

-30°C MICRO-BATH

Model 7103



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- Totally portable -30°C bath—no spills or mess
- Fits sensors of virtually any size or shape
- Operates with Calibrate-*it* software for unattended calibrations

It stands to reason that only one company in the world makes micro-bath calibrators, and now we make one that achieves -30°C while operating at normal room temperatures.

Hart's new Model 7103 Micro-Bath gives you the advantages of greater stability and accuracy (as found with a stirred fluid bath) combined with the weight and size of a portable field calibrator. And it's affordable.

The Model 7103 is stable to ±0.04°C and uniform to ±0.02°C over its entire range from -30°C to 125°C. No compressor or other external cooling—none—is required to reach -30°C. A reliable magnetic stirring system ensures you get lablike performance from your bath.

Best of all, you can take it with you anywhere. The footprint of the 7103 is only 9 x 10.4 inches, weight (with liq-

uid) is less than 22 pounds, and an O-ring-sealed transport lid makes sure you get there without any spills or mess. Heating, cooling, and stabilization times allow you to take readings at almost any temperature within the 7103's range in 40 minutes or less after turning it on.

Each 7103 comes with an RS-232 interface and Hart's Interface-*it* software for running your bath from a PC. With Calibrate-*it* software (see page 6) and a good reference thermometer like the Hart *Black Stack*, you can run calibrations overnight and have total uncertainties well below 0.1°C.

With a 7103, calibrating odd-shaped sensors at cold temperatures is no longer a problem. The 2.5-inch-diameter, 5.5-inch-deep tank accommodates sensors of any shape so you can calibrate or

perform switch tests without worrying about fit or adequate thermal contact.

Why buy a heat source from anyone else? Come to Hart Scientific—the company recognized around the world as the leader in temperature bath performance.

Specifications

Range	-30 to 125°C (-22 to 257°F)
Accuracy	±0.4°C
Stability	±0.02°C typical with 200.05 silicone oil; ±0.04°C max
Uniformity	±0.02°C
Well Size	2.5" diameter x 5.5" deep (6.36 x 13.9 cm)
Communications	RS-232
Heating Time	Ambient to 100°C: 35min., typical
Cooling Time	Ambient to -20°C: 45 min., typical
Stabilization Time	7 minutes, typical
Operating Temperature	5 to 45°C
Resolution	0.1°
Display	LED, °C or °F, switchable
Size	12.75" H x 9" W x 10.37" D (32 x 21 x 28 cm)
Weight	21.6 lb. (9.8 kg)
Power	115/230 VAC (±10%) switchable, 50/60 Hz
Certification	7-point, NIST-traceable certificate of calibration included

Ordering Information

- 7103 Micro-Bath, -30 to 125°C (includes NIST-traceable certificate, a transport seal lid, and a 2082-P test lid)
- 2082-P Spare test lid
- 5010 Silicone oil, type 200.05, 1 liter (usable range: -30°C to 130°C)
- 9317 Carrying Case
- 9932 Calibrate-*it* Software



Have you considered an external reference? See page 8.