

45 Liter Refrigerated Circulator, -25°C



PP45R-20

Key Specifications

Description	-25, 45 L Ref. Circulator
Controller Type	Performance 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	-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 Programmable Controller

Key Features

- OpenMode 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)
- Available with DeviceNet/CANbus, Modbus, and Profibus options

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, 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)	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	34-35

60 Hz Only

Part Number	PP45R-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)	230/60/1/13
Regulatory Approvals	ETL

50 Hz Only

Part Number	PP45R-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
Regulatory Approvals	CE