

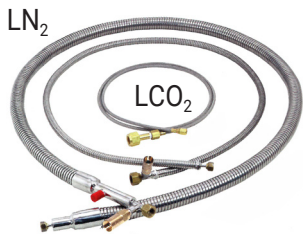
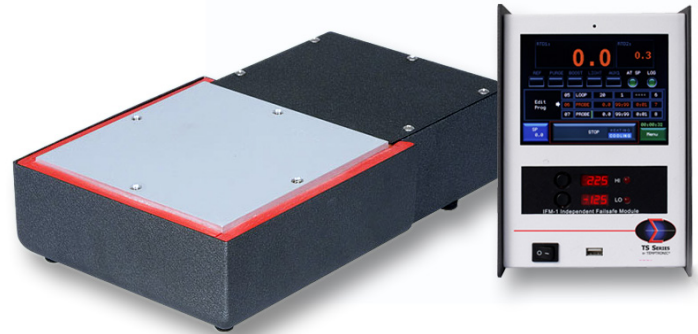


TP294 Cryogenic Thermal Platform/Plate

Sigma Systems Cryogenically Cooled Thermal Platforms provide a flat, thermally conductive, precisely temp-controlled surface ideal for conditioning and testing low profile items with a flat surface such as RF devices, as well as high density power device testing (IGBTs and MOSFETs).

FEATURES:

- Temperature Range of -100°C to +200°C, (optional LN₂ Extended Temperature Range -165°C to +250°C) with transition rates up to 140°C/min. (cooling); 47°C/min. (heating)
- Optional covers, adapter plates, and hole patterns for enclosing and securing test components (see below)
- Dry air purge option to reduce moisture and prevent frost
- Control and communications: Touch-screen controller, Ethernet, Telnet, Web Server - Optional RS232 Serial and IEEE-488 GPIB
- Independent fail safe option to protect components from over-temperature conditions
- ISO 9001:2008, RoHS, CE, Designed to meet UL61010
- Additional plate sizes and capabilities available



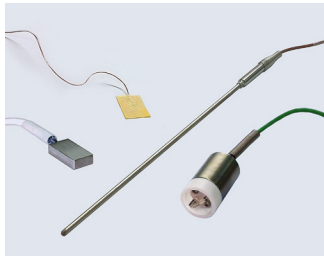
Vacuum Jacketed, Armored Stainless, and Braided Superflex Coolant Delivery Hoses connect temperature chamber to coolant source

All LN₂ hoses include a Safety Pressure Relief Valve

Probing Covers, Purge Enclosures, Adapter Plates, and Additional Hole Patterns available in optimal location and size for maximum Test Access efficiency



Wide range of RTD Probes and Thermocouples available: Tubular, Block, Kapton Tape and Drop sensors, appropriate for temperature chamber or platform and compatible with TS Series Controllers



PLATFORM SPECIFICATIONS

Temperature Range	-100°C to +200°C (LN ₂) -60°C to +200°C (LCO ₂)
Temperature Transition Rate	Cooling: 60°C-140°C/minute Typ. Heating: 21°C-47°C/minute Typ.
Workspace Dimensions	6.75"W x 6.75"D (17.1cm x 17.1cm)
Workspace Surface Area	45.6 in ² (294 cm ²)
External Dimensions:	3.2"H x 7.8"W x 12.8"D (8.1cm x 19.8cm x 32.5cm)
Mounting Style	Benchtop / Optional: Shelf Rack Mounting
Coolant Type	LN ₂ (LCO ₂ optional, reduced low end temp)
Power Requirements (can be configured for CE)	100-120V / 50-60HZ / 1PH / 15A 200-240V / 50-60HZ / 1PH / 13-16A
Options	<ul style="list-style-type: none"> • Delivery Hoses: Vacuum Jacketed; others (see left) • Independent Failsafe Module (IFM) (on Controller, see Page 2) with Redundant Solenoid Valves (RSV) Shuts off coolant to prevent runaway cold condition • Covers, Adapter Plates, and Additional Hole Patterns • Dry Nitrogen Purge for Moisture Control • Dewar Accessories: Distribution Manifolds, Pressure Regulators





Thermal Platform Temperature Controller

The TS Series Controller is the programmable controller for Sigma Systems' cryogenically cooled thermal platforms and thermal chambers. The TS Controller provides touch-screen and remote interfacing to set up and transfer thermal profiles, view data and trends, and log diagnostics.

FEATURES:

- Optimize test time: Precisely control and monitor UUT temperature, even during UUT power cycling
- Fast Setup Time: Intuitive touch-screen programming
- Display Test Status: Real-time data and graphing
- Built-in Diagnostics: Valve counts, ambient temp, equipment runtimes
- Protect UUT from thermal damage with optional Independent Fail Safe Modules

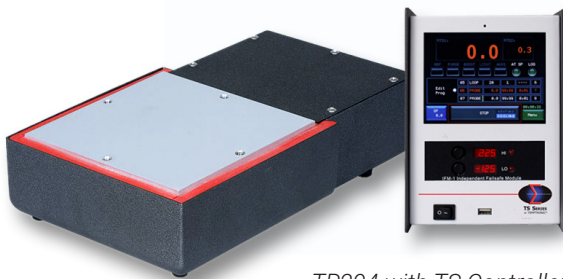


TS Shown with Failsafe Module option



Optional Dry Nitrogen Purge Systems eliminate moisture and/or oxygen from the test environment.

TS Shown with purge and failsafe module options



TP294 with TS Controller



The inTEST Thermal family includes three temperature-related corporations: Tempronic, Sigma Systems, and Theronics. Products include thermal chambers and plates, portable temperature environments, and process chillers.

CONTROLLER SPECIFICATIONS

Temperature Measurement	Range: -210°C to 680°C, Accuracy: ±1.0°C Resolution: 0.1°C full scale
User Interface	5.7" color touch-screen with temperature graphing and charting
Control Safety	Independent Fail-Safe Module (IFM) (optional) high and low temperature limits
Compliance	CE / RoHS / Designed to meet UL 61010
Diagnostics	Controller, chiller, & blower runtime hours Valve activation counts Controller enclosure temperature System performance log
Operating Environment	Temperature: 10°C to 50°C Humidity: 10% to 50%
Temperature Inputs	RTD (500 Ohm/2Wire) (100 Ohm/3 Wire) Thermocouple (type K)
Control Algorithms	Primary loop PID, Dual loop, settable DUT control
Communication Interfaces	Ethernet 10/100 / Telnet / HTML Web Server / USB-2.0 Optional: RS232 and IEEE-488 GPIB
Power Requirements	Voltage: 100 to 250 VAC Frequency: 50/60 Hz Current: up to 30A (application based)
Physical Dimensions	(TS1-4) 8.5"H x 6"W x 11.6"D (21.6cm x 15.2cm x 29.5cm) (TS5-8) 8.5"H x 8.0"W x 11.6"D (21.6cm x 20.3cm x 29.5cm)
Program Compatibility	Supports Sigma C, CC3, CC3.5, C4, and C5 functionality & command set
TS5-TS8 Options	Purge Set Point, Flow Meter, ON/OFF Solenoid Valve