

## COMPACT BATHS



### Compact Baths

### Models 6330 and 7320

Stability and uniformity each better than  $\pm 0.005^{\circ}\text{C}$

Metrology-level performance in lab-friendly sizes

Convenient use on benchtops or on matching carts

### Baths

If you only need a circulator or some type of utility bath to control a process within a few degrees or to maintain biological test samples, then talk to Polyscience or Neslab or Techne. But if you're doing precision thermometer testing, and stability and uniformity are critical to the success of your work, talk to Hart Scientific.

Hart Scientific has been making the world's best-performing temperature baths for almost two decades. With our proprietary heat-port design and hybrid analog-digital controller (see page 98), Hart baths apply the most effective technologies that are commercially feasible. These two new benchtop baths are no exception.

#### Model 6330

This bath delivers all the high temperatures you need up to  $300^{\circ}\text{C}$  ( $572^{\circ}\text{F}$ ). With stability and uniformity at

$300^{\circ}\text{C}$  better than  $\pm 0.015^{\circ}\text{C}$  and  $\pm 0.020^{\circ}\text{C}$  respectively, calibrations can easily be performed at this high temperature with total uncertainty better than  $\pm 0.05^{\circ}\text{C}$ . At lower temperatures, stability and uniformity are even better.

The 6330 is only 12 inches wide and less than 19 inches tall, so it fits easily onto a benchtop without consuming precious space. An optional cart with casters and a storage area raises the 6330 to a convenient height when used on a floor and provides an extra cabinet for lab supplies. With built-in handles, it even lifts easily onto and off of its cart or benchtop. No matter where you want to use this bath—or even if you want to move it around—the 6330 will get there hassle-free.

With an access opening of 3.7" x 6.8" (94 x 172 mm), thermometer immersion depth of 9.25" (234 mm), and total liquid volume of 2.4 gallons (9.2 liters), the

6330 provides capacity for testing many thermometers at once regardless of shape or size, while minimizing expensive fluid requirements.

#### Model 7320

Also featuring a large working area and an optional floor cart, the Model 7320 covers low temperatures from  $-20^{\circ}\text{C}$  to  $150^{\circ}\text{C}$ . From  $-20^{\circ}\text{C}$  to  $30^{\circ}\text{C}$ , stability is an impressive  $\pm 0.005^{\circ}\text{C}$  with uniformities also better than  $\pm 0.005^{\circ}\text{C}$ . No utility bath performs as well as the 7320 at critical temperatures below  $0^{\circ}\text{C}$ , at typical room and body temperatures, and even at important higher temperatures such as  $100^{\circ}\text{C}$  and  $122^{\circ}\text{C}$ .

Of course a wide variety of bath fluids are available from Hart in convenient small quantities. On page 110 you'll find the fluid just right for your temperature needs. Both the 7320 and 6330 include wide openings for filling the baths and convenient drains for emptying them without making a mess.

Each bath includes an RS-232 serial interface and our Model 9930 Interface-*it* software for controlling your bath from a PC. With a Hart Scientific thermometer readout (such as a *Black Stack*; see page 50) and our Calibrate-*it* Software (page 80), automated calibrations can run unattended.

Hart Scientific doesn't make chillers, circulators, or so-called utility baths, and Neslab, Techne, and Polyscience don't make metrology baths. Use the right tools for your work and reap the best possible results. Baths from Hart Scientific are the most stable and uniform of any you'll find. They'll give you results no other bath can.

# Ranges from $-20^{\circ}\text{C}$ to $300^{\circ}\text{C}$

Specifications	6330	7320
Range	$35^{\circ}\text{C}$ to $300^{\circ}\text{C}$	$-20^{\circ}\text{C}$ to $150^{\circ}\text{C}$
Stability	$\pm 0.005^{\circ}\text{C}$ at $100^{\circ}\text{C}$ (oil) $\pm 0.010^{\circ}\text{C}$ at $200^{\circ}\text{C}$ (oil) $\pm 0.015^{\circ}\text{C}$ at $300^{\circ}\text{C}$ (oil)	$\pm 0.005^{\circ}\text{C}$ at $-20^{\circ}\text{C}$ (ethanol) $\pm 0.005^{\circ}\text{C}$ at $25^{\circ}\text{C}$ (water) $\pm 0.007^{\circ}\text{C}$ at $150^{\circ}\text{C}$ (oil)
Uniformity	$\pm 0.007^{\circ}\text{C}$ at $100^{\circ}\text{C}$ (oil) $\pm 0.015^{\circ}\text{C}$ at $200^{\circ}\text{C}$ (oil) $\pm 0.020^{\circ}\text{C}$ at $300^{\circ}\text{C}$ (oil)	$\pm 0.005^{\circ}\text{C}$ at $-20^{\circ}\text{C}$ (ethanol) $\pm 0.005^{\circ}\text{C}$ at $25^{\circ}\text{C}$ (water) $\pm 0.010^{\circ}\text{C}$ at $150^{\circ}\text{C}$ (oil)
Heating Time	250 minutes, from $35^{\circ}\text{C}$ to $300^{\circ}\text{C}$	80 minutes, from $25^{\circ}\text{C}$ to $150^{\circ}\text{C}$
Cooling Time	n/a	100 minutes, from $25^{\circ}\text{C}$ to $-20^{\circ}\text{C}$
Stabilization Time	15–20 minutes	
Temperature Setting	Digital display with push-button data entry	
Set-Point Resolution	$0.01^{\circ}$ ; $0.00018^{\circ}$ in high-resolution mode	
Display Resolution	$0.01^{\circ}$	
Digital Setting Accuracy	$\pm 0.5^{\circ}\text{C}$	
Digital Setting Repeatability	$\pm 0.01^{\circ}\text{C}$	
Access Opening	3.7" x 6.8" (94 x 172 mm)	
Working Area	3.2" x 5.25" (81 x 133 mm)	
Depth	9.25" (234 mm)	
Wetted Parts	304 stainless steel	
Power	115 VAC ( $\pm 10\%$ ), 50/60 Hz, 6 A or 230 VAC ( $\pm 10\%$ ), 50/60 Hz, 4 A, specify, 670 W	115 VAC ( $\pm 10\%$ ) 60 Hz, 10 A or 230 VAC ( $\pm 10\%$ ) 50 Hz, 5 A, specify, 1100 W
Volume	2.4 gal (9.2 liters)	
Size	12" W x 21.5" D x 18.5" H (305 x 546 x 470 mm) off cart; 12" W x 21.5" D x 32.25" H (305 x 546 x 819 mm) on cart	12" W x 24.5" D x 23" H (305 x 622 x 584 mm) off cart; 12" W x 24.5" D x 32.25" H (305 x 622 x 819 mm) on cart
Weight	42 lb. (19 kg)	70 lb. (32 kg)
Automation Package	Interface- <i>it</i> software and RS-232 included	

## Ordering Information

6330	Benchtop Bath, $35^{\circ}\text{C}$ to $300^{\circ}\text{C}$	7320	Benchtop Bath, $-20^{\circ}\text{C}$ to $150^{\circ}\text{C}$
2020-6330	Spare Access Cover, 6330, SST	2020-7320	Spare Access Cover, 7320, SST
2076-6330	Floor Cart, 6330	2076-7320	Floor Cart, 7320
2001-IEEE	IEEE-488 Interface	2001-IEEE	IEEE-488 Interface



With an optional cart (including locking casters), your bath can easily be moved to any place you need it.

