PolyScience®
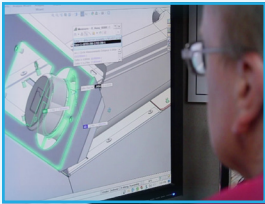## Temperature Control Solutions®

PRODUCT SELECTION GUIDE

| Refrigerated and Heated Circulating Baths | Chillers and Coolers | General Purpose Water Baths | Application-Specific Products |

75.0 °C
75.0

PolyScience
15.0 °C
SET = 15.0
DURACHILL® RECIRCULATING CHILLER

37.0°C
SET = 37.0°C
PolyScience

85.48
85.000
85.00

PolyScience

For over 50 years, PolyScience has been the leader in developing innovative, high quality, precise temperature control solutions.

PolyScience products are manufactured following ISO 9001 quality standards and are relied upon by people in countries across six continents. They are hand-built at our Niles, IL, USA facility and distributed worldwide. European orders ship domestically throughout the E.U. from Alblasserdam, NL.

With an eye toward the future and preserving the integrity of the planet, PolyScience maintains a strict Environmental Management System according to ISO 14001 standards and has developed low-GWP natural refrigerant alternatives in accordance with the F-Gas 2020 initiative put forth by the European Union.

1964 - Our First Building
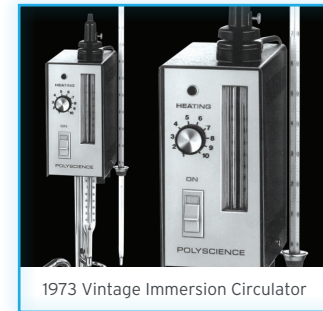
1973 Vintage Immersion Circulator
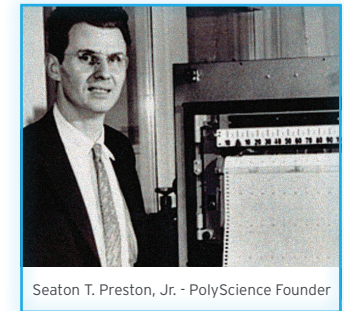
Seaton T. Preston, Jr. - PolyScience Founder

Rotterdam
Global Distribution Center

Chicago
Headquarters/Manufacturing

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Temperature Control Solutions®

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This Selection Guide is intended to serve as a reference for offerings, model numbers, and specifications. All information is subject to change. For additional information, visit www.polyscience.com, request a catalog or contact a Customer Service Representative at +1 (847) 647-0611.

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CIRCULATING BATHS
Temperature Controllers

Controller Type	Advanced Programmable	Advanced Digital	Standard Digital	MX
Maximum Temperature	200°C	200°C	170°C	135°C
Temperature Stability	±0.005°C	±0.01°C	±0.04°C	±0.07°C
Swivel 180™ Rotating Controller	●	●	●	
Pump	Variable-Speed	Variable-Speed	2-Speed	1-Speed
Pump Pressure (maximum) psi (kPa) 60Hz/50Hz	4.3 (29.6) / 3.6 (24.8)	4.3 (29.6) / 3.6 (24.8)	3.5 (24.1) / 2.9 (20.0)	2.3 (15.9) / 1.8 (12.4)
Pressure Flow Rate (maximum) gpm (l/min) 60Hz/50Hz	5.3 (20.1) / 4.4 (16.7)	5.3 (20.1) / 4.4 (16.7)	2.9 (11.0) / 2.7 (10.2)	3.6 (13.5) / 3.1 (11.9)
Suction Flow Rate (maximum) gpm (l/min) 60Hz/50Hz	3.9 (14.7) / 3.2 (12.2)	3.9 (14.7) / 3.2 (12.2)		
Closed-Loop Operation	●	●	●	●
Open-Loop Operation	●	●		
Fluid Optimization/Specific Heat Tuning	●	●		
Temperature Calibration Capability	10-point	1-point	1-point	1-point
WhisperCool® Environmental Control System	●	●	●	●
Inert Gas Reservoir Purge	●	●	●	
Display Type & Size	SmartTouch Color LCD 4.3"	SmartView LCD Touch-Pad 3.75"	EasyView LCD Touch-Pad 3.75"	EasyView LCD 3.25"
Enhanced Data Display Capability	7 selectable views	Message Bar		
Multi-Language Menus or Prompts	11 languages	4 languages	Icon/English	Icon/English
Displays Temperature Trend	●			
Time/Temperature Programs & Steps	Open-Mode			
Date & Time with Calendar Start/Stop	●			
Timer	●	●		
On-Screen Help or Prompts	●	●		
External Temperature Control Capability (Pt100)	●	●		
Data logging to USB Flash Drive	●	●		
RS232/RS485 Serial Output	●	●	RS232	
Remote On/Off Capability	●			
USB	●	●		
Ethernet	●	●		
Software Support for LabVIEW™ included	●			
Backlit Display	●	●	●	●
Automatic Loss of Power Reset	Selectable	Selectable	Yes	Yes
Safety Class (DIN 12876-1)	III	III	I	I
Over-Temperature Protection	●	●	●	●
Failsafe Heater Control	●	●	●	●
High and Low Temperature Limits/Alarms	●	●	●	●
Low-Liquid-Level Safety	●	●	●	●
Alarm and Fault Indicators	Message	Message	Icon	Icon

Advanced Programmable

Advanced Digital

Standard Digital

MX

Temperature Controller Features

Features include patented Swivel 180™ and a SmartTouch touchscreen. (Select Models Only)

Integrated Circulating Baths

Refrigerated/Heated Circulating Baths

Capacity	7 Liter (Low Profile)	7 Liter	7 Liter	15 Liter	15 Liter	20 Liter	28 Liter	45 Liter	75 Liter
Maximum Temperature[1]	200°C	200°C	200°C	200°C	200°C	200°C	200°C	135°C	100°C
Minimum Temperature	-20°C	-20°C	-40°C	-30°C	-40°C	-30°C	-30°C	-25°C	-20°C
Cooling Capacity @ 20°C	200 W	200 W	360 W	915 W	1000 W	915 W	915 W	1400 W	1400 W
Working Access (L x W x D)	6.2 x 5.6 x 5 in 15.7 x 14.2 x 12.7 cm	6.2 x 5.6 x 5 in 15.7 x 14.2 x 12.7 cm	6.2 x 5.6 x 5 in 15.7 x 14.2 x 12.7 cm	8.4 x 10.9 x 5.5 in 21.2 x 27.6 x 14 cm	8.4 x 10.9 x 5.5 in 21.2 x 27.6 x 14 cm	9.9 x 12.5 x 5.5 in 25 x 31.6 x 14 cm	12.4 x 14.1 x 5.5 in 31.4 x 35.9 x 14 cm	21.6 x 15.7 x 5.5 in 54.9 x 39.8 x 14 cm	21.6 x 15.7 x 9.4 in 54.9 x 39.8 x 23.9 cm
Drain	●	●	●	●	●	●	●	●	●
LidDock™	●	●	●	●	●	●	●		
Advanced Programmable	AP7LR-20	AP07R-20	AP07R-40	AP15R-30	AP15R-40	AP20R-30	AP28R-30	AP45R-20	AP75R-20
Advanced Digital	AD7LR-20	AD07R-20	AD07R-40	AD15R-30	AD15R-40	AD20R-30	AD28R-30	AD45R-20	
Standard Digital	SD7LR-20	SD07R-20		SD15R-30		SD20R-30	SD28R-30		
MX	MX7LR-20	MX07R-20		MX15R-30		MX20R-30			

1. Maximum temperature is controller-dependent.

Heated Circulating Baths

Capacity	7 Liter	15 Liter	20 Liter	28 Liter
Maximum Temperature[1]	200°C	200°C	200°C	200°C
Minimum Temperature[2]	Ambient +10°C	Ambient +10°C	Ambient +10°C	Ambient +10°C
Working Access (L x W x D)	6.2 x 5.6 x 5 in 15.7 x 14.2 x 12.7 cm	8.4 x 10.9 x 5.5 in 21.2 x 27.6 x 14 cm	9.9 x 12.5 x 5.5 in 25 x 31.6 x 14 cm	12.4 x 14.1 x 5.5 in 31.4 x 35.9 x 14 cm
Tank Material	Insulated Stainless Steel	Insulated Stainless Steel	Insulated Stainless Steel	Insulated Stainless Steel
Drain	●	●	●	●
Tap Water Cooling-Coil	●	●	●	●
LidDock™	●	●	●	●
Advanced Programmable	AP07H200	AP15H200	AP20H200	AP28H200
Advanced Digital	AD07H200	AD15H200	AD20H200	AD28H200
Standard Digital	SD07H170	SD15H170	SD20H170	SD28H170
MX	MX07H135	MX15H170	MX20H135	

1. Maximum temperature is controller dependent.
2. Minimum temperature is shown with no external heat load.

Model 210 Heated Recirculator

Features
- Low-cost pumping and heating for closed-loop applications
- Provides accurate control within a frequently used temperature range
- Ideal for applications such as thawing plasma, tempering photographic solutions or circulating to an external device
- Over-Temperature Protection
- Failsafe Heater Control

Working Temperature	Ambient to 70°C
Temperature Stability	±0.2°C
Heater Wattage	750 W
Pump Type	Single-speed Centrifugal
Maximum Pressure	2 psi (0.13 bar)
Maximum Flow Rate	3.0 gpm (11.1 l/min)
Overall Dimensions (L x W x H)	8 x 9.5 x 8 in (20.3 x 24.1 x 20.3 cm)
Process Connections	1/2" barb fittings
Part Numbers	040300 (120VAC, 50/60Hz), 040301 (240VAC, 50/60Hz)

Open Tank Circulating Baths

Stainless Steel Open Tank Circulating Baths

Capacity	6 Liter	10 Liter	20 Liter	28 Liter
Maximum Temperature[1]	150°C	150°C	150°C	150°C
Minimum Temperature[2]	Ambient +10°C	Ambient +10°C	Ambient +10°C	Ambient +10°C
Working Access (L x W x D)	3.9 x 4.3 x 6 in 10 x 11 x 15.2 cm	3.9 x 10.1 x 6 in 9.9 x 25.5 x 15.2 cm	10.4 x 9 x 6 in 26.4 x 22.8 x 15.2 cm	10.1 x 8.4 x 8 in 25.7 x 21.4 x 20.3 cm
Tank Material	Stainless Steel	Stainless Steel	Stainless Steel	Stainless Steel
Advanced Programmable	AP06S150	AP10S150	AP20S150	AP28S150
Advanced Digital	AD06S150	AD10S150	AD20S150	AD28S150
MX	MX06S135	MX10S135	MX20S135	MX28S135

Polycarbonate Open Tank Circulating Baths

Capacity	8 Liter	11 Liter	14 Liter	17 Liter	23 Liter	28 Liter
Maximum Temperature[1]	85°C	85°C	85°C	85°C	85°C	85°C
Minimum Temperature[2]	Ambient +10°C	Ambient +10°C	Ambient +10°C	Ambient +10°C	Ambient +10°C	Ambient +10°C
Working Access (L x W x D)	4.1 x 6.1 x 8 in 10.5 x 15.6 x 20.3 cm	8.3 x 6.1 x 8 in 21 x 15.6 x 20.3 cm	12.4 x 6.1 x 8 in 31.4 x 15.6 x 20.3 cm	4.1 x 12 x 8 in 10.5 x 30.5 x 20.3 cm	8.3 x 12 x 8 in 21 x 30.5 x 20.3 cm	12.4 x 12 x 8 in 31.5 x 30.5 x 20.3 cm
Tank Material	Polycarbonate	Polycarbonate	Polycarbonate	Polycarbonate	Polycarbonate	Polycarbonate
Drain				●	●	●
Advanced Programmable	AP08P100	AP11P100	AP14P100	AP17P100	AP23P100	AP28P100
MX	MX08P100	MX11P100	MX14P100	MX17P100	MX23P100	MX28P100

MX Immersion Circulator

Capacity	Up to 28 Liters	
Maximum Temperature[1]	135°C	
Minimum Temperature[2]	Ambient +10°C	
Temperature Stability	±0.07°C	
Electrical Configurations	120V, 60Hz	240V, 50Hz
Maximum Pressure psi (kPa)	1.8 (12.4)	1.5 (10.3)
Maximum Flow Rate gpm (L/min)	3.4 (12.8)	2.8 (10.6)

1. Maximum temperature is dependent on tank material. Immersion Circulator's maximum temperature is dependent on fluid volume.
2. Minimum temperature is shown with no external heat load.

13 Liter Refrigerated Open Bath

- Continuous cooling to 0°C
- Designed to run at maximum cooling; requires heated thermostat for temperature control
- Ideal for applications where bath temperatures at or below ambient are required

Working Temperature	0° to 150°C	
Reservoir Size	13 Liter	
Tank Material	Stainless Steel	
Electrical Configurations	120V, 60Hz, 13A	240V, 50Hz, 7A
Cooling Capacity @ 20° C / 10° C / 0° C	400W / 270W / 90W	330W / 225W / 75W
Working Access (L x W x D)	9 x 11.75 x 7.75 in (22.9 x 29.8 x 19.7 cm)	
Overall Dimensions (L x W x H)	13.5 x 22 x 10 in (34.3 x 55.9 x 25.4 cm)	

GENERAL PURPOSE WATER BATHS

Simple, efficient and easy to operate, these General Purpose Water Baths are a mainstay in any laboratory. With a large full-color screen and customizable presets for your frequently-used settings, using your PolyScience General Purpose Water Bath is a comfortable and intuitive experience. Packed with a host of proprietary features including options for five different languages and an energy-saving eco mode, these are the most advanced General Purpose Water Baths on the market today.

Capacity	2 Liter	5 Liter	10 Liter	20 Liter	28 Liter
Temperature Range	Ambient+5° to 100°C	Ambient+5° to 100°C	Ambient+5° to 100°C	Ambient+5° to 100°C	Ambient+5° to 100°C
Temperature Stability	±0.1°C	±0.1°C	±0.1°C	±0.1°C	±0.1°C
Working Access (L x W xD)	3.9 x 4.3 x 6 in 9.9 x 10.9 x 15.2 cm	5 x 10.8 x 6 in 12.7 x 27.4 x 15.2 cm	10.6 x 11.6 x 6 in 26.9 x 29.5 x 15.2 cm	9.5 x 17 x 6 in 24.1 x 43.2 x 15.2 cm	9.5 x 17 x 8 in 24.1 x 43.2 x 20.3 cm
Overall Dimensions (L x W x H)	8.8 x 8.5 x 13.1 in 22.2 x 21.6 x 33.3 cm	9.3 x 14.4 x 13.1 in 23.5 x 36.5 x 33.3 cm	16.3 x 14.4 x 15.0 in 41.3 x 36.5 x 38.1 cm	15.1 x 22.5 x 15.1 in 38.4 x 57.2 x 38.1 cm	15.1 x 22.5 x 17.0 in 38.4 x 57.2 x 43.2 cm
Heater Wattage	120 W	360 W	1000 W	1400 W	1400 W
Programmable Timer	●	●	●	●	●
Hinged Gable Cover	●	●	●	●	●
Programmable High Limit	●	●	●	●	●
Over-Temperature Protection	Non-adjustable / Auto Reset	Non-adjustable / Auto Reset	Non-adjustable / Auto Reset	Non-adjustable / Auto Reset	Non-adjustable / Auto Reset
Programmable Calibration/ Temperature Offset	●	●	●	●	●
5 Programmable Preset Temperatures	●	●	●	●	●
Audible and Visual Alarms	●	●	●	●	●
Control Panel Lock	●	●	●	●	●
Eco Mode	●	●	●	●	●
Model	WBE02	WBE05	WBE10	WBE20	WBE28

Clear, tall gabled cover accommodates flasks and other tall sample vessels, and tilts out of the way when opened to allow condensate to drain back into the bath.

RECIRCULATING CHILLERS
DuraChill® Portable Recirculating Chillers

DuraChill® Portable Recirculating Chillers are the most effortless chiller on the market. With a wide range of new and exclusive features, DuraChill® Chillers promote ease of use, minimal maintenance and environmental safety. DuraChill® has been designed for future migration to low global warming potential natural refrigerants.

• **Full Color Touch Screen Display**
  The color touch screen display gives you all the information you need at a glance, in five selectable languages. The screen will display continuous status of set temperature, actual temperature, reservoir fill level and output pressure as well as the status of your air filter.
• **Continuous Liquid Level Monitoring**
  Because pump seals will fail in as little as 30 seconds of being run dry, DuraChill® Chillers include a state-of-the-art capacitance liquid level sensor on the reservoir to protect the pump from premature failure.
• **Front Fill Reservoir**
  A conveniently located fill port on the front means you no longer have to go to the back of the chiller to open and fill the reservoir.

• **Self-changing Filter System**
  DuraChill® features the DynamicFilter™ System which is preprogrammed to change the filter once a month for a two-year period and can be adjusted to suit your operating environment. This relieves you of the burden of preventive maintenance.
• **UV Biological Growth Inhibitor**
  As part of our commitment to the environment we developed a UV light system that will continuously control biological growth in the fluid path without the need to add chemical growth inhibitors, preventing algaecides from being released into the world's waterways.
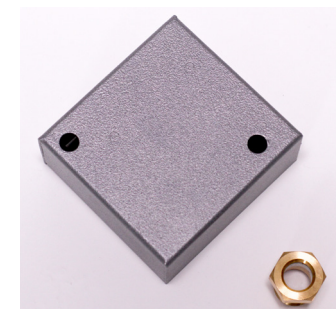• **WhisperCool® Noise Reduction**
  DuraChill® utilizes our patented WhisperCool® system, which evaluates the demand for cooling from the application and then slows the fan speed to the minimum necessary, making the chiller extremely quiet without sacrificing performance.

DuraChill Accessories
See page 14 for more information

	CA02		CA03		CA05		CA10	
Compressor HP	.25		.33		.5		1.0	
Pump Type	Positive Disp.	Turbine	Positive Disp.	Turbine	Positive Disp.	Turbine	Positive Disp.	Turbine
Cooling Capacity @20°C[1] 60Hz	.85 kW	.85 kW	1.4 kW	1.4 kW	1.74 kW	1.74 kW	2.9 kW	2.9 kW
50Hz	.70 kW	.70 kW	1.28 kW	1.28 kW	1.84 kW	1.84 kW	2.65 kW	2.65 kW
Temperature Range			-10° to 70°C 14° to 104°F					
Temperature Stability	±0.1°C	±0.1°C	±0.1°C	±0.1°C	±0.1°C	±0.1°C	±0.1°C	±0.1°C
Maximum Pressure psi (kPa) 60Hz	100 (689)	90 (621)	100 (689)	90 (621)	100 (689)	90 (621)	100 (689)	90 (629)
50Hz	83 (572)	75 (517)	83 (572)	75 (517)	83 (572)	75 (517)	83 (572)	75 (517)
Maximum Flow gpm (L/min) 60Hz	2.6 (9.8)	3.5 (13.2)	2.6 (9.8)	3.5 (13.2)	2.6 (9.8)	3.5 (13.2)	3.5 (13.2)	3.5 (13.2)
50Hz	2.0 (7.6)	2.2 (8.3)	2.0 (7.6)	2.2 (8.3)	2.0 (7.6)	2.2 (8.3)	2.9 (11.0)	2.9 (11.0)
WhisperCool®	●	●	●	●	●	●	●	●
Overall Dimensions (L x W x H)			26.0 x 15.0 x 21.8 in (66 x 38.1 x 55.4 cm)					
Connectivity Options			RS-232, Ethernet, USB Serial Port Emulation, USB TMC, Dry Contact On/Off/Status					
Reservoir Capacity gal (L)			1.1 (4.2)					
Process Connections			1/2" female NPT					
Optional Remote Temperature Probe			Remote monitoring / Remote control					
Self-changing Air Filter	●	●	●	●	●	●	●	●
UV Biological Growth Inhibitor	●	●	●	●	●	●	●	●
Ambient Air Temperature Tracking	●	●	●	●	●	●	●	●
Available Power Configurations	120V 60Hz 240V 50Hz	120V 60Hz 240V 50Hz	120V 60Hz 240V 50Hz	120V 60Hz 240V 50Hz	120V 60Hz 240V 50Hz	120V 60Hz 240V 50Hz	230V 60Hz 240V 50Hz	230V 60Hz 240V 50Hz

1. Cooling capacity based on 20°C (68°F) ambient temperature and a 50%/50% mix of ethylene glycol and distilled water as coolant.

1.5HP High Capacity Recirculating Chillers

Fully configurable to complement your process, these air or water cooled chillers feature a variety of pump and connectivity options and can be configured with a heating element that can provide heat up to 9kW and 90°C.

Powerful portable chillers with high cooling capacities and a multitude of options to fit virtually any need.

For a full list of configurable options, please contact PolyScience Sales.

Model Series	6800	6900
Pump Options	1/3HP Turbine 1/3 HP Positive Displacement 3/4HP Turbine Bronze 3/4HP Turbine	1/3HP Turbine 1/3 HP Positive Displacement 3/4HP Turbine Bronze 3/4HP Turbine
Cooling Capacities[1]	Up to 5.3kW @20°C	Up to 5.3kW @20°C
Condenser Cooling Type	Air	Water
Temperature Range (without optional heater)	5° to 35°C[2]	5° to 35°C[2]
Temperature Stability	±0.5°C	±0.5°C
Maximum Pressure[3] psi (kPa) 60Hz	100 (689)	100 (689)
50Hz	83 (572)	83 (572)
Maximum Flow[3] gpm (L/min) 60Hz	11 (41.6)	11 (41.6)
50Hz	9 (34)	9 (34)
Overall Dimensions (L x W x H)	30.5 x 19 x 26" (78 x 48 x 66 cm)	30.5 x 19 x 26" (78 x 48 x 66 cm)
Electrical Configuration Options	230V 50/60Hz 3Ø, 208-230V 60Hz 1Ø, 460V 60Hz 3Ø, 240V 50Hz 1Ø	230V 50/60Hz 3Ø, 208-230V 60Hz 1Ø, 460V 60Hz 3Ø, 240V 50Hz 1Ø
Reservoir Capacity gal (L)	3.5 (13.25)	3.5 (13.25)
Process Connections	1/2" female NPT	1/2" female NPT

1. Cooling capacity based on 20°C (68°F) ambient temperature and a 50%/50% mix of ethylene glycol and distilled water as coolant.
2. Temperature range dependent on final configuration and heating options.
3. Actual pressure and flow rates are dependent on pump selection and final configuration.

Benchtop Recirculating Chillers

Powerful cooling performance in a compact package. PolyScience Benchtop Chillers deliver superior temperature ranges and consistent performance without taking up valuable floor space. These powerful units are ideal for use with rotary evaporators, vacuum systems, spectrometers and other analytical instrumentation.

		MM	LM	LS
	Cooling Capacity @ 20°C[1] (W) 60Hz/50Hz	460/410	560/520	1290/1190
	Temperature Range	-5° to +50°C	-10° to +30°C	-20° to +40°C
	Temperature Stability	±0.1°C	±0.1°C	±0.1°C
Turbine Pump	Maximum Pressure psi (bar) 60Hz/50Hz	– –	– –	43.4 (299) 32 (221)
	Maximum Flow gpm (l/min) 60Hz/50Hz	– –	– –	2.6 (9.8) 2.2 (8.3)
Centrifugal Pump	Maximum Pressure psi (kPa) 60Hz/50Hz	14.5 (100) 12.5 (86)	14.5 (100) 12.5 (86)	14.5 (100) 10.5 (72)
	Maximum Flow gpm (l/min) 60Hz/50Hz	3.5 (13.2) 3.0 (11.4)	3.5 (13.2) 3.0 (11.4)	3.9 (14.8) 3.4 (12.9)
	WhisperCool®			●
	Overall Dimensions (L x W x H)	20 x 10 x 17 in 50.8 x 25.4 x 43.2 cm	20 x 10 x 19 in 50.8 x 25.4 x 48.3 cm	23.9 x 10 x 19 in 60.7 x 25.4 x 48.3 cm
Electrical Configurations	Turbine Pump 60Hz 50Hz	– –	– –	120V 12A 240V 6A
	Centrifugal Pump 60Hz 50Hz	120V 12A 240V 4.5A	120V 12A 240V 4.5A	120V 12A 240V 6A
	Reservoir Capacity gal (L)	0.7 (2.65)	0.7 (2.65)	0.7 (2.65)
	Process Connections	1/2'' female NPT	1/2'' female NPT	1/2'' female NPT

1. Cooling capacity based on 20°C (68°F) ambient temperature and a 50%/50% mix of ethylene glycol and distilled water as coolant.

Recirculating Coolers

The 3370 Liquid-to-Air Cooler and the 4100 Liquid-to-Liquid Cooler are economical, quiet, energy-efficient alternatives to traditional chillers in many applications. Extend the temperature range of non-refrigerated circulators to below ambient and boost the cooling capacity of refrigerated circulators with the FT-25 Flow-Through Refrigerated Cooler.

3370 Liquid-to-Air Cooler

	Cooling Capacity @ 20°C (W) 60Hz/50Hz	4000[1]
	Temperature Range	Ambient +5° to 70°C
Turbine Pump	Maximum Pressure psi (bar) 60Hz/50Hz	62 (4.3) 50 (3.4)
	Maximum Flow gpm (l/min) 60Hz/50Hz	5.4 (20.5) 4.5 (17.1)
Positive Displacement Pump	Maximum Pressure psi (kPa) 60Hz/50Hz	100 (689) 100 (689)
	Maximum Flow gpm (l/min) 60Hz/50Hz	2.4 (9.1) 2 (7.6)
	Overall Dimensions (L x W x H)	20.5 x 15 x 22.3 in 52 x 38.1 x 56.6 cm
Electrical Configurations	Turbine Pump 60Hz/50Hz	120V 60Hz 5.5A 240V 50Hz 3A
	Positive Displacement Pump 60Hz/50Hz	120V 60Hz 5.5A 240V 50Hz 3A
	Reservoir Capacity gal (L)	1.1 (4.2)
	Process Connections	1/2" female NPT

4100 Liquid-to-Liquid Cooler

	Cooling Capacity @ 20°C (W) 60Hz/50Hz	10,000[2]
	Temperature Range	Facility Water +10° to 60°C
	Temperature Stability	±0.4°C
Turbine Pump	Maximum Pressure psi (kPa) 60Hz/50Hz	100 (689) 100 (689)
	Maximum Flow gpm (l/min) 60Hz/50Hz	3.5 (13.2) 3.5 (13.2)
	Overall Dimensions (L x W x H)	27.6 x 14.5 x 22.6 in 70.2 x 36.8 x 57.5 cm
	Electrical Configurations	208-240V 50-60Hz 3A 240V 50Hz 3A
	Reservoir Capacity gal (L)	1.1 (4.2)
	Process Connections	1/2" female NPT

FT-25 Flow-Through Refrigerated Cooler

Temperature Range	-25° to 40°C
Cooling Capacity (W)	745 @ 20°C 260 @ -10°C
Temperature Control	Fixed at -25°C
Inlet and Outlet Sizes	3/8" (9.5 mm)
Overall Dimensions (L x W x H)	17 x 14 x 14 in 43.2 x 35.6 x 35.6 cm

1. Cooling capacity for 3370 based on 11°C temperature differential between ambient air temperature and cooling fluid temperature.
2. Cooling capacity for 4100 given at 30°C using 20°C facility water.

Immersion Probe Coolers

Excellent for trapping and Dewar-type applications, these coolers reduce the expense of using consumables such as dry ice or liquid nitrogen. A flexible hose allows convenient placement of the cooling probe. With a variety of probes available, these Immersion Probe Coolers are the ideal solution for reaching extreme cold temperatures with high efficiency.

	IP-100	IP-80	IP-60	IP-35
Temperature Range	-100 to -60°C	-80 to -40°C	-60 to -20°C	-35 to 40°C
Cooling Capacity (W)	85 @ -65°C 35 @ - 80°C	215 @ -60°C 100 @ -80°C	150 @ -20°C 0 @ -60°C	1004 @ 20°C 106 @ -30°C
Temperature Control	Fixed at -100°C	Fixed at -80°C	Fixed at -60°C	Fixed at -35°C
Temperature Readout	Yes	Yes	No	No
Overall Dimensions (L x W x H)	20.1 x 15 x 22.3 in 51.1 x 38.1 x 56.6 cm	20.1 x 15 x 22.3 in 51.1 x 38.1 x 56.6 cm	11 x 10 x 9 in 27.9 x 25.4 x 22.9 cm	17 x 14 x 14 in 43.2 x 35.6 x 35.6 cm
Hose Diameter	2.8″ (7.1 cm)	2.8″ (7.1 cm)	1.5″ (3.8 cm)	1.5″ (3.8 cm)
Hose Length	6′ (1.8 m)	6′ (1.8 m)	4′ (1.2 m)	4′ (1.2 m)
3″ Rigid Coil	●			●
1.875″ Rigid Coil		●		●
1.5″ Rigid Coil			●	
1.875″ Bent Probe		●		
1.5″ Bent Probe			●	
Rigid Cold Finger	●			
Flexible Cold Finger	●			

Engineered specifically for use with Dewar Style Cold Traps, our revolutionary Bent Immersion Probe changes the way your lab is organized. By allowing for the probe to hang directly on the edge of the glass, no additional space or support is required.

Rigid Coil Probe

Bent Probe

Rigid Cold Finger Probe

Flexible Cold Finger Probe

	Probe Length	Probe Diameter	Exposed Length[1]
3″ Rigid Coil	9″ (22.9 cm)	3″ (7.6 cm)	17″ (43.2 cm)
1.875″ Rigid Coil	7″ (17.8 cm)	1.875″ (4.8 cm)	16.5″ (41.9 cm)
1.5″ Rigid Coil	4″ (10.2 cm)	1.5″ (3.8 cm)	15″ (38.1 cm)
1.875″ Bent Probe	7″ (17.8 cm)	1.875″ (4.8 cm)	8″ (20.3)
1.5″ Bent Probe	4″ (10.2 cm)	1.5″ (3.8 cm)	6″ (15.2)
Rigid Cold Finger	3.75″ (9.53 cm)	0.7″ (1.8 cm)	3.75″ (9.53 cm)
Flexible Cold Finger	15″ (38.1 cm)	0.625″ (1.6 cm)	15″ (38.1 cm)

1. Exposed length refers to the amount of exposed metal from the insulated hose to the tip of the probe.

APPLICATION-SPECIFIC PRODUCTS

PolyScience offers an array of application-specific products, uniquely configured to accommodate specific testing and quality control needs.

Viscosity Baths

- Configured for use with popular capillary viscometers
- Choice of MX or AD controller
- Includes tap water cooling coil
- Lidded viscometer openings
- Configured to accommodate ASTM D-445 testing

Coliform Bath

- Ideal for fecal coliform and *E. coli* testing
- 28 liter reservoir with hinged, see-through cover
- Designed specifically for the following Coliform tests:
  - APHA, AWWA, WEF and EPA fecal coliform determinations at 44.5ºC as specified in "*Standard Test Methods for the Examination of Water and Wastewater*" (19th edition)
  - Membrane filter method or MPM method can be used
  - AOAC determination of *E. coli* at 45.5ºC
  - APHA, AWWA, WEF 7-hour Fecal Coliform Test at 41.5ºC
  - Defined Substrate Technology® tests for *E. coli* and total coliform at 35.0ºC

Histology Freeze Plate

- Fast-freeze cold plate allows histotechnicians to observe tissue freezing and keep specimen edges flat
- Ultra-cold surface freezes samples quickly, reduces overall processing time by 40% or more

Refrigerated Calibration Bath

- Accommodates up to 6 temperature measuring devices
- Bath lid with sleeves for two each 3 mm, 4 mm, and 6 mm diameter openings

Cryoprecipitate Bath

- Safe, reliable thawing of Fresh Frozen Plasma (FFP) for the recovery of Cryoprecipitated Antihemophilic Factor (AHF)
- Preset to a 4ºC thawing temperature (Variable setpoint option available)
- Thaws up to 24 units of FFP or Whole Blood (WB) simultaneously

75 Liter Forced Age Testing Bath

- Specifically designed to replicate temperature fluctuations that accelerate beverage aging
- Working Temperature: -20º to 100ºC
- Advanced Programmable Temperature Controller allows endless array of thermal cycling options and programs
- Complies with DIN 12876-1 Class III safety requirements for use with flammable liquids

ACCESSORIES
PolyScience Bath Fluids

Bath Fluid	Quantity	For use with:	Normal Temperature Range	Specific Heat @ Fluid Temperature	BTU/lb °F	KJ/Kg °C	Viscosity (c St) @ 25°C	Part Number
polytherm S150	1 gallon (3.8 L)	Select Circulating Baths	50° to 150°C	100°C	0.41	1.71	50	060326
polytherm S200	1 gallon (3.8 L)	Select Circulating Baths	100° to 200°C	150°C	0.40	1.67	125	060327
polytherm S250	1 gallon (3.8 L)	Select Circulating Baths	150° to 250°C	200°C	0.39	1.63	500	060328
polytherm PAG170	1 gallon (3.8 L)	Select Circulating Baths, General Purpose Water Baths	50° to 140°C	140°C	0.49	2.08	85	060350
polycool HC -50	1 gallon (3.8 L)	Select Circulating Baths, Chillers	-50° to 100°C	-30°C	0.62	2.59	3	060330
polycool EG -25	1 gallon (3.8 L)	Select Circulating Baths, Chillers	-25° to 100°C*	-20°C	0.78	3.26	20	060340
polycool PG -20	1 gallon (3.8 L)	Select Circulating Baths, Chillers	-20° to 100°C*	-10°C	0.83	3.47	20	060320
polycool MIX -25	case = 5 x 1/2 gallon (1.9 L)	Select Circulating Baths, Chillers	-25° to 100°C	-20°C	0.78	3.26	20	004-300060
polyclear MIX 30 Plus	case = 5 x 1/2 gallon (1.9 L)	Select Circulating Baths, General Purpose Water Baths, Chillers, Coolers	15° to 90°C	50°C	1.00	4.18	1	004-300063
polyclean CLARIFIER	8 oz (237 ml)	Select Circulating Baths, General Purpose Water Baths, Chillers, Coolers	–	–	–	–	–	004-300040
	case = 12 x 8 oz (237 ml)			–	–	–	–	004-300041
polyclean BATH CLEANER	8 ox (237 ml)	Circulating Baths and General Purpose Water Baths	–	–	–	–	–	004-300050
	case = 12 x 8 oz (237 ml)			–	–	–	–	004-300051

* Temperature range when mixed 50%/50% with distilled water.

Temperature Measurement
Remote Pt100 Temperature Probes

Circulating Baths. For monitoring the temperature of an external application. 5/32" (4 mm) diameter x 6" (15.2 cm)

	Part Number
Cable length: 2' (0.6 m)	525-876
Cable length: 10' (3 m)	525-870
Cable length: 25' (7.6 m)	525-871
Cable length: 50' (15 m)	525-872

Chillers: Benchtop, Liquid-to-Liquid Coolers, DuraChill®

	Part Number
Cable length: 10' (3 m)	060101
Cable length: 25' (7.6 m)	060105
Cable length: 50' (15 m)	060110

DuraChill® Accessories

	Part Number
Replacement DynamicFilter™	511-535
UV Biological Growth Inhibitor	511-528
Tubing Adapter Kit	510-288

Mobile Benchtop Carts

Save bench space by placing your PolyScience products on a custom-designed cart. Store additional equipment or fluids behind the rolling tambour door. Increase your mobility, flexibility and efficiency. Available in two options to accommodate units of various sizes. All PolyScience Mobile Benchtop Carts feature:

- Heavy-Duty Corrosion-Resistant HDPE Construction
- Easy Cleanability
- Four Total-Locking, 3-inch, Sealed Bearing Casters
- 3-inch Lip to Safely Store Equipment
- Weight ratings of up to 200lb on the top and 25lb on the drain shelf

	Large Cart	Small Cart
Part Number	511-445	511-444
Cart Height	28.476"	28.476"
Cart Width	19.68"	17.05"
Cart Depth	28"	23"
Top Area Dimensions (WxDxH)	17.6"x26.5"x1.63"	15"x21.5"x1.63"

Application Assistance

Need assistance in selecting the best product for your application? We're eager to help! Our trained staff will walk you through all your options and alternatives to make certain that you get the product with the performance and features you need to make your work easier - and perhaps even a little more fun.

Global Technical Support

Our certified, factory-trained technicians know your product inside and out and are experts in troubleshooting and repairing PolyScience equipment. To assure you of prompt, competent service regardless of where you're located, authorized PolyScience service and technical support are available directly from our factory or through a global network of approved providers.

PolyScience Warranty

We back most of our products with a 2-year limited warranty on parts and labor. If for any reason you are unhappy with your product, please contact our Sales and Customer Service Department.

World-Class Quality

As an ISO 9001 certified company, PolyScience has implemented the systems, processes, and procedures necessary to ensure the quality, performance and reliability of every product or component we manufacture. We're continually raising our already high standards and constantly striving for improvement. To that end, we've deployed just-in-time production and other Lean Manufacturing techniques – such as self-managed teams, Kanban, Five "S," Quick Changeover and Poke Yoke - throughout our vertically-integrated operation to help ensure that every step of the manufacturing process meets our rigid standards as well as ISO 9001 quality requirements.

IQ/OQ/PQ

To help your company assess, develop and implement regulatory compliance at the level you need, we can provide IQ/OQ/PQ (Installation, Operation and Performance Qualifications) for all our Circulators, Chillers, and General Purpose Water Baths.

Calibration Certification

Our technicians can calibrate your PolyScience product to the highest NIST standards and issue a calibration certificate for your records. Depending on the product, 1 to 10 point calibrations can be provided.

ISO 14001

As a global company, we realize that everything we do has far-reaching impact. Our products are designed to be energy efficient, environmentally friendly and in accordance with RoHS guidelines.
We follow an ISO 14001 certified Environmental Management System furthering our commitment to do our part to minimize our impact on the environment.

Equipment Recycling

Taking care of the environment is a responsibility we all share. As part of our contribution to a greener world, we will gladly accept your old circulators, chillers, and water baths - regardless of brand - for disposal in an environmentally conscious manner. All recoverable materials such as steel, copper, plastic, and packaging will be recycled and refrigerants reclaimed by our qualified technicians.

Equipment Trade-In

Are you in the market for a new circulator, chiller, water bath or other constant temperature control product? You can save money by trading in an old or broken device toward the purchase of a new PolyScience product. We will accept any brand and give you a discount toward your purchase. Naturally, we'll dispose of your old equipment in an environmentally conscious manner.

PolyScience®
Temperature Control Solutions®

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