Refrigerated Circulating Baths

A versatile range of products to fit every need.

Features:

- Working temperatures from -40 to +200°C
- Temperature stabilities to ±0.005°C
- Capacities from 7 to 45 liters
- Six controller types with large, intuitive displays and multiple communication options
- Large bath openings and easy to clean surfaces
- Swivel 180™ Rotating Controllers
- LidDock™ Lid Stowing System
- DuraTop™ Chemical Resistant Deck
- WhisperCool™ Environmental Control System
- Cool Command™ Technology

Capable of reaching temperatures as low as -40°C, PolyScience Refrigerated/Heated Circulating Baths provide dependable temperature control for a wide variety of laboratory cooling applications.

Available in 40 different models, the latest generation PolyScience Refrigerated/Heated Circulating Baths uphold our reputation for innovation, product quality, and refrigeration expertise. Our lab and operator-friendly circulating baths set a new industry standard for design, performance and value. The units are extremely simple to operate, easy to install and maintain, and will provide years of reliable and accurate heat removal.

PolyScience Refrigerated/Heated Circulators come with the following accessories:

- Reservoir cover
- Bypass tubing
- Male inlet and outlet adapters for 3/8, 1/4, and 3/16" (.95, .63, and .47 cm) tubing. 1/4" to M16 adapters also included on 50 Hz units.
- 6' (1.83 m) standard grounded electrical cord with country-specific plug

Features:

- **Quiet**
  Proprietary patent-pending WhisperCool™ technology reduces overall equipment noise, increases refrigeration efficiency, and lowers energy consumption.

- **Easy to maintain**
  Accessing the reservoir drain and removable air filter for maintenance is as simple as removing the circulator's front panel. Performance Programmable, Advanced Programmable and Performance Digital models even remind you when it's time for filter cleaning.

- **Energy saving**
  Cool Command™ technology carefully regulates the amount of cooling required, saving energy while delivering fast cool-downs and more precise control at elevated temperatures.

- **Safe**
  All models feature user-settable high-temperature safeties as well as redundant over-temperature protection and comply with RoHS, WEEE, IEC 61010-1, IEC 61010-2-010, IEC 61326-1, DIN 12876 and are CE and ETL certified. Our DuraTop™ surface is cooler to the touch when operating at high temperatures.

- **Intuitive**
  Whether equipped with the entry-level controller or the most sophisticated, PolyScience Refrigerated/Heated Circulating Baths are extremely easy to use. Clear navigational buttons and menu prompts guide you through setup, making operational and temperature set-point changes simple and precise.

Refrigerated Circulating Baths Selection Guide

Capacity		7 Liter (Low Profile)	7 Liter	7 Liter
Maximum Temperature[1]		200°C	200°C	200°C
Minimum Temperature		-20°C	-20°C	-40°C
Cooling Capacity @ 20°C		200 W	200 W	505 W
Working Access (L x W x D)		6.18 x 5.59 x 5" 15.7 x 14.2 x 12.7 cm	6.18 x 5.59 x 5" 15.7 x 14.2 x 12.7 cm	6.18 x 5.59 x 5" 15.7 x 14.2 x 12.7 cm
Drain		•	•	•
LidDock™		•	•	•
Performance Programmable	120 VAC/60 Hz	PP7LR-20-A11B	PP07R-20-A11B	PP07R-40-A11B
	240 VAC/50 Hz	PP7LR-20-A12E	PP07R-20-A12E	PP07R-40-A12E
Advanced Programmable	120 VAC/60 Hz	AP7LR-20-A11B	AP07R-20-A11B	AP07R-40-A11B
	240 VAC/50 Hz	AP7LR-20-A12E	AP07R-20-A12E	AP07R-40-A12E
Performance Digital	120 VAC/60 Hz	PD7LR-20-A11B	PD07R-20-A11B	PD07R-40-A11B
	240 VAC/50 Hz	PD7LR-20-A12E	PD07R-20-A12E	PD07R-40-A12E
Advanced Digital	120 VAC/60 Hz	AD7LR-20-A11B	AD07R-20-A11B	AD07R-40-A11B
	240 VAC/50 Hz	AD7LR-20-A12E	AD07R-20-A12E	AD07R-40-A12E
Standard Digital	120 VAC/60 Hz	SD7LR-20-A11B	SD07R-20-A11B	
	240 VAC/50 Hz	SD7LR-20-A12E	SD07R-20-A12E	
MX	120 VAC/60 Hz	MX7LR-20-A11B	MX07R-20-A11B	
	240 VAC/50 Hz	MX7LR-20-A12E	MX07R-20-A12E	

Part Number (rows: Performance Programmable through MX)

1. Maximum temperature is controller dependent; see Circulator Controller Features, pages 16 through 27.
2. All 45L Circulating Baths are 208-240 VAC, 50/60 Hz.
Electrical plugs for the part numbers listed are standard U.S. and European types. See page 128 for additional plug types and part numbers.

15 Liter	15 Liter	20 Liter	28 Liter	45 Liter[2]
200°C	200°C	200°C	200°C	135°C
-30°C	-40°C	-30°C	-30°C	-25°C
915 W	1000 W	915 W	915 W	1400 W
8.35 x 10.88 x 5.5" 21.2 x 27.6 x 14 cm	8.35 x 10.88 x 5.5" 21.2 x 27.6 x 14 cm	9.85 x 12.45 x 5.5" 25 x 31.6 x 14 cm	12.35 x 14.13 x 5.5" 31.4 x 35.9 x 14 cm	21.6 x 15.68 x 5.5" 54.9 x 39.8 x 14 cm
•	•	•	•	•
•	•	•	•	
PP15R-30-A11B	PP15R-40-A11B	PP20R-30-A11B	PP28R-30-A11B	PP45R-20-A13D
PP15R-30-A12E	PP15R-40-A12E	PP20R-30-A12E	PP28R-30-A12E	PP45R-20-A12E
AP15R-30-A11B	AP15R-40-A11B	AP20R-30-A11B	AP28R-30-A11B	AP45R-20-A13D
AP15R-30-A12E	AP15R-40-A12E	AP20R-30-A12E	AP28R-30-A12E	AP45R-20-A12E
PD15R-30-A11B	PD15R-40-A11B	PD20R-30-A11B	PD28R-30-A11B	PD45R-20-A13D
PD15R-30-A12E	PD15R-40-A12E	PD20R-30-A12E	PD28R-30-A12E	PD45R-20-A12E
AD15R-30-A11B	AD15R-40-A11B	AD20R-30-A11B	AD28R-30-A11B	AD45R-20-A13D
AD15R-30-A12E	AD15R-40-A12E	AD20R-30-A12E	AD28R-30-A12E	AD45R-20-A12E
SD15R-30-A11B		SD20R-30-A11B	SD28R-30-A11B	
SD15R-30-A12E		SD20R-30-A12E	SD28R-30-A12E	
MX15R-30-A11B		MX20R-30-A11B		
MX15R-30-A12E		MX20R-30-A12E		

Performance Programmable Temperature Controller

Key Specifications

Working Temperature: From -40°C to +200°C

Temperature Stability: ±0.005°C

Maximum Pressure:	psi (bar)
120 VAC/60 Hz Models	4.3 (0.3)
240 VAC/50 Hz Models	3.6 (0.25)

Maximum Flow Rate:	Pressure	Suction
	gpm (l/min)	gpm (l/min)
120 VAC/60 Hz Models	5.3 (20.1)	3.9 (14.7)
240 VAC/50 Hz Models	4.4 (16.7)	3.2 (12.2)

Features:

- OpenMode time/temperature programming (no restriction on number of programs or steps)
- Intuitive 4.3" (10.9 cm) SmartTouch display
- 11 languages: French, German, Spanish, Chinese, Portuguese, Russian, Hindi, Arabic, Italian, Korean, English
- Variable-speed pressure/suction pump with external circulation and temperature control capability
- Swivel 180™, LidDock™, DuraTop™, WhisperCool™, Cool Command™
- On-board connectivity: USB-A & B, Ethernet, RS232/485, remote on/off, external temperature probe
- Event scheduling (time & date), real-time clock and temperature trends for up to 10 days
- Multiple, selectable "home" screens and on-screen help
- Automatic and/or user-adjustable performance optimization and 10-point calibration capability
- Complies with DIN 12876-1 Class III safety requirements for use with flammable liquids
- Includes Enhanced Performance Hardware & Software Package
- Available with DeviceNet™/CANbus, Modbus®, and Profibus® options

Temperature control is easily fine-tuned through the selection of a specific fluid, entry of a fluid's specific heat capacity, or even the adjustment of the controller's PID values.

Simple and intuitive time/temperature programming makes it easy to create and run special test protocols and/or ramp and soak profiles.

Selectable "Home" screens allow you to display as much or as little temperature information as you need – including 4 minute to 10 day temperature trend data.

For additional information on the Performance Programmable Controller's features and capabilities, see pages 16 and 17.

7-Liter: -20°C, Low-Profile

Temperature Range:
-20° to +200°C

Working Access (L x W x D):
6.18 x 5.59 x 5"
15.7 x 14.2 x 12.7 cm

Overall Dimensions (L x W x H):
23.2 x 16.2 x 16.2"
58.9 x 41.1 x 41.1 cm

7-Liter: -20°C

Temperature Range:
-20° to +200°C

Working Access (L x W x D):
6.18 x 5.59 x 5"
15.7 x 14.2 x 12.7 cm

Overall Dimensions (L x W x H):
21.3 x 8.7 x 24.3"
54.1 x 22.1 x 61.7 cm

7-Liter: -40°C

Temperature Range:
-40° to +200°C

Working Access (L x W x D):
6.18 x 5.59 x 5"
15.7 x 14.2 x 12.7 cm

Overall Dimensions (L x W x H):
21.3 x 8.7 x 24.3"
54.1 x 22.1 x 61.7 cm

WhisperCool

15-Liter: -30°C

Temperature Range:
-30° to +200°C

Working Access (L x W x D):
8.35 x 10.88 x 5.5"
21.2 x 27.6 x 14 cm

Overall Dimensions (L x W x H):
22.4 x 14.5 x 26.9"
56.9 x 36.8 x 68.3 cm

WhisperCool

15-Liter: -40°C

Temperature Range:
-40° to +200°C

Working Access (L x W x D):
8.35 x 10.88 x 5.5"
21.2 x 27.6 x 14 cm

Overall Dimensions (L x W x H):
22.4 x 14.5 x 26.9"
56.9 x 36.8 x 68.3 cm

WhisperCool

20-Liter: -30°C

Temperature Range:
-30° to +200°C

Working Access (L x W x D):
9.85 x 12.45 x 5.5"
25 x 31.6 x 14 cm

Overall Dimensions (L x W x H):
24 x 16.6 x 26.9"
61 x 41.9 x 68.3 cm

WhisperCool

28-Liter: -30°C

Temperature Range:
-30° to +200°C

Working Access (L x W x D):
12.35 x 14.13 x 5.5"
31.4 x 35.9 x 14 cm

Overall Dimensions (L x W x H):
26.5 x 18.0 x 26.9"
67.2 x 45.7 x 68.3 cm

WhisperCool

45-Liter: -25°C

Temperature Range:
-25° to +135°C

Working Access (L x W x D):
21.6 x 15.68 x 5.5"
54.9 x 39.8 x 14 cm

Overall Dimensions (L x W x H):
35.8 x 22.4 x 42.1"
90.9 x 56.8 x 107 cm

WhisperCool

Reservoir Size	7 Liter Low-Profile	7 Liter		15 Liter		20 Liter	28 Liter	45 Liter[1]
Temperature Range	-20° to +200°C	-20° to +200°C	-40° to +200°C	-30° to +200°C	-40° to +200°C	-30° to +200°C	-30° to +200°C	-25° to +135°C
Cooling Capacity @ 20°C	200 W	200 W	505 W	915 W	1000 W	915 W	915 W	1400 W
Heater	1100 W (60 Hz)/2200 W (50 Hz)							2200 W (50/60 Hz)
Part Number 120 VAC/60 Hz	PP7LR-20-A11B	PP07R-20-A11B	PP07R-40-A11B	PP15R-30-A11B	PP15R-40-A11B	PP20R-30-A11B	PP28R-30-A11B	PP45R-20-A13D
Part Number 240 VAC/50 Hz	PP7LR-20-A12E	PP07R-20-A12E	PP07R-40-A12E	PP15R-30-A12E	PP15R-40-A12E	PP20R-30-A12E	PP28R-30-A12E	PP45R-20-A12E

1. 45 liter bath is 208-240 VAC, 50/60 Hz
Electrical plugs for the part numbers listed are standard U.S. and European types. See page 128 for additional plug types and part numbers.

Advanced Programmable
Temperature Controller

Key Specifications

Working Temperature: From -40°C to +200°C

Temperature Stability: ±0.01°C

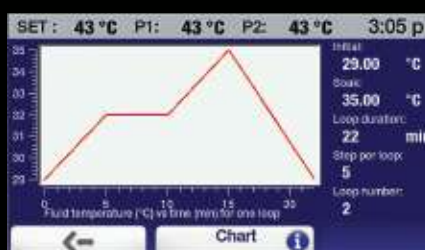| Maximum Pressure:	psi (bar)
120 VAC/60 Hz Models	4.3 (0.3)
240 VAC/50 Hz Models	3.6 (0.25)

Maximum Flow Rate:	Pressure	Suction
	gpm (l/min)	gpm (l/min)
120 VAC/60 Hz Models	5.3 (20.1)	3.9 (14.7)
240 VAC/50 Hz Models	4.4 (16.7)	3.2 (12.2)

Features:

- Time/temperature programming (ten 100-step programs)
- Intuitive 4.3" (10.9 cm) SmartTouch display
- 6 languages: French, German, Spanish, Chinese, Arabic, English
- Variable-speed pressure/suction pump with external circulation and temperature control capability
- Swivel 180™, LidDock™, DuraTop™, WhisperCool™, Cool Command™
- On-board connectivity: USB-A & B, RS232/485, Ethernet and external temperature probe

- Event scheduling (time & date), real-time clock and temperature trends for up to 10 days
- Selectable "home" screens and on-screen help
- Automatic and/or user-adjustable performance optimization
- 5-point calibration capability
- Complies with DIN 12876-1 Class III safety requirements for use with flammable liquids

Special features, such as the ability to select time or temperature as the priority and preview the resulting temperature profile, eliminate the guesswork when creating time/temperature programs.

Extensive communication capability enables you to easily check circulator status.

7-Liter: -20°C, Low-Profile

Temperature Range:
-20° to +200°C

Working Access (L x W x D):
6.18 x 5.59 x 5"
15.7 x 14.2 x 12.7 cm

Overall Dimensions (L x W x H):
23.2 x 16.2 x 16.2"
58.9 x 41.1 x 41.1 cm

7-Liter: -20°C

Temperature Range:
-20° to +200°C

Working Access (L x W x D):
6.18 x 5.59 x 5"
15.7 x 14.2 x 12.7 cm

Overall Dimensions (L x W x H):
21.3 x 8.7 x 24.3"
54.1 x 22.1 x 61.7 cm

7-Liter: -40°C

Temperature Range:
-40° to +200°C

Working Access (L x W x D):
6.18 x 5.59 x 5"
15.7 x 14.2 x 12.7 cm

Overall Dimensions (L x W x H):
21.3 x 8.7 x 24.3"
54.1 x 22.1 x 61.7 cm

WhisperCool™

15-Liter: -30°C

Temperature Range:
-30° to +200°C

Working Access (L x W x D):
8.35 x 10.88 x 5.5"
21.2 x 27.6 x 14 cm

Overall Dimensions (L x W x H):
22.4 x 14.5 x 26.9"
56.9 x 36.8 x 68.3 cm

WhisperCool™

15-Liter: -40°C

Temperature Range:
-40° to +200°C

Working Access (L x W x D):
8.35 x 10.88 x 5.5"
21.2 x 27.6 x 14 cm

Overall Dimensions (L x W x H):
22.4 x 14.5 x 26.9"
56.9 x 36.8 x 68.3 cm

WhisperCool™

20-Liter: -30°C

Temperature Range:
-30° to +200°C

Working Access (L x W x D):
9.85 x 12.45 x 5.5"
25 x 31.6 x 14 cm

Overall Dimensions (L x W x H):
24 x 16.6 x 26.9"
61 x 41.9 x 68.3 cm

WhisperCool™

28-Liter: -30°C

Temperature Range:
-30° to +200°C

Working Access (L x W x D):
12.35 x 14.13 x 5.5"
31.4 x 35.9 x 14 cm

Overall Dimensions (L x W x H):
26.5 x 18 x 26.9"
67.2 x 45.7 x 68.3 cm

WhisperCool™

45-Liter: -25°C

Temperature Range:
-25° to +135°C

Working Access (L x W x D):
21.6 x 15.68 x 5.5"
54.9 x 39.8 x 14 cm

Overall Dimensions (L x W x H):
35.8 x 22.4 x 42.1"
90.9 x 56.8 x 107 cm

WhisperCool™

Reservoir Size	7 Liter Low-Profile	7 Liter		15 Liter		20 Liter	28 Liter	45 Liter[1]
Temperature Range	-20° to +200°C	-20° to +200°C	-40° to +200°C	-30° to +200°C	-40° to +200°C	-30° to +200°C	-30° to +200°C	-25° to +135°C
Cooling Capacity @ 20°C	200 W	200 W	505 W	915 W	1000 W	915 W	915 W	1400 W
Heater	1100 W (60 Hz)/2200 W (50 Hz)							2200 W (50/60 Hz)
Part Number 120 VAC/60 Hz	AP7LR-20-A11B	AP07R-20-A11B	AP07R-40-A11B	AP15R-30-A11B	AP15R-40-A11B	AP20R-30-A11B	AP28R-30-A11B	AP45R-20-A13D
Part Number 240 VAC/50 Hz	AP7LR-20-A12E	AP07R-20-A12E	AP07R-40-A12E	AP15R-30-A12E	AP15R-40-A12E	AP20R-30-A12E	AP28R-30-A12E	AP45R-20-A12E

1. 45 liter bath is 208-240 VAC, 50/60 Hz
Electrical plugs for the part numbers listed are standard U.S. and European types. See page 128 for additional plug types and part numbers.

Performance Digital Temperature Controller

Key Specifications

Working Temperature:	From -40°C to +200°C
Temperature Stability:	±0.005°C

Maximum Pressure:	psi (bar)
120 VAC/60 Hz Models	4.3 (0.3)
240 VAC/50 Hz Models	3.6 (0.25)

Maximum Flow Rate:	Pressure	Suction
	gpm (l/min)	gpm (l/min)
120 VAC/60 Hz Models	5.3 (20.1)	3.9 (14.7)
240 VAC/50 Hz Models	4.4 (16.7)	3.2 (12.2)

Features:

- Intuitive 4.3" (10.9 cm) SmartTouch display
- 11 languages: French, German, Spanish, Chinese, Portuguese, Russian, Hindi, Arabic, Italian, Korean, English
- Variable-speed pressure/suction pump with external circulation and temperature control capability
- Swivel 180™, LidDock™, DuraTop™, WhisperCool™, Cool Command™
- On-board connectivity: USB-A & B, Ethernet, RS232/485, remote on/off and external temperature probe
- Event scheduling (time & date) with real-time clock and temperature trends for up to 10 days

- Multiple, selectable "home" screens and on-screen help
- Automatic and/or user-adjustable performance optimization and 10-point calibration capability
- Complies with DIN 12876-1 Class III safety requirements for use with flammable liquids
- Includes Enhanced Performance Hardware & Software Package
- Available with DeviceNet™/CANbus, Modbus®, and Profibus® options

Highly intuitive touch screen interface makes setup and operation simple and straightforward.

Just a touch of your finger is all it takes to access on-board support – in any of 11 different languages.

7-Liter: -20°C, Low-Profile

Temperature Range:
-20° to +200°C

Working Access (L x W x D):
6.18 x 5.59 x 5"
15.7 x 14.2 x 12.7 cm

Overall Dimensions (L x W x H):
23.2 x 16.2 x 16.2"
58.9 x 41.1 x 41.1 cm

7-Liter: -20°C

Temperature Range:
-20° to +200°C

Working Access (L x W x D):
6.18 x 5.59 x 5"
15.7 x 14.2 x 12.7 cm

Overall Dimensions (L x W x H):
21.3 x 8.7 x 24.3"
54.1 x 22.1 x 61.7 cm

7-Liter: -40°C

Temperature Range:
-40° to +200°C

Working Access (L x W x D):
6.18 x 5.59 x 5"
15.7 x 14.2 x 12.7 cm

Overall Dimensions (L x W x H):
21.3 x 8.7 x 24.3"
54.1 x 22.1 x 61.7 cm

WhisperCool™

15-Liter: -30°C

Temperature Range:
-30° to +200°C

Working Access (L x W x D):
8.35 x 10.88 x 5.5"
21.2 x 27.6 x 14 cm

Overall Dimensions (L x W x H):
22.4 x 14.5 x 26.9"
56.9 x 36.8 x 68.3 cm

WhisperCool™

15-Liter: -40°C

Temperature Range:
-40° to +200°C

Working Access (L x W x D):
8.35 x 10.88 x 5.5"
21.2 x 27.6 x 14 cm

Overall Dimensions (L x W x H):
22.4 x 14.5 x 26.9"
56.9 x 36.8 x 68.3 cm

WhisperCool™

20-Liter: -30°C

Temperature Range:
-30° to +200°C

Working Access (L x W x D):
9.85 x 12.45 x 5.5"
25 x 31.6 x 14 cm

Overall Dimensions (L x W x H):
24 x 16.6 x 26.9"
61 x 41.9 x 68.3 cm

WhisperCool™

28-Liter: -30°C

Temperature Range:
-30° to +200°C

Working Access (L x W x D):
12.35 x 14.13 x 5.5"
31.4 x 35.9 x 14 cm

Overall Dimensions (L x W x H):
26.5 x 18 x 26.9"
67.2 x 45.7 x 68.3 cm

WhisperCool™

45-Liter: -25°C

Temperature Range:
-25° to +135°C

Working Access (L x W x D):
21.6 x 15.68 x 5.5"
54.9 x 39.8 x 14 cm

Overall Dimensions (L x W x H):
35.8 x 22.4 x 42.1"
90.9 x 56.8 x 107 cm

WhisperCool™

Reservoir Size	7 Liter Low-Profile	7 Liter		15 Liter		20 Liter	28 Liter	45 Liter[1]
Temperature Range	-20° to +200°C	-20° to +200°C	-40° to +200°C	-30° to +200°C	-40° to +200°C	-30° to +200°C	-30° to +200°C	-25° to +135°C
Cooling Capacity @ 20°C	200 W	200 W	505 W	915 W	1000 W	915 W	915 W	1400 W
Heater	1100 W (60 Hz)/2200 W (50 Hz)							2200 W (50/60 Hz)
Part Number 120 VAC/60 Hz	PD7LR-20-A11B	PD07R-20-A11B	PD07R-40-A11B	PD15R-30-A11B	PD15R-40-A11B	PD20R-30-A11B	PD28R-30-A11B	PD45R-20-A13D
Part Number 240 VAC/50 Hz	PD7LR-20-A12E	PD07R-20-A12E	PD07R-40-A12E	PD15R-30-A12E	PD15R-40-A12E	PD20R-30-A12E	PD28R-30-A12E	PD45R-20-A12E

1. 45 liter bath is 208-240 VAC, 50/60 Hz
Electrical plugs for the part numbers listed are standard U.S. and European types. See page 128 for additional plug types and part numbers.

Advanced Digital
Temperature Controller

Key Specifications

Working Temperature:	From -40°C to +200°C
Temperature Stability:	±0.01°C

Maximum Pressure: psi (bar)

120 VAC/60 Hz Models	4.3 (0.3)
240 VAC/50 Hz Models	3.6 (0.25)

Maximum Flow Rate:	Pressure	Suction
	gpm (l/min)	gpm (l/min)
120 VAC/60 Hz Models	5.3 (20.1)	3.9 (14.7)
240 VAC/50 Hz Models	4.4 (16.7)	3.2 (12.2)

Features:

- Intuitive 3.75" (9.5 cm) display with touch-pad control
- 4 languages: French, German, Spanish, English
- Variable-speed pressure/suction pump with external circulation and temperature control capability
- Swivel 180™, LidDock™, DuraTop™, WhisperCool™, Cool Command™
- On-board connectivity: USB-A & B, RS232/485, Ethernet and external temperature probe
- Automatic and/or user-adjustable performance optimization

- Single-point calibration
- Complies with DIN 12876-1 Class III safety requirements for use with flammable liquids

Alpha-numeric message bar guides you through setup and provides important operational information.

For further optimization of temperature control, you can easily input the specific heat capacity value for the heat transfer fluid that you're using.

| | 7-Liter: -20°C, Low-Profile | 7-Liter: -20°C | 7-Liter: -40°C | 15-Liter: -30°C |

7-Liter: -20°C, Low-Profile

Temperature Range:
-20° to +200°C

Working Access (L x W x D):
6.18 x 5.59 x 5"
15.7 x 14.2 x 12.7 cm

Overall Dimensions (L x W x H):
23.2 x 16.2 x 16.2"
58.9 x 41.1 x 41.1 cm

7-Liter: -20°C

Temperature Range:
-20° to +200°C

Working Access (L x W xD):
6.18 x 5.59 x 5"
15.7 x 14.2 x 12.7 cm

Overall Dimensions (L x W x H):
21.3 x 8.7 x 24.3"
54.1 x 22.1 x 61.7 cm

7-Liter: -40°C

Temperature Range:
-40° to +200°C

Working Access (L x W x D):
6.18 x 5.59 x 5"
15.7 x 14.2 x 12.7 cm

Overall Dimensions (L x W x H):
21.3 x 8.7 x 24.3"
54.1 x 22.1 x 61.7 cm

WhisperCool™

15-Liter: -30°C

Temperature Range:
-30° to +200°C

Working Access (L x W x D):
8.35 x 10.88 x 5.5"
21.2 x 27.6 x 14 cm

Overall Dimensions (L x W x H):
22.4 x 14.5 x 26.9"
56.9 x 36.8 x 68.3 cm

WhisperCool™

15-Liter: -40°C

Temperature Range:
-40° to +200°C

Working Access (L x W x D):
8.35 x 10.88 x 5.5"
21.2 x 27.6 x 14 cm

Overall Dimensions (L x W x H):
22.4 x 14.5 x 26.9"
56.9 x 36.8 x 68.3 cm

WhisperCool™

20-Liter: -30°C

Temperature Range:
-30° to +200°C

Working Access (L x W x D):
9.85 x 12.45 x 5.5"
25 x 31.6 x 14 cm

Overall Dimensions (L x W x H):
24 x 16.6 x 26.9"
61 x 41.9 x 68.3 cm

WhisperCool™

28-Liter: -30°C

Temperature Range:
-30° to +200°C

Working Access (L x W x D):
12.35 x 14.13 x 5.5"
31.4 x 35.9 x 14 cm

Overall Dimensions (L x W x H):
26.5 x 18 x 26.9"
67.2 x 45.7 x 68.3 cm

WhisperCool™

45-Liter: -25°C

Temperature Range:
-25° to +135°C

Working Access (L x W x D):
21.6 x 15.68 x 5.5"
54.9 x 39.8 x 14 cm

Overall Dimensions (L x W x H):
35.8 x 22.4 x 42.1"
90.9 x 56.8 x 107 cm

WhisperCool™

Reservoir Size	7 Liter Low-Profile	7 Liter		15 Liter		20 Liter	28 Liter	45 Liter[1]
Temperature Range	-20° to +200°C	-20° to +200°C	-40° to +200°C	-30° to +200°C	-40° to +200°C	-30° to +200°C	-30° to +200°C	-25° to +135°C
Cooling Capacity @ 20°C	200 W	200 W	505 W	915 W	1000 W	915 W	915 W	1400 W
Heater	1100 W (60 Hz)/2200 W (50 Hz)							2200 W (50/60 Hz)
Part Number 120 VAC/60 Hz	AD7LR-20-A11B	AD07R-20-A11B	AD07R-40-A11B	AD15R-30-A11B	AD15R-40-A11B	AD20R-30-A11B	AD28R-30-A11B	AD45R-20-A13D
Part Number 240 VAC/50 Hz	AD7LR-20-A12E	AD07R-20-A12E	AD07R-40-A12E	AD15R-30-A12E	AD15R-40-A12E	AD20R-30-A12E	AD28R-30-A12E	AD45R-20-A12E

1. 45 liter bath is 208-240 VAC, 50/60 Hz
Electrical plugs for the part numbers listed are standard U.S. and European types. See page 128 for additional plug types and part numbers.

Standard Digital Temperature Controller

Key Specifications

Working Temperature: From -30° to +170°C

Temperature Stability: ±0.04°C

Maximum Pressure:	psi (bar)
120 VAC/60 Hz Models	3.5 (0.24)
240 VAC/50 Hz Models	2.9 (0.2)

Maximum Flow Rate:	Pressure
	gpm (l/min)
120 VAC/60 Hz Models	2.9 (11.0)
240 VAC/50 Hz Models	2.7 (10.2)

Features:

- Intuitive 3.75" (9.5 cm) display with touch-pad control
- 2-speed pressure pump with external (closed-loop) circulation capability
- Swivel 180™, LidDock™, DuraTop™, WhisperCool™, Cool Command™
- On-board connectivity: RS232
- Automatic performance optimization
- Single-point calibration
- Complies with DIN 12876-1 Class I safety requirements for use with non-flammable liquids

Highly intuitive operator interface makes changing set-point and other operating parameters quick and simple.

Easy-to-use calibration function allows you to adjust the temperature display to match that of a traceable temperature standard.

7-Liter: -20°C, Low-Profile

Temperature Range: -
-20° to +170°C

Working Access (L x W x D):
6.18 x 5.59 x 5"
15.7 x 14.2 x 12.7 cm

Overall Dimensions (L x W x H):
23.2 x 16.2 x 16.2"
58.9 x 41.1 x 41.1 cm

7-Liter: -20°C

Temperature Range:
-20° to +170°C

Working Access (L x W x D):
6.18 x 5.59 x 5"
15.7 x 14.2 x 12.7 cm

Overall Dimensions (L x W x H):
21.3 x 8.7 x 24.3"
54.1 x 22.1 x 61.7 cm

15-Liter: -30°C

Temperature Range:
-30° to +170°C

Working Access (L x W x D):
8.35 x 10.88 x 5.5"
21.2 x 27.6 x 14 cm

Overall Dimensions (L x W x H):
22.4 x 14.5 x 26.9"
56.9 x 36.8 x 68.3 cm

20-Liter: -30°C

Temperature Range:
-30° to +170°C

Working Access (L x W x D):
9.85 x 12.45 x 5.5"
25 x 31.6 x 14 cm

Overall Dimensions (L x W x H):
24 x 16.6 x 26.9"
61 x 41.9 x 68.3 cm

28-Liter: -30°C

Temperature Range:
-30° to +170°C

Working Access (L x W x D):
12.35 x 14.13 x 5.5"
31.4 x 35.9 x 14 cm

Overall Dimensions (L x W x H):
26.5 x 18 x 26.9"
67.2 x 45.7 x 68.3 cm

Reservoir Size	7 Liter Low-Profile	7 Liter	15 Liter	20 Liter	28 Liter
Temperature Range	-20° to +170°C	-20° to +170°C	-30° to +170°C	-30° to +170°C	-30° to +170°C
Cooling Capacity @ 20°C	200 W		915 W		
Heater	1100 W (60 Hz)/2200 W (50 Hz)				
Part Number 120 VAC/60 Hz	SD7LR-20-A11B	SD07R-20-A11B	SD15R-30-A11B	SD20R-30-A11B	SD28R-30-A11B
Part Number 240 VAC/50 Hz	SD7LR-20-A12E	SD07R-20-A12E	SD15R-30-A12E	SD20R-30-A12E	SD28R-30-A12E

Electrical plugs for the part numbers listed are standard U.S. and European types. See page 128 for additional plug types and part numbers.

MX Temperature Controller

Key Specifications

Working Temperature: From -30° to +135°C

Temperature Stability: ±0.07°C

Maximum Pressure:	psi (bar)
120 VAC/60 Hz Models	1.8 (0.12)
240 VAC/50 Hz Models	1.5 (0.10)

Maximum Flow Rate:	Pressure
	gpm (l/min)
120 VAC/60 Hz Models	3.4 (12.8)
240 VAC/50 Hz Models	2.8 (10.6)

Features:

· Large, 3.25" (8.3 cm) universal icon and English display

· Single-speed pressure pump with external (closed-loop) circulation capability

· LidDock™, DuraTop™, WhisperCool™, Cool Command™

· User-adjustable high and low temperature limits and alarms

· Single-point calibration

· Complies with DIN 12876-1 Class I safety requirements for use with non-flammable liquids

Visual alarms alert you when bath temperature falls outside your pre-set limits.

Single-speed pressure pump provides external closed-loop circulation capability.

For additional information on the MX Controller's features and capabilities, see pages 26 and 27.

| 7-Liter: -20°C, Low-Profile | 7-Liter: -20°C | 15-Liter: -30°C | 20-Liter: -30°C |

7-Liter: -20°C, Low-Profile

Temperature Range:
-20° to +135°C

Working Access (L x W x D):
6.18 x 5.59 x 5"
15.7 x 14.2 x 12.7 cm

Overall Dimensions (L x W x H):
23.2 x 16.2 x 17.3"
58.9 x 41.1 x 43.9 cm

7-Liter: -20°C

Temperature Range:
-20° to +135°C

Working Access (L x W x D):
6.18 x 5.59 x 5"
15.7 x 14.2 x 12.7 cm

Overall Dimensions (L x W x H):
21.3 x 8.7 x 25.4"
54.1 x 22.1 x 64.5 cm

15-Liter: -30°C

Temperature Range:
-30° to +135°C

Working Access (L x W x D):
8.35 x 10.88 x 5.5"
21.2 x 27.6 x 14 cm

Overall Dimensions (L x W x H):
22.4 x 14.5 x 28"
56.9 x 36.8 x 71.1 cm

WhisperCool™

20-Liter: -30°C

Temperature Range:
-30° to +135°C

Working Access (L x W x D):
9.85 x 12.45 x 5.5"
25 x 31.6 x 14 cm

Overall Dimensions (L x W x H):
24 x 16.5 x 28"
61 x 41.9 x 71.1 cm

WhisperCool™

Reservoir Size	7 Liter Low-Profile	7 Liter	15 Liter	20 Liter
Temperature Range	-20° to 135°C	-20° to 135°C	-30° to 135°C	-30° to 135°C
Cooling Capacity @ 20°C	200 W		915 W	
Heater	1100 W			
Part Number 120 VAC/60 Hz	MX7LR-20-A11B	MX07R-20-A11B	MX15R-30-A11B	MX20R-30-A11B
Part Number 240 VAC/50 Hz	MX7LR-20-A12E	MX07R-20-A12E	MX15R-30-A12E	MX20R-30-A12E

Electrical plugs for the part numbers listed are standard U.S. and European types.