



## Features:

- **Intuitive**

Whether equipped with the entry-level MX Controller or the most sophisticated Performance Programmable, our Heated Circulating Baths are extremely easy to use. Crisp menu architecture, screen icons, and plain-text prompts make it easy to navigate through operational settings and options.

- **Convenient**

LidDock™ helps keep moisture where it belongs – in the bath. And accessing the reservoir drain is as simple as removing the Circulator's front panel.

- **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.

- **Precise**

Exceptionally exacting temperature control, combined with a tap-water cooling-coil, allow you to maintain bath temperatures at or near ambient with stabilities as precise as  $\pm 0.005^{\circ}\text{C}$ .

- **Versatile**

A variety of communication and control options, including Ethernet, USB data logging and computer control, bi-directional serial communication, and external circulation with remote temperature control, enhance functionality and applications flexibility.

# Heated Circulating Baths Selection Guide



| Fully Integrated Heated Circulating Baths |                                           |                                            |                                          |                                             |                                | Open Bath Systems                   |                                         |
|-------------------------------------------|-------------------------------------------|--------------------------------------------|------------------------------------------|---------------------------------------------|--------------------------------|-------------------------------------|-----------------------------------------|
| Capacity                                  | 7 Liter                                   | 15 Liter                                   | 20 Liter                                 | 28 Liter                                    |                                | 6 Liter                             | 10 Liter                                |
| Maximum Temperature <sup>1</sup>          | 200°C                                     | 200°C                                      | 200°C                                    | 200°C                                       |                                | 150°C                               | 150°C                                   |
| Minimum Temperature <sup>2</sup>          | Ambient +10°C                             | Ambient +10°C                              | Ambient +10°C                            | Ambient +10°C                               |                                | Ambient +10°C                       | Ambient +10°C                           |
| Working Access<br>(L x W x D)             | 6.18 x 5.59 x 5"<br>15.7 x 14.2 x 12.7 cm | 8.35 x 10.88 x 5.5"<br>21.2 x 27.6 x 14 cm | 9.85 x 12.45 x 5.5"<br>25 x 31.6 x 14 cm | 12.35 x 14.13 x 5.5"<br>31.4 x 35.9 x 14 cm |                                | 3.9 x 4.3 x 6"<br>10 x 11 x 15.2 cm | 3.9 x 10.1 x 6"<br>9.9 x 25.5 x 15.2 cm |
| Tank Material                             | Insulated<br>Stainless Steel              | Insulated<br>Stainless Steel               | Insulated<br>Stainless Steel             | Insulated<br>Stainless Steel                |                                | Stainless Steel                     | Stainless Steel                         |
| Drain                                     | •                                         | •                                          | •                                        | •                                           |                                |                                     |                                         |
| Tap Water Cooling-Coil                    | •                                         | •                                          | •                                        | •                                           |                                |                                     |                                         |
| LidDock™                                  | •                                         | •                                          | •                                        | •                                           |                                |                                     |                                         |
| Catalog Number                            | Performance Programmable                  | 120 VAC/60 Hz<br>240 VAC/50 Hz             | PP07H200-A11B<br>PP07H200-A12E           | PP15H200-A11B<br>PP15H200-A12E              | PP20H200-A11B<br>PP20H200-A12E | PP28H200-A11B<br>PP28H200-A12E      |                                         |
|                                           | Advanced Programmable                     | 120 VAC/60 Hz<br>240 VAC/50 Hz             | AP07H200-A11B<br>AP07H200-A12E           | AP15H200-A11B<br>AP15H200-A12E              | AP20H200-A11B<br>AP20H200-A12E | AP28H200-A11B<br>AP28H200-A12E      | AP06S150-A11B<br>AP06S150-A12E          |
|                                           | Performance Digital                       | 120 VAC/60 Hz<br>240 VAC/50 Hz             | PD07H200-A11B<br>PD07H200-A12E           | PD15H200-A11B<br>PD15H200-A12E              | PD20H200-A11B<br>PD20H200-A12E | PD28H200-A11B<br>PD28H200-A12E      |                                         |
|                                           | Advanced Digital                          | 120 VAC/60 Hz<br>240 VAC/50 Hz             | AD07H200-A11B<br>AD07H200-A12E           | AD15H200-A11B<br>AD15H200-A12E              | AD20H200-A11B<br>AD20H200-A12E | AD28H200-A11B<br>AD28H200-A12E      | AD06S150-A11B<br>AD06S150-A12E          |
|                                           | Standard Digital                          | 120 VAC/60 Hz<br>240 VAC/50 Hz             | SD07H170-A11B<br>SD07H170-A12E           | SD15H170-A11B<br>SD15H170-A12E              | SD20H170-A11B<br>SD20H170-A12E | SD28H170-A11B<br>SD28H170-A12E      |                                         |
|                                           | MX                                        | 120 VAC/60 Hz<br>240 VAC/50 Hz             | MX07H135-A11B<br>MX07H135-A12E           | MX15H135-A11B<br>MX15H135-A12E              | MX20H135-A11B<br>MX20H135-A12E |                                     | MX06S135-A11B<br>MX06S135-A12E          |
|                                           |                                           |                                            |                                          |                                             |                                |                                     | MX10S150-A11B<br>MX10S150-A12E          |
|                                           |                                           |                                            |                                          |                                             |                                |                                     |                                         |
|                                           |                                           |                                            |                                          |                                             |                                |                                     |                                         |
|                                           |                                           |                                            |                                          |                                             |                                |                                     |                                         |

1. Maximum temperature is controller dependent for integrated systems (see Controller Selection Guide, pages 28 and 29); maximum temperature is dependent on tank material for Open Bath Systems with stainless steel or polycarbonate tanks. Immersion Circulator's maximum temperature is dependent on fluid volume.

2. Minimum temperature is shown with no external heat load.

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



| Open Bath Systems              |                                |                                |                                |                                |                                |                                |                                | Immersion Circulator |
|--------------------------------|--------------------------------|--------------------------------|--------------------------------|--------------------------------|--------------------------------|--------------------------------|--------------------------------|----------------------|
| 20 Liter                       | 28 Liter                       | 8 Liter                        | 11 Liter                       | 14 Liter                       | 17 Liter                       | 23 Liter                       | 28 Liter                       | Up to 28 Liters      |
| 150°C                          | 150°C                          | 85°C                           | 85°C                           | 85°C                           | 85°C                           | 85°C                           | 85°C                           | 135°C                |
| Ambient +10°C                  | Ambient +10°C                  | Ambient +10°C                  | Ambient +10°C                  | Ambient +10°C                  | Ambient +10°C                  | Ambient +10°C                  | Ambient +10°C                  | Ambient +10°C        |
| 10.4 x 9 x 6"                  | 10.1 x 8.4 x 8"                | 4.1 x 6.1 x 8"                 | 8.3 x 6.1 x 8"                 | 12.4 x 6.1 x 8"                | 4.1 x 12 x 8"                  | 8.3 x 12 x 8"                  | 12.4 x 12 x 8"                 | N/A                  |
| 26.4 x 22.8 x 15.2 cm          | 25.7 x 21.4 x 20.3 cm          | 10.5 x 15.6 x 20.3 cm          | 21 x 15.6 x 20.3 cm            | 31.4 x 15.6 x 20.3 cm          | 10.5 x 30.5 x 20.3 cm          | 21 x 30.5 x 20.3 cm            | 31.5 x 30.5 x 20.3 cm          | N/A                  |
| Stainless Steel                | Stainless Steel                | Polycarbonate                  | Polycarbonate                  | Polycarbonate                  | Polycarbonate                  | Polycarbonate                  | Polycarbonate                  | N/A                  |
|                                |                                |                                |                                |                                | •                              | •                              | •                              |                      |
|                                |                                |                                |                                |                                |                                |                                |                                |                      |
| AP20S150-A11B<br>AP20S150-A12E | AP28S150-A11B<br>AP28S150-A12E | AP08P100-A11B<br>AP08P100-A12E | AP11P100-A11B<br>AP11P100-A12E | AP14P100-A11B<br>AP14P100-A12E | AP17P100-A11B<br>AP17P100-A12E | AP23P100-A11B<br>AP23P100-A12E | AP28P100-A11B<br>AP28P100-A12E |                      |
| AD20S150-A11B<br>AD20S150-A12E | AD28S150-A11B<br>AD28S150-A12E |                                |                                |                                |                                |                                |                                |                      |
| MX20S135-A11B<br>MX20S135-A12E | MX28S135-A11B<br>MX28S135-A12E | MX08P100-A11B<br>MX08P100-A12E | MX11P100-A11B<br>MX11P100-A12E | MX14P100-A11B<br>MX14P100-A12E | MX17P100-A11B<br>MX17P100-A12E | MX23P100-A11B<br>MX23P100-A12E | MX28P100-A11B<br>MX28P100-A12E | MX-CA11B<br>MX-CA12E |

# Performance Programmable Temperature Controller

## Key Specifications

Working Temperature: Up to 200°C

Temperature Stability:  $\pm 0.005^\circ\text{C}$

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™
- 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
- Available with DeviceNet™/CANbus, Modbus®, and Profibus® options
- Includes Enhanced Performance Hardware & Software Package



Powerful time/temperature programming function simplifies the creation of ramp and soak profiles or special test protocols. Programs can even be scheduled to run automatically at a predetermined time and date.

The Performance Programmable Controller's performance is easily fine-tuned by selecting a specific heat transfer fluid, entering a fluid's specific heat capacity value, or even adjusting PID settings.

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



#### 7-Liter: +200°C

Temperature Range:  
Ambient +10° 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):  
19.6 x 8.7 x 16.1"  
49.9 x 22.1 x 40.9 cm

#### 15-Liter: +200°C

Temperature Range:  
Ambient +10° 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 16.6"  
56.9 x 36.8 x 42.2 cm

#### 20-Liter: +200°C

Temperature Range:  
Ambient +10° 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 16.5 x 16.6"  
61 x 41.9 x 42.2 cm

#### 28-Liter: +200°C

Temperature Range:  
Ambient +10° 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 16.6"  
67.2 x 45.7 x 42.2 cm

| Reservoir Size            | 7 Liter                       | 15 Liter      | 20 Liter      | 28 Liter      |
|---------------------------|-------------------------------|---------------|---------------|---------------|
| Temperature Range         | Ambient +10° to +200°C        |               |               |               |
| Heater                    | 1100 W (60 Hz)/2200 W (50 Hz) |               |               |               |
| Part Number 120 VAC/60 Hz | PP07H200-A11B                 | PP15H200-A11B | PP20H200-A11B | PP28H200-A11B |
| Part Number 240 VAC/50 Hz | PP07H200-A12E                 | PP15H200-A12E | PP20H200-A12E | PP28H200-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.

# Advanced Programmable Temperature Controller

## Key Specifications

Working Temperature: Up to 200°C

Temperature Stability:  $\pm 0.01^\circ\text{C}$

Maximum Pressure: psi (bar)

120 VAC/60 Hz Models 4.3 (0.3)

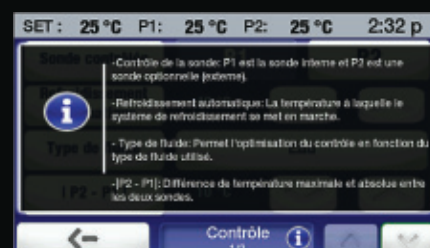
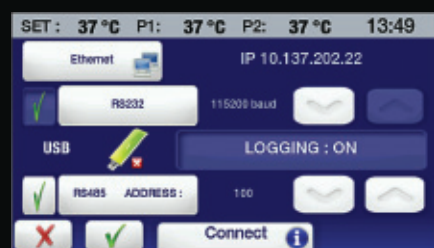
240 VAC/50 Hz Models 3.6 (0.25)

| 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™
- 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



Multiple connectivity options give you a variety of ways to log data and control circulator operation.

All screens and menus, including on-line help, can be displayed in any of six different languages: English, French, German, Spanish, Chinese, or Arabic.

For additional information on the Advanced Programmable Controller's features and capabilities, see pages 18 and 19.



| 7-Liter: +200°C                                                                | 15-Liter: +200°C                                                                | 20-Liter: +200°C                                                            | 28-Liter: +200°C                                                              |
|--------------------------------------------------------------------------------|---------------------------------------------------------------------------------|-----------------------------------------------------------------------------|-------------------------------------------------------------------------------|
| Temperature Range:<br>Ambient +10° to +200°C                                   | Temperature Range:<br>Ambient +10° to +200°C                                    | Temperature Range:<br>Ambient +10° to +200°C                                | Temperature Range:<br>Ambient +10° to +200°C                                  |
| Working Access (L x W x D):<br>6.18 x 5.59 x 5"<br>15.7 x 14.2 x 12.7 cm       | Working Access (L x W x D):<br>8.35 x 10.88 x 5.5"<br>21.2 x 27.6 x 14 cm       | Working Access (L x W x D):<br>9.85 x 12.45 x 5.5"<br>25 x 31.6 x 14 cm     | Working Access (L x W x D):<br>12.35 x 14.13 x 5.5"<br>31.4 x 35.9 x 14 cm    |
| Overall Dimensions (L x W x H):<br>19.6 x 8.7 x 16.1"<br>49.9 x 22.1 x 40.9 cm | Overall Dimensions (L x W x H):<br>22.4 x 14.5 x 16.6"<br>56.9 x 36.8 x 42.2 cm | Overall Dimensions (L x W x H):<br>24 x 16.5 x 16.6"<br>61 x 41.9 x 42.2 cm | Overall Dimensions (L x W x H):<br>26.5 x 18 X 16.6"<br>67.2 x 45.7 x 42.2 cm |

| Reservoir Size            | 7 Liter                       | 15 Liter      | 20 Liter      | 28 Liter      |
|---------------------------|-------------------------------|---------------|---------------|---------------|
| Temperature Range         | Ambient +10° to +200°C        |               |               |               |
| Heater                    | 1100 W (60 Hz)/2200 W (50 Hz) |               |               |               |
| Part Number 120 VAC/60 Hz | AP07H200-A11B                 | AP15H200-A11B | AP20H200-A11B | AP28H200-A11B |
| Part Number 240 VAC/50 Hz | AP07H200-A12E                 | AP15H200-A12E | AP20H200-A12E | AP28H200-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.

# Performance Digital Temperature Controller

## Key Specifications

Working Temperature: Up to 200°C

Temperature Stability:  $\pm 0.005^\circ\text{C}$

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:

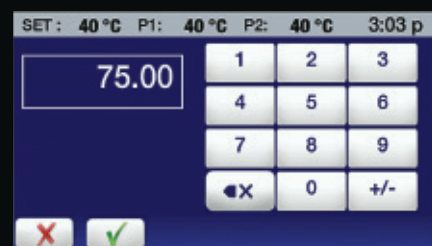
- Intuitive 4.3" (10.9 cm) SmartTouch display
- 11 languages: French, German, Spanish, Chinese, Portuguese, Russian, Hindi, Arabic, Italian, Korean, English
- Variable-speed pressure/suction pump with external circulation and temperature control capability
- Swivel 180™, LidDock™, DuraTop™
- On-board 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



External temperature probe control compensates for heat loss, keeping external devices at the precise temperature required.



Making a temperature set-point change is fast and easy – whether it's a half of degree or a hundred.



For additional information on the Performance Digital Controller's features and capabilities, see pages 20 and 21.



#### 7-Liter: +200°C

Temperature Range:  
Ambient +10° 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):  
19.6 x 8.7 x 16.1"  
49.9 x 22.1 x 40.9 cm

#### 15-Liter: +200°C

Temperature Range:  
Ambient +10° 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 16.6"  
56.9 x 36.8 x 42.2 cm

#### 20-Liter: +200°C

Temperature Range:  
Ambient +10° 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 16.5 x 16.6"  
61 x 41.9 x 42.2 cm

#### 28-Liter: +200°C

Temperature Range:  
Ambient +10° 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 16.6"  
67.2 x 45.7 x 42.2 cm

| Reservoir Size            | 7 Liter                       | 15 Liter      | 20 Liter      | 28 Liter      |
|---------------------------|-------------------------------|---------------|---------------|---------------|
| Temperature Range         | Ambient +10° to +200°C        |               |               |               |
| Heater                    | 1100 W (60 Hz)/2200 W (50 Hz) |               |               |               |
| Part Number 120 VAC/60 Hz | PD07H200-A11B                 | PD15H200-A11B | PD20H200-A11B | PD28H200-A11B |
| Part Number 240 VAC/50 Hz | PD07H200-A12E                 | PD15H200-A12E | PD20H200-A12E | PD28H200-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.

# Advanced Digital Temperature Controller

## Key Specifications

Working Temperature: Up to 200°C

Temperature Stability:  $\pm 0.01^\circ\text{C}$

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™
- 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



On-screen prompts – in English, French, Spanish, or German – guide you through setup and operation.



Class III safety features plus user-settable over-temperature safety and adjustable high and low temperature limits provide exceptional process and equipment protection.

For additional information on the Advanced Digital Controller's features and capabilities, see pages 22 and 23.



#### 7-Liter: +200°C

Temperature Range:  
Ambient +10° 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):  
19.6 x 8.7 x 16.1"  
49.9 x 22.1 x 40.9 cm

#### 15-Liter: +200°C

Temperature Range:  
Ambient +10° 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 16.6"  
56.9 x 36.8 x 42.2 cm

#### 20-Liter: +200°C

Temperature Range:  
Ambient +10° 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 16.5 x 16.6"  
61 x 41.9 x 42.2 cm

#### 28-Liter: +200°C

Temperature Range:  
Ambient +10° 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 16.6"  
67.2 x 45.7 x 42.2 cm

| Reservoir Size            | 7 Liter                       | 15 Liter      | 20 Liter      | 28 Liter      |
|---------------------------|-------------------------------|---------------|---------------|---------------|
| Temperature Range         | Ambient +10° to +200°C        |               |               |               |
| Heater                    | 1100 W (60 Hz)/2200 W (50 Hz) |               |               |               |
| Part Number 120 VAC/60 Hz | AD07H200-A11B                 | AD15H200-A11B | AD20H200-A11B | AD28H200-A11B |
| Part Number 240 VAC/50 Hz | AD07H200-A12E                 | AD15H200-A12E | AD20H200-A12E | AD28H200-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.

# Standard Digital Temperature Controller

## Key Specifications

Working Temperature: Up to 170°C

Temperature Stability:  $\pm 0.04^{\circ}\text{C}$

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™
- 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



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



Highly intuitive operator interface makes changing the temperature set-point or making other operational adjustments simple and straightforward.

For additional information on the Standard Digital Controller's features and capabilities, see pages 24 and 25.



#### 7-Liter: +170°C

Temperature Range:  
Ambient +10° 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):  
19.6 x 8.7 x 16.1"  
49.9 x 22.1 x 40.9 cm

#### 15-Liter: +170°C

Temperature Range:  
Ambient +10° 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 16.6"  
56.9 x 36.8 x 42.2 cm

#### 20-Liter: +170°C

Temperature Range:  
Ambient +10° 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 16.5 x 16.6"  
61 x 41.9 x 42.2 cm

#### 28-Liter: +170°C

Temperature Range:  
Ambient +10° 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 16.6"  
67.2 x 45.7 x 42.2 cm

| Reservoir Size            | 7 Liter                       | 15 Liter      | 20 Liter      | 28 Liter      |
|---------------------------|-------------------------------|---------------|---------------|---------------|
| Temperature Range         | Ambient +10° to +170°C        |               |               |               |
| Heater                    | 1100 W (60 Hz)/2200 W (50 Hz) |               |               |               |
| Part Number 120 VAC/60 Hz | SD07H170-A11B                 | SD15H170-A11B | SD20H170-A11B | SD28H170-A11B |
| Part Number 240 VAC/50 Hz | SD07H170-A12E                 | SD15H170-A12E | SD20H170-A12E | SD28H170-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: Up to 135°C

Temperature Stability:  $\pm 0.07^\circ\text{C}$

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™
- 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.



Easy-to-use calibration function makes it simple to adjust the temperature display to match that of a traceable temperature standard.

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



#### 7-Liter: +135°C

Temperature Range:  
Ambient +10° 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):  
19.6 x 8.7 x 17.2"  
49.9 x 22.1 x 43.7 cm

#### 15-Liter: +135°C

Temperature Range:  
Ambient +10° 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 17.8"  
56.9 x 36.8 x 45.2 cm

#### 20-Liter: +135°C

Temperature Range:  
Ambient +10° 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 17.8"  
61 x 41.9 x 45.2 cm

| Reservoir Size            | 7 Liter                | 15 Liter      | 20 Liter      |
|---------------------------|------------------------|---------------|---------------|
| Temperature Range         | Ambient +10° to +135°C |               |               |
| Heater                    | 1100 W                 |               |               |
| Part Number 120 VAC/60 Hz | MX07H135-A11B          | MX15H135-A11B | MX20H135-A11B |
| Part Number 240 VAC/50 Hz | MX07H135-A12E          | MX15H135-A12E | MX20H135-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.