



## Product data sheet

# PRESTO A80 Process system

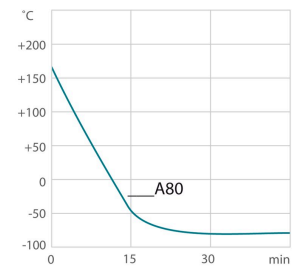
## 2-stage process circulators for low temperatures

As air- or water-cooled versions, the units with 2-stage refrigeration unit offer high cooling and heating capacities for lowest temperatures down to -80 °C.

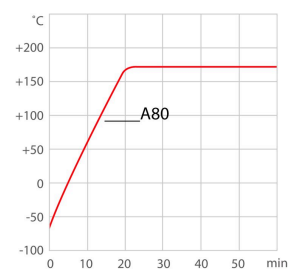
The highly dynamic temperature control systems PRESTO are designed for high-precision temperature control for a wide range of applications such as reactor vessels or material stress tests. Moreover, by using efficient components, the process systems can compensate exothermic and endothermic reactions exceptionally fast. Permanent internal monitoring and self-lubricating pumps ensure a long life-time. In addition, numerous interfaces offer many remote control possibilities across networks or for integration into higher-level control systems.



Cool-down time Medium: Thermal HL



Heat-up time Medium: Thermal HL



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### Product Features

- Analog connections, RS485, Profibus DP (accessory)
- Space optimized design creates more room directly next to the units
- External Pt100 sensor connection
- Built-in 5.7" industrial color touchscreen
- Second external Pt100 sensor connection (accessory)
- Alarm output
- Temperature stability  $\pm 0.01$  °C ...  $\pm 0.05$  °C
- Pump pressure up to 1.7 bar, max. flow rate 40 l/min

## Performance values

208V/60Hz (Nema N6-20 Plug)	
Heating capacity kW	1.5
Viscosity max. cSt	50
Pump capacity flow rate l/min	0 ... 40
Pump capacity pressure psi	1.5 ... 18.9
Power consumption A	15
Voltage Tolerance %	208V   -10/+15

Order number including voltage version (208V/60Hz) 9420801.14

Cooling capacity (Ethanol)

°C	200	100	20	0	-20	-30	-40	-60	-80
kW <sup>1</sup>	1.2	1.2	1.2	1.2	1.1	1.1	1.1	0.65	0.1

Refrigerant stage 1

Refrigerant stage 2

Refrigerant

R507

Refrigerant

R23

Filling weight g

1140

Filling weight g

500

Global Warming Potential for R507

3985

Global Warming Potential for R23

14800

Carbon dioxide equivalent t

4.5429

Carbon dioxide equivalent t

7.4

<sup>1</sup> Performance specifications measured in accordance with DIN 12876. Cooling capacities up to 20 °C measured with ethanol; over 20 °C with thermal oil unless otherwise specified. Performance specifications apply at an ambient temperature of 20 °C. Performance values may differ with other bath fluids.

## Technical data

Available voltage versions

Order No.

9420801

9420801.03

230V 50Hz (Schuko Plug - CEE 7/4 Plug Type F) (R507)

9420801.S1.03

230V 50Hz (Schuko Plug - CEE 7/4 Plug Type F) (R449A)

9420801.04

230V 50Hz (UK Plug Type BS1363A) (R507)

9420801.14

208V 60Hz (Nema N6-20 Plug) (R507)

## Cooling

Cooling of compressor	2-stage Air
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## Electronics

Interfaces	Alarm output, Ethernet, Modbus TCP/IP, Profibus optional, REG/EPROG optional, RS232, RS485 optional, SD memory card, Standby-Input optional, USB
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External pt100 sensor connection	integrated
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2nd external Pt100 sensor connection	accessory
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Integrated programmer	8x60 steps
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Temperature control	ICC
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Absolute temperature calibration	3 Point Calibration
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Temperature display	5.7" TFT Touchscreen
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Temperature setting	Touchscreen
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## Dimensions and volumes

Internal usable expansion volume l	5.6
Minimal process volume l	3.9
Active heat exchanger volume l	1.7
Weight lbs	361.6
Total dimensions in. (W × L × H)	16.9 x 25.6 x 49.6
Pump connections	M24x1.5 male

## Temperature values

Working temperature range °C	-80 ... 250
Setting the resolution of the temperature display °C	0.01
Temperature stability °C	±0.01 ... ±0.05
Ambient temperature °C	+5 ... +40
Temperature display resolution °C	0.01

## Other

Classification	Classification III (FL)
IP Code	IP 20
Pump type	Centrifugal Pump
Pump type Magnetically coupled	1
Sound pressure level dB(A)	68

## All Benefits



### Touch display. Perfect operation.

With the touch display, the user always has an overview of all values and functions. The intuitive and multilingual menu structure enables perfect control.



### Convenience for several users

Administrator level for customizing instrument settings, user levels with limited permissions for fast and safe defined access, password protection, all levels adjustable



### 100 % Cooling capacity

'Active Cooling Control' for cooling available throughout the entire working temperature range, fast cool-down even at higher temperatures



### Intelligent temperature control.

Intelligent cascade control - automatic and self-optimizing adaptation of the PID control parameters with external stability of +/- 0.05 °C.



### Full control

'Temperature Control Features', for individual optimization, access to all important control parameters, additional settings for band limit, limits, co-speedfactor etc.



### Control of the external application

External Pt100 sensor connection for precise measurement and control directly in the external application



### Highest measuring accuracy

'Absolute Temperature Calibration' for manual compensation of a temperature difference, 3-point calibration



### Intelligent pump system

Reliable and consistent pump capacity, electronically adjustable pump stages or pressure value, automatic adjustment of pump capacity to viscosity



### Many interfaces.

Straight-forward remote control, data management, and integration into process structures. USB, Ethernet, RS232, SD card, and alarm off are permanently integrated. Further interfaces available as accessories.



## Space-saving footprint

All connections as well supply and exhaust air are located at the front or rear, no venting grids on the sides, units can be placed close to each other or the application



## Continuous operation up to +40 °C

Robust temperature control instrument, continuous operation even at ambient temperatures of up to +40 °C



## Maximum safety.

Classification III according to DIN12876-1 enables safe operation, even with flammable fluids. Automatic switch-off in the event of high temperature or low liquid level.



## Duplicate safety

Adjustable high temperature cut-off for internal tank and for integrated expansion vessel



## For flammable bath fluid

Classification III (FL) according to DIN 12876-1



## Quick support

If an error occurs, the integrated Black-Box function permits fast diagnosis by the JULABO service team



## 100% Checked.

100% testing. 100% quality. Each JULABO Circulator undergoes thorough quality testing before leaving the factory.



## Green technology.

Development consistently applied environmentally friendly materials and technologies.



## JULABO. Quality.

Highest standards of quality for a long product life.



## Quick start.

Individual JULABO consultation and comprehensive manuals at your disposal.



## Satisfied customers.

11 subsidiaries and more than 100 partners worldwide guarantee fast and qualified JULABO support.



## Services 24/7.

Around the clock availability. You can find suitable accessories, data sheets, manuals, case studies, and more at [www.julabo.com](http://www.julabo.com).

Refer to [www.julabo.com](http://www.julabo.com) for more information regarding the entire JULABO product portfolio. Technical changes without prior notification. Images may deviate from the original. | Datasheet No.EN-US9420801/260304