



**FLUKE®**

**Calibration**

## Industrial temperature calibration selection guide

### **Look inside for:**

**Field metrology wells**

**Infrared calibrators**

**Handheld and field  
dry-wells**

**Micro-baths**

**Environmental monitoring**

**Thermometer readouts**

**Reference sensors**

# Temperature measurement and calibration

*Tools for industrial instrumentation  
and calibration technicians*








## Selection guide






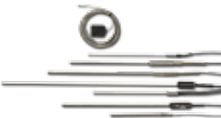









# Selection guide

**FLUKE**®

Calibration

|               | Field metrology wells   |   |   | NEW! Precision infrared calibrators   |  | Handheld dry-wells  |   |
|---------------|---|---|---|---|--|---|---|
|               |  |  |  |  |  |  |  |
| Model         | 9142/9142P<br>page 4  | 9143/9143P<br>page 4  | 9144/9144P<br>page 4  | 4180<br>page 6  | 4181<br>page 6   | 9100S<br>page 8   | 9102S<br>page 8   |
| Range         | -25 °C to 150 °C<br>4-20 mA   | 33 °C to 350 °C<br>4-20 mA  | 50 °C to 660 °C<br>4-20 mA  | -15 °C to 120 °C  | 35 °C to 500 °C  | 35 °C to 375 °C   | -10 °C to 122 °C  |
| Best accuracy | ± 0.2 °C  | ± 0.2 °C  | ± 0.35 °C   | ± 0.35 °C   | ± 0.35 °C  | ± 0.25 °C   | ± 0.25 °C   |
| Applications  | ◆   | ◆   | ◆   | ◆   | ◆  | ■   | ■   |

|               | Field dry-wells  |  |  |  |   | Sensors  |                       |
|---------------|--|--|--|--|---|--|-----------------------|
|               |  |  |  |  |  |  |                       |
| Model         | 9009<br>page 9   | 9103<br>page 10  | 9140<br>page 10  | 9141<br>page 10  | 9150<br>page 10   | PRT<br>page 15   | Thermistor<br>page 15 |
| Range(s)      | -15 °C to 350 °C   | -25 °C to 140 °C   | 35 °C to 350 °C  | 50 °C to 650 °C  | 150 °C to 1200 °C   | -200 °C to 670 °C  | 0 °C to 100 °C        |
| Best accuracy | ± 0.2 °C   | ± 0.25 °C  | ± 0.5 °C   | ± 0.5 °C   | ± 5 °C  | See pages 14-15  | See pages 14-15       |
| Applications  | ■ ◆  | ■ ◆  | ■ ◆  | ■ ◆  | thermocouples   | ◆ ■ ◆  | ◆ ■ ◆                 |

|               | Micro baths   |   |   | Thermometer readouts and environmental monitoring                                   |  |   |   |
|---------------|---|---|---|---|--|---|---|
|               |  |  |  |  |  |  |  |
| Model         | 6102<br>page 11   | 7102<br>page 11   | 7103<br>page 11   | 1551A/1552A<br>page 13  | 1523/1524<br>page 13   | 1529<br>page 14   | 1620A<br>page 12  |
| Range         | 35 °C to 200 °C   | -5 °C to 125 °C   | -30 °C to 125 °C  | -200 °C to 300 °C   | -200 °C to 2315 °C   | -200 °C to 962 °C   | 15 °C to 35 °C<br>20%RH to 70%RH  |
| Best accuracy | ± 0.25 °C   | ± 0.25 °C   | ± 0.25 °C   | ± 0.05 °C   | ± 0.015 °C   | ± 0.006 °C  | ± 0.25 °C<br>± 2 %RH  |
| Channels      | n/a   | n/a   | n/a   | n/a   | 1 or 2   | 4   | 2   |
| Applications  | ◆   | ◆   | ◆   | ■ ◆   | ◆ ◆  | ◆ ◆   | ★   |

[www.flukecal.com](http://www.flukecal.com)

# Field dry-wells

**FLUKE®**

Calibration

## Fluke Calibration 9009 Industrial Dual-Block Calibrator

### Cut your calibration time in half

- Calibrate temperature sensors fast
- Independently controlled cold and hot blocks
- -15 °C to 110 °C (cold block), 50 °C to 350 °C (hot block)
- Self-contained in a rugged watertight case
- Four removable inserts,
- Direct interface to Fluke 754

Each unit includes four removable inserts, including two with holes that are 6.4 mm (1/4 in) and two with holes that are 4.8 mm (3/16 in) in diameter. Each unit also includes a power cord, insert removal tool, RS-232 interface, instrument control software and a NIST-traceable calibration

**Recommended accessories:** additional inserts, reference temperature sensor and indicator

Why calibrate thermometers? Because your performance will go up and your costs will come down. As suggested in the example in Table 1, the cost of inaccurate measurements can be quite high.

**Tip:** While you're checking your transmitter sensor at one temperature, the other well can be heating or cooling to your next set-point.

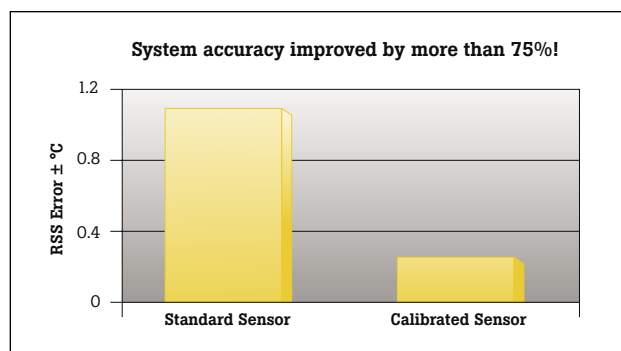


Now it's easy to work twice as fast.

#### High Cost of Not Calibrating a Sensor

|               |                        |
|---------------|------------------------|
| Process fluid | Water                  |
| Flow rate     | 100 gallons per minute |
| Control temp  | 38 °F                  |
| Energy cost   | Rate per kW-Hr         |
| Energy cost   | 70,812 (Rate) per year |

Table 1. Annual cost of energy due to a 1 °C temperature error



System accuracy improvement achieved with a calibrated Pt100 sensor.

### Ordering information

**9009-B** Dual Block Dry-Well (Black), -15 °C to 350 °C  
**9009-Y** Dual Block Dry-Well (Yellow), -15 °C to 350 °C  
**3102-1** Insert 1.6 mm (1/16 in)  
**3102-2** Insert 3.2 mm (1/8 in)  
**3102-3** Insert 4.8 mm (3/16 in)  
**3102-4** Insert 6.4 mm (1/4 in)  
**3102-5** Insert 7.9 mm (5/16 in)  
**3102-6** Insert 9.5 mm (3/8 in)  
**3102-7** Insert 11.1 mm (7/16 in)  
**3102-8** Insert 4 mm (5/32 in)  
**2514** Dry-well interface cable to Fluke 754

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# Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

Fluke:

[9009-B-156](#) [9009-Y-156](#)