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 Square Inches (2900 Sq.cm)
Surface/ Finish	Aluminum Qty (8) 10-32 reinforced Threaded Holes in surface for Adapter Plate, DUT mounting & clamping	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 Centimeter NS
Chassis Material / Finish	Stainless Steel	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 208 VAC 30 Amp 5450 Watts	Heaters can be specified
Cooling Rate	10°C/Min Using 35 psi Liquid Nitrogen	Coolant is customer specified
Controller (Two Choices)	Synergy Nano Color Touchscreen	Watlow PM6 Economy Model

FACILITY REQUIREMENT

Power requirements may vary. Most common heater arrangement requires a dedicated 230 Volt 30 Amp circuit.

Coolant: High Pressure L-N_2 75-125 psi is the standard coolant supplied using Dewars. Low Pressure L-N_2 is available upon request.

L-CO_2 300 psi or 900 psi is available upon request. Recommended for infrequent cooling requirements as low as –60°C.

For information on models that are cooled using mechanical refrigeration please consult the factory.

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

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

Controller Options and Accessories

The (a) Synergy Nano temperature controller has a Color LCD touch screen Easy to use, with on-screen graphing capability, logging, multi sensor, multi conditional outputs, very descriptive menus, GPIB optional and free drivers. More on the Synergy Nano.



(a)

(b)



(b) Watlow PM6 is a very robust, economical controller

Dry Nitrogen Purge

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.

Simple needle valve flowmeter





Dry Nitrogen Purge Regulator with Flowmeter

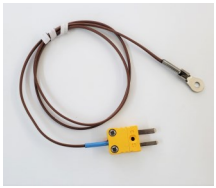
Device Under Test Temperature Sensors

Preferred 3 wire RTD or thermocouple sensor to read device temperature or deploy two probe advanced temperature control algorithm. Convenient terminal block or in-line connector to attach second probe.





Device Sensors & Connectors





Coolant Delivery Hoses & Exhaust

Liquid Nitrogen and Liquid Carbon Dioxide require different hose configurations. We offer many options for L-N_2 & L-CO_2 applications. Exhaust options the Super Quiet Muffler 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 Logger

Multiple Thermocouple Sensors are available for extended datapoint monitoring using a Synergy Nano Controller see (a) above.



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

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