

thermo scientific



Refrigerated and heated bath circulators

Customizable solutions designed to
meet your needs today and tomorrow

ThermoFisher
SCIENTIFIC

Arctic and Sahara Series refrigerated/heated bath circulators

Your application is as individual as you are. Bath circulators provide temperature-controlled fluid circulation to support diverse workflows in laboratory and process applications. Bath circulators support water conservation by replacing tap water for cooling and heating, saving thousands of dollars per year.

With over 50 years of expertise, Thermo Scientific™ Bath Circulators are designed to meet the demands of temperature control applications in scientific, research, and industrial labs. Our reliable immersion circulators for precise temperature control can be used alone or matched up with one the bath solutions for analytical instrumentation, jacketed reactor, and rotary evaporators.

Customizable solutions designed to meet your needs today and tomorrow

- Extensive choice of temperature ranges, pumping capacities, and bath volumes, with leading warranty coverage
- Selection of intuitive displays to support your application and budget
- A range of accessories and inserts for sample security and management

Robust reliability even in the most demanding applications

- Digital control technology for precise temperature control and stability
- Powerful pumping capacity for external fluid circulation
- Large volume, corrosion-resistant stainless-steel work area

Support for you and the environment

- Technical expertise and support at your fingertips
- Service provided by dedicated local, depot, and technical support team
- Sustainability in mind with water conservation, energy saving options, and zero-waste manufacturing

Thermo Scientific™ Arctic and Sahara™ heated/
refrigerated bath circulators



Flexibility to customize



Immersion circulators

Choice of 3 controllers that can be paired to existing tank, vessel, or bath to heat the fluid or dedicated stainless-steel bath solution for extended ranges

Bath circulators

Choice of heating and cooling temperature control with a large selection of stainless-steel baths as well as economical polypropylene baths

Accessories

Extensive selection of accessories from work area covers to racks/inserts to heat transfer fluids to provide ultimate flexibility

All systems and immersion circulators come standard with external circulation connections

Immersion circulators

Standard (SC) Series—choose from 3 versions

Designed for ease-of-use with powerful pumping and heating capabilities for closed-loop applications, this economical choice offers solid performance for applications ranging from ambient +13°C to 150°C.

Advanced (AC) Series—choose from 2 versions

This advanced series offers greater pumping performance, ramp programming, application alarms, and temperature ranges from ambient +13°C to 200°C.

Premium (PC) Series—choose from 3 versions

Ideal for applications that require sophisticated control, multiple ramp programming, and extreme temperature performance, ranging from ambient +13°C to 300°C.

The Thermo Scientific Standard, Advanced, and Premium heated immersion circulators offer advanced, precise sample temperature control. They can be used with existing reservoirs or matched up with one of the bath solutions. Powerful, integrated pumps ensure uniform temperature distribution for external circulations usage or internal temperature control.

- Programmable with temperature set points and ramping
- The controller can be indexed 90° for optimal viewing
- Real temperature adjustment (RTA) for calibration
- Audio/visual alarms for temperature and levels
- Energy saving mode to reduce power consumption for less demanding applications
- Adjustable pump speeds for flow or bath agitation
- Auto restart after power failure
- On/off timer with real-time clock
- Available in multi languages with export communication options



Thermo Scientific™ SC100 Immersion Circulator



Thermo Scientific™ AC150 Immersion Circulator



Thermo Scientific™ PC200 Immersion Circulator

Model	Thermo Scientific STANDARD Series			Thermo Scientific ADVANCED Series		Thermo Scientific PREMIUM Series		
	SC100	SC150	SC150L	AC150	AC200	PC200	PC201	PC300
Maximum temperature (°C)	100	150	150	150	200	200	200	300
Temperature stability (°C) [†]	0.02			0.01		0.01		
Heater capacity (kW) 230V/115V	2/1.2			2/1.2		2/1.2	3**	3**
Maximum flow rate (l/min)	17			20		24		
Maximum pressure (mbar/psi)	300/4.35			475/6.89		560/8.12		
Maximum suction (mbar/psi)	–			330/4.78		380/5.51		
Tank depth requirement (mm)	150	150	200	150		200		
Programmable Set Point temperatures	5							
Ramp programs	–	–	–	–	1	10		
High temperature warning	–	–	–	Yes		Yes		
Low level warning	–	Yes	Yes	Yes		Yes		
Application threshold alarm	–	–	–	Yes		Yes		
Fluid selection with predefined temperature limits	–	Yes						
Safety	–	Automatic shutdown for high temperature, low liquid level, or motor overload						
Pump	2 level adjustment for flow/bath agitation			3 level adjustment for turbulence control		Incremental pump speed adjustment		
Languages	English, German, French			English, German, French, Spanish, Italian		English, German, French, Spanish, Italian, Chinese, and Japanese ²⁰⁰		

* In combination with a PT100 sensor probe connected to the external application.

** Available only in 230V. ***Temperature stability data measured according to DIN 12876.

[†]Adjustable from 40% to 100%.

Thermo Scientific Arctic Series

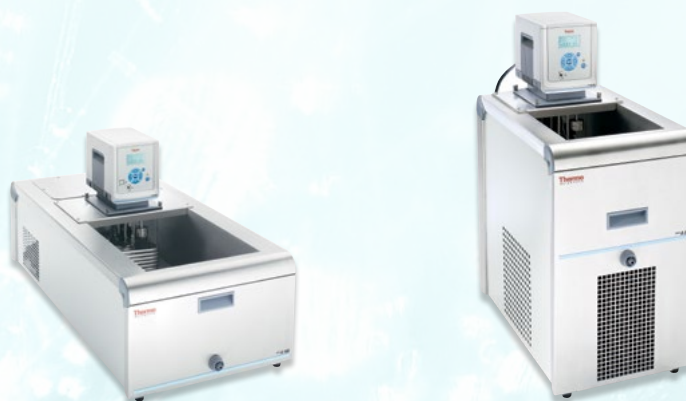
Refrigerated bath circulators

Choose from multiple capacities with a variety of reservoir openings and depth dimensions for maximum application flexibility



Thermo Scientific Arctic Series Refrigerated Bath Circulators

Controller/ Bath	A10	A25	A45HC
SC100	-10 to 100°C	-25 to 100°C	—
SC150	-10 to 100°C	-25 to 150°C	—
SC150L	—	-25 to 150°C	-28 to 150°C
AC150	-10 to 100°C	-25 to 150°C	—
AC200	-10 to 100°C	-25 to 200°C	-45 to 200°C
PC200	—	-25 to 200°C	-45 to 200°C
Cooling capacity at 20°C 230 V/115 V	240 W	500 W	900 W
Maximum bath volume (liters)*	6	12	12
Work area (D x W x L) mm/in.	150 x 136.7 x 123.5 / 5.9 x 5.4 x 4.9	200 x 173 x 183.7 / 7.9 x 6.8 x 7.2	200 x 173 x 183.7 / 7.9 x 6.8 x 7.2
Net weight (kg/lb)	27.5/60.6	36.1/79.5	55.2/121.5
Compliance	CE/ROHS/WEEE	CE/ROHS/WEEE	CE/ROHS/WEEE



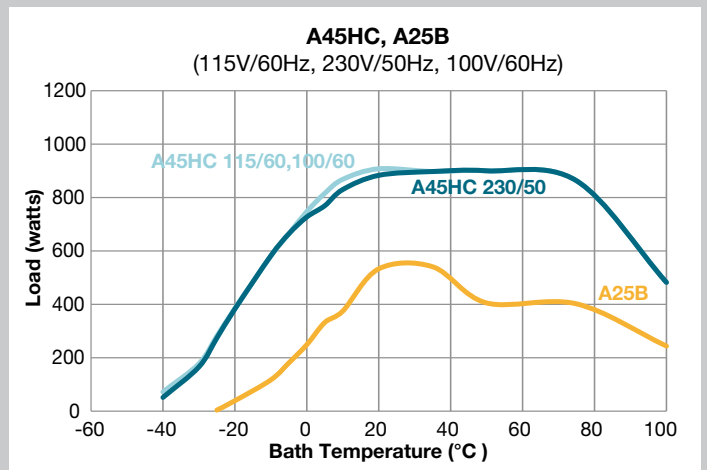
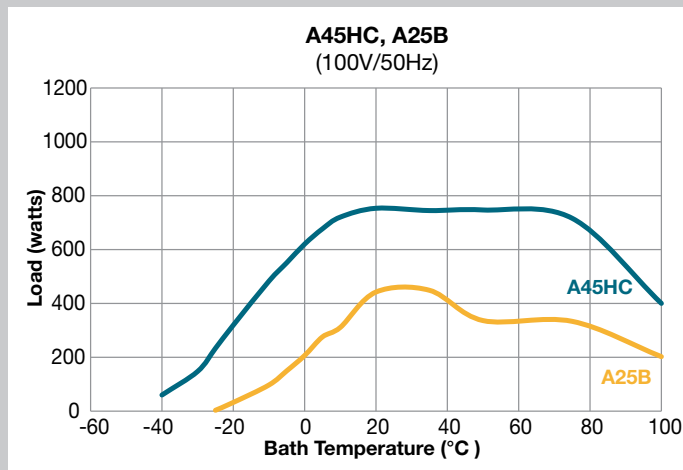
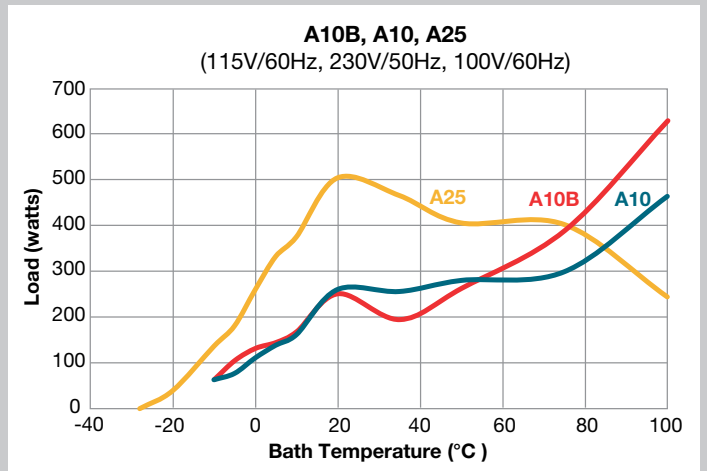
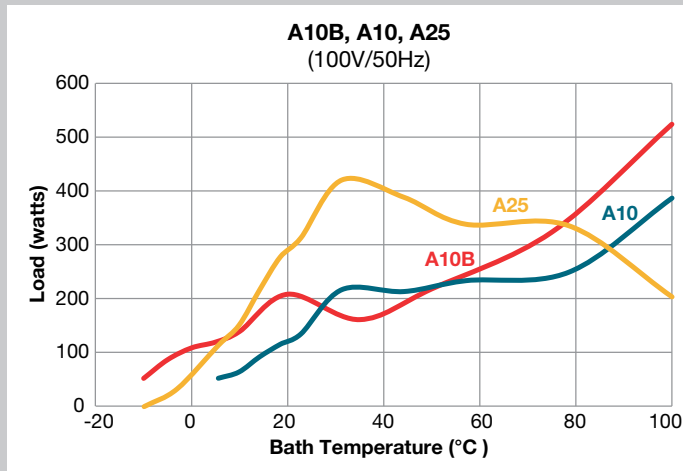
Thermo Scientific Arctic Series Refrigerated Bath Circulators

Controller /Bath	A10B	A25B
SC100	-10 to 100°C	-25 to 100°C
SC150	-10 to 100°C	-25 to 150°C
SC150L	—	—
AC150	-10 to 100°C	-25 to 150°C
AC200	-10 to 100°C	-25 to 200°C
PC200	—	—
Cooling capacity at 20°C 230 V/115 V	240 W	500 W
Maximum bath volume (liters)*	30	21
Work area (DxWxL) mm/in.	200 x 297.2 x 365 / 7.9 x 11.7 x 13.4	233 x 223.8 x 243.8 / 9.2 x 8.8 x 9.6
Net weight (kg/lb)	44.5/97.9	42.3/93.1
Compliance	CE/ROHS/WEEE	CE/ROHS/WEEE

* Fluid volume varies depending on the fluid used, temperature range, and items inserted in the reservoir.

Performance curves for refrigerated bath circulators

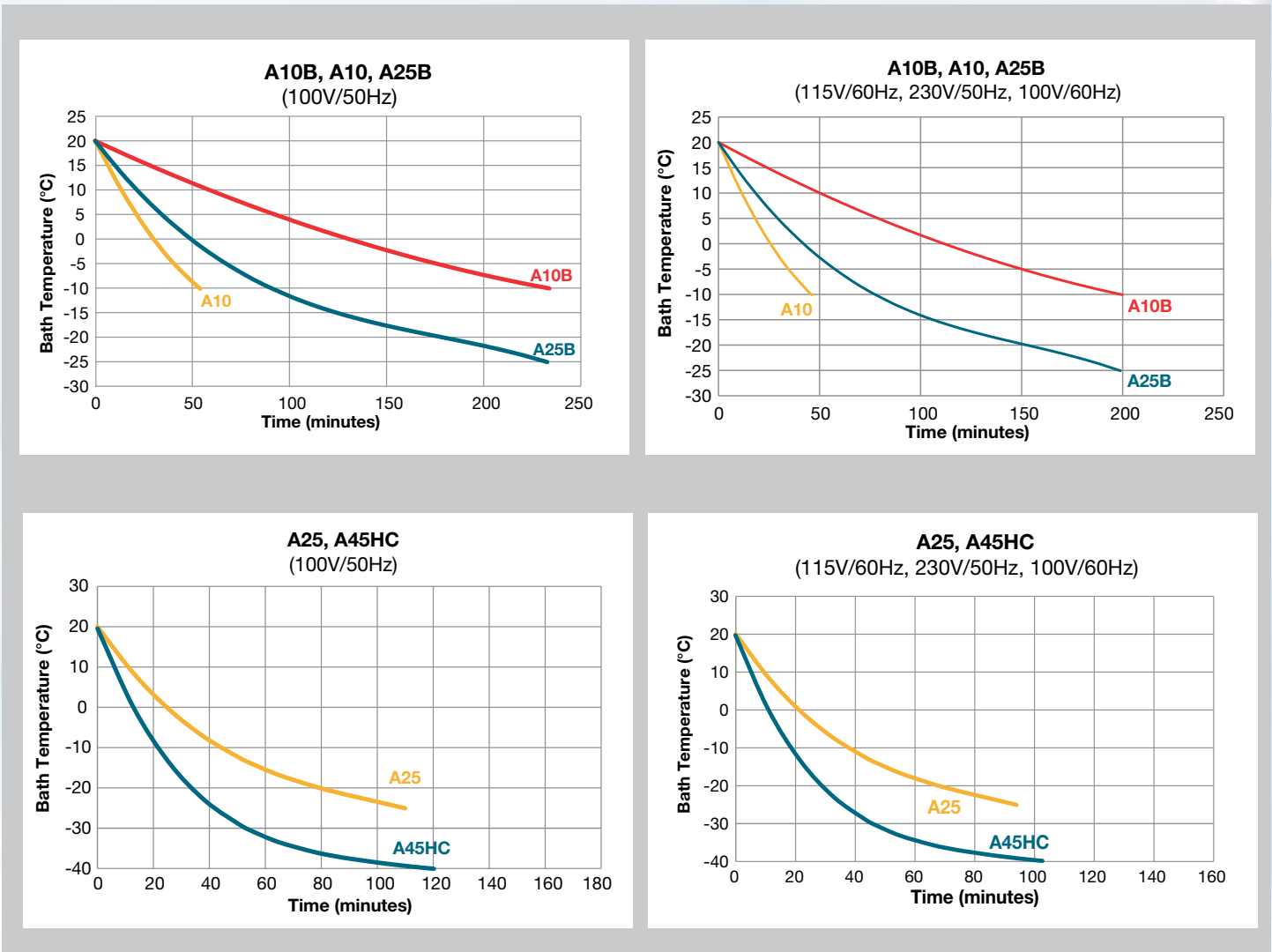
Cooling capacity



Specifications obtained at sea level using water (above 5°C to 90°C) or a fluid with a specific heat of 2.3 kJ/kg-K or 0.55 Btu/lb-F (less than 5°C) as the recirculating fluid at a 20°C ambient condition, at nominal operating voltage. Other fluids, process temperatures, ambient temperatures, altitude or operating voltage will affect performance. Specifications are for reference only and are subject to change.

Performance curves for refrigerated bath circulators

Cooling capacity



Specifications obtained at sea level using water (above 5°C to 90°C) or a fluid with a specific heat of 2.3 kJ/kg-K or 0.55 Btu/lb-F (less than 5°C) as the recirculating fluid at a 20°C ambient condition, at nominal operating voltage. Other fluids, process temperatures, ambient temperatures, altitude or operating voltage will affect performance. Specifications are for reference only and are subject to change.

Sahara Series heated bath circulators

13°C to 300°C

When your application requires a high temperature, rely on these durable, seamless, stainless-steel baths

The Thermo Scientific™ Sahara™ Series Heated Bath Circulators are available in capacities from 7 to 53 L, with a variety of work area dimensions to meet your application needs.

- Up to eight different controllers can be selected that best fit your application needs
- The controller can be indexed 90° for easier viewing
- Rugged and corrosion-resistant for high temperature applications up to 300°C

Typical applications

- Viscometers
- Spectrophotometers
- Refractometers
- Metrology



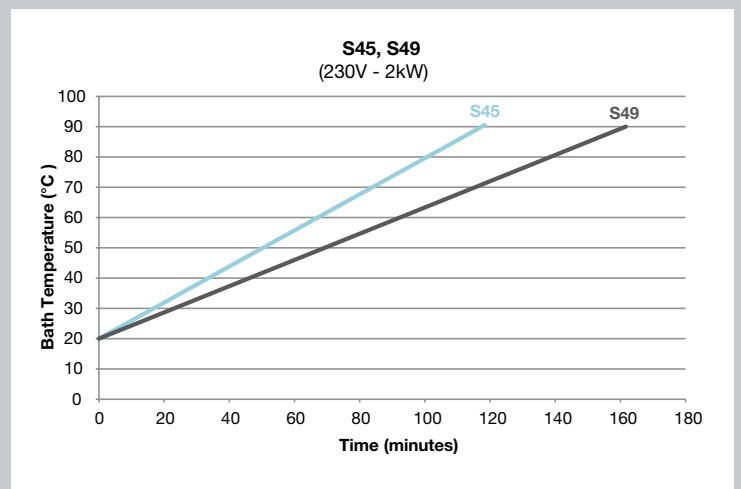
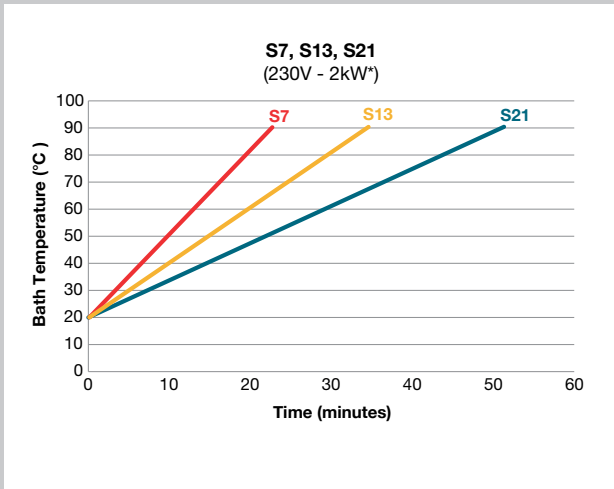
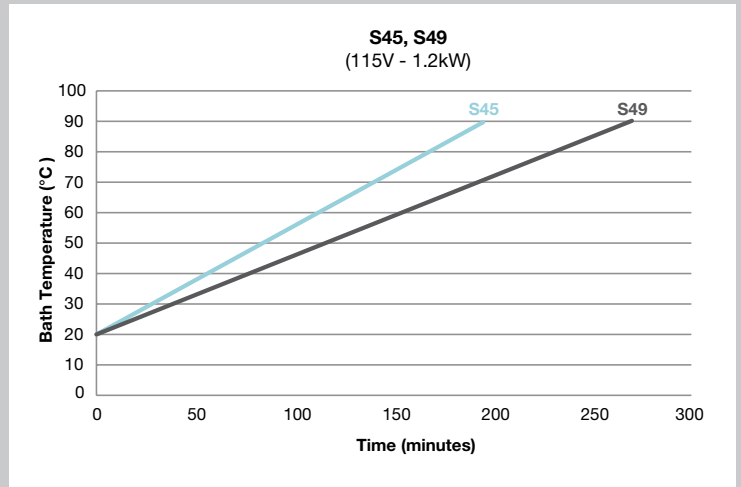
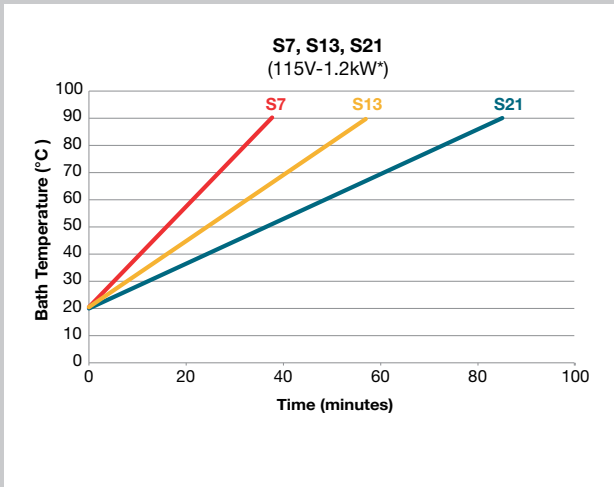
Thermo Scientific Sahara Series Heated Bath Circulators

Controller / Bath	S7	S13	S21	S45	S49
SC100	Ambient +13 to 100°C	Ambient +13 to 100°C	Ambient +13 to 100°C	Ambient +13 to 100°C	Ambient +13 to 100°C
SC150	Ambient +13 to 150°C	Ambient +13 to 150°C	Ambient +13 to 150°C	Ambient +13 to 150°C	Ambient +13 to 150°C
SC150L	Ambient +13 to 150°C	Ambient +13 to 150°C	—	Ambient +13 to 150°C	Ambient +13 to 150°C
AC150	Ambient +13 to 150°C	Ambient +13 to 150°C	Ambient +13 to 150°C	Ambient +13 to 150°C	Ambient +13 to 150°C
AC200	Ambient +13 to 200°C	Ambient +13 to 200°C	Ambient +13 to 200°C	Ambient +13 to 200°C	Ambient +13 to 200°C
PC200	Ambient +13 to 200°C	Ambient +13 to 200°C	—	Ambient +13 to 200°C	Ambient +13 to 200°C
PC201	Ambient +13 to 200°C	Ambient +13 to 200°C	—	Ambient +13 to 200°C	Ambient +13 to 200°C
Maximum bath volume (liters)*	8	12	19	41	53
Work area (D x W x L) mm (in.)	200 x 154.2 x 111.9 (7.9 x 6.1 x 4.4)	200 x 239.9 x 119.9 (7.9 x 9.4 x 4.4)	150 x 296.5 x 311.9 (5.9 x 11.7 x 12.3)	300 x 298.1 x 311.9 (11.8 x 11.7 x 12.3)	200 x 498 x 429.9 (7.9 x 19.6 x 16.9)

* Fluid volume varies depending on the fluid used, temperature range, and items inserted into the reservoir.

Performance curves for stainless steel heated bath circulators

Time to temperature—heating



Specifications obtained at sea level using water (above 5°C to 90°C) or a fluid with a specific heat of 2.3 kJ/kg-K or 0.55 Btu/lb-F (less than 5°C) as the recirculating fluid at a 20°C ambient condition, at nominal operating voltage. Other fluids, process temperatures, ambient temperatures, altitude or operating voltage will affect performance. Specifications are for reference only and are subject to change.

Thermo Scientific Polypropylene Series Heated Bath Circulators

Ambient +13°C to 100°C

Polypropylene (PP)

An economical alternative to stainless steel, these polypropylene baths are thermally resistant up to 100°C and deliver exceptional temperature performance with operational savings. Temperatures are maintained from ambient plus 13°C to 100°C.



Thermo Scientific Polypropylene Series Heated Bath Circulators

Controller /Bath	S6P	S12P	S19P
SC100	Ambient +13 to 80°C	Ambient +13 to 80°C	Ambient +13 to 80°C
SC150	Ambient +13 to 80°C	Ambient +13 to 80°C	Ambient +13 to 80°C
AC150	—	Ambient +13 to 80°C	Ambient +13 to 80°C
AC200	—	Ambient +13 to 80°C	Ambient +13 to 80°C
Bath volume (liters)*	6	12	19
Work area (D x W x L) mm/in	150 x 138 x 223 / 5.9 x 5.4 x 8.8	150 x 302 x 148.9 / 5.9 x 11.9 x 5.9	150 x 302 x 326.9 / 5.9 x 11.9 x 12.9
Net weight (kg/lb)	6.3 / 13.9	7.3 / 16.1	8.7 / 19.1
Compliance	CE/ROHS/WEEE	CE/ROHS/WEEE	CE/ROHS/WEEE

Accessories

Accessory	Cat. No.
Racks and inserts: Racks for Arctic and Sahara	
Stainless steel rack for bath types A10B, S49, S14P, and S21P. Choose a rack insert below:	1600002
Rack insert—includes top and bottom panels that will hold up to 100 test tubes that are 10 mm	1600003
Rack insert—includes top and bottom panels that will hold up to 60 test tubes that are 16 mm	1600004
Rack insert—includes top and bottom panel that will hold up to 25 test tubes that are 25 mm	1600005
Rack insert—includes top and bottom panel with no holes	1600006
Stainless steel rack for bath types A25B, A45HC, S21. Choose a rack insert below:	1600079
Rack Insert—includes top and bottom panels that will hold up to 55 test tubes that are 10 mm	1600072
Rack Insert—includes top and bottom panels that will hold up to 32 test tubes that are 16 mm	1600081
Rack Insert—includes top and bottom panels that will hold up to 13 test tubes that are 25 mm	1600082
Rack insert—includes top and bottom panel with no holes	1600083
Racks for Glacier Series circulators	
Rack for Glacier G50 ultralow refrigerated bath. Holds 16 straws up to 3 mm dia. and 65 mm or 133 mm in length	1600154
Bridges	
Bath bridge—for immersion cooler. Fits S21, S45 heated baths	1600077
Bath bridge—to hold SC immersion circulator in W13, W15, W26, W45, W46 baths	1600078
Bath bridge—to hold AC immersion circulator in W13, W15, W26, W45, W46 baths	1600150
Bath bridge—for tap water cooling coil and auto-refill. Fits S21 and S45 heated baths	1600123
Bath bridge—for cooling coil and auto-refill. Fits S7	1600131
Bath bridge—for cooling coil and auto-refill. Fits S7 (for SC controller only)	1600131
Bath bridge—for cooling coil and auto-refill. Fits S5P	1600135
Bath bridge—for cooling coil and auto-refill. Fits S49	1600140
Bath bridge—for auto-refill. Fits A25, A45HC	1600125
Bath bridge—for auto-refill. Fits A10B	1600141
Bath bridge—for auto-refill. Fits A25B	1600124
Bath bridge—for auto-refill. Fits A10	1600126
Bath bridge—for auto-refill. Fits S7	1600133
Adjustable bath bridge—400 to 800 mm, for SC, AC, and PC immersion circulators	1600018



Stainless steel rack



Bath bridge

Accessories

Adding a **lifting platform** to your bath allows you to adjust the submerged depth of your vessels or other objects.

Improve time to temperature by lowering the amount of fluid that needs to be heated or cooled. **Fluid displacement blocks** are used for external circulation only.

Operate heated baths closer to ambient temperature by removing pump heat.

Various **adapter boxes and communication cables** are available to allow for serial and analog communication.

Accessory	Cat. No.
Lifting -latform	
Lifting platform, stainless steel for S21, S21P, S45	1600011
Bath Bridge–for lifting platform in S21, S45 baths	1600007
Bath Bridge–for lifting platform in S21P	1600098
Bath Bridge–for tap water cooling coil, auto-refill and lifting platform in S21P bath	1600136
Lifting platform, stainless steel for S14P	1600012
Bath bridge–for lifting platform in S14P	1600098
Bath bridge–for tap water cooling coil, auto-refill and lifting platform in S14P bath	1600136
Lifting platform, stainless steel for A10B	1600142
Bath bridge–for lifting platform in A10B bath	1600036
Bath bridge–for lifting platform and auto-refill in A10B bath	1600128
Lifting platform stainless steel for S49	1600013
Bath bridge–for lifting platform in S49 bath	1600009
Bath bridge–for tap water cooling coil, auto-refill and lifting platform in S49 bath	1600130
Performance accessories	
Fluid displacement block for A25, A40 bath	1600105
Fluid displacement block for A10 bath	1600045
Tap water cooling coils	
Tap water cooling coil for SC100 or SC150 immersion circulator with a clamp	1600015
Tap water cooling coil for SC150 L immersion circulator with a clamp	1600017
Tap water cooling coil for all controllers with S13, S21, S45, S49, S14P	1600014
Tap water cooling coil for SC150 L controller with S13, S45, S49	1600016
Tap water cooling coil for SC100 or SC150 controller with S5P	1600090
Tap water cooling coil for SC100 or SC150 controller with S7	1600092
Tap water cooling coil for SC150 L controller with S7	1600093
Tap water cooling coil for AC150 or AC200 controller with S7	1600094
Solenoid valve (100-230V/50-60Hz) for tap water cooling coil (AC200 and up)	1601000
Connectivity	
RS232 serial communication adapter	1600027
RS485 serial communication adapter	1600075
Communication extension board for Ethernet/LAN	1600076
Interface cable USB 1.8 m long	1600033
Interface cable RS232 and RS485 1.5 m long	1600034
Interface cable LAN 5 m long	1600035
Analog I/O adapter	1600149



Tap water cooling coil

Accessory	Cat. No.
Work area covers	
Stainless steel work area cover for S5P	1600020
Stainless steel work area cover for S14P	1600021
Stainless steel work area cover for S21P	1600022
Stainless steel work area cover for S21, S45	1600038
Stainless steel work area cover for S49	1600040
Stainless steel work area cover for A10B	1600042
Work area cover with leveling device for A10	1600100
Work area cover with leveling device for S7	1600102
Work area cover with leveling device for S13	1600103
Tubing and accessories	
Adapter M16x1 female/1/4in. NPTF male	1600028
Adapter M16x1 male/1/4in. NPTF male	1600029
Plumbing Package – includes (4) clamps and (2) 5' Viton tubing (uninsulated), temperature range of -30°C to +200°C, 12mm ø	1600146
Plumbing Package – includes (4) clamps and (2) 5' Viton tubing (insulated), temperature range of -30°C to +200°C, 12 mm ø	1600147
Remote temperature sensors	
Pt100 probe, teflon coated, flexible, 300 mm long, 3 mm Ø, cable length 3 m	3330818
Pt100 probe, 18/8 stainless steel tubing, 150 mm long, 3 mm Ø, 3 m cable	3330429
Heat transfer fluids	
Sil 100 Silicone oil bath liquid, temperature range -75 to 75°C, 5 L	9990201
Sil 100 Silicone oil bath liquid, temperature range -75 to 75°C, 10 L	9990202
Silicone oil, temperature range +30°C to +150°C, 5 gal	610000000000
Algaecide/corrosion inhibitor, Nalco Kit	610000000005
Thermo200 Treated Water Solution w/Nalco, Temp Range +5°C to +95°C, 5 gal	610000000007
Sil 180 Silicone oil bath liquid, temperature range -40 to 200°C, 5 L	9990203
Sil 180 Silicone oil bath liquid, temperature range -40 to 200°C, 10 L	9990204
Sil 300 Silicone oil bath liquid, temperature range 80 to 300°C, 5 L	9990205
Sil 300 Silicone oil bath liquid, temperature range 80 to 300°C, 10 L	9990206
Synth 260 bath liquid, temperature range 40 to 250°C, 5 L	9990213
Synth 260 bath liquid, temperature range 40 to 250°C, 10 L	9990214
Ethyl glycol, 5 gallons (approx.19 liters) for low temperature applications to -30°C	610000000001
Software	
NEScom control/monitoring PC software	422000000004
Miscellaneous accessories	
Trolley w/castors for A45HC	1600070
Trolley w/castors for A25	1600071
Cage for SC100/SC150 immersion circulator	1600088

Directly control temperature of an external batch or application by placing the temperature sensor into the external application.



Stainless steel work area cover

Arctic Series circulator ordering information

Model	A10			A25			A45HC		
	115/60	230/50	100/50-60	115/60	230/50	100/50-60	115/60	230/50	100/50-60
Voltages (V/Hz)	115/60	230/50	100/50-60	115/60	230/50	100/50-60	115/60	230/50	100/50-60
SC100 plus Bath	1525108	1525101	1525106	1525258	1525251	1525256	-	-	-
SC150 plus Bath	1535108	1535101	1535106	1535258	1535251	1535256	-	-	-
SC150L plus Bath	-	-	-	1545258	1545251	1545256	1545408HC	1545401HC	1545406HC
AC150 plus Bath	1555108	1555101	1555106	1555258	1555251	1555256	-	-	-
AC200 plus Bath	1655108	1565101	1565106	1565258	1565251	1565256	1565408HC	1565401HC	1565406HC
PC200 plus Bath	-	-	-	1575258	1575251	1575256	1575408HC	1575401HC	1575406HC

Arctic Series circulator ordering information

Model	A10B			A25B		
	115/60	230/50	100/50-60	115/60	230/50	100/50-60
Voltages (V/Hz)	115/60	230/50	100/50-60	115/60	230/50	100/50-60
SC100 plus Bath	1524108	1524101	1524106	1524258	1524151	1524256
SC150 plus Bath	1534108	1534101	1534106	1534258	1534251	1534256
SC150L plus Bath	-	-	-	-	-	-
AC150 plus Bath	1554108	1554101	1554106	1554258	1554251	1554256
AC200 plus Bath	1564108	1564101	1564106	1564258	1564251	1564256
PC200 plus Bath	-	-	-	-	-	-

Sahara Series circulator ordering information

Model	S7			S13		
	115/60	230/50	100/50-60	115/60	230/50	100/50-60
Voltages (V/Hz)	115/60	230/50	100/50-60	115/60	230/50	100/50-60
SC100 plus Bath	1521078	1521071	1521076	1521138	1521131	1521136
SC150 plus Bath	1531078	1531071	1531076	1531138	1531131	1531136
SC150L plus Bath	1541078	1541071	1541076	1541138	1541131	1541136
AC150 plus Bath	1551078	1551071	1551076	1551138	1551131	1551136
AC200 plus Bath	1561078	1561071	1561076	1561138	1561131	1561136
PC200 plus Bath	1571072	1571075	-	1571132	1571135	-

Sahara Series circulator ordering information

Model	S21			S45			S49		
	115/60	230/50	100/50-60	115/60	230/50	100/50-60	115/60	230/50	100/50-60
Voltages (V/Hz)	115/60	230/50	100/50-60	115/60	230/50	100/50-60	115/60	230/50	100/50-60
SC100 plus Bath	1521218	1521211	1521216	1521458	1521451	1521456	1521498	1521491	1521496
SC150 plus Bath	1531218	1531211	1531216	1531458	1531451	1531456	1531498	1531491	1531496
SC150L plus Bath	-	-	-	1541458	1541451	1541456	1541498	1541491	1541496
AC150 plus Bath	1551218	1551211	1551216	1551458	1551451	1551456	1551498	1551491	1551496
AC200 plus Bath	1561218	1561211	1561216	1561458	1561451	1561456	1561498	1561491	1561496
PC200 plus Bath	-	-	-	1571452	1571455	-	1571492	1571495	-

Polypropylene Series circulator ordering information:

Model	S6P			S12P			S19P		
	115/60	230/50	100/50-60	115/60	230/50	100/50-60	115/60	230/50	100/50-60
Voltages	115/60	230/50	100/50-60	115/60	230/50	100/50-60	115/60	230/50	100/50-60
SC100 plus Bath	1523058	1523051	1523056	1523148	1523141	1523146	1523218	1523211	1523216
SC150 plus Bath	1533058	1533051	1533056	1533148	1533141	1533218	1533218	1533211	1533216
AC150 plus Bath	-	-	-	1553148	1553141	1553146	1553218	1553211	1553216
AC200 plus Bath	-	-	-	1563148	1563141	1563146	1563218	1563211	1563216

Find out more at thermofisher.com/tc