

# 45 Liter Refrigerated Circulator, -25°C



PP45R-20

### **Key Specifications**

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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	1400
(W)	

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	Yes
Capability	
Flammability Class (DIN 12876-1)	III (FL)
Over-Temperature Protection /	Yes
Failsafe Heater Control	
Low Liquid Level Protection	Yes
WhisperCool Environmental Control	Yes
Technology	
Cool Command Refrigeration	Yes
Technology	
Reservoir Drain	Yes TDMO 51 - 110D 11 - D 10 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1
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)	35.8 x 22.4 x 42.1 in
(inches)	00.0 A ZZ.7 A 4Z. I III
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 (I/min)	20.1
Maximum Suction Flow Rate (gpm)	3.9
Maximum Suction Flow Rate (I/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 (I/min)	16.7
Maximum Suction Flow Rate (gpm)	3.2
Maximum Suction Flow Rate (I/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