

7 Liter Refrigerated Circulator, -20°C



AP07R-20

Key Specifications

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| Description | -20, 7 L Ref. Circulator |
| Controller Type | Advanced Programmable |
| Display | 4.3" SmartTouch Touchscreen |
| Connectivity | Ethernet, USB A & B, RS232/addressable RS485, Remote On/Off, External Temperature Probe |
| Languages Supported | 11: French, German, Spanish, Chinese, Portuguese, Russian, Hindi, Arabic, Italian, Korean, English |
| Time/Temperature Programs & Steps | Open Mode: No restriction on the number of programs or steps |
| Swivel 180 Rotating Controller | Yes |
| Working Temperature Range °C | -20° to 200° |
| Temperature Stability °C | ±0.005° |
| Fluid Optimization/Specific Heat Tuning | Automatic and/or user-adjustable |
| Temperature Calibration Capability | 10-point |
| Working Access (L x W x D) (cm) | 15.7 x 14.2 x 12.7 cm |
| Pump Type | Pressure/Suction |
| External Temperature Control Capability | Yes |

Flammability Class (DIN 12876-1) III (FL)

Electrical Plug Options

Part numbers listed are Standard U.S. and European types. [Country specific plug types available.](#) Contact your [regional distributor to order.](#)

Key Features

Advanced Programmable Controller

Key Features

- OpenMode time time/temperature programming (no restrictions 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 pump with open- and closed-loop external circulation capability
- Swivel 180™ Rotating Controller
- On-board connectivity: USB-A & B, Ethernet, RS-232/RS-485, remote on/off and external temperature probe
- Event scheduling (time & date) with real-time clock
- Review temperature trends for up to 10 days
- Multiple selectable "home" screens
- On-screen help
- Automatic and/or user-adjustable performance optimization
- 10-point calibration capability
- Includes Enhanced Performance Hardware & Software Package (Pt100 temperature probe, USB flash drive for data logging, stainless steel fittings and tubing adapters, PolyScience LabVIEW Virtual Instrument, iPhone application download)

Common Specifications

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| Working Temperature Range °F | -4° to 392° |
| Working Temperature Range °C | -20° to 200° |
| Nominal Cooling Capacity @ +20C (W) | 200 |
| Reservoir Capacity (gallons) | 1.85 |
| Reservoir Capacity (liters) | 7 |
| Reservoir/Tank Material | Stainless Steel |
| Reservoir Cover | Included |
| DuraTop | Yes |
| LidDock | Yes |
| Cleanable Air Filter | Yes |
| Working Access (L x W x D) (inches) | 6.18 x 5.59 x 5 in |
| Working Access (L x W x D) (cm) | 15.7 x 14.2 x 12.7 cm |

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| Temperature Stability °F | ±0.02° |
| Temperature Stability °C | ±0.005° |
| Display | 4.3" SmartTouch Touchscreen |
| Display Resolution (Set) | 0.01 |
| Display Resolution (Read) | 0.001 |
| Pump Type | Pressure/Suction |
| Pump Speed | Variable |
| Process Connections | 1/4" (F) NPT |
| External Temperature Control Capability | Yes |
| Flammability Class (DIN 12876-1) | III (FL) |
| Over-Temperature Protection / Failsafe Heater Control | Yes |
| Low Liquid Level Protection | Yes |
| Reservoir Drain | Yes |
| Included Software | PolyTemp Viewer, TDMS file viewer, USB driver, Time/Temperature Program Generator, PolyTemp Remote iPhone application |
| Maximum Ambient Temperature °F | 95° |
| Maximum Ambient Temperature °C | 35° |
| Overall Dimensions (L x W x H) (inches) | 21.3 x 8.7 x 24.3 in |
| Overall Dimensions (L x W x H) (cm) | 54.1 x 22.1 x 61.7 cm |
| Refrigerant | R134a |
| Environmental Compliance | RoHS, WEEE |
| Shipping Weight (pounds) | 90.0 |
| Shipping Weight (kilograms) | 40.8 |
| Catalog Page Number | 36-37 |

60 Hz Only

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|---|---------------|
| Part Number | AP07R-20-A11B |
| Maximum Pressure (psi) | 4.3 |
| Maximum Pressure (bar) | 0.30 |
| Maximum Pressure Flow Rate (gpm) | 5.30 |
| Maximum Pressure Flow Rate (l/min) | 20.1 |
| Maximum Suction Flow Rate (gpm) | 3.9 |
| Maximum Suction Flow Rate (l/min) | 14.7 |
| Cooling Capacity @ -20°C (W) | 30 |
| Cooling Capacity @ 0°C (W) | 120 |
| Cooling Capacity @ +20°C (W) | 200 |

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|--|---|
| Cooling Capacity @ +100°C (W) | 200 |
| Included Hardware | Nylon hose adapters for 3/8", 1/4", and 3/16" |
| Heater Wattage | 1100 |
| Electrical Requirements (VAC/Hz/Ph/A) | 120/60/1/12 |
| Regulatory Approvals | ETL |

50 Hz Only

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| Part Number | AP07R-20-A12E |
| Maximum Pressure (psi) | 3.6 |
| Maximum Pressure (bar) | 0.25 |
| Maximum Pressure Flow Rate (gpm) | 4.40 |
| Maximum Pressure Flow Rate (l/min) | 16.7 |
| Maximum Suction Flow Rate (gpm) | 3.2 |
| Maximum Suction Flow Rate (l/min) | 12.2 |
| Cooling Capacity @ -20°C (W) | 30 |
| Cooling Capacity @ 0°C (W) | 120 |
| Cooling Capacity @ +20°C (W) | 200 |
| Cooling Capacity @ +100°C (W) | 200 |
| Included Hardware | Nylon hose adapters for 3/8", 1/4", and 3/16", and 1/4" NPT to M16 adapter |
| Heater Wattage | 2200 |
| Electrical Requirements (VAC/Hz/Ph/A) | 240/50/1/12 |
| Regulatory Approvals | CE |



© 2015-2020 **PolyScience** 6600 W. Touhy Avenue, Niles, Illinois 60714-4516 USA

Phone: +1(847) 647-0611 or +1(800) 229-7569 **Fax:** +1(847) 647-1155

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