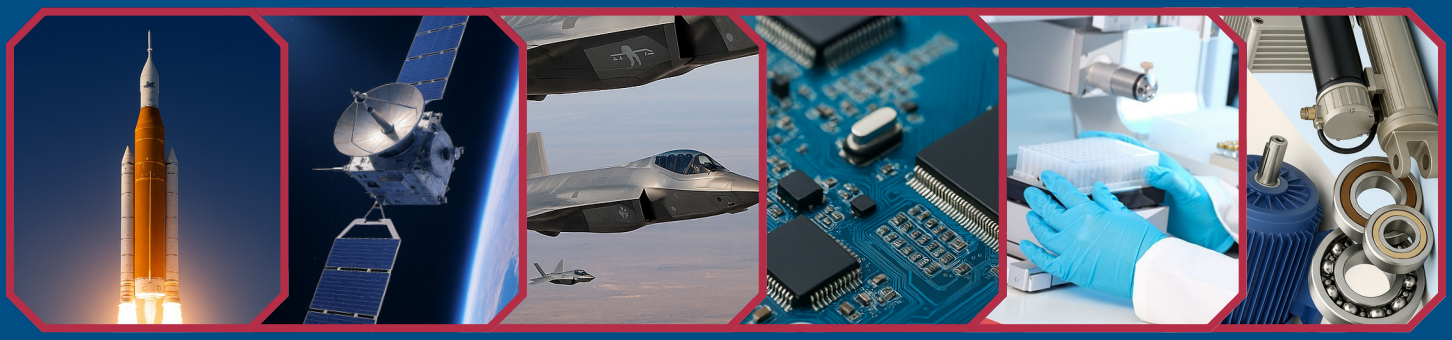
TotalTemp
Technologies, Inc.

Product Catalog

Thermal Testing Solutions



www.TotalTempTech.com (888) 712-2228

Catalog 2026, Version 1.0

Welcome

TotalTemp Technologies, Inc. designs and manufactures advanced thermal testing and temperature-control equipment engineered for precision, reliability, and efficiency. Founded by experienced engineers in the field, we continue a legacy of innovation in thermal platforms and custom test solutions. Our proven designs support critical programs across aerospace, communications, electronics, biomedical, defense, and automotive industries.

Our portfolio includes:

Thermal Platforms
Temperature Chambers
Hybrid Chambers
Space Simulation Vacuum Chambers
Custom Systems

With in-house engineering and manufacturing, we deliver high performance systems with fast turnaround and the flexibility to meet unique requirements. Our team brings decades of combined experience in electrical engineering, mechanical design, aerospace, and manufacturing.

At TotalTemp, we are committed to quality, value, and exceptional customer service. We look forward to supporting your testing needs and earning your trust as a longterm partner.

Thermal Platforms

Thermal Platforms provide fast, precise temperature control through direct conduction heat transfer, making them ideal for semiconductor, RF, and electronics testing. They deliver exceptional heating and cooling rates while maintaining stable, accurate temperatures.

Designed for low profile, flat mounted components, typically RF devices, amplifiers, attenuators, circulators/isolators, TWTs, and many low profile devices. Thermal platforms remain the most efficient solution for applications that can be thermally cycled through direct contact.

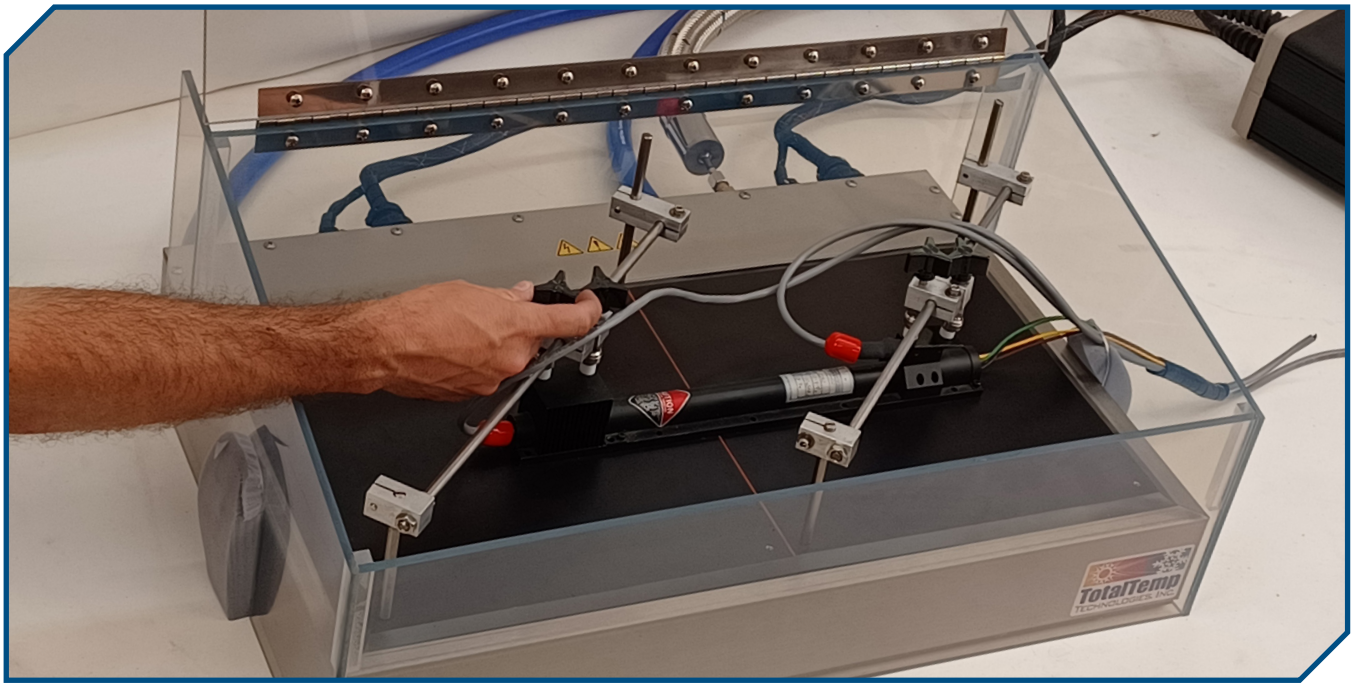
TotalTemp Technologies offers a comprehensive range of thermal platforms including:

- Cryogenic
- Mechanically Refrigerated
- Dual Zone Systems
- Heat Only Platforms
- Ultra/High Vacuum Platforms

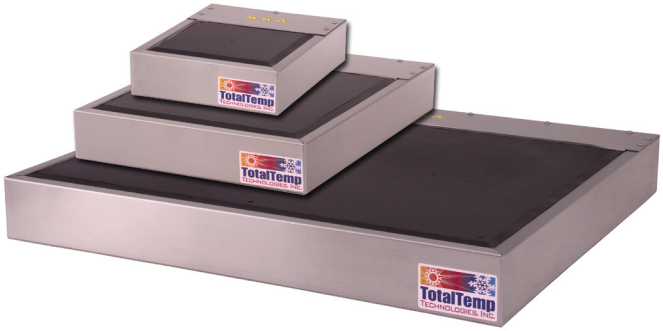
SD144 shown with probing cover

Our Platforms Deliver

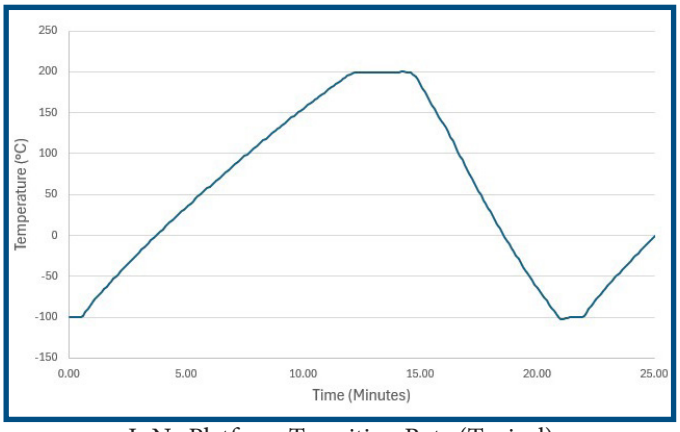
- Accurate temperature
- Uniform control
- Rapid thermal transition rates
- Compact footprints
- Excellent accessibility to the DUT
- Remote temperature controllers
- 2-year warranty with lifetime technical support
- Proudly made in San Diego, California, USA



SD144/288 Dual Zone shown with probing cover and clamps



Size comparison of SD49, SD144, and SD450



L-N_2 Platform Transition Rate (Typical)

Most cryogenic cooling systems use Liquid Nitrogen (L-N_2) or Liquid CO_2 (L-CO_2) for rapid temperature transitions and wide operating ranges supplied from a Dewar or a cryogenic bulk storage system.

They provide superior heat removal capacity, lower initial cost, faster ramp rates, low maintenance, and generally lower operating costs, particularly when usage levels justify installation of an outdoor bulk system.

With L-N_2 the system can reach -185°C offering excellent performance for deep cold applications. L-CO_2 can reach temperatures down to –65°C, but efficiency drops near this limit, requiring higher usage to maintain performance below -40°C.

Depending on temperature requirements and usage levels, systems can use either low pressure (300 PSIG) or high pressure (900 PSIG) L-CO_2 tanks. Low pressure L-CO_2, stored at about –18°C, offers minimal distribution losses compare to L-N_2. High pressure CO_2 is less efficient but stores indefinitely at room temperature.

Cryogenic Thermal Platform Specifications	
Temperature Range	-100°C to +200°C (L-N_2)
	-65°C to +200°C (L-CO_2)
	Extended temperature range available
Temperature Transition Rate	Cooling: typical 40°C, up to 85°C/minute (Custom)
	Heating: typical 20°C, up to 92°C/minute (Custom)
	Temperature transition rate can be programmed
Temperature Control Tolerance	±0.1°C
Temperature Uniformity	±0.5°C maximum
Power Requirement	100-240V / 50-60Hz / 1PH / 15-30A max
	CE marking available

Cryogenic Thermal Platform Dimensions

Model:	Work Surface Width x Depth Inch (CM)	External Width x Depth x Height Inch (CM)
SD14	3.75 x 3.75 (9.5 x 9.5)	6.31 x 10.31 x 3.38 (16.0 x 26.2 x 8.6)
SD49	7.5 x 6.5 (19.0 x 16.5)	9.88 x12.25 x 3.9 (25.1 x 31.1 x 9.9)
SD98	15 x 6.5 (38.1 x 19.0)	17.38 x 12.25 x 3.9 (44.1 x 31.1 x 9.9)
SD144	12 x 12 (30.5 x 30.5)	14.3 x 17.6 x 3.9 (36.3 x 44.7 x 9.9)
SD288	24 x 12 (61.0 x 30.5)	26.4 x 17.6 x 3.9 (67.1 x 44.7 x 9.9)
SD450	25 x 18 (63.5 x 45.7)	27.3 x 23.7 x 3.9 (69.3 x 60.2 x 9.9)

Cryogenic dewar for liquid nitrogen

Features & Options

- Rugged stainless steel long life chassis
- Superior heat transfer and wear resistance surface
- Standard or custom hole patterns
- Bench top or rack mounted configuration
- Programmable touch-screen temperature controllers
- Built-in thermal failsafe system
- Redundant safety protection system
- Cascade smart temperature control algorithm
- Dual Zone platform temperature control
- Probing cover and purge system
- CE Certified

Mechanically Refrigerated Thermal Platforms

SC144 chassis mounted and SC98 remote benchtop configurations

SC450 shown with remote configuration

Mechanically refrigerated cooling systems use compressors and conventional refrigerants in a closed-loop cooling system. They operate using standard electrical power and do not require cryogenic coolant tanks.

Single stage compressor system performance plateaus around -40°C. A two-stage cascade refrigeration system can cool down to the ultimate low temperature of around -75°C but they are more complex and more expensive. Mechanically refrigerated systems cost more upfront but can offer lower hourly operating cost for long duration testing.

For long, continuous testing at moderate subzero temperatures with minimal device load, a mechanically refrigerated platform is recommended. These systems are more efficient for extended operation down to –35°C with single stage units and –70°C with cascade refrigeration.

Mechanically Refrigerated Thermal Platform Specifications	
Temperature Range	SC Single Stage Model: -40°C to +175°C
	SCC Cascade System: -70°C to +175°C
Temperature Transition Rate	Cooling: up to 4-12°C/minute
	Heating: up to 12-30°C/minute
	Cooling and heating rate can be adjusted
Temperature Control Tolerance	±0.1°C
Temperature Uniformity	±0.5°C maximum
Power Requirement	100-240V / 60Hz / 1PH / 15-30A max

Mechanically Refrigerated Platform Dimensions	
Model: SC Single Stage & SCC Cascade System	Work Surface Width x Depth Inch (CM)
SC14 & SCC14	3.75 x 3.75 (9.5 x 9.5)
SC49 & SCC49	7.5 x 6.5 (19.0 x 16.5)
SC98 & SCC98	15 x 6.5 (38.1 x 19.0)
SC144 & SCC144	12 x 12 (30.5 x 30.5)
SC288 & SCC288	24 x 12 (61.0 x 30.5)
SC450 & SCC450	25 x 18 (63.5 x 45.7)

- Other platform sizes available
- Contact us for system external dimensions

Mechanical refrigeration construction

Features & Options

- Industry proven ultra-low temperature refrigeration system
- Efficient evaporator and heater arrangement
- Remote benchtop and chassis mounted configuration
- Advanced temperature controller
- Built-in thermal failsafe system
- Probing cover and purge system
- Two-year domestic and one year international warranty

Model SD144 Dual Zone (Independent) shown in horizontal orientation

Model Dual Zone (Independent) shown in vertical orientation

Dual Thermal Platforms are available either as two independent modules or two platforms integrated within a single chassis, providing flexible configuration options for complex thermal testing requirements.

In an independent dual zone configuration, the platforms may be oriented vertically to enable true two zone temperature control, ideal for devices requiring simultaneous hot and cold side conditioning.

Dual zone platforms in a single chassis are particularly effective for testing Traveling Wave Tube Amplifiers (TWTAs) and other devices with highly uneven power dissipation. One zone independently manages heat transfer or removal while the other zone drives the required test temperatures to accurately simulate real operating conditions.

The temperature controller in dual zone platforms manage both thermal platforms simultaneously or independently and can be mounted in a rack panel, allowing seamless integration into automated test environments.

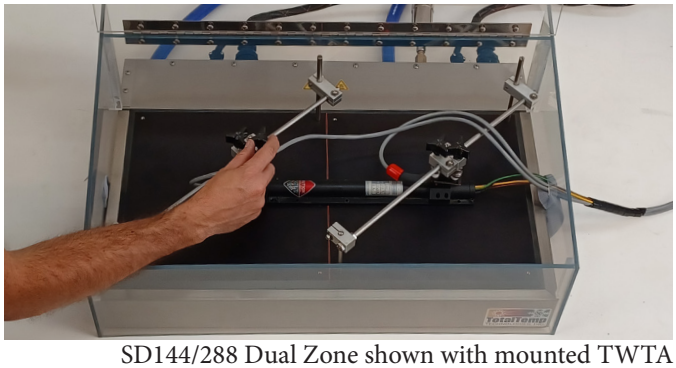
Dual Zone Thermal Platform Specifications	
Temperature Ranges (Independently Controllable)	-100°C to +200°C (L-N_2)
	-65°C to +200°C (L-CO_2)
	Extended temperature range available
Temperature Transition Rate	Cooling: typical 20°C, up to 85°C/minute (Custom)
	Heating: typical 18°C, up to 92°C/minute (Custom)
	Cooling and heating rate can be adjusted
Temperature Control Tolerance	±0.1°C
Temperature Uniformity	±0.5°C maximum
Power Requirement	100-120V / 50-60Hz / 1PH / 15-30A max
	200-240V / 50-60Hz / 1PH / 15-30A max
	CE marking available

Dual Zone Thermal Platform Dimensions	
Model:	Work Surface Width x Depth Inch (CM)
SD49/98 (Integrated)	7.5 x 6.5 (Qty.2) (19.0 x 16.5) (Qty.2)
SD144/288 (Integrated)	12 x 12 (Qty.2) (30.5 x 30.5) (Qty.2)
SD144 (Independent)	12 x 12 on left, 12 x 12 on right (30.5 x 30.5 on left, 30.5 x 30.5 on right)

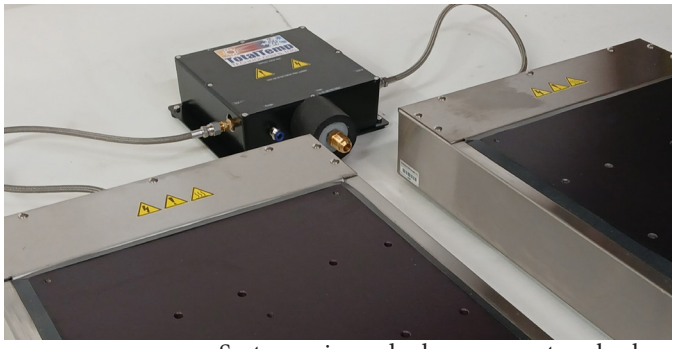
- Other platform sizes available
- See SD Platform dimensions (pg5)

Features & Options

- Benchtop or rack mounted controller
- Vertical or horizontal platform orientation
- Remote Valve box for coolant delivery
- Custom fixturing for DUT mounting
- CE Certified product available
- Two-year domestic and one-year



SD144/288 Dual Zone shown with mounted TWTA



System using a dual zone remote valve box

Heat Only Platforms — Model: HSD

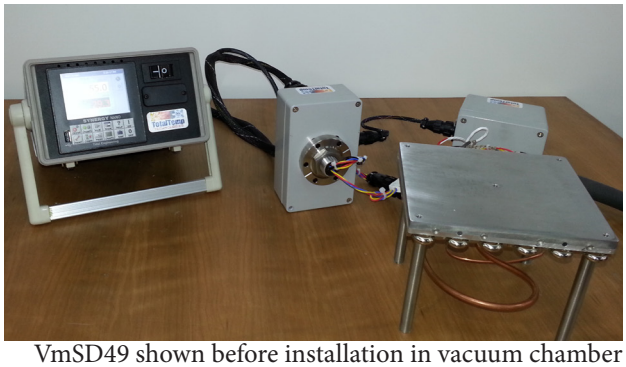
Heat Only Thermal Platforms provide highly efficient conductive heat transfer for component testing from ambient to 300°C temperatures with precise temperature control, excellent thermal uniformity, and very rapid transition rate.

Leveraging the same design principles found across TotalTemp Technologies' thermal platform line, Heat Only systems offer a compact footprint, easy DUT access, and seamless integration with advanced temperature controllers. They are an ideal solution for applications requiring fast, controlled conductive heating without the need for active cooling.

Available Sizes:

Heat Only Thermal Platforms are manufactured in the full range of standard SD series thermal platform sizes for consistency across applications.

HSD14 configured for heat only


VmSD49 shown before installation in vacuum chamber

Ultra/High Vacuum Chamber Platform — Model: VmSD

The TotalTemp Vacuum Platform can be integrated into an existing vacuum chamber, as illustrated above, or supplied as a complete turnkey system to meet your space simulation and thermal vacuum requirements.

Available Sizes:

Consult TotalTemp for both standard and fully customized sizes.

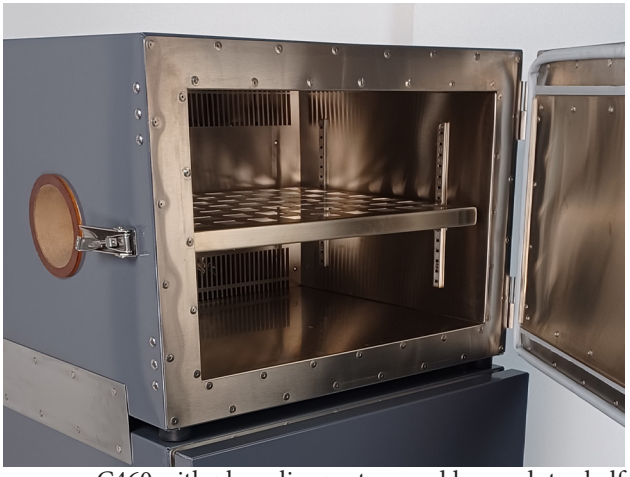
Temperature Chambers

TotalTemp Technologies Benchtop Temperature Chambers provide fast, precise environmental control through convection based heating and cooling. These systems are ideal for electronics, aerospace and other industrial testing applications where heat transfer via convection method is required, or the part has uneven geometry that heat conduction using thermal platform wouldn't be efficient accurate and repeatable thermal conditions are required.

Engineered for efficiency, TotalTemp benchtop chamber line combines affordability and a small footprint to support to meet broad testing applications.

TotalTemp Technologies offers a wide range of temperature chambers including:

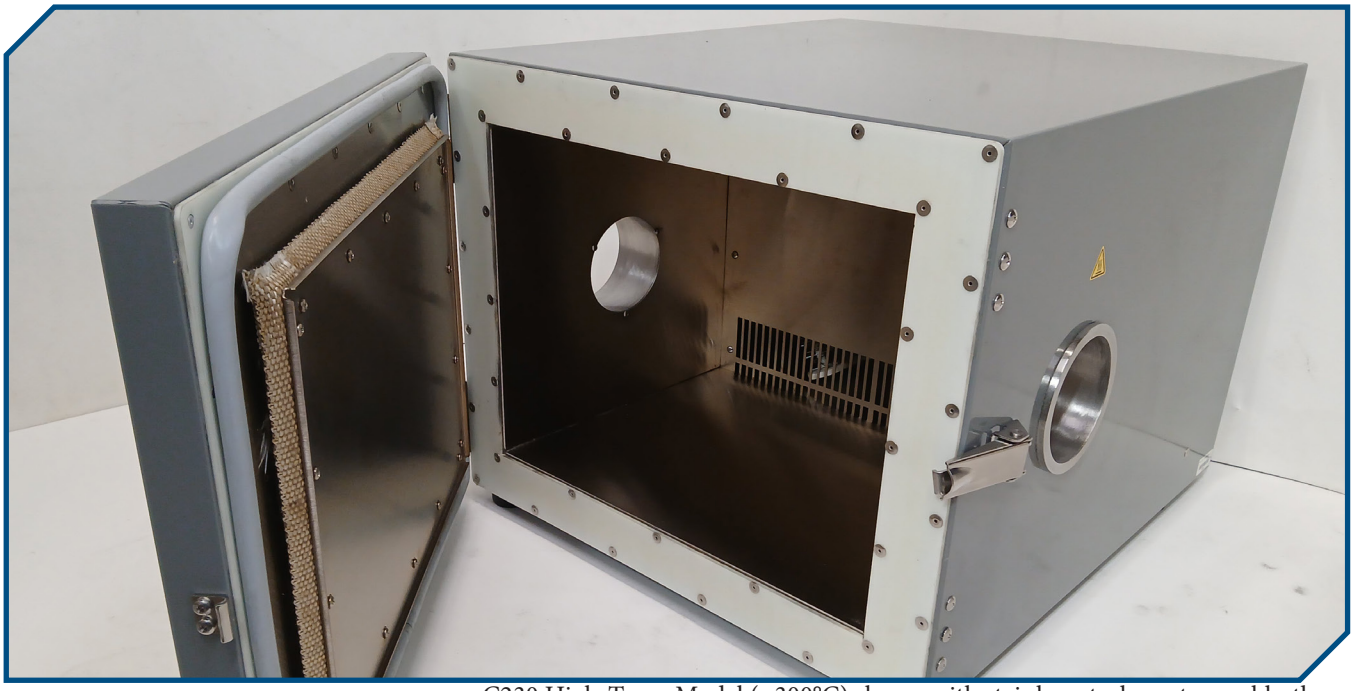
- Cryogenic Benchtop
- Mechanically Refrigerated
- Hybrid Temperature Chamber
- Rapid Ultra Hot & Cold



C460 with phenolic aperture and heavy duty shelf

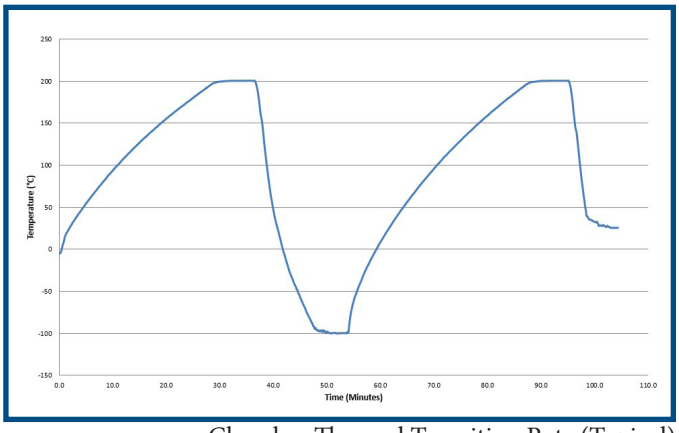
Our Chambers Deliver

- Accurate and uniform temperature control
- Rapid thermal transition rates
- Compact footprint
- Apertures for DUT accessibility
- Flexible configurations and custom designs
- Stainless steel interior/powder coated steel exterior
- High density, thin insulated walls
- Advanced programmable controller and data logger
- Safety and redundant protections
- 2-year warranty with lifetime support
- Proudly made in San Diego, California, USA



C230 High-Temp Model (+300°C) shown with stainless steel aperture cable-thrus

Cryogenic chambers utilize Liquid Nitrogen ($L\text{-}N_2$) or Liquid Carbon Dioxide ($L\text{-}CO_2$) to achieve ultra-low temperatures, fast ramp rates, and high heat removal capacity. These systems are ideal for deep-cold and high-performance testing applications.



Chamber Thermal Transition Rate (Typical)

C460s in a triple stacked orientation

Cryogenic Temperature Chamber Specifications	
Temperature Range	-100°C to +200°C (L-N_2)
	-65°C to +200°C (L-CO_2)
	Extended temperature range available
Temperature Transition Rate	Cooling: 25°C/minute (Typ.)
	Heating: 15°C/minute (Typ.)
	Rapid thermal transition rates available
Temperature Control Tolerance	±0.1°C
Temperature Uniformity	±1.0°C maximum
Power Requirement	100-120V / 50-60Hz / 1PH / 15-30A max
	200-240V / 50-60Hz / 1PH / 15-30A max
Construction	Stainless steel interior and powder coated steel exterior

Cryogenic Temperature Chamber Dimensions

Model:	Capacity Cu. Feet (Liters)	Interior Width x Depth x Height Inch (CM)	External Width x Depth x Height Inch (CM)
C230	1.3 (36.8)	16 x 12 x 12 (40.6 x 30.4 x 30.4)	20.2 x 24.4 x 16.2 (51.3 x 61.5 x 41.1)
C460	2.18 (61.7)	19.5 x 16 x 12.4 (49.5 x 40.6 x 31.4)	25 x 29 x 17 (63.5 x 73.6 x 43.1)
C900	9 (255)	25 x 25 x 25 (63.5 x 63.5 x 63.5)	30 x 38 x 29 (76.2 x 96.5 x 73.6)

- Chamber sizes available in both cryogenic and mechanically refrigerated configurations
- For custom sizes or specialized designs, please contact our Engineering Team at TotalTemp Technologies

C230 shown with optional stand

Features & Options

- Space saving, high density insulated walls
- NEMA Grade MIL spec phenolic apertures
- Advanced programmable controllers & Logger
- Dry nitrogen purge system to prevent condensation
- Built-in fail-safe protection system
- Independent redundant safety system
- Conveniently accessible service panels
- Extreme temperature & rapid thermal transition options
- Heavy duty adjustable shelves
- Benchtop or caster-mounted configurations
- Optional DUT view window
- Stackable or benchtop configurations

C230C shown with custom adapter plate

Mechanically refrigerated chambers use compressor based cooling systems in a closed loop configuration. These systems do not require cryogenic coolant tanks and are ideal for long-duration testing at moderate sub-zero temperatures.

Features & Options

- Compact and space-saving benchtop design
- Programmable touchscreen controllers / data logger
- Consistent airflow for uniform heating / cooling
- Cable ports for DUT monitoring
- High performance and quiet operation
- Benchtop or caster-mounted configurations
- Optional DUT view window

Mechanically Refrigerated Temperature Chamber Specifications	
Temperature Range	-45°C to +175°C (Single Stage)
	-75°C to +175°C (Cascade)
Temperature Transition Rate	Cooling: 4°C/minute (Typ.)
	Heating: 13°C/minute (Typ.)
	Cooling and heating rate can be adjusted
Temperature Control Tolerance	±0.1°C
Temperature Uniformity	±1.0°C
Power Requirement	100-120V / 60Hz / 1PH / 15-30A max
	200-240V / 60Hz / 1PH / 15-30A max
Construction	Stainless steel interior and powder coated steel exterior
Dimensions	All sizes offered in a cryogenic system are also available as mechanically refrigerated models

HBC144 shown with optional window

Features & Options

- Combined convection and conduction heat transfer
- Integrated hot/cold plate floor for direct DUT contact
- Independent or synchronized air/platform control
- Fast thermal transition rates for increased throughput
- Superior thermal uniformity and gradient control
- Hinged top-access door and 2-inch feed-throughs
- Compact benchtop footprint for space efficiency
- DUT viewing window option

The TotalTemp Hybrid Temperature Chamber represents a breakthrough in thermal testing by combining both conduction and convection technologies in a single benchtop system. The system enables independent or simultaneous control of air and conductive surface temperatures for precise, efficient, and improved thermal testing compared to conventional temperature chambers.

With compact footprint and flexible configuration, the hybrid chambers make it ideal for laboratory, R&D, and production environments requiring high-performance thermal conditioning.

Hybrid Temperature Chamber Specifications

Model:	HBC49	HBC144
Workspace Dimensions (Width x Depth x Height)	7.5” x 8.5” x 5” 19cm x 21.6cm x 12.7cm	13” x 13” x 8.5” 33cm x 33cm x 21.6cm
Temperature Range	-100°C to +175°C (Cryogenic Cooling)	
	-45°C to +175°C (Single Stage)	
	-75°C to +175°C (Cascade)	
Temperature Transition Rate	Cryogenic System	24°C cooling
		13°C heating
	Mechanically Refrigerated	4°C cooling
		13° heating
Temperature Control Tolerance	±0.1°C	
Temperature Uniformity	±0.5°C Platform / ±1.0°C Chamber	
Power Requirement	100-120V / 50-60Hz / 1PH / 15-30A max	
	200-240V / 50-60Hz / 1PH / 15-30A max	
	Contact TotalTemp for 50Hz option	
Construction	Stainless steel construction inside and out	

Space Simulation Vacuum Chamber

Model VmSD49

VmSD144ME1

VmSD144ME2

TotalTemp Technologies Thermal Vacuum Space Simulation Chambers (TVAC) are designed to replicate the extreme conditions of outer space, combining high vacuum environments with precise thermal control. These systems enable accurate testing of electronic components, aerospace assemblies, RF devices, and satellite hardware under real-world space conditions.

By integrating our world leading thermal platform with vacuum chambers, TVAC systems provide efficient conductive heat transfer in high vacuum, ensuring reliable, repeatable testing outcomes.

Horizontal cylindrical vacuum chamber

We offer multiple configurations of space simulation vacuum chambers:

- Fully integrated turnkey thermal vacuum chamber systems
- Custom chamber sizes and vacuum volumes
- Cryogenic or mechanically cooled systems
- Thermal platform for direct integration into your vacuum chambers
- Configurable feedthrough ports and instrumentation interfaces

Space Simulation Chamber Specifications	
Temperature Range	-70°C to +175°C (L-N_2)
	-65°C to +175°C (L-CO_2)
	-45°C to +175°C (Single Stage Refrigeration)
	-70°C to +175°C (Cascade Refrigeration)
Temperature Transition Rate	Cooling: Typical 40°C/minute, up to 85°C/minute (Custom)
	Heating: Typical 20°C/minute, up to 95°C/minute (Custom)
	Temperature transition rate can be programmed
Platform Temperature Control Tolerance	±0.1°C
Platform Temperature Uniformity	±0.5°C maximum
Power Requirement	100-120V / 50-60Hz / 1PH / 15-20A max
	200-240V / 50-60Hz / 1PH / 15-20A max
	Platform CE marking compliance

Cryogenic Temperature Chamber Dimensions

Model:	Work Surface Width x Depth Inch (CM)	Vacuum Chamber Workspace Inch (CM)
VmSD14	3.75 x 3.75 (9.5 x 9.5)	Pyrex Bell-jar Ø12" ID x 12" Height (Ø30.5 cm ID x Ø30.5 cm Height)
VmSD49	7.5 x 6.5 (19.0 x 16.5)	Pyrex Bell-jar Ø12" ID x 12" Height (Ø30.5 cm ID x Ø30.5 cm Height)
VmSD144	12 x 12 (30.5 x 30.5)	Pyrex Bell-jar Ø12" ID x 12" Height (Ø30.5 cm ID x Ø30.5 cm Height)
VmSD144ME1	12 x 12 (30.5 x 30.5)	Rectangular Stainless Steel 16" W × 16" D × 14" H (40.6cm x 40.6cm x 35.5cm)
VmSD144ME2	12 x 12 (30.5 x 30.5)	Metal Bell-jar Ø18" ID x 18" Height (Ø45.7 cm ID x Ø45.7 cm Height)

- Vacuum chamber sizes available in both cryogenic and mechanically refrigerated configurations
- For custom sizes or designs, please contact our Engineering Team
- Contact us for system external dimensions

Features & Options

- High altitude space simulation up to 1×10^{-6} Torr
- Compact, portable systems with small footprint
- Fast pump-down and thermal transition rates
- Integrated thermal platforms for precise temperature control
- Redundant safety system
- Multiple chamber styles (Pyrex or metal bell jar, cubical, custom geometries)
- Configurable feedthrough ports for instrumentations
- 1-year warranty with lifetime technical support
- Proudly made in San Diego, California, USA

Synergy Nano controller

Synergy Nano Controller

from TotalTemp Technologies is a compact, high performance temperature controller for precise control in environmental chambers and thermal platforms, offered in benchtop, rack mount, or chassis mount configurations.

Featuring an intuitive color LCD touch screen, the Synergy Nano provides easy navigation, real time graphing, and clearly displayed process information, allowing operators to quickly create, run, and monitor complex temperature profiles. The controller supports a wide range of sensor inputs, including RTDs and multiple thermocouple types, making it adaptable to diverse test requirements.

Designed for modern test environments, the Synergy Nano integrates robust communication and remote access capabilities, including Ethernet, RS232/RS485, FTP, USB, and optional GPIB. Built in data logging with ample internal storage allows longterm recording of temperature data, set points, and process variables for traceability and analysis. The controller also features user configurable alarms, optional automatic resume after power loss, and a real time clock to support mission critical testing.

Watlow PM6 Legacy controller

Watlow Temperature Controller

is widely used in TotalTemp Technologies' thermal testing systems as a reliable solution for precise temperature control in environmental chambers and thermal platforms. The PM6 model offers cost effective, easy-to-read display, programmable shortcut button, and the menu structure allows operators to quickly configure and monitor temperature profiles, including ramp and soak programs used in qualification and production testing. Multiple communication options support straightforward system integration tailored to customer requirements.

Designed for users who need accuracy and durability without the complexity of advanced programmable controllers, the Watlow PM PLUS and PM LEGACY provide an economical and proven control solution within the TotalTemp Technologies product line.

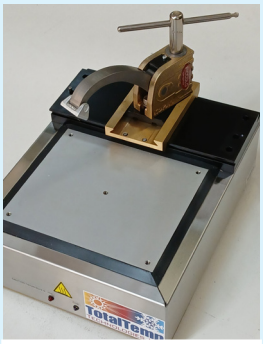
Standard Features	Synergy Nano Controller	Watlow		
		PM6 Legacy	PM6 Plus	F4T
Size (DIN)	1/4	1/16	1/16	1/4
LCD Touch Screen	✓			✓
Programmable Ramp To Set Point	✓	✓	✓	✓
Profiling Ramp & Soak	✓		✓	✓
EIA-485 Modbus & Bluetooth communications	✓	✓	✓	✓
Modbus RTU protocol EIA(RS)-485/232 serial communications	✓		✓	✓
Ethernet/IP / Modbus TCP	✓	Optional	Optional	✓
2nd sensor input for device under test temperature monitoring	✓		✓	✓
Cascade Control Loop	Optional		Optional	Optional
Data Logging	✓	✓	✓	Optional
Expandable for Multiple External Sensors	✓		Optional	Optional
Graphical Trend Charts	✓			✓
Modbus RTU 232/485	✓	Optional	Optional	✓
USB port (s) for data transfer	✓			✓
Email Notifications	✓			✓
Lab View Drivers	✓			✓
WebServer	✓			✓
Valve Cycle Count	✓			✓
GPIB-488	Optional		Optional	Optional

Synergy Nano shown with optional rack mount

Watlow F4T shown with USB connections

Options & Accessories

Clamping & Mounting



Heavy duty clamp

Light duty clamp

- Heavy duty clamps (>100 Lbs force)
- Light duty clamp (5 Lbs force)
- Two point clamp (20 Lbs force)
- Adjustable toggle clamp
- Custom adapter plate

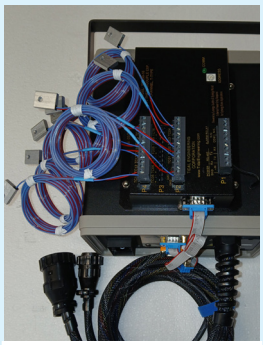
Coolant Delivery & Exhaust

Cryogenic vacuum jacketed hose

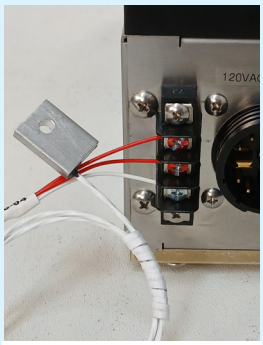
Remote valve box

- Delivery hose wye connector
- Dual remote valve box
- Platform exhaust hose
- Super quiet muffler
- Super quiet vent valve
- Filter/strainer inlet assembly

Sensor Types & Logger



16-channel data logger

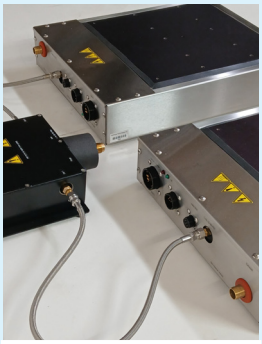


Sensor terminal block

- 3 wire 100Ω Platinum RTD
- Various thermocouple types
- Various sensor terminal blocks
- Custom in-line connections

Controller Options

GPIB



Two channel operation

- Independent two-channel operation
- 19” rack panel mounting
- GPIB communication
- Cascade control feature

Purge & Cover

Polycarbonate probing cover

Dry nitrogen purge regulator

- Probing covers of all sizes
- Low ESD options
- Purge regulator / flow meter
- Purge conditioning
- Platform chassis purge

Chamber Accessories

Stainless-steel cable pass through aperture

Heavy Duty Shelves

- Phenolic or stainless steel aperture
- Stand with caster wheels
- Heavy / light duty shelves
- High velocity motor
- Purge inlet
- Soft plug

Space Simulation Accessories

Pyrex bell jar

CF flange and gasket

- Sensors with CF flanged feed-thru
- Pyrex or stainless steel jars
- Bell jar guard
- Copper UHV gasket & hardware

Safety Options

Watlow limit controller

Hot LED indicator

- Independent limit controller
- Independent fail-safe system
- Hot/Cold indication
- Coolant delivery PRV

Ordering Info

Platform

SD	144	-N	-B	-120	-15	

Cooling Method
SD = Cryogenic
SC = Single Stage Refrigeration
SCC = Cascaded Refrigeration
HSD = Hot Only
DSD = Dual Zone Cryogenic

Platform Size (Inches)
14 = 3.75 x 3.75
49 = 6.5 x 7.5
98 = 6.5 x 15
144 = 12 x 12
288 = 12 x 24
450 = 18x 25

Controller Option
-N = Synergy Nano Controller
-E = Watlow Controller
* consult TTi Engineering for options

Cryogenic Coolant Pressure Requirements
A = L-N2 Low Pressure = 10 to 55 psi
B = L-N2 High Pressure = 50 to 150 psi
C = L-N2 Medium Pressure = 25-100 psi
D = L-CO2 Low Pressure = 300 psi
E = L-CO2 High Pressure = 900 psi
X = For Hot Only Platform

Voltage Requirements
-120 = 120 VAC / 60 Hz
-208 = 208/230 VAC / 60 Hz
-240 = 220-240 VAC / 60 Hz
* Consult for 50 Hertz availability

Amperage
-15 = 15 AMP
-30 = 30 AMP

Special Requirements
If required, enter "X" & consult TTi Engineering

Chamber

C	460		-N	-B	-120	-15	

Product Type
C = Convection Heat Transfer Chamber
HBC = Hybrid (Conduction + Convection)

Chamber Size
W x D x H (Inches)
230 = 16 x 12 x 12
460 = 19.5 x 16 x 12.4
900 = 25 x 25 x 25
1500 = 30 x 30 x 30
HBC49 = 7.5" x 8.5" x 5"
HBC144 = 13" x 13" x 8.5"

Coolant System Option
Blank = Cryogenic
C = Single Stage Mechanically Refrigerated
CC = Cascade Mechanically Refrigerated

Controller Option
-N = Synergy Nano Controller
-E = Watlow Controller
* consult TTi Engineering for options

Cryogenic Coolant Pressure Requirements
A = L-N2 Low Pressure = 10 to 55 psi
B = L-N2 High Pressure = 50 to 150 psi
C = L-N2 Medium Pressure = 25-100 psi
D = L-CO2 Low Pressure = 300 psi
E = L-CO2 High Pressure = 900 psi
X = For Hot Only Platform

Voltage Requirements
-120 = 120 VAC / 60 Hz
-208 = 208/230 VAC / 60 Hz
-240 = 220-240 VAC / 60 Hz
* Consult for 50 Hertz availability

Amperage
-15 = 15 AMP
-20 = 20 Amp (HBC System)
-30 = 30 AMP

Special Requirements
If required, enter "X" & consult TTi Engineering

Thermal Vacuum Chamber

Vm	SD144		-N	-B	-120	-15	

Product Type
Vm = TVAC with Platform

Chamber Platten Size
D x W (Inches)
SD14 = 3.75 x 3.75
SD49 = 6.5 x 7.5
SD144= 12 x 12

Chamber Shape & Material
Blank = Pyrex Bell-jar
ME1 = Cubical Stainless Steel / Front Door
ME2 = Metal Bell-jar

Controller Option
-N = Synergy Nano Controller
-E = Watlow Controller
* = Special controller, consult TTi Engineering for options

Cryogenic Coolant Pressure Requirements
A = L-N2 Low Pressure = 10 to 55 psi
B = L-N2 High Pressure = 50 to 150 psi
C = L-N2 Medium Pressure = 25-100 psi
D = L-CO2 Low Pressure = 300 psi
E = L-CO2 High Pressure = 900 psi
X = For Hot Only Platform

Voltage Requirements
-120 = 120 VAC / 60 Hz
-208 = 208/230 VAC / 60 Hz
-240 = 220-240 VAC / 60 Hz
* Consult for 50 Hertz availability

Amperage
-15 = 15 AMP
-20 = 20 Amp

Special Requirements
If required, enter "X" & consult TTi Engineering


CAES
PIONEERING ADVANCED ELECTRONICS


CRANE
AEROSPACE & ELECTRONICS


CURTISS-WRIGHT


duet
MICROELECTRONICS


EMERSON


KEYSIGHT
TECHNOLOGIES


L3HARRIS


mercury


MICROWAVE
INNOVATIONS


JPL
Jet Propulsion Laboratory
California Institute of Technology


molex


NANOWAVE
Technologies Inc.


NORTHROP
GRUMMAN


qorvo


api
technologies corp.


QUINSTAR
TECHNOLOGY


TELETRONICS
INTERNATIONAL INC.


VICOR


WESTEST
ELEVATED CONFIDENCE


aselsan


भारत इलेक्ट्रॉनिक्स
BHARAT ELECTRONICS


FRONTGRADE


Honeywell


KRATOS


ONEIDA
RESEARCH
SERVICES, INC.
Est. 1977


Q Microwave
An Amphenol company


QUASONIX


RANTEC
EXCELLENCE BY DESIGN


RF-LAMBDA
THE LEADER OF RF BROADBAND SOLUTIONS


Stellant

TotalTemp
TECHNOLOGIES, INC.

Worldwide Leading Provider of Benchtop Temperature Chambers and Thermal Platform Equipment

TotalTemp Technologies, Inc.

Sales@totaltemptech.com
Support@totaltemptech.com
Phone: (888) 712-2228

3630 Hancock St, San Diego, Ca 92110, USA

www.TotalTempTech.com