

45 Liter Refrigerated Circulator, -25°C



PD45R-20

Key Specifications

Description	-25, 45 L Ref. Circulator
Controller Type	Performance Digital
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
Swivel 180 Rotating Controller	Yes
Working Temperature Range °C	-25° to 135°
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)	54.9 x 39.8 x 14 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

Performance Digital Controller

Key Features

- 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

Working Temperature Range °F	-13° to 275°
Working Temperature Range °C	-25° to 135°
Nominal Cooling Capacity @ +20C (W)	1400
Reservoir Capacity (gallons)	11.88
Reservoir Capacity (liters)	45
Reservoir/Tank Material	Stainless Steel

Reservoir Cover	Included
DuraTop	Yes
Cleanable Air Filter	Yes
Working Access (L x W x D) (inches)	21.6 x 15.68 x 5.5 in
Working Access (L x W x D) (cm)	54.9 x 39.8 x 14 cm
Temperature Stability °F	±0.01°
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
WhisperCool Environmental Control Technology	Yes
Cool Command Refrigeration Technology	Yes
Reservoir Drain	Yes
Included Software	PolyTemp Viewer, TDMS file viewer, USB driver, PolyScience LabVIEW Virtual Instrument & Functions, PolyTemp Remote iPhone application
Maximum Ambient Temperature °F	95°
Maximum Ambient Temperature °C	35°
Overall Dimensions (L x W x H) (inches)	35.8 x 22.4 x 42.1 in
Overall Dimensions (L x W x H) (cm)	90.9 x 56.8 x 107 cm
Refrigerant	R134a
Environmental Compliance	RoHS, WEEE
Shipping Weight (pounds)	180.0
Shipping Weight (kilograms)	81.5
Catalog Page Number	38-39

60 Hz Only

Part Number	PD45R-20-A13D
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)	250
Cooling Capacity @ 0°C (W)	800
Cooling Capacity @ +20°C (W)	1400
Cooling Capacity @ +100°C (W)	1400
Included Hardware	PT100 temperature probe, USB drive, stainless steel hose adapters for 3/8", 1/4", and 3/16"
Heater Wattage	2200
Electrical Requirements (VAC/Hz/Ph/A)	208-230/60/1/13
Regulatory Approvals	ETL

50 Hz Only

Part Number	PD45R-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)	250
Cooling Capacity @ 0°C (W)	800
Cooling Capacity @ +20°C (W)	1400
Cooling Capacity @ +100°C (W)	1400
Included Hardware	PT100 temperature probe, USB drive, stainless steel 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)	208-240/50/60/1/13
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Regulatory Approvals	CE
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