

## PORTABLE IR CALIBRATORS

## Models 9132 and 9133



### 9132

For IR calibrations above normal ambient, the 9132 provides a stable blackbody target up to 500°C (932°F). With accuracy to  $\pm 0.5^\circ\text{C}$  and stability to  $\pm 0.1^\circ\text{C}$ , 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°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  $-30^\circ\text{C}$  ( $22^\circ\text{F}$ ) in normal ambient conditions. With a conveniently located dry gas fitting on the front bezel, the 9133 won't build up ice on the target. At the upper end of its range, the 9133 provides stable temperatures to 160°C (320°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 (NIST traceable) to be within  $\pm 0.4^\circ\text{C}$  ( $\pm 0.7^\circ\text{F}$ ).

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



*Large target for calibrating all IR thermometer types.*

### Features Summary

- Certify IR pyrometers from  $-30^\circ\text{C}$  to  $500^\circ\text{C}$  ( $-22^\circ\text{F}$  to  $932^\circ\text{F}$ )
- Large 2.25" (57 mm) 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  $-30^\circ\text{C}$  to  $500^\circ\text{C}$ .

These new units feature a large, temperature controlled blackbody target with a diameter of 2.25" (57 mm), 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, and the target temperature can be controlled in set-point increments of  $0.1^\circ$  from  $-30^\circ\text{C}$  to  $500^\circ\text{C}$ .

For even higher precision, a well is located directly behind the blackbody surface for contact calibration of the blackbody. Using an optional calibrated PRT and readout device, target accuracy of  $\pm 0.075^\circ\text{C}$  can be achieved.

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.

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Specifications	9132	9133
Temperature Range	50°C to 500°C (122°F to 932°F)	–30°C to 160°C at 23°C ambient (–22°F to 320°F at 73°F ambient)
Accuracy	±0.5°C at 100°C (±0.9°F at 212°F) ±0.8°C at 500°C (±1.4°F at 932°F)	±0.4°C (±0.72°F)
Stability	±0.1°C at 100°C (±0.18°F at 212°F) ±0.3°C at 500°C (±0.54°F at 932°F)	±0.1°C (±0.18°F)
Target Size	2.25" (57 mm)	
Target Emissivity	0.95	
Resolution	0.1°	
Heating Time	30 minutes (50°C to 500°C)	15 minutes (25°C to 150°C)
Cooling Time	30 minutes (500°C to 100°C)	15 minutes (25°C to –20°C)
Computer Interface	RS-232 included with 9930 Interface- <i>it</i> software	
Power	115 VAC (±10%), 3 A or 230 VAC (±10%), 1.5 A, switchable, 50/60 Hz	115 VAC (±10%), 1.5 A, 230 VAC (±10%), 1.0 A, switchable, 50/60 Hz
Size	4" H x 6" W x 7" D (102 x 152 x 178 mm)	6" H x 11.25" W x 10.5" D (152 x 286 x 267 mm)



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

## Ordering Information

9132	Portable IR Calibrator, 500°C
9308	Rugged Carrying Case, 9132
9133	Portable IR Calibrator, –30°C
9302	Rugged Carrying Case, 9133
1521	Handheld Reference Thermometer
5618-9	Secondary Reference PRT, 1/8" diameter, –200°C to 500°C