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AirTherm SMT

Heat Controller



The **AirTherm SMT** is a new generation of heat control system from WPI designed to be used in Live Cell Imaging applications with microscopes fitted with a full microscope environmental chamber enclosure. The standard **AirTherm SMT** controls temperature and, as an option, monitors humidity.

The **AirTherm SMT** uses a PID control algorithm to maintain tightly controlled loops of heat and humidity environment control.

With **AirTherm SMT**, the temperature of the sample and microscope optics

can be controlled to within 0.2°C.

During operation, air is drawn out of the chamber through a flexible hose, heated by the **AirTherm SMT** heater and re-circulated to the chamber by the return hose.

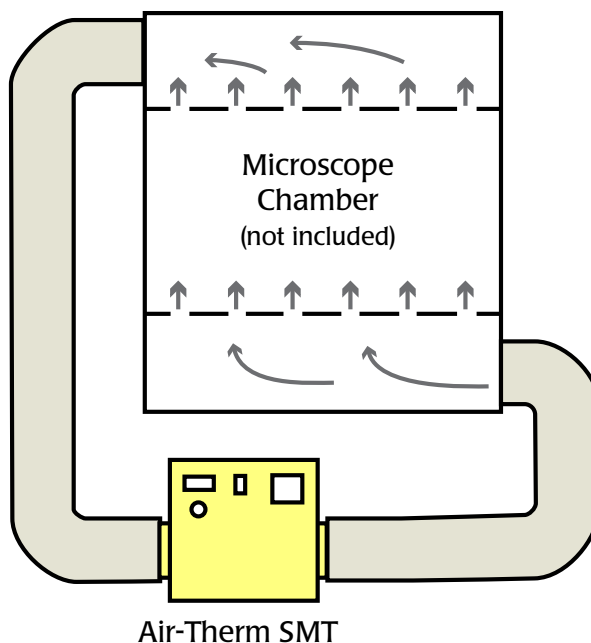
- Precision heat controller for use in live cell imaging and custom incubators
- Control heat and monitor humidity (optional) with a single controller
- Electrically and acoustically quiet
- Quick, precise response to thermal change

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The system is typically used in a closed loop configuration.

A typical AirTherm SMT installation places the heated air inflow at the bottom and the cold air return at the top of the microscope chamber.



The **AirTherm SMT** system includes:

- **AirTherm SMT**
- Coil-reinforced heater hose pieces, hose clamps
- Temperature sensor for remote placement in environmental chamber

NOTE: Humidity probe for monitoring chamber humidity is sold separately.

SPECIFICATIONS

Air Flow Rate	20–50 CFM (0.55–1.4 m ³ /minute)	Temperature Sensor Type	Platinum RTD 1000W
Control Temperature Range	Ambient to 45°C	Humidifier Type	Ultrasonic
Temperature Resolution	0.1°C	Humidifier Tank Capacity	0.5 gallons
Temperature Accuracy	0.2°C	Humidifier Daily Output	2 gallons
Humidity Control Range	Ambient–90%	Fuse	
Humidity Resolution	0.1%	For 120VAC	.8A 250V 5x20mm metric
Humidity Accuracy	.5%	For 230VAC	.4A 250V 5x20mm metric
Humidity Repeatability	0.5%	Power	450W, 95–135V or 220–240V, 50/60Hz
Analog Output For Chart Re-corder	0.5°C resolution; 0–10V represents 0–100°C	Dimensions	6½ x 8 x 7½" (15.5 x 21 x 19cm)
Heating Volume	Less than 50 CF (1400L), re-circulating		



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