

Mini Fixed-Point Cell Furnace



- Good introduction to fixed-point calibration
- User friendly and inexpensive

Hart's 9260 Mini Fixed-Point Cell Furnace provides a fixed-point system that cuts in half the financial investment required to do fixed-point calibrations and virtually all the time and training required by traditional systems.

This furnace costs less than half of a large furnace and works with indium, tin, zinc, and aluminum cells to cover all ITS-90 fixed points from 156.5985 °C to 660.323 °C. The cells themselves, using a smaller volume of 99.9999 % pure metal, also cost much less. But cost is only a part of the issue.

The 9260 makes using fixed points easy. Simply insert the cell at the end of the day and let it sit overnight. The next morning, initialize the built-in software routine for your specific cell. Come back in an hour, verify the stability of the cell, and you can take measurements for the rest of the day from a near-perfect temperature source!

The built-in software lets you choose between using melting-point curves or freezing-point curves for each metal. The ITS-90 calls for freezing points, but melting points are easier to realize, and the difference in uncertainty (less than 2 mK for most applications) is generally

insignificant. In fact, the difference between using traditional cells at their freezing points and Hart's mini cells at their melting points is not significant for most labs in most applications.

Comparison blocks are also available for the 9260 for high-precision comparison calibrations at high temperatures. Two blocks are available with a variety of pre-drilled wells in addition to blank or custom blocks. Well depth is 229 mm (9 in).

Ordering Information

9260	Mini Fixed-Point Furnace
5914A	Mini Quartz Indium Cell
5915A	Mini Quartz Tin Cell
5916A	Mini Quartz Zinc Cell
5917A	Mini Quartz Aluminum Cell
5944	Metal Cased Mini Indium Cell
5945	Metal Cased Mini Tin Cell
5946	Metal Cased Mini Zinc Cell
5947	Metal Cased Mini Aluminum Cell
2940-9260	Container, Mini-Cell Support, 9260

Cal Power

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Specifications

Temperature Range	50 °C to 680 °C
Ambient Operating Range	5 °C to 45 °C
Stability	±0.03 °C to 300 °C ±0.05 °C above 300 °C
Vertical Gradient	Top and bottom zones adjustable by offset
Plateau Duration	6–10 hours typical
Resolution	0.01 °
Display Scale	°C or °F, switchable
Immersion Depth	229 mm (9 in)
Stabilization Time	15 minutes nominal
Preheat Wells	2
Fault Protection	Sensor burnout and short protection, over-temperature thermal cutout
Display Accuracy	±0.2 °C to 300 °C ±0.3 °C to 450 °C ±0.5 °C to 680 °C
Comparison Block	Two multi-hole blocks, blanks, and custom blocks available
Well-to-Well Gradient (in comparison block)	±0.02 °C
Heating Time	1.25 hrs. from 25 °C to 680 °C
Cooling Time	10.5 hrs. from 680 °C to 100 °C
Comm.	RS-232 included
Power Requirements	115 VAC (±10 %), 60 Hz, 11 A, or 230 VAC (±10 %), 50 Hz, 6 A, specify, 1200 W
Exterior Dimensions (HxWxD)	489 x 222 x 260 mm (19.25 x 8.75 x 10.25 in)
Weight	20.5 kg (45 lb.) with block

2942-9260	Container, SST Mini-Cell Support, 9260
1904-X	Accredited Cell Intercomparison
3160-1	Comparison Insert, Blank
3160-2	Comparison Insert, 7 holes at 6.35 mm (1/4 in)
3160-3	Comparison Insert, 2 holes at 3.2 mm (1/8 in), 2 at 4.76 mm (3/16 in), 2 at 6.35 mm (1/4 in), 2 at 9 mm (9/32 in), and 2 at 9.5 mm (3/8 in) <i>Call for other comparison insert options.</i>