Tenney ENVIRONMENTAL

Thermal Shock Chambers

Tenney Environmental Thermal Shock Chambers are designed and engineered to operate in accordance with a variety of today's thermal shock testing standards. These chambers provide two opposite extreme temperature environments referred to as a cold and hot zone. Thermal shock testing is achieved by quickly and repeatedly transferring a product between a cold and hot zone by means of a pneumatic carriage transport system. Chambers are available in 0.25 ft3, 1.4 ft3, 2 ft3, 5 ft3 and 8 ft3 of internal workspace volume. Design meets MIL-STD 202G Method 107G along with a variety of other thermal shock test specifications.

Features

- TS2 Product Series includes standard Compound Air Flow System for maximizing air mixing, Semi-Pierced adjustable duct walls for airflow tunability, Hot Gas Defrost system for prolonged testing
- TSJR Product Series feagures an efficient Vertical-Down Airflow System
- 2-inch traveling port*
- Open-air, rapid-responding, low-mass, nichrome wire heating elements
- Two zone types with hot/cold compartment setups
- Smart 1.2™ Control System with RS485 & Ethernet communications, on-board data logging, and graphical trend chart
- Cascade refrigeration system with TEV control and two semi-hermetic compressors
- Vapor-tight, interior liners made of 100% continuously welded stainless steel
- Vertical configurations**
- Fiberglass and polyurethane insulation ensures minimal thermal transfer
- Double-gasket doors provide additional insulation
- Door switch
- Limit switch
- Dual-carriage transport system with stainless steel, wire mesh basket

** Not standard on TSJR model*
*** TSJR model available in horizontal configuration only*

Benefits

- Provides two opposite temperature extremes for accurate and efficient temperature cycling and thermal shock testing
- Fully automatic chamber control features easy-to-read alphanumeric display
- Cold chamber also serves as convenient full range test chamber
- Alerts user of low pressure, high pressure, and compressor motor-overloads
- The Tenney Thermal Shock Junior Test Chamber is a cost-effective alternative to larger capacity units
- Ensures optimal product performance, meeting military standards MIL-STD-202G, MIL-STD-883 Method 1010, MIL-STD-810 Method 503, MIL-STD-750 Method 1051, and more

Applications

- Electronics
- Consumer Products
- Military and Defense
- Aerospace
- Telecommunications

**Non-hazardous, non-flammable, & non-volatile materials only*

** These pictures may show changes, options, and features that are not included on your unit. These pictures are for reference only.*

TPS™ Thermal Product Solutions

Tenney Environmental is a brand of Thermal Product Solutions, LLC.

»Blue M »Gruenberg »Lindberg/MPH »Lunaire
»Redline Chambers »Tenney »Wisconsin Oven

www.tenney.com
2821 Old Route 15 I New Columbia, PA 17856-9396 I USA I P: (570) 538-7200 I F: (570) 538-7380

Options

- Viewing windows with chamber lights
- Various power configurations available
- Additional Wire Mesh Type Basket
- OTP TempGuard V per chamber
- Dry Air Purge System per chamber
- Main Power Disconnect
- IEEE Communications
- Remote Control and Monitoring Software
- Remote Air Cooled Condenser (TS2 models only)
- Datalogging Thermocouples
- Product Control Thermocouple
- LN2 Boost Cooling

TPS™
Thermal Product Solutions

Tenney Environmental is a brand of Thermal Product Solutions, LLC.

»Blue M »Gruenberg »Lindberg/MPH »Lunaire
»Redline Chambers »Tenney »Wisconsin Oven

www.tenney.com
2821 Old Route 15 I New Columbia, PA 17856-9396 I USA I P: (570) 538-7200 I F: (570) 538-7380

Model	TSJR	WSP-109	TS2							
Carriage Capacity Ft3	0.25	1.4	2		5		8			
Carriage Capacity Inches (mm) (W x D x H)	10.5" x 6.125" x 6" (266mm x 155mm x 152mm)	14" x 14" x 12" (355mm x 355mm x 317.5mm)	15" x 15" x 15" 381mm x 381mm x 381mm		20" x 18" x 24" 508mm x 457mm x 610mm		25" x 25" x 23" 635mm x 635mm x 584mm			
Exterior Dimensions Inches (mm) (W x D x H)	63" x 22" x 41"/32" (1600mm x 1041mm x 558mm) Height with cart adds 32" / 813mm	55" x 46" x 91"/114.5" (1397mm x 1169mm x 2312mm) Height with traveling port fully extended is 114.5" / 2908mm	74" x 102" x 67"/87" (1880mm x 2591mm x 1702mm) Height with traveling port fully extended is 87" / 2210mm		83" x 107" x 73"/93" (2108mm x 2718mm x 1854mm) Height with traveling port fully extended is 93" / 2362mm		84" x 112" x 80"/102" (2134mm x 2845mm x 2032mm) Height with traveling port fully extended is 102" / 2591mm			
Refrigeration (HP)	½ + ½ + LN2	LN2 Only	2	7.5	2	7.5	2	7.5	15	
Hot Zone/ Cold Zone Heat (kW)	2.5/0.5	16/4	18/6		21/6		21/6			
Power	208V - 230V 1PH 60HZ	208V - 230V 1PH 60HZ	208V - 230V 3PH 60HZ or 480V 3PH 60HZ							
Estimated Recommended OCP	30	125	225A (208 - 230V 3PH 60HZ) or 100A (460V 3PH 60HZ)		225A (208 - 230V 3PH 60HZ) or 100A (460V 3PH 60HZ)		350A (208 - 230V 3PH 60HZ) or 150A (460V 3PH 60HZ)			
Estimated Full Load Amps	24	100	164A (208 - 230V 3PH 60HZ) or 78A (460V 3PH 60HZ)		164A (208 - 230V 3PH 60HZ) or 78A (460V 3PH 60HZ)		257A (208 - 230V 3PH 60HZ) or 116A (460V 3PH 60HZ)			
Cooling Type	Air Cooled	N/A	Cascade Water Cooled, Optional Remote Air Cooled Available							
Air Circulation	Vertical Down	Horizontal	Compound Horizontal with Adjustable Duct Walls							
Product Load (lbs)	3	30	200*		200*		200*			
Approx Unit Weight (lbs)	900	1750	4700		5200		6200			
Cold Chamber										
Operating Temperature Range	-68°C to 200°C	-75°C to 200°C	-73°C to +200°C							
Hot Chamber										
Operating Temperature Range	+40°C to +200°C	+85°C to +215°C	Above ambient to +200°C							
Maximum Temperature	+200°C	+215°C	+200°C							

* The load rating is the maximum weight the carriage system can handle. Temperature recovery should be reviewed by the factory.

2821 Old Route 15 I New Columbia, PA 17856-9396 I USA I P: (570) 538-7200 I F: (570) 538-7380