

**weisstechnik**<sup>®</sup>  
a schunk company



**IN STOCK  
READY  
TO SHIP**

**Thermal Shock  
Test Chambers  
TS Series**



# 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

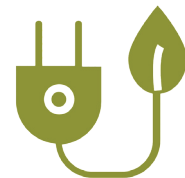


### Safety

- 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<sub>2</sub> 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

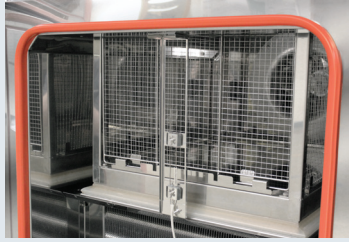
- Long life halogen bulb
- Bright chamber illumination



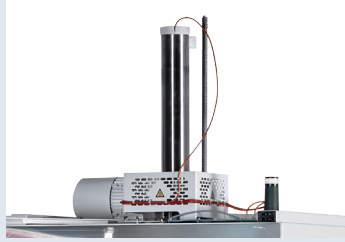
## Meets Global Testing Standards

- 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<sup>2</sup>, transfer time < 10 seconds
- JEDEC standard JESD 22-A1068

# Designed with user benefits in mind.



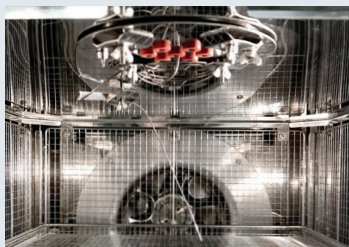
**Protective Mesh**  
Keeps your test specimen  
in place during testing



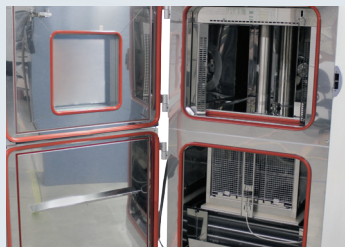
**Robust Basket Travel System**  
The robust basket travel system  
allows for heavier loads



**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
<b>External dimensions WxDxH, approx.*</b>	<b>mm/ inches</b>	895 x 1970 x 1895 35.2 x 77.5 x 74.6	990 x 2350 x 1985 39 x 92.5 x 78.2	990 x 2625 x 1985 39 x 103.5 x 78.2	2269 x 2377 x 2230 89.5 x 93.5 x 88	2469 x 2775 x 2230 97 x 109.5 x 88
<b>Test basket volume</b>	<b>liters/ cu ft</b>	60/2.1	120/4.2	120/4.2	300/10.5	300/10.5
<b>Test basket dimensions WxDxH, approx.</b>	<b>mm/ inches</b>	380 x 430 x 370 15 x 17 x 14.5	470 x 650 x 410 18.5 x 25.6 x 16.1	470 x 650 x 410 18.5 x 25.6 x 16.1	770 x 650 x 610 30.3 x 25.5 x 24	770 x 650 x 610 30.3 x 25.5 x 24
<b>Temperature range hot chamber</b>	<b>°C/°F</b>	+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
<b>Temperature range cold chamber</b>	<b>°C/°F</b>	-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
<b>Heating rate hot chamber<sup>1</sup></b>	<b>°C/min</b>	17.0	14.0	18.0	11.0	12.0
<b>Cooling rate cold chamber<sup>1</sup></b>	<b>°C/min</b>	3.7	6.3	7.5	5.0	6.0
<b>Heating rate of cold chamber (single-cham- ber operation)<sup>1</sup></b>	<b>°C/min</b>	3.2	2.0	2.0	1.5	1.5
<b>Temperature deviation, in time<sup>2</sup></b>	<b>°C</b>	±0.3 to ±1.0	±0.3 to ±1.0	±0.3 to ±1.0	±0.3 to ±1.0	±1.0
<b>Basket transfer time</b>	<b>sec</b>	< 10	< 10	< 10	< 10	< 10
<b>Recovery time<sup>3</sup></b>	<b>min</b>	< 15 <sup>4</sup>	< 15 <sup>5</sup>	< 12 <sup>6</sup>	< 15 <sup>7</sup>	< 15 <sup>8</sup>
<b>Refrigeration</b>		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

<sup>1</sup>As per IEC 60068-3-5. Temperature change rates can be increased by selecting higher/lower temperatures in the hot/cold chamber.

<sup>2</sup>In the middle of the chamber.

<sup>3</sup>Depending on adjusted set point value in the temperature range -65 °C to +200 °C.

<sup>4</sup>MIL-STD-883 E Method 1010.8, degree of intensity D with 4.5 kg ICs distributed over 2 shelves, measurement in specimen.

<sup>5</sup>MIL-STD-883 J Method 1010.8, degree of intensity D with 12 kg ICs distributed over 3 shelves, measurement in specimen.

<sup>6</sup>MIL-STD-883 F Method 1010.8, degree of intensity D with 20 kg ICs distributed over 3 shelves, measurement in specimen.

<sup>7</sup>MIL-STD-883 J Method 1010.8, degree of intensity F with 25 kg ICs distributed over 3 shelves, measurement in specimen.

<sup>8</sup>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

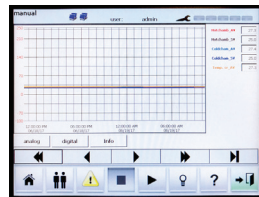
The SImpac control system is the latest technology in digital chamber control and programming. With the simple, easy to use touchscreen and menu-guided user interface, no programming knowledge is necessary. SImpac offers many features including USB and Ethernet interfaces, remote control and remote monitoring,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



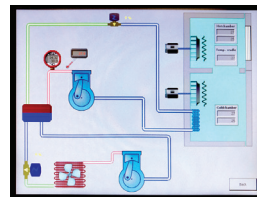
#### Features - Get the most out of your Thermal Shock testing



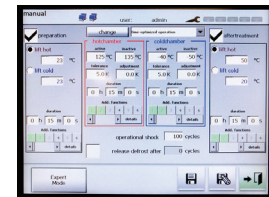
Main Menu



Real Time Graph



Diagnostic Mode



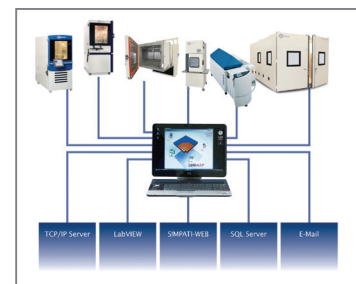
Time Optimized Mode/  
Energy Saving Mode

Everything at a glance • Everything under control • Everything perfect

### In SIMPATI®, smart integration is programmed in.

#### 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

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 offers product testing for most industries. TS Series meets many test standards; contact your local account manager for details.



Horizontal



Horizontal Three Zone



Liquid



Vertical

Custom sizes available



# Worldwide Service

**24/7 Service Support Helpline:  
1-800-361-6731**

Weiss Technik products are backed by our 24/7 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:

- > 24/7 Service Helpline
- > 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.

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WTNA/TS/JAN2018



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



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