

TempTrak® Patented Solid Simulators

Enterprise Wireless Monitoring



Air temperatures fluctuate when refrigerator doors are opened and closed, but the actual temperature of the item stored in the cabinet is not affected unless the door is left open for a significant period of time. In response to the need to represent the actual product temperature, Cooper-Atkins has developed a series of patented* product simulators. Both solid simulator probes include a calibration port which allows NIST-traceable calibration to be performed on-site. The SysCal™ process calibrates the transmitter and probe together as a system, using a thermocouple thermometer to quickly verify its accuracy. The Solid Vial Simulator's unique shape mimics the product temperatures in a cold storage area. The patented Solid Simulators are compatible with 900 MHz and Wi-Fi.

*U.S. Patent #9,470,587



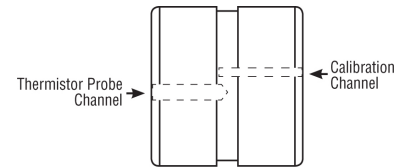
#10113
#10113-032



#10114
#10114-032



Label Protecting
Calibration Channel



Patented Solid
Simulator

Features

- Accurately simulates product temperature in ambient conditions
- Durable, FDA-approved Acetal Copolymer
- Compact size
- SysCal™ calibration port

Benefits

- Minimally affected by ambient air, thus more accurate readings
- No worry of breakage, leakage or evaporation
- Allows for easy installation, upright or sideways
- Perform on-site calibration verification traceable to NIST standards

Specifications

#10113 / #10113-032 Solid Simulator

- Temperature Range: -25° to 180°F (-32° to 82°C)
- Dimensions: 1.5" x 1.5" (38 mm x 38 mm)
- Weight: 3 oz (85 g)
- 1-year warranty
- -032 model is traceable to NIST standards
- Certifications: RoHS

#10114 / #10114-032 Solid Vial Simulator

- Temperature Range: -25° to 180°F (-32° to 82°C)
- Dimensions: 1.75" x 1" (44 mm x 25 mm)
- Weight: 1.5 oz (43 g)
- 1-year warranty
- -032 model is traceable to NIST standards
- Certifications: RoHS



Two tests were conducted in an environmental chamber over a two hour time span in order to show how the Solid Simulator (#10113) and Solid Vial Simulator (#10114) react to changing ambient air temperature in comparison to product temperature.

Once all of the probes were allowed to stabilize at 41°F, the chamber door was left open for 5 minutes, shut for one hour, and then the process was repeated. Probe readings were recorded every five minutes. In both tests, the air probe reacted quickly, rising 7-10 degrees, while the Solid Simulator and Glycol Simulator remained stable and consistent.

Test 1

The Solid Simulators reaction to change in temperature, compared to the ambient air temperature and the Glycol Simulator temperature.

- Air Probe
- Glycol Simulator
- Solid Simulator

Test 2

The Solid Vial Simulators reaction to the change in temperature, compared to the ambient air temperature and the temperature of a 5ml vial of liquid.

- Air Probe
- 5ml Vial
- Solid Vial Simulator

