



**CSZ**  
Cincinnati Sub-Zero

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**TSB-SERIES  
THERMAL SHOCK BATHS**



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

# Liquid Thermal Shock Chambers

## Find product flaws before they reach your customer

Thermal Shock chambers detect hidden product flaws by stimulating defects at the lowest level of assembly, before they reach the customer. Product is submersed in fluid and thermally stressed between the hot and cold baths, resulting in rapid product temperature changes. The thermal stresses induced precipitate hidden manufacturing defects in electronic circuit boards, sub-assemblies and other components by the expansion and contraction of critical parts.

## EZT-570S Controller

CSZ EZT-570S Touch Screen Controller is designed to save chamber programming and setup time. Comes standard with data logging, data file access via memory stick or PC, Ethernet control and monitoring, alarm notification via email or phone text message, data file backup system, full system security, online help & voice assistance in multiple languages and more.

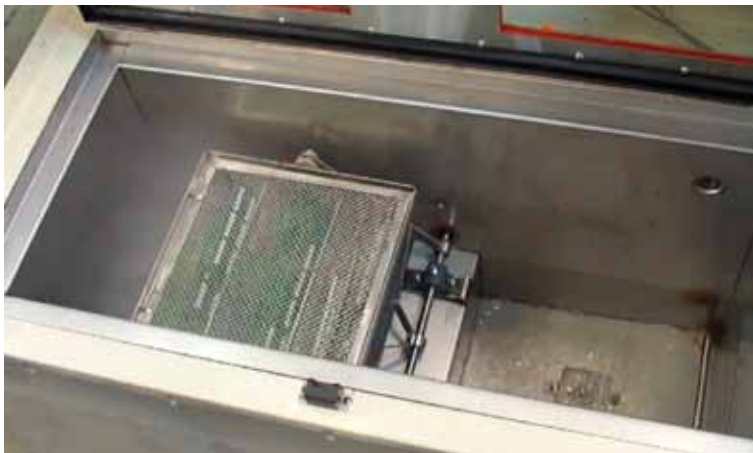




### Reduce fluid loss and save operating costs

We recommend the use of Golden D02-TS perfluorinated fluid for use in thermal shock applications. The fluid can be used in both the hot and cold baths, eliminating cross contamination and reducing evaporation losses. Other fluids may be used with factory approval.

The CSZ exclusive TSB-Series units contain a vapor-tight, stainless steel construction with a vapor expansion system that dramatically reduces the evaporation and fluid loss usually associated with liquid thermal shock equipment, lowering your operating costs over the life of the system.



### Vapor Tight Design

Design prevents the denser-than-air test liquid vapors from falling out when loading or unloading product. The type 304 stainless steel bath enclosure is continuously welded with a gasketed lid to form a positive seal and vapor tight unit.

A special bladder allows the vapors to expand and contract as the product moves between the hot and cold baths. The chamber liner is thermally isolated from the exterior by a thermal break. This reduces thermal loss and minimizes any formed condensation on the exterior of the cabinet after prolonged low temperature operation.



## Energy-Saving System

Utilizes bi-modal heating and cooling controls, eliminating the need to override the cooling system with an excessively large heating system. The results are energy efficient unit operation and lower operating costs.

## Transfer Mechanism

System is a single basket arrangement of mesh stainless steel to minimize thermal mass. The gear-driven transfer mechanism smoothly moves the transfer basket. Proximity switches are utilized to freeze the basket if there is a loss of electrical power, fluid or if the lid is opened.





## TSB Performance Specifications

Model	TSB-2P-1.5-1.5	TSB-5P-3-3
<b>Temperature Range</b>	Hot Bath: Ambient to +160°C (320°F) Cold Bath: Ambient to -75°C (-103°F)	
<b>Overall Dimensions</b>	75"H x 40"W x 43"D (190.5cm x 101.5cm x 109cm)	80"H x 45"W x 69"D (203cm x 114cm x 175cm)
<b>Basket Size</b>	1.5"D x 10"L x 10"W (4cm x 25.5cm x 25.5cm)	3.5"D x 11.5"L x 11.5"W (9cm x 29cm x 29cm)
<b>Net Bath Size</b>	12" x 12" (30.5cm x 30.5cm)	15" x 15" (38cm x 38cm)
<b>Liquid Capacity (each bath)</b>	8.5 gal. (32 l)	9 (34 l)
<b>Load Capacity*</b>	2 Lbs.	5 Lbs.
<b>Heater Capacity</b>	3000	4500
<b>Power Input**</b>	208/230/460V, 3PH	

\*Stated in Lbs. of integrated circuits and based on Mil-Std 883G, method 1011.9, test condition C at 5 1/2 cycles per hour. \*\*At 208V the heater is derated at 2.4 watts for TSB-2 and derated 3.3 watts for TSB-5.

Performance based on 60 Hz. operation and +75°F ambient air. For 50 Hz. operation, stated performance will be approximately 17% less.

Custom size chambers are also available.





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 2,400 people in 22 group companies in 15 countries.



## Testing Services

Our AZLA Accredited Test Laboratory provides environmental simulation testing utilizing the latest test technology to meet your testing needs from product qualification testing, overflow testing and /or third party product validation. Capabilities include Temperature, Humidity, and/or Vibration, Thermal Shock, Burn-in, Radiator Testing, Altitude, Vibration, HALT/HASS, Shock, Salt Spray, Cyclic Corrosion test and Drop Testing. Serving you from two locations in **Cincinnati, OH** and **Sterling Heights, MI**.

**FOR MORE INFORMATION** please call our Testing headquarters at **513-793-7774** or visit **[www.wnatesting.com](http://www.wnatesting.com)**.



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