## thermo scientific



## Thermo Scientific Refrigerated and Heated Bath Circulators

Your success circulates at every degree



## performance, configurability and technology

## Now you can configure a flexible, cost-effective temperature control solution for any application.

- Pharmaceutical
- BioTech
- Chemical/Petrochemical
- Food and Beverage
- QA/QC
- Research and Development
- Analytical Instruments



## Environment-friendly Design

All units are RoHS/WEEE compliant

### Safe Operation

Units are CE Compliant with select models UL listed, for safe operation.

### **GREEN TIP** SAVE ENERGY

Save up 70% on energy costs when using the Energy Savings mode\*

\*Compared to standard operating mode.

### Ease-of-Use

All immersion circulators feature an intuitive user interface with bright display to view critical readings. Each system comes with a quickstart guide for simple set-up and operation.

The controller can be indexed 90° for optimal viewing.

Tool-less setup.

# factors to consider before selecting your temperature control product

#### What is your application need?

Do you have an existing tank, vessel or bath and need to heat the fluid? Review the immersion circulators for the temperature control range and features that best suit your application requirements.

### Do you need to circulate to an external application such as a rotary evaporator or bio reactor, or need to add heating or cooling to your application?

Consider Thermo Scientific<sup>™</sup> refrigerated or heated bath circulators. All systems and immersion circulators come standard with external circulation connections. Whether you have present or future use for external circulation you can always reconfigure your refrigerated or heated bath circulator or immersion circulator to accomplish this in a few simple steps.

## Does your temperature control application require a work area to place beakers or test tube racks?

Decide between a large selection of refrigerated bath circulators, heated stainless steel baths, as well as the economical PPO or Acrylic heated baths. These baths were designed to provide larger work areas to accommodate multiple beakers, test tube racks or incubation vessels.

## How much cooling capacity will your application require?

Choose from multiple temperature ranges and temperature ramp rates required for your application. The heating and cooling capacity are specified in watts for each system. The corresponding heating and cooling curves will give you insight into how fast a system can heat or cool the volume of fluid to your required temperature set point.

Temperature specifications for heating baths state a minimum temperature of ambient plus 13°C. This refers to the effect of 'heat soak' on the performance of these units that occurs when heat from the motor is conducted into the bath. Larger baths may lose heat quickly and may be able to accurately temperature control below the ambient plus 13°C threshold. Utilize a 'Cooling Coil' accessory or a refrigerated bath circulator to work in near ambient temperature conditions.

#### **Table of Contents**

| Frequently Asked Questions   | 4  |
|--|----|
| Immersion Circulator Comparison Table  | 5  |
| Thermo Scientific STANDARD, ADVANCED & PREMIUM Heated Immersion Circulators          | 6  |
| Thermo Scientific ARCTIC Series Refrigerated/Heated Bath Circulators                 | 8  |
| Thermo Scientific GLACIER Series Ultra-Low Temperature Refrigerated Bath Circulators | 13 |
| Thermo Scientific SAHARA Series Heated Bath Circulators                              | 14 |
| Accessories  | 19 |
| Service and Support  | 22 |
| Dimensions Chart   | 24 |
|  |    |

## Does my Thermo Scientific unit come with external circulation connections?

Yes. The external circulation connections required to circulate the fluid from the bath to your application is a standard feature on all STANDARD, ADVANCED and PREMIUM controllers. Each ARCTIC refrigerated/heated bath and SAHARA heated bath is capable of circulating to an external application.

## How do I achieve more heating capacity for my application?

When choosing an immersion circulator, you have the ability to choose from different versions and voltages. By understanding the flexibility of your electrical supply you can increase the amount of heating capacity for your application.

For applications in North America, the ADVANCED or PREMIUM Series can be utilized with 208V single phase electrical supply, and gain between 67% to 250% more in heating capacity.

| Immersion<br>Circulator  | 100-115V<br>50-60Hz | 100V<br>50-60Hz | 115V<br>60Hz    | 200-230V<br>50-60Hz | 230V<br>50Hz |
|--------------------------|---------------------|-----------------|-----------------|---------------------|--------------|
| SC100<br>SC150<br>SC150L | _                   | 0.9kW<br>@ 100V | 1.2kW<br>@ 115V | _                   | 2kW<br>@230V |
| AC150<br>AC200           | _                   | 0.9kW<br>@ 100V | 1.2kW<br>@ 115V | 2kW<br>@ 230V       | 2kW<br>@230V |
| PC200                    | 1.2kW<br>@ 115V     | _               | -               | 2kW<br>@ 230V       | _            |
| PC201<br>PC300           | _                   | _               | _               | 3kW<br>@ 230V       | _            |

The table below illustrates the different electrical capabilities and heating capacities:

## What is the difference between a refrigerated circulating bath and a refrigerated circulator?

A refrigerated circulating bath and a refrigerated circulator are very much alike. The defining attribute is that the work area of the refrigerated circulating bath is much larger than that of the refrigerated circulator. Accordingly, these types of systems are much larger overall than the refrigerated circulators due to the larger size of the bath (or work area).

- The refrigerated circulating bath design is focused on applications that require a large area within the bath to place samples, beakers and/or test tube racks, etc. Although the primary focus is the use of the bath, this system can still circulate externally.
- The refrigerated circulator can also be used for samples, test tube or beakers within its small bath. The difference that the bath is much smaller and will not hold as many samples.

## When using silicone oil how does fluid expansion affect my application?

It is very important to take special precaution to ensure that your system is filled to the appropriate level to avoid overflowing the silicone oil out of the stainless steel bath onto the lab bench or other areas. It is absolutely critical to take every safety precaution and confirm all aspects of your system before setting the temperature parameters for extreme heating applications. Based on our testing we estimate that for every 100°C increase in temperature within the bath that the fluid will expand 10%. However, our tests show depending on which immersion circulator you are utilizing the fluid expansion can range from 10% to 30%.

Note: The SAHARA stainless steel baths have been designed to be filled to the low level fluid safety cut out to enable the system to power up and start to temperature control. If filled properly to the low level, the expansion of the silicone oil will not overflow the tank at the immersion circulator's maximum temperature set point.

## How do I secure an immersion circulator to my tank or apparatus?

The model of immersion circulator will define the choices for your installation:

The STANDARD Series has a choice of the following:

- Stainless steel clamp that expands to 1" (25mm) and enables the installation of the immersion circulator to be installed on the lip of the tank or apparatus.
- Stainless steel bridge that allows the installation of a STANDARD Series immersion circulator to the legacy Haake stainless steel 'W' series baths.

The ADVANCED and PREMIUM immersion circulators are only available with a bridge.

An adjustable bridge that expands between 300mm and 800mm is available and will fit all immersion circulators. This kind of adjustable bridge is useful when the vessel is irregularly shaped.

### **Thermo Scientific Immersion Circulator Comparison Table**

Choose the immersion circulator that best fits your specific application requirements.
Match the immersion circulator to a refrigerated or heated bath.

|                                   | Thermo S         | cientific STAND/ | RD Series        | Thermo Scientific | ADVANCED Series  | Thermo S         | cientific PREMI  | UM Series        |
|-----------------------------------|------------------|------------------|------------------|-------------------|------------------|------------------|------------------|------------------|
| Model                             | SC100            | SC150            | SC150L           | AC150             | AC200            | PC200            | PC201            | PC300            |
| Specifications                    |                  |                  |                  |                   |                  |                  |                  |                  |
| Maximum temperature (°C)          | 100              | 150              | 150              | 150               | 200              | 200              | 200              | 300              |
| Temperature stability (°C)***     | 0.02             | 0.02             | 0.02             | 0.01              | 0.01             | 0.01             | 0.01             | 0.01             |
| Heater capacity (kW) 230V/115V    | 2/1.2            | 2/1.2            | 2/1.2            | 2/1.2             | 2/1.2            | 2/1.2            | 3**              | 3**              |
| Maximum flow rate (I/min)         | 17               | 17               | 17               | 20                | 20               | 24               | 24               | 24               |
| Maximum pressure (mbar/psi)       | 300/4.35         | 300/4.35         | 300/4.35         | 475/6.89          | 475/6.89         | 560/8.12         | 560/8.12         | 560/8.12         |
| Maximum suction (mbar/psi)        |                  |                  |                  | 330/4.78          | 330/4.78         | 380/5.51         | 380/5.51         | 380/5.51         |
| Flow rate/pump speed steps        | 2                | 2                | 2                | 3                 | 3                | Adjustable†      | Adjustable†      | Adjustable†      |
| Fill level from top of tank (mm)  | 6018             | 6018             | 10518            | 6318              | 6318             | 6318             | 6318             | 6318             |
| Tank depth requirement (mm)       | 150              | 150              | 200              | 150               | 150              | 200              | 200              | 200              |
| Dimensions/Weight                 |                  |                  |                  |                   |                  |                  |                  |                  |
| Overall dimensions (mm) H x W x D | 336 x 138 x 199  | 336 x 138 x 199  | 384 x 138 x 199  | 372 x 165 x 199   | 372 x 165 x 199  | 421 x 189 x 233  | 421 x 189 x 233  | 421 x 189 x 233  |
| Overall dimensions (in) H x W x D | 13.2 x 5.4 x 7.8 | 13.2 x 5.4 x 7.8 | 15.1 x 5.4 x 7.8 | 14.6 x 6.4 x 7.8  | 14.6 x 6.4 x 7.8 | 16.6 x 7.4 x 9.2 | 16.6 x 7.4 x 9.2 | 16.6 x 7.4 x 9.2 |
| Net weight (kg)                   | 3.3              | 3.3              | 3.3              | 4.2               | 4.2              | 4.7              | 4.7              | 4.7              |
| Safety & Compliance               | 5.5              | 0.0              | 5.5              | 7.2               | 7.2              | 4.7              | 4.7              | 4.7              |
| Safety class acc. DIN12876        | 1/NFL            | 3/FL             | 3/FL             | 3/FL              | 3/FL             | 3/FL             | 3/FL             | 3/FL             |
| ,                                 |                  |                  |                  |                   |                  |                  |                  |                  |
|                                   | Optional         | Optional         | Optional         | Optional          | Optional         | Optional         | Optional         | Optional         |
| Alarm Type                        |                  |                  |                  |                   | _                |                  |                  |                  |
| High temperature alarm            | •                | •                | •                | •                 | ٠                | •                | •                | •                |
| Low level alarm                   |                  | •                | •                | •                 | •                | •                | •                | •                |
| Refrigeration alarm               | •                | •                | •                | •                 | •                | •                | •                | •                |
| Application threshold alarm       |                  |                  |                  | •                 | •                | •                | •                | •                |
| Application alarm (external)*     |                  |                  |                  | Optional          | Optional         | Optional         | Optional         | Optional         |
| Alarm Indicators                  |                  | 1                |                  |                   |                  |                  |                  |                  |
| Acoustic/optical alarm            | •                | •                | ٠                | •                 | ٠                | •                | •                | •                |
| Connectivity                      |                  |                  |                  |                   |                  |                  |                  |                  |
| Remote sensor port                |                  |                  |                  | •                 | ٠                | •                | •                | •                |
| USB port                          |                  | •                | •                |                   | ٠                | •                | •                | •                |
| Multi function port               |                  |                  |                  |                   | ٠                | •                | •                | •                |
| RS232/RS485/Ethernet/LAN          |                  | Optional         | Optional         | Optional          | Optional         | Optional         | Optional         | Optional         |
| Analog I/O                        |                  | Optional         | Optional         |                   | Optional         | Optional         | Optional         | Optional         |
| Information Displayed on Screen   |                  |                  |                  |                   |                  |                  |                  |                  |
| High temperature warning          |                  |                  |                  | •                 | ٠                | •                | ٠                | •                |
| Low level warning                 |                  | •                | •                | •                 | ٠                | •                | ٠                | •                |
| High level warning                |                  |                  |                  | •                 | •                | •                | •                | •                |
| Date & time                       | •                | ٠                | ٠                | ٠                 | ٠                | •                | ٠                | •                |
| Features                          |                  | 1                |                  |                   |                  | •                |                  |                  |
| Energy saving mode                | •                | •                | •                | •                 | •                | •                | •                | •                |
| RTA                               | •                | •                | •                | •                 | •                | •                | •                | •                |
| °C/°F/K selection                 | •                | •                | •                | •                 | •                | •                | ٠                | •                |
| Auto restart                      | •                | •                | •                | •                 | •                | •                | •                | •                |
| System temperature limits         | •                | •                | •                | •                 | •                | •                | •                | •                |
| Application temperature limits    | •                | •                | •                | •                 | •                | •                | •                | •                |
| Solenoid valve for tap water      |                  |                  |                  |                   | Optional         | Optional         | Optional         | Optional         |
| On/off timer                      | •                | •                | •                | •                 | optional         | optional         |                  |                  |
| Preset set point temperatures     | 5                | 5                | 5                | 5                 | 5                | 5                | 5                | 5                |
| Ramp programs                     | J                | J                | 5                | 5                 | 1                | 10               | 10               | 10               |
|                                   |                  | 1                |                  |                   | 1                | 10               | 10               | 10               |
| Real time clock                   | •                | •                | •                | •                 | •                | •                | •                | •                |

\*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%.

## **Immersion Circulators**

## **Versatile Across Performance Levels**

The Thermo Scientific STANDARD, ADVANCED, and PREMIUM Series heated immersion circulators offer outstanding, precise temperature control. Whether used alone or matched up with one of the refrigerated or heated baths, we offer a temperature control solution designed to meet your needs.

### The STANDARD (SC) Series Choose from three versions.

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

### The ADVANCED (AC) Series Choose from two versions.

The ADVANCED series offers greater pumping performance, ramp programming, application alarms, and temperature ranges from ambient plus 13°C to 200°C.

### The PREMIUM (PC) Series Choose from three versions.

Ideal for applications that require sophisticated control, multiple ramp programming, and extreme temperature performance ranging from ambient plus13°C to 300°C.

### What's included:

8mm and 12mm hose adapters for external circulation, pump plug for external circulation (SC only) and 6-ft. power cord.

#### To purchase immersion circulators separately, please use the information below.

| Immersion Circulator | Order No.            |                  |               |                      |               |
|----------------------|----------------------|------------------|---------------|----------------------|---------------|
| Voltage              | 100-115V/<br>50-60Hz | 100V/<br>50-60Hz | 115V/<br>60Hz | 200-230V/<br>50-60Hz | 230V/<br>50Hz |
| SC 100               |                      | 1520006          | 1520008       |                      | 1520001       |
| SC 100 w/clamp       |                      | 1520016          | 1520018       |                      | 1520011       |
| SC 150               |                      | 1530006          | 1530008       |                      | 1530001       |
| SC 150 w/clamp       |                      | 1530016          | 1530018       |                      | 1530011       |
| SC 150L              |                      | 1540006          | 1540008       |                      | 1540001       |
| SC 150L w/clamp      |                      | 1540016          | 1540018       |                      | 1540011       |
| AC 150               |                      | 1550006          | 1550008       | 1550001              |               |
| AC 150 w/bridge      |                      | 1550026          | 1550028       | 1550021              |               |
| AC 200               |                      | 1560006          | 1560008       | 1560001              |               |
| AC 200 w/bridge      |                      | 1560026          | 1560028       | 1560021              |               |
| PC 200               | 1570002              |                  |               | 1570005              |               |
| PC 200 w/bridge      | 1570022              |                  |               | 1570025              |               |
| PC 201               |                      |                  |               | 1580005              |               |
| PC 201 w/bridge      |                      |                  |               | 1580025              |               |
| PC 300               |                      |                  |               | 1590005              |               |
| PC 300 w/bridge      |                      |                  |               | 1590025              |               |

See page 22 for complete list of available accessories.

#### **Useful Accessories:**

- Tap water cooling coil
- Solenoid valve for use with the tap water cooling coil (for AC200 controller and up)
- Pump/heater coil cage (SC100, SC150, SC150L controller only)
- Universal adjustable bridge
- External temperature probe (for AC150 controller and up)

### Certification: $C \in$

#### Compliance: RoHS and WEEE

### **Immersion Circulators**

**SC150L** 

All of the SC150

features, PLUS-

· Increased immersion depth

to accommodate larger or

deeper baths

immersion circulator

#### ▶STANDARD



### **SC100**

- Maximum temperature: 100°C
- Five programmable set point temperatures
- RTA (Real Temperature Adjustment) for calibration
- Two levels of pump speed adjustment to increase flow or bath agitation
- Three languages (English, German, French)
- Change digital display resolution between 0.1 and 0.01 and between °C – °F – K
- Acoustic and visual alarm
- Auto-Restart feature after power failure

### ►ADVANCED



### AC150

### GREEN TIP SAVE ENERGY when using the

**SC150** 

All of the SC100

features, PLUS-

Maximum temperature: 150°C

Early-warning alert for fluid refill

Automatic controller shut-down

at detection of excessive high

temperature, low liquid level, or

Communication options for:

motor overload

Ethernet/LAN

RS232

•

•

•

•

immersion circulator

RS485

Analog I/O

Energy Savings mode\*

#### All STANDARD immersion circulator features, PLUS-

- Maximum temperature: 150°C
- Pump speed adjustment to three levels for turbulence control
- Powerful force and suction pump for external open and closed applications
- Internal or external temperature control mode (Remote Sensor, NAMUR type)
- Programmable application temperature alarm with user selected alarm, go-safe-state or shut off option
- · Fluid selection with predefined temperature limits
- Five languages (English, German, French, Spanish, Italian)

## AC200 All of the AC150

- immersion circulator features, PLUS–
- Maximum temperature: 200°C
- One ramp program
- On/Off timer with real time clock for time-critical applications
- USB port
- Analog I/O option
- Multi-function port

### **▶**PREMIUM



### PC200

All of the ADVANCED immersion circulator features, PLUS–

- Maximum temperature: 200°C
- · Incremental pump speed adjustment
- Seven languages (English, German, French, Spanish, Italian, Chinese, and Japanese)
- Ten ramp programs





## All of the PC200

immersion circulator features, PLUS–

- 3.0 kW heater for faster time to temperature
- All stainless steel pump with ceramic rotors



### PC300

All of the PC201 immersion circulator features, PLUS–

Maximum temperature: 300°C

## Thermo Scientific PP 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.

#### **Useful Accessories:**

- Tap Water Cooling Coil
- Solenoid Valve for Tap Water Cooling Coil (AC200 controller and above)
- Auto-refill (AC200 controller and above)
- External Temperature Probe (AC150 controller and above)
- Work Area Cover
- Lifting Platform (S21, S45, S49, S14P, S21P only)
- Test Tube Racks



| Controller 🕇 🛛 Bath 🕨   | S5P  | S14P                 | S21P                                |  |
|-------------------------|--|----------------------|-------------------------------------|--|
| SC100                   | Ambient +13 to 100°C   | Ambient +13 to 100°C | Ambient +13 to 100°C                |  |
| SC150                   | Ambient +13 to 100°C   | Ambient +13 to 100°C | Ambient +13 to 100°C                |  |
| AC150                   |  | Ambient +13 to 100°C | Ambient +13 to 100°C                |  |
| AC200                   |  | Ambient +13 to 100°C | Ambient +13 to 100°C                |  |
| Bath volume (liters)*   | 5  | 14                   | 21                                  |  |
| Work area (DxWxL) mm/in | nm/in 160 x 132 x 132 / 6.3 x 5.2 x 5.2 160 x 300 x 163 / 6.3 x 11.8 x 6.4 |                      | 160 x 300 x 353 / 6.3 x 11.8 x 13.9 |  |
| Net weight (kg/lb)      | 5.1 / 11.2   | 6.3 / 13.9           | 6.6 / 14.5                          |  |
| Compliance CE/ROHS/WEEE |  | CE/ROHS/WEEE         | CE/ROHS/WEEE                        |  |

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

#### **Ordering information:**

| Model           |         | S5P     |           |         | S14P    |           |         | S21P    |           |
|-----------------|---------|---------|-----------|---------|---------|-----------|---------|---------|-----------|
| 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 | 1533146   | 1533218 | 1533211 | 1533216   |
| AC150 plus Bath | -       | -       | -         | 1553148 | 1553141 | 1553146   | 1553218 | 1553211 | 1553216   |
| AC200 plus Bath | -       | -       | -         | 1563148 | 1563141 | 1563146   | 1563218 | 1563211 | 1563216   |

See pages 19-21 for complete list of available accessories. Overall dimensions can be found on page 24-25.

## Accessories

| Accessory  | Catalog Number |
|--|----------------|
| Racks and inserts: Racks for Arctic and Sahara   |                |
| Stainless steel rack for bath types A10B, S49, S19T, S14P, S21P. Choose a rack insert below:   | 1600002        |
| Rack insert - includes top and bottom panels that will hold up to 100 test tubes that are 10mm | 1600003        |
| Rack insert - includes top and bottom panels that will hold up to 60 test tubes that are 16mm  | 1600004        |
| Rack insert - includes top and bottom panel that will hold up to 25 test tubes that are 25mm   | 1600005        |
| Rack insert - includes top and bottom panel with no holes                                      | 1600006        |
| Stainless steel rack for bath types A25B, A40, S21. Choose a rack insert below:                | 1600079        |
| Rack Insert - includes top and bottom panels that will hold up to 55 test tubes that are 10mm  | 1600072        |
| Rack Insert - includes top and bottom panels that will hold up to 32 test tubes that are 16mm  | 1600081        |
| Rack Insert - includes top and bottom panels that will hold up to 13 test tubes that are 25mm  | 1600082        |
| Rack insert - includes top and bottom panel with no holes                                      | 1600083        |
| Stainless steel rack for bath type S12T. Choose a rack insert below:                           | 1600026        |
| Rack insert - includes top and bottom panels that will hold up to 39 test tubes that are 10mm  | 1600084        |
| Rack insert - includes top and bottom panel that will hold up to 20 test tubes that are 16mm   | 1600085        |
| Rack insert - includes top and bottom panel that will hold up to 8 test tubes that are 25mm    | 1600086        |
| Rack insert - includes top and bottom panel with no holes                                      | 1600087        |
| Racks for Glacier  |                |
| Rack for Glacier G50 ultra low refrigerated bath.  | 1600154        |
| Holds 16 straws up to 3mm dia. and 65mm or 133mm in length                                     | 1000154        |
| 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 S12T, S19T                                | 1600137        |
| Bath bridge - for cooling coil and auto-refill. Fits S6T                                       | 1600139        |
| Bath bridge - for cooling coil and auto-refill. Fits S49                                       | 1600140        |
| Bath bridge - for auto-refill. Fits A25, A40   | 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 & PC immersion circulators                  | 1600018        |





## 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.

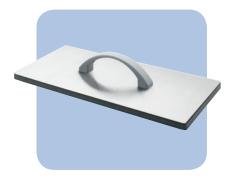
Operate heated baths closer to ambient temperature by removing pump heat.

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

| Accessory  | Catalog Number |
|--|----------------|
| Lifting Platform   |                |
| 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 ba  | th 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 ba  | th 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 | n 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 SC150L immersion circulator with a clamp                    | 1600017        |
| Tap water cooling coil for all controllers with S13, S21, S45, S49, S14P, S21P, S12T,  | S19T 1600014   |
| Tap water cooling coil for SC150L 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 S6T                          | 1600091        |
| Tap water cooling coil for SC100 or SC150 controller with S7                           | 1600092        |
| Tap water cooling coil for SC150L 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 1.8m long  | 1600033        |
| Interface cable RS232 and RS485 1.5m long  | 1600034        |
| Interface cable LAN 5m long  | 1600035        |
| Analog I/O adapter   | 1600149        |
|  |                |

Tap water cooling coil

## Accessories



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

Allows you to start/stop, monitor temperature, run temperature ramps and data log from your computer.

| Accessory  | Catalog Number |
|--|----------------|
| 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/1/4"NPTF male   | 1600028        |
| Adapter M16x1 male/1/4"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, 12mm ø   | 1600147        |
| Remote Temperature Sensors   |                |
| Pt100 prode, teflon coated, flexible, 300mm long, 3mm Ø, cable length 3m   | 3330818        |
| Pt100 probe, 18/8 stainless steel tubing, 150mm long, 3mm Ø, 3m cable length, up to 600°C                                  | 3330429        |
| Heat Transfer Fluids   |                |
| Sil 100 Silicone oil bath liquid, temperature range -75 to 75°C, 5L  | 9990201        |
| Sil 100 Silicone oil bath liquid, temperature range -75 to 75°C, 10L   | 9990202        |
| Silicone oil, temperature range +30°C to +150°C, 5 GAL   | 61000000000    |
| Algaecide/corrosion inhibitor, Nalco Kit   | 61000000005    |
| THERM0200 Treated water solution w/Nalco, Temp Range +5°C to +95°C, 5 GAL  | 61000000007    |
| Sil 180 Silicone oil bath liquid, temperature range -40 to 200°C, 5L   | 9990203        |
| Sil 180 Silicone oil bath liquid, temperature range -40 to 200°C, 10L  | 9990204        |
| Sil 300 Silicone oil bath liquid, temperature range +80 to 300°C, 5L   | 9990205        |
| Sil 300 Silicone oil bath liquid, temperature range +80 to 300°C, 10L  | 9990206        |
| Synth 260 bath liquid, temperature range +40 to 250°C, 5L  | 9990213        |
| Synth 260 bath liquid, temperature range +40 to 250°C, 10L   | 9990214        |
| Ethyl glycol, 5 gallons (approx. 19 liters) for low temperature applications to -30°C                                      | 61000000001    |
| Software   |                |
| NEScom control/monitoring PC software  | 422000000004   |
| Miscellaneous Accessories  |                |
| Trolley w/castors for A40  | 1600070        |
| Trolley w/castors for A25  | 1600071        |
| Cage for SC100/SC150 immersion circulator  | 1600088        |
| Cage for SC150L immersion circulator   | 1600089        |
| Auto-refill (100-230V/50-60Hz) (AC200 and up)  | 1603000        |

## Dimensions

### Thermo Scientific SAHARA Acrylic Heated Baths

| Model      | Millimeters (H x W x L) | Inches (H x W x L) |
|------------|-------------------------|--------------------|
| SC100-S6T  | 352.7 x 188.8 x 407     | 13.9 x 5.9 x 16    |
| SC150-S6T  | 352.7 x 188.8 x 407     | 13.9 x 5.9 x 16    |
| SC100-S12T | 354.7 x 356.1 x 348     | 14 x 14 x 13.7     |
| SC150-S12T | 354.7 x 356.1 x 348     | 14 x 14 x 13.7     |
| AC150-S12T | 392.7 x 356.1 x 348     | 15.5 x 14 x 13.7   |
| AC200-S12T | 392.7 x 356.1 x 348     | 15.5 x 14 x 13.7   |
| SC100-S19T | 354.7 x 356.1 x 526     | 14 x 14 x 20.7     |
| SC150-S19T | 354.7 x 356.1 x 526     | 14 x 14 x 20.7     |
| AC150-S19T | 392.7 x 356.1 x 526     | 15.5 x 14 x 20.7   |
| AC200-S19T | 392.7 x 356.1 x 526     | 15.5 x 14 x 20.7   |

### Thermo Scientific SAHARA Stainless Steel Heated Baths

| Model     | Millimeters (H x W x L) | Inches (H x W x L) |
|-----------|-------------------------|--------------------|
| SC100-S7  | 456.2 x 234.8 x 428.4   | 18 x 9.2 x 16.7    |
| SC150-S7  | 456.2 x 234.8 x 428.4   | 18 x 9.2 x 16.7    |
| AC150-S7  | 494.2 x 234.8 x 428.4   | 19.5 x 9.2 x 16.7  |
| AC200-S7  | 494.2 x 234.8 x 428.4   | 19.5 x 9.2 x 16.7  |
| PC200-S7  | 494.2 x 234.8 x 428.4   | 19.5 x 9.2 x 16.7  |
| PC201-S7  | 494.2 x 234.8 x 428.4   | 19.5 x 9.2 x 16.7  |
| PC300-S7  | 494.2 x 234.8 x 428.4   | 19.5 x 9.2 x 16.7  |
| SC100-S13 | 456.2 x 320.8 x 428.4   | 18 x 12.6 x 16.7   |
| SC150-S13 | 456.2 x 320.8 x 428.4   | 18 x 12.6 x 16.7   |
| AC150-S13 | 494.2 x 320.8 x 428.4   | 19.5 x 12.6 x 16.7 |
| AC200-S13 | 494.2 x 320.8 x 428.4   | 19.5 x 12.6 x 16.7 |
| PC200-S13 | 494.2 x 320.8 x 428.4   | 19.5 x 12.6 x 16.7 |
| PC201-S13 | 494.2 x 320.8 x 428.4   | 19.5 x 12.6 x 16.7 |
| PC300-S13 | 494.2 x 320.8 x 428.4   | 19.5 x 12.6 x 16.7 |
| SC150-S21 | 408.5 x 380.8 x 628.4   | 16.1 x 15 x 24.7   |
| SC150-S21 | 408.5 x 380.8 x 628.4   | 16.1 x 15 x 24.7   |
| AC150-S21 | 446.5 x 380.8 x 628.4   | 17.6 x 15 x 24.7   |
| AC200-S21 | 446.5 x 380.8 x 628.4   | 17.6 x 15 x 24.7   |

### Thermo Scientific SAHARA PPO Heated Baths

| Model      | Millimeters (H x W x L) | Inches (H x W x L) |
|------------|-------------------------|--------------------|
| SC100-S5P  | 359.5 x 190 x 388       | 14.2 x 7.5 x 15.3  |
| SC150-S5P  | 359.5 x 190 x 388       | 14.2 x 7.5 x 15.3  |
| SC100-S14P | 360.5 x 358 x 452       | 14.2 x 14.1 x 17.8 |
| SC150-S14P | 360.5 x 358 x 452       | 14.2 x 14.1 x 17.8 |
| AC150-S14P | 398.5 x 358 x 452       | 15.7 x 14.1 x 17.8 |
| AC200-S14P | 398.5 x 358 x 452       | 15.7 x 14.1 x 17.8 |
| SC100-S21P | 360.5 x 358 x 642       | 14.2 x 14.1 x 25.3 |
| SC150-S21P | 360.5 x 358 x 642       | 14.2 x 14.1 x 25.3 |
| AC150-S21P | 398.5 x 358 x 642       | 15.7 x 14.1 x 25.3 |
| AC200-S21P | 398.5 x 358 x 642       | 15.7 x 14.1 x 25.3 |

### Thermo Scientific SAHARA Stainless Steel Heated Baths

| Model      | Millimeters (H x W x L) | Inches (H x W x L) |
|------------|-------------------------|--------------------|
| SC100-S45  | 556.2 x 380.8 x 628.4   | 21.9 x 15 x 24.7   |
| SC150-S45  | 556.2 x 380.8 x 628.4   | 21.9 x 15 x 24.7   |
| SC150L-S45 | 556.2 x 380.8 x 628.4   | 21.9 x 15 x 24.7   |
| AC150-S45  | 594.2 x 380.8 x 628.4   | 23.4 x 15 x 24.7   |
| AC200-S45  | 594.2 x 380.8 x 628.4   | 23.4 x 15 x 24.7   |
| PC200-S45  | 594.2 x 380.8 x 628.4   | 23.4 x 15 x 24.7   |
| PC201-S45  | 594.2 x 380.8 x 628.4   | 23.4 x 15 x 24.7   |
| SC100-S49  | 456.2 x 578.8 x 746.4   | 18 x 22.8 x 29.4   |
| SC150-S49  | 456.2 x 578.8 x 746.4   | 18 x 22.8 x 29.4   |
| SC150L-S49 | 456.2 x 578.8 x 746.4   | 18 x 22.8 x 29.4   |
| AC150-S49  | 494.2 x 578.8 x 746.4   | 19.5 x 22.8 x 29.4 |
| AC200-S49  | 494.2 x 578.8 x 746.4   | 19.5 x 22.8 x 29.4 |
| PC200-S49  | 494.2 x 578.8 x 746.4   | 19.5 x 22.8 x 29.4 |
| PC201-S49  | 494.2 x 578.8 x 746.4   | 19.5 x 22.8 x 29.4 |

### Thermo Scientific GLACIER Ultra-Low Temperature Refrigerated Baths

| Model     | Millimeters (H x W x L) | Inches (H x W x L) |
|-----------|-------------------------|--------------------|
| AC200-G50 | 851.1 x 418.8 x 554     | 33.5 x 16.5 x 21.8 |
| PC200-G50 | 851.1 x 418.8 x 554     | 33.5 x 16.5 x 21.8 |



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