

Published on *PolyScience* (https://www.polyscience.com)

# 15 Liter Refrigerated Circulator, -40°C



PD15R-40

## **Key Specifications**

Description-40, 15 L Ref. CirculatorController TypePerformance DigitalDisplay4.3" SmartTouch TouchscreenConnectivityEthernet, USB A & B, RS232/addressable RS485, Remote On/Off, External Temperature ProbeLanguages Supported11: French, German, Spanish, Chinese, Portuguese, Russian, Hindi, Arabic, Italian, Korean, EnglishSwivel 180 Rotating ControllerYesWorking Temperature Range °C-40° to 200°Temperature Stability °C±0.005°Fluid Optimization/Specific Heat TuningAutomatic and/or user-adjustableTemperature Calibration Capability10-pointWorking Access (L x W x D) (cm)21.2 x 27.6 x 14 cm Pressure/SuctionPump TypePressure/Suction		
Display4.3" SmartTouch TouchscreenConnectivityEthernet, USB A & B, RS232/addressable RS485, Remote On/Off, External Temperature ProbeLanguages Supported11: French, German, Spanish, Chinese, Portuguese, Russian, Hindi, Arabic, Italian, Korean, EnglishSwivel 180 Rotating ControllerYesWorking Temperature Range °C-40° to 200°Temperature Stability °C ±0.005°±0.005°Fluid Optimization/Specific Heat TuningAutomatic and/or user-adjustableTemperature Calibration Capability10-pointCapability21.2 x 27.6 x 14 cmD) (cm)During Temperature	Description	-40, 15 L Ref. Circulator
ConnectivityEthernet, USB A & B, RS232/addressable RS485, Remote On/Off, External Temperature ProbeLanguages Supported11: French, German, Spanish, Chinese, Portuguese, Russian, Hindi, Arabic, Italian, Korean, EnglishSwivel 180 Rotating ControllerYesWorking Temperature Range °C-40° to 200°Temperature Stability °C ±0.005°±0.005°Fluid Optimization/Specific Heat TuningAutomatic and/or user-adjustableTemperature Calibration Capability10-pointWorking Access (L x W x D) (cm)21.2 x 27.6 x 14 cm	Controller Type	Performance Digital
Languages Supported11: French, German, Spanish, Chinese, Portuguese, Russian, Hindi, Arabic, Italian, Korean, EnglishSwivel 180 Rotating ControllerYesWorking Temperature Range °C-40° to 200°Temperature Stability °C Heat Tuning±0.005°Fluid Optimization/Specific Heat TuningAutomatic and/or user-adjustableTemperature Calibration Capability10-pointWorking Access (L x W x D) (cm)21.2 x 27.6 x 14 cm	Display	4.3" SmartTouch Touchscreen
In FrenceFrenceRussian, Hindi, Arabic, Italian, Korean, EnglishSwivel 180 Rotating ControllerWorking Temperature Range °CTemperature Stability °C ±0.005°Fluid Optimization/Specific Heat TuningAutomatic and/or user-adjustableTemperature Calibration CapabilityWorking Access (L x W x D) (cm)Durant	Connectivity	
ControllerWorking Temperature Range °C-40° to 200°Temperature Stability °C ±0.005°±0.005°Fluid Optimization/Specific Heat TuningAutomatic and/or user-adjustableTemperature Calibration Capability10-pointCapability21.2 x 27.6 x 14 cmD) (cm)Durant	Languages Supported	
Range °CTemperature Stability °C±0.005°Fluid Optimization/Specific Heat TuningAutomatic and/or user-adjustableTemperature Calibration Capability10-point CapabilityWorking Access (L x W x D) (cm)Duran Turna	<b>U</b>	Yes
Fluid Optimization/Specific   Automatic and/or user-adjustable     Heat Tuning   10-point     Capability   21.2 x 27.6 x 14 cm     D) (cm)   Durant		-40° to 200°
Heat Tuning 10-point   Capability 21.2 x 27.6 x 14 cm   D) (cm) During	Temperature Stability °C	±0.005°
Capability Working Access (L x W x 21.2 x 27.6 x 14 cm D) (cm)		Automatic and/or user-adjustable
D) (cm)	•	10-point
Pump Type Pressure/Suction	•	21.2 x 27.6 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<sup>™</sup> 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<sup>™</sup> Virtual Instrument, iPhone<sup>®</sup> application download)

### **Common Specifications**

-	
Working Temperature Range °F	-40° to 392°
Working Temperature Range °C	-40° to 200°
Nominal Cooling Capacity @ +20C (W)	1000
Reservoir Capacity (gallons)	3.96
Reservoir Capacity (liters)	15
Reservoir/Tank Material	Stainless Steel

Reservoir Cover	Included
DuraTop	Yes
LidDock	Yes
Cleanable Air Filter	Yes
Working Access (L x W x D) (inches)	8.35 x 10.88 x 5.5 in
Working Access (L x W x D) (cm)	21.2 x 27.6 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)	22.4 x 14.5 x 26.9 in
Overall Dimensions (L x W x H) (cm)	56.9 x 36.8 x 68.3 cm
Refrigerant	R404A
Environmental Compliance	RoHS, WEEE
Shipping Weight (pounds)	118.0
Shipping Weight (kilograms)	53.5

# 60 Hz Only

Part Number	PD15R-40-A11B
Maximum Pressure (psi)	4.3
Maximum Pressure (bar)	0.30
Maximum Pressure Flow Rate (gpm)	5.30
Maximum Pressure Flow Rate	20.1
(l/min)	
Maximum Suction Flow Rate (gpm)	3.9
Maximum Suction Flow Rate (I/min)	14.7
Cooling Capacity @ -20°C (W)	265
Cooling Capacity @ 0°C (W)	650
Cooling Capacity @ +20°C (W)	1000
Cooling Capacity @ +100°C (W)	1000
Included Hardware	PT100 temperature probe, USB drive, stainless steel hose adapters for
	3/8", 1/4", and 3/16"
Heater Wattage	1100
Electrical Requirements	120/60/1/13
(VAC/Hz/Ph/A)	
Regulatory Approvals	ETL

38-39

# 50 Hz Only

•	
Part Number	PD15R-40-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)	265
Cooling Capacity @ 0°C (W)	650
Cooling Capacity @ +20°C (W)	1000
Cooling Capacity @ +100°C (W)	1000

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)	240/50/1/13
Regulatory Approvals	CE

© 2015 **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

**Source URL (modified on 03/06/2015 - 13:39):** https://www.polyscience.com/circulating-baths/15-liter-refrigerated-circulator-40%C2%B0c-1