

TECHNICAL DATA

# 7196B LN<sub>2</sub> Comparison Calibrator





## Key features

- Provides low-cost calibrations to  $-196^{\circ}\text{C}$ .
- Uncertainty less than 2 mK, ensuring precise and reliable results.
- Simple and straightforward to use.

## Product overview: 7196B LN<sub>2</sub> Comparison Calibrator

The nominal boiling point of nitrogen is  $-196^{\circ}\text{C}$  at one atmosphere of pressure. The defining triple point of argon is  $-189.3442^{\circ}\text{C}$ . While there is a difference between the nominal boiling point of nitrogen and the argon triple point, the difference can be corrected for mathematically, and an uncertainty of less than 2 mK from the actual argon triple point is achievable.

Fluke Calibration's LN<sub>2</sub> Comparison Calibrators consist of a vacuum-sealed stainless steel Dewar Flask, a high-purity copper block, and a precision-fit lid. The dewar is filled with LN<sub>2</sub> and the copper block is suspended in it; an SPRT is inserted into the block and a calibration is performed against your own calibrated SPRT. The **7196B-4** includes four 8-mm (0.32") wells. The **7196B-13** includes five 8-mm (0.32") wells and eight 6.35-mm (0.25") wells.

Fluke Calibration's LN<sub>2</sub> Comparison Calibrators are neither expensive nor complicated to use. If you need supporting data or would like to discuss the theory of operation of an LN<sub>2</sub> Comparison Calibrator, call Fluke Calibration today. (Or come to one of our [calibration training courses](#) and we'll show you.)

## Specifications: 7196B LN<sub>2</sub> Comparison Calibrator

Specifications	
Temperature	Nominal $-196^{\circ}\text{C}$ depending on atmospheric pressure
Thermal Wells	7196B-4: four 8 mm (0.32") I.D. wells 7196B-13: five 8 mm (0.32") I.D. wells, eight 6.35 mm (0.25") I.D. wells Both blocks: 275 mm immersion from top of lid to boom of well, 150 mm immersion into copper block
Dimensions (outer diameter x height)	168 mm x 406 mm (6.6 in O.D. x 16 in)
Temperature Stability	Typically better than 2 mK/20 min <sup>[1]</sup>
Temperature Uniformity	<0.0004 °C
Volume	5.47 liters (1.45 gallons)
<sup>[1]</sup> The equilibrium temperature will change with the atmospheric pressure ( $dT/dp \gg 0.085 \text{ mK/Pa}$ ). The actual temperature stability depends on atmospheric pressure stability.	

## Ordering information



### **7196B-4**

LN<sub>2</sub> Comparison Calibrator, 4 holes

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### **7196B-13**

LN<sub>2</sub> Comparison Calibrator, 13 holes

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