

# **THERMOJET**<sub>ES</sub> Precision Temperature Cycling System

### Overview

ThermoJet Environment Simulator is a precision-controlled temperature forcing system that delivers an airstream of up to 20 SCFM to rapidly change the temperature of a product or Device Under Test (DUT).

ThermoJet provides temperature transition speeds unmatched in the industry, and can sustain air cooling temperatures of  $-80^{\circ}C$  at 20 SCFM.

## ThermoJet Highlights

- The only temperature forcing system that maintains -80°C at 20 SCFM (full range +350°C to -80°C) to deliver faster testing.
- Our air coolers deliver true extended low temp testing so your devices (even large ones) get to lower temperatures faster and stay there longer.
- DualCool<sup>™</sup>Cascade refrigeration system reliably delivers vigorous temperature cycling, even in a 24/7 operating environment.
- Portable space-saving touchscreen controller.
- Compact footprint (21" x 27") and caster-mounted for mobility.
- Cycle from +125°C to -55°C / -55°C to +125°C in less than 10 seconds...you save time.

ThermoJet<sub>es</sub> delivers efficient electronic control and maximizes productivity.



Improve Test Productivity by 20 - 30%

### **Key Features**

- Control temperature from 80°C to +225°C
- Flow rate of up to 20 SCFM
- > ±0.5°C temperature stability
- > Enhanced digital temperature control
- Utilizes off-the-shelf refrigerants
- > Highest heat removal capacity in the industry
- Compact footprint smallest on market
- CE compliant
- Removable touch screen interface

#### **Additional Features:**

- Save & trend data with our USB stick data logging feature
- Enhanced nozzle design allows for device testing at greater pressures. Devices may operate at pressures up to 70 PSI
- Effortlessly adjust the height of the arm with a click of a button. Our improved Motorized Arm allows for precise adjustment from the touch screen
- Save on utility costs with the updated energyefficient software
- Utilizes CFC and HCFC free refrigerants
- LabView drivers and control application
  available upon request
- Command sets compatible with similar systems in market

#### **General Accessories**

Model	Description	
THJ-AP	Auxiliary Purge, Adjustable Flow	
THJ-NAA	Nozzle Adaptor Accessory	
THJ-TC1	Thermocouple Kit	
Thermal Caps		
Model	Description	
SH25T1	Transparent 2.5" ID x 2" deep	
SH35T1	Transparent 3.5" ID x 2" deep	
SH45T1	Transparent 4.5" ID x 2" deep	
SH55T1	Transparent 5.5" ID x 2" deep	
SH65T1	Transparent 6.5" ID x 2" deep	

#### **NOTES:**

- 1. Specifications based on 230V, 60 Hz at 15 SCFM, ambient 23°C, 50% humidity.
- 2. System may be used with lower pressure at reduced specifications.
- 3. Clock started when temperature reached setpoint.
- 4. Operating at low air flow.

European Union EMC & Safety Compliance Declaration

The European Conformity (CE) marking symbolizes conformity of SP Scientific products with the applicable 2010 EN and CE Standards. For more information about CE compliance, please contact SP Scientific at 800-431-8232 x2372.

## ThermoJet<sub>es</sub> Specifications<sup>1, 2</sup>

LJ		
Temperature		
Maximum Low	-80°C	
Maximum High	Standard +225°C / High Temp +350°C	
Accuracy	1°C - Factory calibrated with NIST traceable device	
Setability	0.1°C	
Indication/Resolution	0.1℃	
Stability	±0.5°C at discharge nozzle	
Sensors:	Special limits of error type-T thermocouples	
Calibration	Software controlled	
Max. Transition Rates	+125°C to -55°C in <10s / -55°C to +125°C in <10s +200°C to -65°C in <15s / -80°C to +200°C in <15s	
Stabilization Rate <sup>3</sup>	+125°C to -55°C in <12s	
	-55°C to +125°C in <4s	
Air Filtering/Drying		
Coalescent	Water, Oil, and Particle Filtering	
Regenerative	-85 C dew point	
Air Flow Specification	s	
Input	25 SCFM @ 80-125 psig, dew point 10°C	
	(11.8 l/s @ 5.5 - 8.6 bar)	
Output	5-20 SCFM (2.3 - 9.4 l/s) Factory calibrated with NIST traceable device	
Setability	1 SCFM (0.4 l/s)	
Physical Characteristic	CS	
Footprint	21" wide x 27" deep (54 cm x 69 cm)	
Arm Reach	56" radius (140 cm) max.	
Rotation	350°	
Work Surface Height	38" (100 cm)	
Weight	425 lbs (193 kg)	
Mobility	4 full swivel, lockable casters	
DB Rating⁴	$\cong$ 65 dB(A)	
System Controller Features		
Туре	Microprocessor PLC-based PID	
Program	Save and load 48 programs of 8 segments each	
Safeties	Low flow, over temp, EMo interlock	
Status Indication	Air input, air temp, air/DUT control, OK, run/idle, purge, defrost	
Available Limits	Max. ramp rate, min./max. air temperatures	
Ramp Rates	1°C/min. incremental up to 999°C	
Remote Information	IEEE, RS232 Communication	
System Requirements		
Temperature	+12°C to +25°C	
Humidity	0% to 65% RH	
Electrical	208V-230V/60Hz, 200V/50Hz @ 1Ph 30A 220V-230V/50Hz @ 1Ph 30A	

Virtis

Hull

FTS Systems

National-Hotpack

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