PRESTO A80 Process system

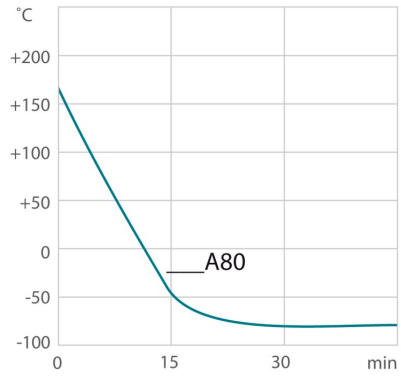
As air- or water-cooled versions, the units with 2-stage refrigeration unit offer high cooling and heating capacities for lowest temperatures down to -80 °C.

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.

Product features

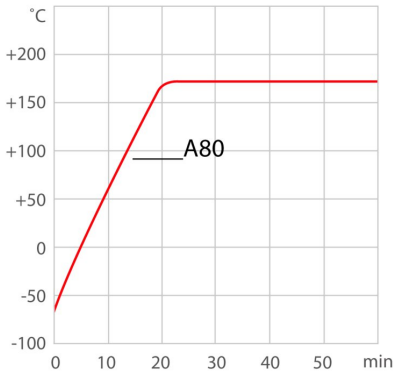
- Analog connections, RS485, Profibus DP (accessory)
- Space optimized design creates more room directly next to the units
- External Pt100 sensor connection
- Built-in 5.7'' industrial color touchscreen
- Second external Pt100 sensor connection (accessory)
- Alarm output
- Temperature stability ±0.01 °C ... ±0.05 °C
- Pump pressure up to 1.7 bar, max. flow rate 40 l/min
- Heating capacity up to 3.4 kW
- Cooling capacity up to 1.2 kW
- removable ventilation grid

Cool-down time



Medium: Thermal HL

Heat-up time



Medium: Thermal HL

Performance values

230V/50Hz (Schuko Plug - CEE 7/4 Plug Type F)	
Heating capacity kW	1.8
Viscosity max. cSt	50
Pump capacity flow rate l/min	0 ... 40
Pump capacity flow pressure bar	0.1 ... 1.7
Power consumption A	16

Refrigerant variants

Order No.	9420801.03					
Cooling capacity (Ethanol)						
°C	20	0	-20	-40	-60	-80
kW [1]	1.2	1.2	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

Order No.	9420801.S1.03				
Cooling capacity (Ethanol)					
°C	20	0	-20	-40	-60
kW [1]	1.3	1.2	1.1	1	0.7

Refrigerant stage 1		Refrigerant stage 2	
Refrigerant	R449A	Refrigerant	R23
Filling weight g	1140	Filling weight g	500
Global Warming Potential for R449A	1397	Global Warming Potential for R23	14800
Carbon dioxide equivalent t	1.59258	Carbon dioxide equivalent t	7.4

[1] 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.	9 420 801
Available voltage versions:	
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

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

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

Dimensions and volumes	
Internal usable expansion volume l	5.6
Minimal process volume l	3.9
Active heat exchanger volume l	1.7
Weight kg	164
Dimensions cm (W × L × H)	43 x 65 x 126
Pump connections	M24x1.5 male

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

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.

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

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

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

Green technology.
Development consistently applied environmentally friendly materials and technologies.

Quick start.
Individual JULABO consultation and comprehensive manuals at your disposal.

Services 24/7.
Around the clock availability. You can find suitable accessories, data sheets, manuals, case studies, and more at www.julabo.com.

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

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.

For flammable bath fluid
Classification III (FL) according to DIN 12876-1

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

JULABO. Quality.
Highest standards of quality for a long product life.

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