

7 Liter Refrigerated Circulator, -20°C



AD07R-20

Key Specifications

Description	-20, 7 L Ref. Circulator
Controller Type	Advanced Digital
Display	4.3" SmartTouch Touchscreen
Connectivity	Ethernet, USB A & B, RS232/addressable RS485, External Temperature Probe
Languages Supported	11: French, German, Spanish, Chinese, Portuguese, Russian, Hindi, Arabic, Italian, Korean, English
Swivel 180 Rotating Controller	Yes
Working Temperature Range °C	-20° to 200°
Temperature Stability °C	±0.01°
Fluid Optimization/Specific Heat Tuning	Automatic and/or user-adjustable
Temperature Calibration Capability	1-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 Digital Controller

Key Features

- Intuitive 3.75" (9.5 cm) display with touch-pad control
- 4 languages: French, German, Spanish, English
- Swivel 180™ Rotating Controller
- On-board connectivity: USB-A & B, Ethernet, RS232/addressable RS485, and external temperature probe
- On-screen prompts
- Automatic performance optimization and specific heat tuning
- Single-point calibration capability

Common Specifications

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
Temperature Stability °F	±0.01°
Temperature Stability °C	±0.01°
Display	4.3" SmartTouch Touchscreen
Display Resolution (Set)	0.01
Display Resolution (Read)	0.01
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, PolyScience LabVIEW Virtual Instrument & Functions, 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	40-41

60 Hz Only

Part Number	AD07R-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
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

50 Hz Only

Part Number	AD07R-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



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