

## TECHNICAL DATA

# Fluke 9118A Thermocouple Calibration Furnace



## Key features

- High-performance thermocouple calibrations up to 1200 °C.
- Horizontal, open-ended tube furnace.
- Temperature range of 300 °C to 1200 °C.
- Comparison calibration of noble and base-metal thermocouples by secondary high-temperature labs and instrument shops.
- Ideal for industries such as aerospace, automotive, energy, metals, and plastics.

## Product overview: Fluke 9118A Thermocouple Calibration Furnace

### *Precision Calibration for High-Temperature Thermocouples*

#### The Standard for High-Temperature Thermocouple Calibration

The Fluke 9118A Thermocouple Calibration Furnace delivers unrivaled performance and flexibility for demanding high-temperature calibration labs. Engineered for accuracy, reliability, and ease of use, the 9118A furnace helps you meet industry standards while improving productivity and lowering cost of ownership.

## Key Features and Benefits of the Fluke 9118A

- **Wide Temperature Range** – Calibrate thermocouples from 300 °C to 1200 °C, covering most high-temperature industrial and laboratory applications.
- **Flexible Configuration** – Easily switch between tube furnace and isothermal block configurations to calibrate a wide variety of thermocouple types—accommodating both base-metal and noble-metal designs.
- **Outstanding Uniformity and Stability** – Achieve industry-best temperature uniformity and stability:
  - Axial uniformity:  $\pm 0.2$  °C over a 60 mm zone at 1200 °C
  - Radial uniformity:  $\pm 0.25$  °C at 1200 °C (isothermal block)
  - Temperature stability:  $\pm 0.1$  °C or better across the full range
- **Automated Setpoint Control** – Boost lab productivity with programmable, automated temperature setpoint control. Supports up to eight setpoints, ramp rates, and dwell times—plus remote automation and data logging with the Fluke 1586A Super-DAQ.
- **Non-Metallic, Contamination-Free Block** – Ceramic alumina well and isothermal block minimize thermocouple contamination and reduce ongoing calibration costs.

## Specifications: Fluke 9118A Thermocouple Calibration Furnace

General specifications	
<b>Operating conditions</b>	
Operating temperature	5 °C to 40 °C
Storage temperature	–20 °C to 70 °C
Humidity	80 % maximum for temperatures <31 °C, decreasing linearly to 50 % at 40 °C
Altitude	<2,000 m (6,562 feet)
Power requirements	230 V ac ( $\pm 10$ %), 50/60 Hz, 20 A
Heater power	4000 watts at 230 V ac
<b>Over-current protection</b>	
System	20 A, 250 V resettable circuit breaker
Main heater fuse	F 12 A, 250 V
Zone heater fuse	F 12 A, 250 V
Computer interface	RS-232 and USB
Display	Monochrome LCD, °C or °F user-selectable
Display resolution	0.1 °C or °F
Size (H x W x L)	400 mm x 337 mm x 700 mm (15.7 in x 13.3 in x 27.6 in)
Net weight	29 kg (63.9 lb) without isothermal block
<b>Isothermal block (optional)</b>	
Isothermal block construction	Alumina
Block outer diameter	37 mm (1.5 in)
Block length	380 mm (15.0 in)

Well diameter	(four wells total) 6.7 mm (0.26 in)	
Well depth	365 mm (14.4 in)	
Net weight	0.84 kg (1.9 lb) isothermal block only	
Accuracy specifications		
All accuracy specifications except temperature are for a period of 1 year after calibration, at 13 °C to 33 °C		
The furnace can be used with or without an Isothermal Block installed. Unique calibration parameters are necessary for each configuration. Calibration does NOT come standard from the factory for each configuration. Ensure that the furnace has been properly calibrated for the desired mode of operation.		
Furnace temperature range	300 °C to 1200 °C	
Set-point accuracy	± 5 °C	
Radial uniformity		
Temperature	9118A (14 mm from geometry central point)	9118A-ITB (hole to hole)
300 °C	± 0.5 °C	± 0.1 °C
700 °C	± 0.5 °C	± 0.20 °C
1200 °C	± 0.5 °C	± 0.25 °C
Axial uniformity		
Temperature	9118A (± 30 mm axial length from geometry central point)	9118A-ITB (at 60 mm from full immersion)
Full range	± 0.25 °C	± 0.2 °C
Temperature stability		
Specification	9118A	9118A-ITB
Stability	± 0.2 °C	± 0.1 °C
Stabilization time	2 hours, full range	3 hours at or below 700 °C 2 hours above 700 °C
Note: Temperature stability measured as 2-sigma over 30 minutes		
	9118A	9118A-ITB
Heating time (23 °C to 1200 °C)	40 minutes	45 minutes
Cooling time (1200 °C to 300°C)	180 minutes	200 minutes

## Ordering information



### **9118A**

Thermocouple Calibration Furnace

---

### **9118A-ITB**

Thermocouple Calibration Furnace with Isothermal Block

---

**Fluke.** *Keeping your world up and running.®*

**Fluke Corporation**  
PO Box 9090, Everett, WA 98206 U.S.A.

**For more information call:**  
In the U.S.A. (800) 443-5853  
In Canada (800) 36-FLUKE  
From other countries +1 (425) 446-5500  
[www.fluke.com](http://www.fluke.com)

©2026 Fluke Corporation.  
Specifications subject to change without notice.  
01/2026

**Modification of this document is not permitted  
without written permission from Fluke  
Corporation.**