

MICRO-BATHS



Micro-Baths	Models 6102, 7102, and 7103
World's smallest portable calibration baths	
Calibrates sensors of any size or shape	
Stability to $\pm 0.015^{\circ}\text{C}$	
Ranges from -30°C to 200°C	

Once again, Hart Scientific, the leader in product innovation and development, is introducing new instruments that will change the way you work. Hart's Micro-Baths are the world's first completely portable baths built specifically for temperature calibration work. And now we've added a third model, the 7103, for calibrations at temperatures as low as -30°C .

Micro-Baths can be used anywhere for any type of sensor. The Model 6102 weighs less than 10 pounds, with the fluid. It's lighter and smaller than most dry-wells, has a spill-proof lid, and is easier to carry than your lunch. You can take it where you need to go without carts or excessive effort. Micro-Baths can even be transported with the fluid in them.

Wherever you go with your Micro-Bath, you can count on its performance.

Each model is stable to $\pm 0.03^{\circ}\text{C}$ or better, depending on the fluid you use. Uniformity is $\pm 0.02^{\circ}\text{C}$ or better for low uncertainties using a reference thermometer. Display accuracy has been improved to $\pm 0.25^{\circ}\text{C}$ for quick calibrations without a reference thermometer. In short, you get the stability and precision of a liquid bath in a dry-well-sized package. Don't be fooled by competitors who place a can of oil inside a dry-well and call it a bath. Hart Micro-Baths are maximized for true fluid-bath performance.

With a 1.9-inch-diameter, 5.5-inch-deep tank, a Micro-Bath can calibrate any type of sensor including short, square, or odd-shaped sensors. The problems of fit and immersion are virtually eliminated by using a fluid medium rather than a dry-block calibrator. Micro-Baths are perfect for liquid-in-glass and bimetal thermometers.

The 6102 has a temperature range from 35°C to 200°C , the 7102 covers -5°C to 125°C , and the 7103 extends from -30°C to 125°C . Stability, uniformity, and accuracy specifications cover the entire range for each bath, not just the best temperature.

All Micro-Baths have RS-232 ports, come with our *Interface-it* software, and can be used with Hart's *Calibrate-it* software (described on page 80). Also included are contacts to calibrate a thermal switch, eight set-point memory storage, ramp-rate adjust, and over-temperature safety cutout.

You may have noticed we haven't touted our CFC-free refrigeration. Yes, cold Micro-Baths are CFC-free, and also compressor-free. That's right—no heavy, noisy compressor to lug around. We achieve our temperature range and stability with only one moving part. This means more durability and less weight.

Hart manufactures and sells temperature calibration baths of every size and shape, and now we have the smallest and lightest baths in the industry to go with the dozens of other models we make.

Look at the specs, price, and value of these portable instruments and you'll know why Hart Scientific is the number-one company in this business.



See our selection of bath fluids on page 110.



Have you considered an external reference? See page 39.



Don't forget a protective case.

Ranges from -30°C to 200°C

Specifications	6102	7102	7103
Range	35°C to 200°C (95°F to 392°F)	-5°C to 125°C (23°F to 257°F)	-30°C to 125°C (-22°F to 257°F)
Accuracy	±0.25°C		
Stability	±0.02°C at 100°C ±0.03°C at 200°C	±0.015°C at -5°C ±0.03°C at 121°C	±0.03°C at -25°C ±0.05°C at 125°C
Uniformity	±0.02°C		
Resolution	0.01°C/F		
Operating Temperature	5°C to 45°C		
Heating Time	25°C to 200°C: 40 minutes	25°C to 100°C: 30 minutes	25°C to 100°C: 35 minutes
Cooling Time	200°C to 100°C: 35 minutes	25°C to 0°C: 30 minutes	25°C to -20°C: 45 minutes
Well Size	1.9" dia. x 5.5" deep (48 x 139 mm)		
Size	5.5" W x 10.38" H x 8" D (14 x 26 x 20 cm)	7.2" W x 12" H x 9.5" D (18 x 31 x 24 cm)	9" W x 13.2" H x 10.5" D (23 x 34 x 26 cm)
Weight	10 lb. (4.5 kg) with fluid	15 lb. (6.8 kg) with fluid	22 lb. (9.8 kg) with fluid
Power	115 VAC (±10%), 2.3 A or 230 VAC (±10%), 1.1 A, switchable, 50/60 Hz, 270 W	115 VAC (±10%), 1.8 A or 230 VAC (±10%), 0.9 A, switchable, 50/60 Hz, 200 W	94–234 VAC (±10%), 50/60 Hz, 400 W
NIST-Traceable Calibration	Data at 50°C, 100°C, 150°C, 200°C	Data at -5°C, 25°C, 55°, 90°C, 121°C	Data at -25°C, 0°C, 25°C, 50°C, 75°C, 100°C, 125°C

Ordering Information

- 6102 Micro-Bath, 35°C to 200°C (includes a transport seal lid and a 2082-M test lid)
- 2082-M Spare test lid
- 2083 3-inch tank extension adapter (affects stability, uniformity, and range at extreme temperatures)
- 5013-L Silicone oil, type 200.20, 1 liter (usable range: 10°C to 230°C)
- 9310 Carrying Case
- 2025-6102 X Cell Basket (see page 23)



A Micro-Bath's 1.9-inch-diameter tank lets you calibrate just about any size industrial sensor.

Ordering Information

- 7102 Micro-Bath, -5°C to 125°C (includes a transport seal lid and a 2082-P test lid)
- 2082-P Spare test lid
- 2083 3-inch tank extension adapter (affects stability, uniformity, and range at extreme temperatures)
- 5010-L Silicone oil, type 200.05, 1 liter (usable range: -40°C to 130°C)
- 9311 Carrying Case
- 2025-6102 X Cell Basket (see page 23)

Ordering Information

- 7103 Micro-Bath, -30°C to 125°C (includes a transport seal lid and a 2085 test lid)
- 2085 Spare test lid
- 5010-L Silicone oil, type 200.05, 1 liter (usable range: -40°C to 130°C)
- 9317 Carrying Case
- 2065-7103 X Cell Basket (see page 23)



Tom's ready for any 2002 Olympics temperature measurements.

Industrial