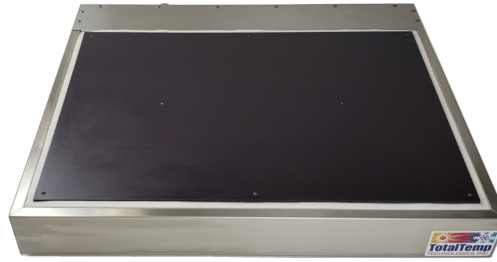




## PRODUCT DATA SHEET

# SD450



---

THERMAL PLATFORM USED FOR PRECISION TEMPERATURE TEST

---

### DESCRIPTION

The SD450 is a very effective testing surface for larger, higher power items such as TWTs and amplifiers with microwave integrated circuits or multiple Hybrid / MMICs. Over 4000 watts of heat removal capability

### PRODUCT INFORMATION

Surface Dimensions / Area	18 x 25 inch (45.72 x 63.5 cm)	450 Sq. Inches (2900 Sq.cm)
Surface Material / Finish	6061 Aluminum	Black Anodize or custom specification
External Dimensions	23.7 x 27.3 x 3.9 Inch NS	(60.19 x 69.3 x 9.9 Cm NS)
Chassis Material / Finish	304 Stainless Steel 18 Gauge	Brushed
Approximate Weight	82 lbs. (37.2kg)	
Temperature Range	-148°F to 392°F (-100 to +200°C)	Extended Range and Hot Only available
Heating Rate	12°C/Min 240 VAC 30 Amp 6500 Watts	Heaters can be specified
Cooling Rate	12.5°C/Min Using Liquid Nitrogen	Coolant is customer specified
Controller (Two Choices)	<a href="#">Synergy Nano</a> Color Touchscreen	<a href="#">Watlow PM6</a> Economy Model

### FACILITY REQUIREMENT

Power requirements may vary. Most common heater arrangement requires a dedicated 240 Volt 30 Amp circuit.

Coolant: Cryogenic gas suppliers in your area can supply either Nitrogen and Carbon Dioxide to your facility.

**High Pressure L-N2 75-125 psi is the Standard Coolant**

Low Pressure L-N2 Pressure below 30 psi Available Upon Request for improved performance on bulk systems

High Pressure L-CO2 Pressure 900 psi Available Upon Request recommended for infrequent cooling requirements

Low Pressure L-CO2 Pressure below 300 psi Available Upon Request for improved performance on bulk systems or Dewars

SCC450 Thermal Platform Models that are Cooled using Mechanically Refrigeration. For more information:

<https://www.totaltemptech.com/mechanically-refrigerated-thermal-platforms/>

**[New Leaders in Thermal Test Products. We offers many ways to improve your testing and help choose the best equipment](#)**

[TotalTempTech.com](http://TotalTempTech.com)  
[Sales@TotalTempTech.com](mailto:Sales@TotalTempTech.com)  
Phone: 888.712.2228



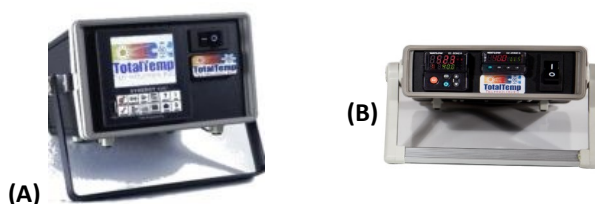
**TotalTemp Technologies, Inc.**  
3630 Hancock Ste. A  
San Diego, CA 92110  
Revision 3 January 14th, 2021

**OPTIONS AND ACCESSORIES:** <https://www.totaltemptech.com/thermal-platforms-coldplates-options-and-accessories/>

### Controller Options and Accessories

The (A) Synergy Nano Benchtop Controller has a Color LCD touch screen – Easy to use, easy to read with graphing capability, logging, multi sensor, multi conditional outputs, comm ready, GPIB Upgradeable and free drivers. [More on the Synergy Nano](#)

The (B) Watlow PM6 is a very robust, economical controller



### Dry Nitrogen Purge

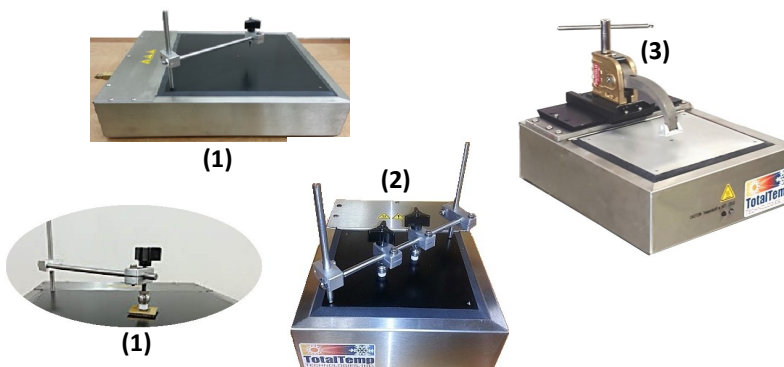
Probing Covers, especially when used with purge systems keeps condensation and frost from accumulating on the surfaces of the DUT (Device Under Test) at cold temperatures. Purging is also used to prevent oxidation of metals surfaces at high temperatures. Lastly the cover greatly reduces the gradient effects caused by room temperature. Low ESD and other options are available.



**Dry Nitrogen Purge Regulator with Flowmeter**

### Clamps & Adapter Plates

We supply (1)light, (2)medium and (3)heavy duty clamping systems to increase thermal conductivity by applying downward force. Lower wattages and less extreme temperature do not require heavy clamping forces. The more wattage and temperature differential, the more clamping force is required. Platforms can also be directly drilled in many locations or an adapter plate can be secured on top of the platform by using the standard hole pattern.



### Coolant Delivery Hoses & Exhaust

Liquid Nitrogen and Liquid Carbon Dioxide require different hose configurations. We offer many options for L-N<sub>2</sub> & L-CO<sub>2</sub> applications. Exhaust options the SQM and flexible hoses for venting are also available.



**14-0010 Super Quiet Muffler (SQM)**

Greatly reduces the noise level of coolant being spent by a Thermal Platform

### Temperature Sensors & Loggers

RTDs & Thermocouples

Sensors are available for extended temperature ranges or for Space Simulation Applications



28-00101 Data logger  
16-Channel Temperature Monitor  
Thermocouples, daisy chain up to four of these 16-Channel monitors together and acquire 64 temperatures

**New Leaders in Thermal Test Products. We offers many ways to improve your testing and help choose the best equipment**

[TotalTempTech.com](http://TotalTempTech.com)  
[Sales@TotalTempTech.com](mailto:Sales@TotalTempTech.com)  
Phone: 888.712.2228



**TotalTemp Technologies, Inc.**  
3630 Hancock Ste. A  
San Diego, CA 92110  
Revision 3 January 14th, 2021