

Temptronic® ThermoSpot® DCP-102 bench top temperature forcing system

For IC characterization, test, and failure analysis with 55W 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. The system consists of a powerful temperature source that feeds a thermal head with an interchangeable ThermoBridge™ that couples directly to your IC and can be designed to interface to your DUT for in-circuit and test socket applications.

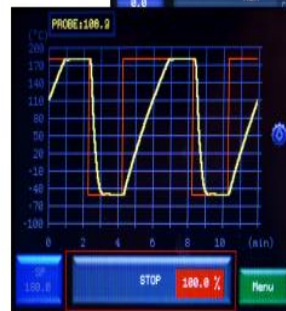
User-programmable temperatures, graphing, and data logging are established through the controller's touch-screen or remote communications. The system provides fast and precise transitions of temperature at the IC, even with variations in device power, and can be used with Temptronic's proven DUT Control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



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

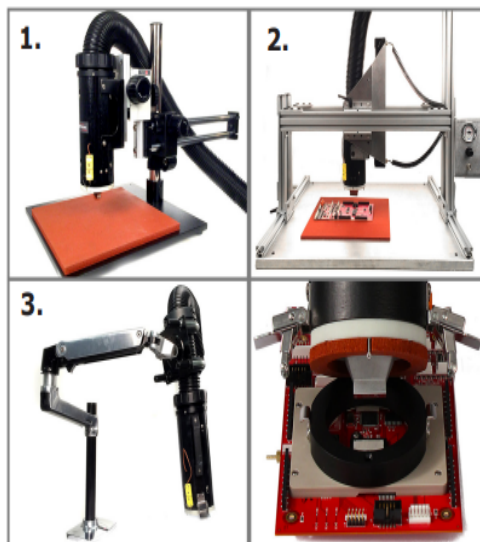
Features

- 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 DUT
- Self-contained, quiet benchtop unit
- No facilities air supply required
- Communications: Ethernet, USB, IEEE, RS232



ThermoSpot DCP-102 Specifications

System Model	ThermoSpot DCP-102
Temperature Performance^{1,2}	Range: -65 to 175°C @ 23°C ambient Accuracy: ±1.0°C Stability: ±0.3°C
Cooling Power¹	55W @ -55°C 125W @ -40°C 250W @ 0°C
Transition Rates¹	25 to -40°C <35 sec, 25 to +125°C <1.5 min.
Temperature Sensors	Main sensor: RTD, DUT sensors: K thermocouple, Diode, 100Ω RTD, Analog
Temperature Calibration	Software calibrated
Communications Interface	Ethernet (TCP/IP) and optional USB, IEEE488, RS232 communications
DUT Pressure Force	2 to 100 Kg/Force (depending on interface)
DUT Dimensions	From 2x2mm to 100x100mm (0.078" to 3.937")
Operator Interface	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
Thermal Head	89mm (3.5") diameter
Thermal Head Hose	1.8 meters (69") long
Frost Free Thermal Head	Low flow dry air or nitrogen purge 0.05cfm, -70°C (-94°F) dew point Controlled automatically
Physical Dimensions	610mm D x 445mm W x 445mm H (24"D x 17.5"W x 17.5"H)
System Weight	66 Kg (145lbs.)
Noise Level	55 dBA
Power Requirements	100/115/120 VAC (±10%), 15 amp, 50/60Hz 220/230 VAC (±10%), 10 amp, 50/60Hz
Purge Dry Air Supply	User supplied, regulated, -70°C (-94°F) air or nitrogen, 0.1cfm at 0.2 BAR
Operating Environment	Temperature: 5 to 35°C (40 to 95°F), Humidity: 20 to 95% RH
¹ as measured at thermal head, ² cooling power reduced by 5°C at 50Hz	



Positioning and Alignment

- 1. Boom Stand:** provides X, Y, Z positioning of thermal head.
- 2. Pneumatic Stand:** provides X, Y, Z, positioning and measured downward force to DUT.
- 3. Bench Stand:** free-motion stand and boom to manually position the thermal head over DUT.

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: Temprotronic, Sigma Systems, and Thermonics. Products include thermal chambers and plates, temperature forcing systems, and process chillers. Specifications subject to change.