weisstechnik®
a schunk company

Thermal Shock Test Chambers TS Series

Stand the test of time.

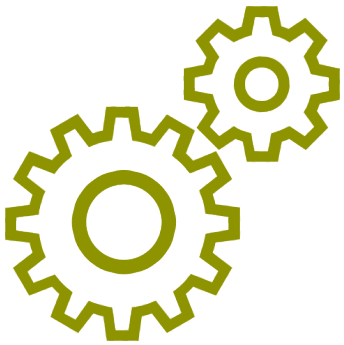
Engineered & Manufactured in the USA

www.weiss-na.com

TS Series - The Highest Standard for Thermal Shock Test Chambers

We know what matters to you for your tests: reliable, precise and reproducible measurement results. That's why we construct our test chambers so that you can achieve this, because incorrect results lead to incorrect conclusions. We consider this and eliminate possible disturbances during development and build on our comprehensive know-how and years of experience.

Perfection in Performance, Equipment and Design



Increased Productivity

- 1,000 cycles without defrost.
- Time optimized mode - higher product throughput
- Pause function - allows for uninterrupted testing
- Programmable Pre-temp function - allows for pre-conditioning of inactive zone

Safety

- Electrical and Mechanical transfer interlock
- Main Power disconnect
- Chamber overheat protection
- Lockable Door Latch
- Product door access protection

Energy Savings

- Green Mode - up to 40% in energy savings.
- Reduce CO_2 emissions

Quiet Operation

- Ideal for laboratory testing

Small Footprint

- Allows for small test lab operation

Performance Features

The exceptional features of the TS Series offer the user unmatched reliable measurement results. The well thought-out design, quality manufacturing and low maintenance gives you peace of mind and quality results in your testing applications.

Product Protection

- Protective mesh panels - keeps product in basket during test
- Moveable product sensor
- Hot & cold zones product temperature limiter

Extended Temperature Range up to 250°C

- Allows for higher pre-temp conditioning

High Basket Loads

- Allows for heavy products to be tested
- Allows for higher throughput

Easy Operation

- Touchscreen controller - optimized for Thermal Shock operation

Test Space Lighting

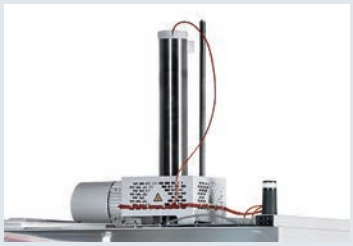
- Long life halogen bulb
- Bright chamber illumination

Meets Global Testing Standards

- MIL-STD-810 G, Method 503.5
- MIL-STD-883 J, Method 1010.8, versions A, B, C, D, F
- IEC 60068-2-14, Test Na^2, transfer time < 10 seconds
- JEDEC standard JESD 22-A1068

Designed with user benefits in mind.

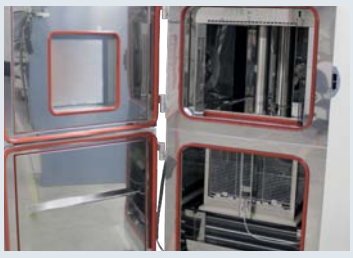
Protective Mesh
Keeps your test specimen in place during testing



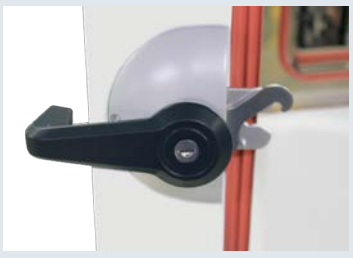
Robust Basket Travel System
The robust basket travel system allows for heavier loads

Touchscreen Controller
Precise and accurate

Moveable Product Sensor
Measuring of product temperature



Double Seal Gaskets
Quality in every detail



Keyed Door Lock
Added security

Impressive technology. Reliable results.

The performance data at a glance:

Type		TS 60	TS 120	TS 120 P	TS 300	TS 300 P
External dimensions W x D x H, approx.*	**mm/ inches**	895 x 1970 x 1895 35.2x77.5x74.6	990 x 2350 x 1985 39x92.5x78.2	990 x 2625 x 1985 39x103.5x78.2	2269x2377x2230 89.5x93.5x88	2469 x 2775 x 2230 97x109.5x88
Test basket volume	**liters/ cu ft**	60/2.1	120/4.2	120/4.2	300/10.5	300/10.5
Test basket dimensions W x D x H, approx.	**mm/ inches**	380 x 430 x 370 15x17x14.5	470 x 650 x 410 18.5x25.6x16.1	470 x 650 x 410 18.5x25.6x16.1	770 x 650 x 610 30.3x25.5x24	770 x 650 x 610 30.3x25.5x24
Temperature range hot chamber	**°C/°F**	+50 to +220 +122 to +428	+50 to +220 +122 to +428	+50 to +220 +122 to +428	+50 to +220 +122 to +428	+50 to +220 +122 to +428
Temperature range cold chamber	**°C/°F**	-80 to +70 -112 to +158	-80 to +70 -112 to +158	-80 to +70 -112 to +158	-80 to +70 -112 to +158	-80 to +70 -112 to +158
Heating rate hot chamber[1]	**°C/min**	17.0	14.0	18.0	11.0	12.0
Cooling rate cold chamber[1]	**°C/min**	3.7	6.3	7.5	5.0	6.0
Heating rate of cold chamber (single-chamber operation)[1]	**°C/min**	3.2	2.0	2.0	1.5	1.5
Temperature deviation, in time[2]	**°C**	± 0.3 to ± 1.0	± 0.3 to ± 1.0	± 0.3 to ± 1.0	± 0.3 to ± 1.0	± 1.0
Basket transfer time	**sec**	< 10	< 10	< 10	< 10	< 10
Recovery time[3]	**min**	< 15[4]	< 15[5]	< 12[6]	< 15[7]	< 15[8]
Refrigeration		Air-Cooled	Water-Cooled			

*Add additional height of 432mm (17") for traveling port TS 60
*Add additional height of 470mm (18.5") for traveling port TS 120 and TS 120 P
*Add additional height of 665mm (26.2") for traveling port TS 300 and TS 300 P
*TS 300 and TS 300 P have two pieces, consult your account manager
*Add 9" (229mm) to the depth for touchscreen controller mounting
[1]As per IEC 60068-3-5. Temperature change rates can be increased by selecting higher/lower temperatures in the hot/cold chamber.
[2]In the middle of the chamber.
[3]Depending on adjusted set point value in the temperature range -65 °C to +200 °C.
[4]MIL-STD-883 E Method 1010.8, degree of intensity D with 4.5 kg ICs distributed over 2 shelves, measurement in specimen.
[5]MIL-STD-883 J Method 1010.8, degree of intensity D with 12 kg ICs distributed over 3 shelves, measurement in specimen.
[6]MIL-STD-883 F Method 1010.8, degree of intensity D with 20 kg ICs distributed over 3 shelves, measurement in specimen.
[7]MIL-STD-883 J Method 1010.8, degree of intensity F with 25 kg ICs distributed over 3 shelves, measurement in specimen.
[8]MIL-STD-883 F Method 1010.8, degree of intensity C with 50 kg ICs distributed over 3 shelves, measurement in specimen.
The performance data refer to +25 °C ambient temperature, 480 V nominal voltage,
without specimen, optional equipment and heat compensation.
Chambers typically use refrigerants R404A and R23. Consult factory.
We reserve the right to make any technical alterations.

Smart programming

Advanced touchscreen chamber control & programming

The Latest Technology - Optimized for Thermal Shock Operation

Webseason® is the latest technology in digital chamber control and programming. With the simple, easy to use touchscreen and menu-guided user interface, no programming knowledge is necessary. Webseason® offers many features including USB and Ethernet interfaces, remote control and remote monitoring, networking with other test systems, and a 32- bit control and monitoring system to ensure accurate control of temperature and humidity.

WEB Season®

Features - Get the most out of your Thermal Shock testing

Main Menu

Manual Mode

Energy Savings & Time Optimized Mode

Multiple Languages

Everything at a glance • Everything under control • Everything perfect

In S!MPATI®, smart integration is programmed in.

S!M PATI®

For Optimum Operation of Your Environmental Test Chamber

- Remote monitoring of chamber operation
- Link up to 99 chambers

Additional Thermal Shock Models

Pre-engineered and custom sizes available


Vertical


Liquid


Horizontal


Horizontal Double Duty

The Weiss Technik Thermal shock series offers a complete line for all your testing applications. Available in Horizontal, Vertical and Liquid models, the TS Series meets many of the stringent MIL-STD 883 test standards; contact your local sales office for a complete list.

Features:

- Two and Three Zone with multiple capacity available
- Guaranteed part temperature recovery/soak
- Many standard safety features
- Traveling port for product temperature monitoring

Design & Performance

Configuration		Vertical	Horizontal		Liquid
Model Number		TS V11	TSH27	TSH45	TSL5
Basket Volume	Cubic Feet / Liters	11 / 311	27 / 765	45 / 1274	0.55 / 16
Basket Capacity	Pounds	125 lbs	500 lbs	500 lbs	10 lbs
Basket Size	Width	30" (762mm)	36" (914mm)	60" (1524mm)	13.25" (337mm)
	Depth	25" (635mm)	36" (914mm)	36" (914mm)	12" (305mm)
	Height	25" (635mm)	36" (914mm)	36" (914mm)	6" (152mm)
Chamber Exterior Dimensions	Width	89" (2261mm) [2]	230" (5842mm) [4]	308" (7823mm) [4]	82" (2082mm)
	Depth	70" (1778mm) [2]	86" (2184mm)	92" (2337mm)	68" (1727mm)
	Height	134" (3404mm) [3]	99" (2515mm)	99" (2515mm)	96" (2439mm)
Temperature Range	Minimum	-67°C (-88°F)			-65°C (-85°F)
	Maximum	+200°C (+392°F)			+160°C (+320°F)
Temperature Recovery		171 lbs	376 lbs	327 lbs	7.5 ibs
Product Load [1]		125 lbs	276 lbs	240 lbs	5.5 lbs [5]

Performances are based on laboratory conditions at +24°C, 60 Hz, with cooling water inlet temperature and flow rate according to requirements. Performances at 50 Hz may vary. Please consult with your local Sales Representative if your conditions vary.

[1] Weights are for Aluminum (other materials will vary), and test conforms to MIL-SPEC 883L 1010.9 test condition B for Air-Thermal-Shock

[2] TSV11 has a separate machine pack, 78"W x 88"D x 42"H (1727 x 2235 x 1067 mm)

[3] TSV11 travelling port extends 44" above top of chamber when basket is in top (Hot Zone) chamber

[4] TSH travelling port extends out from right side. Extension: TSH9: 40", TSH27: 48", TSH45: 67".

[5] Liquid Thermal Shock recovery < 5 min. per MIL-SPEC-883L 1011.9 Test Conditions B

Dimensions are chamber only, control console to be mounted separately.

MIL-SPEC 883L Standards are critical for many customers. Weiss Technik' Thermal Shock chambers are designed to conform to MIL-SPEC 883L 1010.9 Test Conditions A, B, C, D, and F for air thermal shock, depending upon the customer's product; and to conform to 1011.9 Test Condition C for liquid thermal shock. These chambers can meet many of the most stringent MIL-SPEC standards. Chamber dimensions and capacity can vary according to customer floor plan needs; please consult with your local Sales Representative for customizing the chamber for your facility.

Custom sizes available

Worldwide Service

After Hours Service Support Helpline: 1-800-361-6731

Weiss Technik products are backed by our global factory trained service department. With over 400 service technicians located throughout the globe, we can offer our customers a wide variety of services, including the following:

- Emergency Service
- Instrumentation Upgrades
- Equipment Relocation
- Equipment Modifications
- Equipment Start-up
- Instrument Calibration
- Preventative Maintenance
- Refrigerant Modification
- Replacement and Spare Parts
- Training and Technical Support

Quality

Weiss Technik helps make the task of compliance with the QS9000 3rd Edition Calibration Mandate much simpler. There is no need for you to take the time to actively seek an accredited laboratory.

Weiss Technik, certified ISO9001 in 1997, can provide the latest required ISO/IEC 17025 (A2LA accredited) calibration services at your facility. These services meet 17025 requirements and ensure that your company is in compliance with the most recent changes in the QS9000 3rd Edition mandate.

Please contact us for a copy of our Certificate of Accreditation and a copy of our Calibration Scope of Accreditation.

A2LA ACCREDITED
CERT # 1276.01

Weiss Technik North America, Inc. Calibration Services are accredited by A2LA to ISO/IEC 17025

Quality System Registered to ISO 9001

Weiss Technik North America, Inc. Quality System is registered to ISO9001:2015

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