

## Temptronic® ThermoSpot® DCP-102 Bench Top Temperature Forcing System

For IC characterization, test, and failure analysis with 125W capacity at -40°C

The ThermoSpot Model DCP-102 benchtop temperature forcing system provides a highly responsive, thermally conductive path to quickly induce temperatures to the DUT. This highly reliable system – without thermoelectric modules - uses a thermal probe designed with an interchangeable ThermoBridge™ to mate directly to your IC or other device under test. Using proprietary, robust refrigeration technology, ThermoSpot can perform thermal cycling without the worry of cooling degradation so common with thermoelectric modules employed in competitive systems.

User-programmable temperatures, graphing, and data logging are established through the controller's touch-screen or remote communications. The system provides fast and precise transitions of temperature at the IC, even with variations in device power, and can be used with Temptronic's proven DUT Control technology using an imbedded diode or external thermocouple.



A ThermoBridge™ provides the thermal interface to match the area of your IC package.

### Features

- High reliability thermal cycling without thermoelectric modules
- Temperature Range: -65 to 175°C
- Cooling Power: 55W at -55°C , 125W at -40°C
- 25 to -40°C <35 sec.
- Easy and secure thermal connection to in-circuit or test socketed DUT
- Communications: Ethernet, USB (optional IEEE, RS232)



## ThermoSpot DCP-102 Specifications

<b>System Model</b>	ThermoSpot DCP-102
<b>Temperature Performance<sup>1,2</sup></b>	Range: -65 to 175°C @ 23°C ambient Accuracy: ±1.0°C; Stability: ±0.3°C
<b>Cooling Power<sup>1</sup></b>	55W @ -55°C 125W @ -40°C 250W @ 0°C
<b>Transition Rates<sup>1</sup></b>	25 to -40°C <35 sec, 25 to +125°C <1.5 min.
<b>Temperature Sensors</b>	Main sensor: RTD, DUT sensors: K thermocouple, Diode, 100Ω RTD, Analog
<b>Temperature Calibration</b>	Software calibrated
<b>Communications Interface</b>	Ethernet (TCP/IP), USB / Optional IEEE488, RS232
<b>Maximum Force Allowable on Thermal Head</b>	980.6 N (220.4 Lbf)
<b>DUT Dimensions</b>	From 2 x 2mm to 50 x 50mm (0.079" x 0.079" to 2.0 x 2.0")
<b>Operator Interface</b>	5.25" color touch-screen, programmable with 0.1°C resolution Preset temperatures, ramp, soak, cycle. Ramp rate control, Graphing and data logging, Web server, Offset calibration Analog temperature inputs
<b>Thermal Head</b>	89mm (3.5") diameter
<b>Thermal Head Hose</b>	1.8 meters (70") long, optional 3.0 meters (118") long
<b>Frost Free Thermal Head</b>	Low flow dry air or nitrogen purge 0.05cfm, -70°C (-94°F) dew point Controlled automatically
<b>Physical Dimensions</b>	610mm D x 445mm W x 445mm H (24"D x 17.5"W x 17.5"H)
<b>System Weight</b>	66 Kg (145lbs.)
<b>Noise Level</b>	55 dBA
<b>Power Requirements</b>	115 VAC (±10%), 15 amp, 50/60Hz 208/230 VAC (±10%), 10 amp, 50/60Hz
<b>Purge Dry Air Supply</b>	User supplied, regulated, -70°C (-94°F) air or nitrogen, 0.1cfm at 0.2 BAR
<b>Operating Environment</b>	Temperature: 5 to 35°C (40 to 95°F), Humidity: 20 to 95% RH
<b>Compliance</b>	CE   RoHS   EU 517/2014   designed to meet UL61010

<sup>1</sup> as measured at thermal head, <sup>2</sup> cooling power reduced by 5°C at 50Hz

### Optional Positioning and Alignment Accessories



#### Boom Stand:

The Boom Stand provides X, Y, Z positioning of the Thermal Head over the DUT.

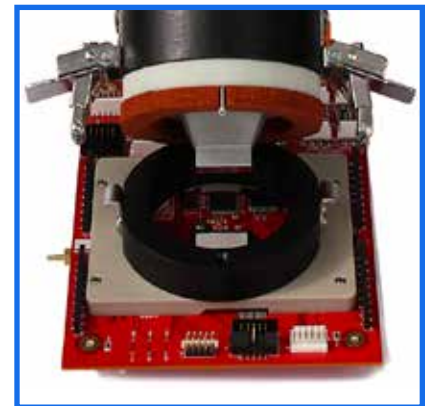
(P/N SA214350)



#### Bench Stand:

Free-motion stand and boom provide manually positioning of the Thermal Head over the DUT.

(P/N SA214360)



#### DUT Interfacing:

**Test Socket Alignment** - latches and guide pins provide easy and secure connections to the test socket.

**Soldered Component Alignment** - customized interfaces to accommodate PCB layout and chip geometry.

The inTEST Thermal family includes three temperature-related corporations: Temptronic, Sigma Systems, and Thermonics. Products include thermal chambers and plates, temperature forcing systems, and process chillers. Specifications subject to change.