

## **NEW** Ametek/Jofra ETC Infrared Thermometer Calibrator

- Easy Temperature Calibrator
- Infrared Calibration Made Easy
  - Accurate to  $\pm 0.05\%$  of Reading  $\pm 0.3^\circ\text{C} / 0.54^\circ\text{F}$
  - Extensive Range
- Full featured
  - One Key – One Function Operation
  - Large LCD with Icons
  - Ample and Accessible Target Area
  - RS232 Communications and Software Supplied



ETC400R ▲

Temperature Test Instruments

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The **JOFRA ETC** series is designed for field testing of temperature measurement devices. The small size and light weight make it a perfect instrument to verify sensors in difficult to reach places

**Keyboard & Display** - Dual information display telling both the SET temperature and the TRUE temperature.

**Reduced size and weight** are important considerations because the unit is able to fit into a tool box or instrument carrying case and can be used for sensors that are difficult to access.

**One-key-one-function user interface** provides immediate access to setting the temperature and the auto-step timesaving function. There is no need for manipulation of sophisticated menus.

### RS-232 and calibration software

Simplified calibration documentation - The ETC series calibrator is delivered with an RS-232 serial interface and the AMECAL-LIGHT software. This WINDOWS®-based software allows the user to customize calibration routines. The software is easy-to-use so you do not have to be a programmer to configure your own calibration procedures and write out calibration certificates.

### An easy to use tool for calibration of infrared thermometers

### Contact Transcat for additional options/models not listed

**Each Unit Includes:** Indicator, power cord, RS232 cable, software for testing and for calibration of temperature calibrators, reference and user's manuals, and manufacturer's NIST traceable certification

### Specifications

Range:	28 to 400°C (82.4 to 752°F)
Accuracy:	$\pm 0.05\%$ of reading $\pm 0.3^\circ\text{C} / 0.54^\circ\text{F}$
Stability:	$\pm 0.3^\circ\text{C} / 0.54^\circ\text{F}$
Time to stability:	3 min
Heating time:	28 to 400°C / 82.4 to 752°F (5 min)
Cooling time:	400 to 100°C / 752 to 212°F (20 min)
Engineering units:	°C and °F
Communications:	RS232 with software
Display:	LCD – large with icons
Voltage:	115 VAC – 230 VAC available (add -230 to catalog part number)
Size / Weight:	6.8 x 2.8 x 7.2" HWD / 3.8 lb

### Ordering Information

Order #	Mfg#	Description	Price
MPETC400R115BG	ETC400R115BG	IR calibrator, 82.4 to 752°F, 115 VAC	
MPETC400R230AG	ETC400R230AG	IR calibrator, 82.4 to 752°F, 230 VAC	
MP124094	124094	Carrying Case for ETC series	

## Hart Scientific Infrared Calibrator

- Three Preset Points
- Quick Check for Your IR Thermometers

Infrared thermometer calibration just became easier to do and cheaper to perform with the addition of the 9135 3-Temperature IR Calibrator. Choose from three selectable temperature setpoints (50°C, 100°C, or 150°C) to get a quick check of your IR sensor and thermometers.

The 9135 is a hand-held instrument that's easy to carry around in your toolbox or prop up on the lab bench. Slim design allows easy access to many on-line IR devices for site calibration or quick temperature checks. Select which of the three temperatures you are checking, point your IR device at the 1.5" diameter heated black body, and record your temperature readings. It's that quick and easy. A LED ready light tells you when the calibrator is at temperature.

You won't find an infrared source that's this easy to use and this portable.

### Specifications

Temperature Range:	50°C, 100°C, or 150°C (122°F, 212°F, 302°F)
Accuracy:	±1°C (±1.8°F)
Stability:	±0.1°C (±0.18°F)
Heating Time:	3 minutes from 25°C to 150°C
Cooling Time:	25 minutes from 150°C to 50°C
Stabilization Time:	3 minutes
Black Body Diameter:	1.5" (38 mm)
Black Body Emissivity:	0.95
Power:	115 VAC or 230 VAC (±10%)
Size:	4.5 x 7.5 x 1.75" LWD
Weight:	1.5 lbs



9135

### Ordering Information

Order #	Mfg #	Description	Price
MP9135	9135	IR Thermometer Calibrator	
MP5916T-CS	9308	Rugged Carrying Case for 9135	

## Mikron Blackbody Calibration Sources

- Calibrate IR Sensors and Thermometers
- Blackbody Emissivity of 0.99

Black body sources are commonly used for calibrating infrared thermometers and sensors, both hand-held and process type. They are also used for calibration of radiometers, thermal imaging systems, and certain spectrographic analyzers. All units employ a radiation source with the highest emissivity possible, and are supplied with NIST traceable certificates of calibration.

**NOTE:** These models represent the most popular ranges and configurations. Units are available with temperature ranges up to 3000°C (5430°F); contact Transcat for information.

**Each Unit Includes:** Manufacturer's NIST traceable certificate of calibration and instructions.

### Specifications and Ordering Information

Mfg#	M310C-1	M335C
Range:	Ambient +10 to 300°C (572°F)	300–1500°C (570–2730°F)
Aperture Diameter:	3.0"	0.67"
Accuracy:	0.25% rdg ± 1°C	0.4% Rdg ± 1°C
Warm-Up Time:	30 min to 200°C	30 min to 1200°C
Size:	7 x 11 x 11" HWD	11.5 x 20 x 22" HWD
Power Requirements:	115 VAC, 150W, 220V Optional	115 VAC, 1.0 kW, 220V Optional
Order #	MP6737T-C	MP21060T-C
Price		

NOTE: Add -220 to part number for 220V version.



M310C-1



M335C

## Hart Scientific Portable IR Calibrators

- 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. Hart's new portable IR calibrators provide stable blackbody targets for calibrating noncontact IR thermometers from  $-30^{\circ}$  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 target temperatures 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 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.

**Each Unit Includes:** Manufacturer's NIST traceable certificate of calibration and instructions. The 9133 includes a quick-attach fitting on the front bezel for dry air purging, which eliminates ice buildup on the target.

### Specifications and Ordering Information

Mfg#	9132	9133
Temperature Range	50 to $500^{\circ}\text{C}$ (122 to $932^{\circ}\text{F}$ )	$-30$ to $150^{\circ}\text{C}$ at $23^{\circ}\text{C}$ ambient ( $-22$ to $302^{\circ}\text{F}$ at $73^{\circ}\text{F}$ ambient)
Accuracy	$\pm 0.5^{\circ}\text{C}$ at $100^{\circ}\text{C}$ ( $\pm 0.9^{\circ}\text{F}$ at $212^{\circ}\text{F}$ ) $\pm 0.8^{\circ}\text{C}$ at $500^{\circ}\text{C}$ ( $\pm 1.4^{\circ}\text{F}$ at $932^{\circ}\text{F}$ )	$\pm 0.4^{\circ}\text{C}$ ( $\pm 0.72^{\circ}\text{F}$ )
Stability	$\pm 0.1^{\circ}\text{C}$ at $100^{\circ}\text{C}$ ( $\pm 0.18^{\circ}\text{F}$ at $212^{\circ}\text{F}$ ) $\pm 0.3^{\circ}\text{C}$ at $500^{\circ}\text{C}$ ( $\pm 0.54^{\circ}\text{F}$ at $932^{\circ}\text{F}$ )	$\pm 0.1^{\circ}\text{C}$ ( $\pm 0.18^{\circ}\text{F}$ )
Target Size	2.25" (57 mm)	
Target Emissivity	0.95	
Resolution	$0.1^{\circ}$	
Heating Time	30 minutes ( $50^{\circ}\text{C}$ to $500^{\circ}\text{C}$ )	15 minutes ( $25^{\circ}\text{C}$ to $150^{\circ}\text{C}$ )
Cooling Time	30 minutes ( $500^{\circ}\text{C}$ to $100^{\circ}\text{C}$ )	15 minutes ( $25^{\circ}\text{C}$ to $-20^{\circ}\text{C}$ )
Computer Interface	RS-232 included with 9930 Interface-it Software	
Power	115 VAC ( $\pm 10\%$ ), 3A or 230 VAC ( $\pm 10\%$ ), 1.5A, switchable, 50/60 Hz	115 VAC ( $\pm 10\%$ ), 1.5A, 230 VAC ( $\pm 10\%$ ), 1.0A, 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)
Weight	4 lb. (1.8 kg)	10 lb. (4.6 kg)
Order #	MPHART9132	MPHART9133
Price		

### Accessories

Order #	Mfg #	Description	Price
MP5961T-CS	9308	Rugged Carrying Case for HART9132	
MPHART9302	9302	Rugged Carrying Case for HART9133	
MP1521T	1521	Hand-Held Reference Thermometer	
MP5618-9	5618-9	Secondary Reference PRT, 1/8" Diameter, $-200^{\circ}\text{C}$ to $500^{\circ}\text{C}$	



9133 ▲

Temperature Test Instruments



Shown with Raytek MX2, 9132 ▲  
Infrared Thermometer

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