A GENTHERM COMPANY

TSB-SERIES
THERMAL SHOCK BATHS

TSB-2

TSB-15

www.cszindustrial.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

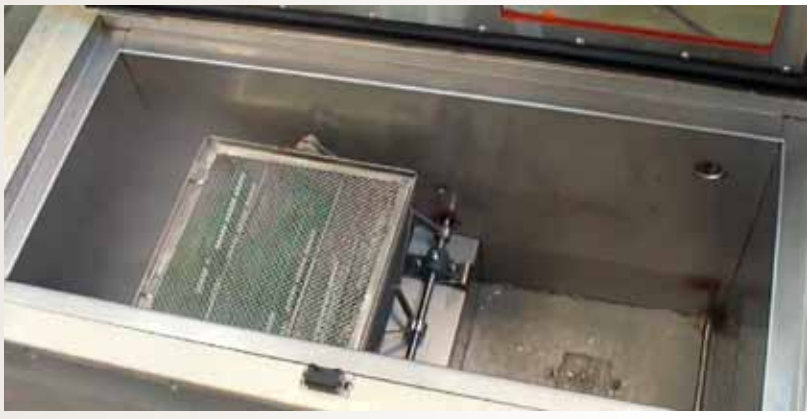
CSZ recommends the use of Galden DO2-TS perfluorinated fluid for use in thermal shock applications. The fluid can be used in both the hot and cold baths, eliminating cross contamination and reducing evaporation losses. Other fluids may be used with factory approval.

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.

Model	TSB-2P-1.5-1.5	TSB-5P-3-3
Temperature Range	Hot Bath: Ambient to +160°C (320°F) Cold Bath: Ambient to -75°C (-103°F)	
Overall Dimensions	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)
Basket Size	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)
Net Bath Size	12" x 12" (30.5cm x 30.5cm)	15" x 15" (38cm x 38cm)
Liquid Capacity (each bath)	8.5 gal. (32 l)	9 (34 l)
Load Capacity*	2 Lbs.	5 Lbs.
Heater Capacity	3000	4500
Power Input**	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.

CSZ is committed to your satisfaction every step of the way.

We are dedicated to our customers from the initial point of contact, fully understanding your unique needs, developing the right solution and delivering outstanding products and post-sale support.

CSZ has two manufacturing facilities in Cincinnati, OH with world-wide sales and service.

Your one stop solution for Environmental Chambers

- 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.

Services

- Refrigeration Retrofits
- Controller Upgrades
- Preventative Maintenance
- Calibration Services

Testing Services

CSZ Testing Services is an A2LA Accredited Test Laboratory utilizing the latest test technology. We are 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, Radiator Testing, Altitude, Vibration, HALT/HASS, 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.**

A2LA ACCREDITED

CSZ
A GENTHERM COMPANY

Cincinnati Sub-Zero
12011 Mosteller Road
Cincinnati, OH 45241

(p) **513-772-8810**
(f) **513-772-9119**

www.cszindustrial.com

© Cincinnati Sub-Zero Products, LLC
95002 7/16