

9140 Series Field Metrology Wells 4180 Series Infrared Calibrators

FLUKE®

New



Fluke 9142/9143/9144



Fluke 4180/4181

Field Metrology Wells and infrared calibration targets

9142, 9143, 9144 Field temperature calibration with precision and speed

The Fluke 9140 series Field Metrology Wells extend high performance portable temperature calibration to the industrial process environment by maximizing portability, speed, and functionality with little compromise to metrology performance.

Offering a broad temperature covered by three models you can easily cover varied contact temperature probe workloads between -25 °C to 660 °C.

They are quick to reach temperature set points, yet they are stable, uniform, and accurate. These industrial temperature calibrators are perfect for performing transmitter loop calibrations, comparison calibrations, or simple checks of thermocouple sensors.

Adding the process option means there is no need to carry additional tools into the field. The optional built-in two-channel readout measures resistance, voltage, and 4–20 mA current with 24V loop power.

- Lightweight, portable, and fast
- Cool to -25 °C in 15 minutes and heat to 660 °C in 15 minutes
- Built-in two-channel readout for PRT, RTD, thermocouple, 4–20 mA current
- On-board automation and documentation
- Metrology performance in accuracy, stability, uniformity, and loading

4180/4181 IR Calibrators True metrology solution for infrared Calibration

Now it's easy to increase your IR temperature measurement accuracy in the lab or the field with the new 4180/81 Precision Infrared Calibrators from Fluke's Hart Scientific division.

Their accredited calibrations from Hart's IR laboratory help to ensure traceable, consistent measurements accurate to +0.25 °C. Select from eight preconfigured Fluke thermometer settings or set up your own.

The large 152 mm (6 inch) target helps eliminate errors. So whether you're measuring from -15 °C to 120 °C (4180) or from 35 °C to 500 °C (4181) you'll get a 4:1 TUR.

- High performance, designed for industrial use
- Guaranteed accuracy specifications
- Excellent stability and uniformity
- Large 152 mm targets capture peripheral vision of IR thermometer
- Portability and speed for field use - including convenient bail handle
- Simulates individual IR thermometer emissivity settings
- No difficult infrared calculations
- Fluke and Raytek thermometer calibration points can be loaded directly into the calibrator for convenience
- Calibrated in accredited infrared laboratory by Hart Scientific, the experts in temperature calibration
- At least 4 times more accurate than most IR thermometers
- Calibration includes uncertainties from surface heat loss and emissivity

Included Accessories

914x: 9930 Interface-it Software, Report of Calibration, Test leads (P Version Only), 6-pin DIN Connector for Reference Probe (P Version Only)

Ordering Information

Fluke 4180	Precision Infrared Calibrator, -15 °C to 120 °C
Fluke 4181	Precision Infrared Calibrator, 35 °C to 500 °C
Fluke 4180-CASE	Carrying Case, 4180, 4181
Fluke 4180-DCAS	Carrying Case with wheels, 4180, 4181
Fluke 9142-X	Field Metrology Well, Low Temp
Fluke 9143-X	Field Metrology Well, Mid Temp
Fluke 9144-X	Field Metrology Well, High Temp

Add -P to order optional Process option (914X-X-P). X represents insert type, A, B, C, D, E or F

Specifications

	9142	9143	9144	4180	4181
Temp Range	-25 °C to 150 °C	33 °C to 350 °C	50 °C to 660 °C	-15 °C to 120 °C	35 °C to 500 °C
Stability	±0.1 °C Full Range	±0.02 °C at 33 °C ±0.02 °C at 200 °C ±0.03 °C at 350 °C	±0.03 °C at 50 °C ±0.04 °C at 420 °C ±0.05 °C at 660 °C	±0.05 °C at 0 °C	±0.2 °C at 250 °C
Uniformity	±0.01 °C Full Range	±0.01 °C at 33 °C ±0.015 °C at 200 °C ±0.02 °C at 350 °C	±0.02 °C at 50 °C ±0.05 °C at 420 °C ±0.15 °C at 660 °C	±0.1 °C at 0 °C	±0.1 °C at 35 °C
Target Size	N/A	N/A	N/A	152.4 mm diameter	152.4 mm diameter
Emissivity Range	N/A	N/A	N/A	Preset to 0.95	Preset to 0.95
NIST Accredited Calibration	YES	YES	YES	YES	YES

9142/9143/9144:

Size (HxWxD): 290 x 185 x 295 mm
Weight: 9142: 8.2 kg, 9143: 7.3 kg, 9144: 7.7 kg
One Year Warranty

4180/4181

Size (HxWxD): 241 x 356 x 241 mm
Weight: 4180: 9.1 kg, 4181: 9.5 kg
One Year Warranty