

# TPW MAINTENANCE BATH

# Model 7312



## TPW Maintenance Bath

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- Maintains TPW cells for up to two months
- Includes immersion freezer for simple cell freezing
- Independent cutout circuit protects cells from breaking

For frequent use of traditional-size triple point of water cells, nothing helps save you time and hassle like a good maintenance bath. The Model 7312 Triple Point of Water Maintenance Bath keeps your cells up and running reliably for weeks at a time—even during heavy usage—and comes at a price you'll love.

The 7312 accommodates two TPW cells and includes three pre-cool wells for properly cooling probes prior to measurements within the cells. Stability and uniformity are each better than  $\pm 0.006^\circ\text{C}$ , so your cells stay usable for up to eight weeks. Whatever method you use for building your ice mantles, you can be assured they'll last in a 7312 bath.

An independent safety circuit protects your water cells from freezing and breaking by monitoring the temperature of the

bath and shutting down its refrigeration system should the bath controller fail. Noise-reduction techniques in the manufacturing process ensure your bath doesn't add excessive noise to your lab.

With a temperature range from  $-5^\circ\text{C}$  to  $110^\circ\text{C}$ , this bath can also be used for comparison calibrations—particularly of long-stem probes—or maintenance of gallium cells. An optional gallium cell holding fixture fits two cells, which in a 7312 bath can maintain their melting plateaus for up to two weeks.

In fact, the 7312 comes with a time-saving Model 2031 Immersion Freezer so you can build your ice mantles quickly and hands-free. Just fill the 2031's condensing reservoir with dry-ice and alcohol, insert it into the cell, and get some other work done

while your ice mantle forms in less than an hour. (Alternatively,  $\text{LN}_2$  may be used.)

If you're using traditional-size TPW cells, don't take the time to create an ice mantle only to watch it melt quickly as it sits in a bucket of ice. Maintain your cells the right way in a Hart 7312 TPW Maintenance Bath.

### Specifications

<b>Range</b>	$-5^\circ\text{C}$ to $110^\circ\text{C}$
<b>Stability</b>	$\pm 0.001^\circ\text{C}$ at $0^\circ\text{C}$ (alcohol-water mix) $\pm 0.004^\circ\text{C}$ at $30^\circ\text{C}$ (alcohol-water mix)
<b>Uniformity</b>	$\pm 0.003^\circ\text{C}$ at $0^\circ\text{C}$ (alcohol-water mix) $\pm 0.006^\circ\text{C}$ at $30^\circ\text{C}$ (alcohol-water mix)
<b>TPW Duration</b>	Six weeks, typical (assumes correctly formed ice mantle)
<b>Set-Point Accuracy</b>	$\pm 0.05^\circ\text{C}$ at $0^\circ\text{C}$
<b>Set-Point Repeatability</b>	$\pm 0.01^\circ\text{C}$
<b>Display Resolution</b>	$\pm 0.01^\circ\text{C}$
<b>Set-Point Resolution</b>	$\pm 0.002^\circ\text{C}$ ; $0.00003^\circ\text{C}$ in high-resolution mode
<b>Access Opening</b>	4.75" x 3.8" (121 x 97 mm)
<b>Immersion Depth</b>	19.5" (496 mm)
<b>Volume</b>	5 gallons (19 liters)
<b>Communications</b>	RS-232 included
<b>Power</b>	115 VAC ( $\pm 10\%$ ), 60 Hz or 230 VAC ( $\pm 10\%$ ), 50 Hz, specify
<b>Size</b>	12" W x 24.5" D x 32.25" H (305 x 622 x 819 mm)
<b>Weight</b>	75 lb. (34 kg)

### Ordering Information

7312	TPW Maintenance Bath (includes TPW Holding Fixture, Immersion Freezer, and RS-232 Interface)
2001-IEEE	Interface, IEEE-488
2029-5903	Gallium Cell Holding Fixture
2031	"Quick Stick" Immersion Freezer



Hart's 2031 "Quick Stick" Immersion Freezer offers unmatched convenience and simplicity in forming the triple point of water ice mantle.