

## Portable IR calibrators 9132-9133



- Certify IR pyrometers from  $-30\text{ }^{\circ}\text{C}$  to  $500\text{ }^{\circ}\text{C}$  ( $-22\text{ }^{\circ}\text{F}$  to  $932\text{ }^{\circ}\text{F}$ )
- Large 57 mm (2.25 in) blackbody target
- RTD reference well for high precision
- Small, compact design

Whether you're using in-line or handheld infrared pyrometers, you need good calibration standards to verify their accuracy. Our new portable IR calibrators provide stable blackbody targets for calibrating noncontact IR thermometers from  $-30\text{ }^{\circ}\text{C}$  to  $500\text{ }^{\circ}\text{C}$ .

These new units feature a large, temperature controlled blackbody target with a diameter of 57 mm (2.25 in), which offers a large field of view area for optical variations in infrared thermometers. The emissivity of the isothermal target is set at 0.95 ( $\pm 0.02\%$ ), and the target temperature can be controlled in set-point increments of  $0.1\text{ }^{\circ}$  from  $-30\text{ }^{\circ}\text{C}$  to  $500\text{ }^{\circ}\text{C}$ .

For even higher precision, a well is located directly behind the blackbody surface for contact calibration of the blackbody.

These units are as easy to use as "point and shoot." Simply set the desired blackbody temperature from the convenient front panel control buttons, wait a few minutes for equilibrium, and point the gun at the target. The radiated energy from the blackbody is measured by your IR thermometer. Simply compare its reading

to the display on the blackbody and record the difference.

### 9132

For IR calibrations above normal ambient, the 9132 provides a stable blackbody target up to  $500\text{ }^{\circ}\text{C}$  ( $932\text{ }^{\circ}\text{F}$ ). With accuracy to  $\pm 0.5\text{ }^{\circ}\text{C}$  and stability to  $\pm 0.1\text{ }^{\circ}\text{C}$ , this new portable IR unit can certify most handheld pyrometers.

Short heating and cooling times mean you won't have to wait long to get your work done. From room temperature to  $500\text{ }^{\circ}\text{C}$  the 9132 will be stable within 30 minutes. You won't find a more compact IR calibrator.

### 9133

If you're calibrating IR guns at cold temperatures, you'll love our new 9133. With solid-state cooling technology, this new IR calibrator reaches  $-30\text{ }^{\circ}\text{C}$  ( $22\text{ }^{\circ}\text{F}$ ) in normal ambient conditions. With a conveniently located dry gas fitting on the front bezel, ice build up on the target can be avoided. At the upper end of its range, the 9133 provides stable temperatures to  $160\text{ }^{\circ}\text{C}$  ( $320\text{ }^{\circ}\text{F}$ ).

With heating and cooling times of about 15 minutes from ambient to either extreme, the 9133 gets you to temperature quickly and performs when it gets there. Compare your IR devices to the temperature display—it's factory calibrated to be within  $\pm 0.4\text{ }^{\circ}\text{C}$  ( $\pm 0.7\text{ }^{\circ}\text{F}$ ).

No other IR calibrators give you this level of precision in such compact packages. Whatever your temperature application, trust a Hart product to solve it.



Large target for calibrating all IR thermometer types.



The 9133 includes a quick-attach fitting on the front bezel for dry air purging, which eliminates ice buildup on the target.

# Portable IR calibrators

Specifications	9133	9132
<b>Temperature Range</b>	-30 °C to 150 °C at 23 °C ambient (-22 °F to 302 °F at 73 °F ambient)	50 °C to 500 °C (122°F to 932°F)
<b>Accuracy</b>	± 0.4 °C (± 0.72 °F)	± 0.5 °C at 100 °C (± 0.9°F at 212°F) ± 0.8 °C at 500 °C (± 1.4 °F at 932 °F)
<b>Stability</b>	± 0.1 °C (± 0.18 °F)	± 0.1°C at 100°C (± 0.18°F at 212°F) ± 0.3°C at 500°C (± 0.54°F at 932°F)
<b>Target Size</b>	57 mm (2.25 in)	
<b>Target Emissivity</b>	0.95 (± 0.02 from 8 to 14 μm)	
<b>Resolution</b>	0.1 °	
<b>Heating Time</b>	15 minutes (25 °C to 150 °C)	30 minutes (50 °C to 500 °C)
<b>Cooling Time</b>	15 minutes (25 °C to -20 °C)	30 minutes (500 °C to 100 °C)
<b>Computer Interface</b>	RS-232 I/O included with 9930 Interface-it software	
<b>Power</b>	115 V ac (± 10 %), 1.5 A, or 230 V ac (± 10 %), 1.0 A, switchable, 50/60 Hz, 200 W	115 V ac (± 10 %), 3 A or 230 V ac (± 10 %), 1.5 A, switchable, 50/60 Hz, 340 W
<b>Size ( HxWxD )</b>	152 x 286 x 267 mm (6 x 11.25 x 10.5 in)	102 x 152 x 178 mm (4 x 6 x 7 in )
<b>Weight</b>	4.6 kg (10 lb)	1.8 kg (4 lb)
<b>NIST-Traceable Contact Calibration</b>	Data at -30°C, 0°C, 25°C, 75°C, 100°C, 125°C, and 150°C	Data at 50°C, 100°C, 200°C, 250°C, 300°C, 400°C, and 500°C

## Ordering Information

<b>9132</b>	Portable IR Calibrator, 500 °C
<b>9308</b>	Rugged Carrying Case, 9132
<b>9133</b>	Portable IR Calibrator, -30 °C
<b>9302</b>	Rugged Carrying Case, 9133