate temperature shock for faster testing

TSB-Series Liquid Baths provide immediate product exposure to thermal stresses. Vapor-tight construction and design minimizes expensive test liquid vapors from evaporating when the unit is opened for loading or unloading product.



Workspace Volume	2 lbs. & 5 lbs. (.9kg & 2.3kg)
Temperature Range	Hot Bath: +35°C to +160°C (+95°F to +320°F) Cold Bath: -75°C to +25°C (-103°F to +77°F)
Custom Sizes Available	

Horizontal Thermal Shock Chambers

Thermally shock twice as much product with one chamber

Our horizontal thermal shock chambers are the ideal choice for batch testing and larger test loads. Chambers are designed to perform tailored environmental stress screening of component and board level electronic assemblies. The carrier basket transfers the load between the hot and cold zones in a two or three zone configuration. In the horizontal three zone, the products travel via a carrier basket between the cold and ambient zones, and the hot zone travels to envelop the carrier basket.



Double duty thermal shock chambers (DTS) consist of three zones: a hot chamber on each end with a cold chamber in the middle. This design allows product to be moved between the zones simultaneously with two product baskets - exposing twice as much product in one system to maximize your investment.

Workspace Volume	16 to 45 cu. ft. (453 L & 1274 L)
DTS Temperature Range	Hot Chamber: +70°C to +210°C (+158°F to +410°F) Hot/Cold Chamber: -75°C to +190°C (-103°F to +375°F)
HTS Temperature Range	Hot Chamber: Ambient +55°C to +200°C (+131°F to +392°F) Cold Chamber: -70°C to Ambient (-158°F to Ambient)

Custom Sizes Available



Altitude Chambers with Temperature/Humidity

Simulating altitude and temperature for combined environmental testing

Our CA-Series Commercial Altitude Chambers combine temperature with vacuum to test basic components and sub-assemblies in a variety of industries. Your products can be tested simultaneously with temperature and altitude or may be used as a temperature/humidity cycling chamber with multiple uses. Chambers may be designed to meet RTCA/DO-160 test specifications for airborne equipment.

Workspace Volume	18 to 55 cu. Ft. (510 L to 1557 L)
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: -50°C to +190°C (-58°F to +375°F) Cascade: -68°C to +190°C (-90°F to +375°F)
Optional Humidity Range	10% to 98% RH Optional Low 5% RH
Altitude	100,000 Ft. (8.2 Torr) Standard 175,000 Ft. (.37 Torr) Optional

Custom sizes available



Combined Environments

Temperature/Humidity/Vibration Chambers

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

Systems are designed for compatibility with your choice of electrodynamic or mechanical vibration systems. This provides you with the flexibility to use your existing vibration shaker. Each model is manufactured to standard designs, but may be custom engineered to meet a wide range of stringent test requirements.

AV(H)L & CV(H) Workspace Volume	32 cu. Ft. to 81 cu. Ft. (906 L to 2293 L)
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: -50°C to +190°C (-58°F to +375°F) Cascade: -70°C to +190°C (-94°F to +375°F)
Optional Humidity Range	10% to 98% RH Optional Low 5% RH

Custom sizes available

Our AV(H)L-Series AGREE (Advisory Group on Reliability of Electronic Equipment) chambers combine temperature/humidity and vibration for commercial and military testing. The AV(H) L-Series models have the optional capability to interface with both horizontal and vertical electrodynamic vibration systems with rear or vertical sliding doors.



CV(H)-Series



AV(H)L-Series



AV(H)
Gantry Vertical Lift



HALT/HASS Chambers

Quickly Discover Design Weakness

HALT & HASS Time Compressor chambers incorporate the highest level of technology and quality for the optimum in reliability testing. Time Compressor Chambers are state-of-the-art HALT and HASS systems for simultaneously subjecting products to all-axis broadband vibration and rapid thermal cycling.

- Superior reliability and thermal performance
- Significantly better high and low vibration limits
- Quiet operation

	TC-2.0	TC-2.5	TC-3.0	TC-4.0
Temperature Range	-100°C to +200°C (-148°F to +392°F)			
Temperature Ramp Ranges	Up to 100°C/min			
Vibration Levels	1 - 90 GRMS			1 - 80 GRMS
Table Size	24" x 24" (61cm x 61cm)	30" x 30" (76cm x 76cm)	36" x 36" (91cm x 91cm)	48" x 48" (122cm x 122cm)



Benchtop Vibration Chamber

Ideal for reliability testing of compact products and electronics

The benchtop vibration system may be used as a stand-alone vibration table for vibration testing or placed inside an environmental chamber for combined vibration & temperature testing offering flexibility and greater return on investment.

	TCB-1.3
Vibration Level	1 to 60 GRMS
Temperature Range (Base Only)	-70°C to +163°C When placed inside a new or existing chamber
Table Size	22"W x 23"D x 12"H (56cm x 58cm x 30cm)



Walk-in Chambers

WM-Series Modular Panel Walk-In Chambers

Offers flexibility for testing larger volumes at an economical price

Modular Walk-In chambers use pre-fabricated panels and offer flexibility to meet virtually any size or configuration. These chambers are easily assembled, installed and may also be expanded for future applications. Select from stainless steel, aluminum, or galvanized construction to fit your specific needs.



Size	200 to 8,000 cu. ft. and larger	
Temperature Range	Single Stage:	-30°C to +85°C (-22°F to +185°F)
	Tundra®:	-45°C to +85°C (-49°F to +185°F)
	Tundra® II:	-50°C to +85°C (-58°F to +185°F)
	Cascade:	-70°C to +85°C (-94°F to +185°F)
Humidity Range	10% to 95% RH	

WW-Series Solid Welded Walk-In Chambers

Rugged construction with higher temperatures and faster cycling

WW-Series Welded Walk-In chambers are fabricated to allow wider temperature and humidity ranges with fast temperature change rates. These welded walk-in chambers consist of one solid piece that is constructed using a zinc coated exterior and a Type 304 stainless steel interior.

Size	200 to 8,000 cu. ft. and larger	
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:	-50°C to +190°C (-58°F to +375°F)
	Cascade:	-70°C to +190°C (-94°F to +375°F)
Humidity Range	10% to 95% RH	





OEM Test Chambers

Over the years, we have been an OEM supplier for a wide variety of companies across many industries manufacturing and private labelling thousands of specialized chambers. We provide unique environmental simulation solutions for testing or integration into your final system for reliability testing, production testing (batch, burn-in or end of line), any application where environmental temperature or humidity conditions are needed.



You design it | We design it together
Specially built for YOU.

EZT-570 Touchscreen Controller Find out more

The Next Generation Controller with Smartphone Technology

All features are built into the controller interface so no additional software or internet is required for access to all the features the controller has to offer.

Communications & Connectivity

- Monitor and/or Control the chamber remotely for anytime, anywhere access from any device using LAN VNC.
- Alarm notification sends email and/or text messages.
- Email built-in to send data, alarm, audit trail files directly from controller.
- Ethernet TCP/IP, and serial communications.



Save valuable time with the ease of use of the EZT-570 featuring fewer steps to accomplish your daily testing needs while incorporating simplified operation and programming to test faster.



Profiling

- Profiling includes up to 99 steps and 1000 cycles.
- Program ramp steps entering time or °C/min.
- Programs may be written using product control function.
- Easily review profile using trend chart or review list of steps before running profile.
- Profile status view displays current step, estimated start/stop date and time and more.
- Profiles may be transferred to different chambers via USB or optional EZ-View software.
- Automated delay profile start.

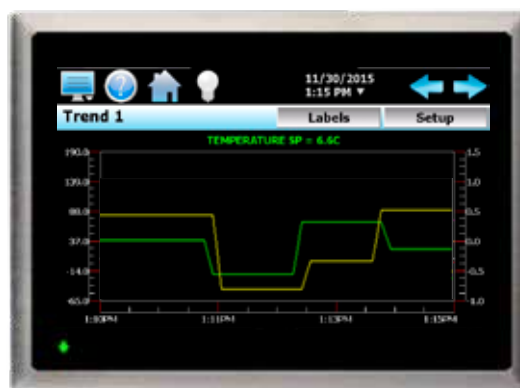
Data Logging

- Configurable log interval, data file length, filename, operator entered batch & lot information as well as an unlimited number of operator notes saved to the data file.
- Access data files directly from controller or PC.
- 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).



User Convenience & Flexibility

- Controller may be configured in any of one of 28 languages – one setting updates icons, menus and help screen
- Fully configurable alarm settings.
- Selectable power failure/recovery options.
- Full system security allows up to 30 different users with four different levels of security.
- Audit trail files track changes in settings by each user.
- Import/export configuration settings to other controllers saving time. (Personalized to your use)
- Configurable alarms and maintenance alerts
- Adapt-a-tune technology provides excellent control stability.



Graphing Technology

- Real-time trend display graph with adjustable time and min/max values.
- Up to eight configurable trend graphs with left & right axis
- Graph historical data files.
- Zoom in/out graphs.



Enhanced Communications & Control Options

- Digital input option provides 8 inputs that can be configured for various control functions including starting, stopping and pausing a profile. "Wait for" function allows the user to pause a profile during a particular step of the profile until a specific digital input is turned on or off.
- Digital output "customer event" feature provides 15 programmable outputs. Each output can be configured to perform other operations including alarm or profile status indicators for more control over your testing.
- Optional refrigeration monitor package displays and data logs temperatures and refrigeration system compressor suction/discharge pressures.
- Condensation control option helps prevent condensation from collecting on the part by automatically managing the air dewpoint.
- Bar code option allows user to scan barcode to start profile and to add notes to current data file when datalogging.



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.

[Request Information](#)



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The Testing Standard.

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