



Product data sheet

PRESTO A45 Process system

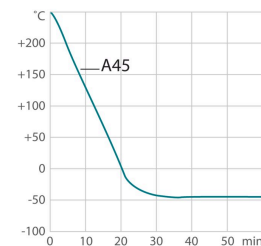
Air-cooled process systems down to $-45\text{ }^{\circ}\text{C}$

The A45 air-cooled process system can be used flexibly and independently of cooling water supply. They compensate exothermic and endothermic reactions extremely quickly.

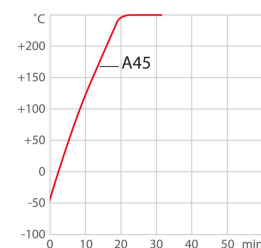
The highly dynamic temperature control systems PRESTO are designed for high-precision temperature control for a wide range of applications such as reactor vessels or material stress tests. Moreover, by using efficient components, the process systems can compensate exothermic and endothermic reactions 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.



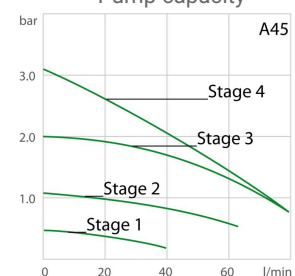
Cool-down time Medium: Thermal HL



Heat-up time Medium: Thermal HL



Pump capacity



Product Features

- Heating capacity 12 kW
- Cooling capacity up to 3.5 kW
- External Pt100 sensor connection
- Analog connections, RS485, Profibus DP (accessory)
- Removable ventilation grid
- Built-in 5.7" industrial color touchscreen
- Second external Pt100 sensor connection (accessory)
- Temperature stability $\pm 0.05\text{ }^{\circ}\text{C}$... $\pm 0.1\text{ }^{\circ}\text{C}$

Performance values

208V/3PPE/60Hz (Without Plug)	
Heating capacity kW	5.5
Viscosity max. cSt	50
Pump capacity flow rate l/min	0 ... 80
Pump capacity pressure psi	1.5 ... 43.5
Power consumption A	23
Voltage Tolerance %	208V -5/+10

Order number including voltage version (208V/3PPE/60Hz)	9420452.16						
Cooling capacity 1 (Ethanol)							
°C	200	20	0	-10	-20	-30	-40
kW ¹	3.4	3.5	3.1	2.5	1.8	0.7	0.2
Refrigerant stage 1							
Refrigerant	R449A						
Filling weight g	1050						
Global Warming Potential for R449A	1397						
Carbon dioxide equivalent t	1.46685						

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.	9420452
Available voltage versions:	
9420452.07	400V 3PNPE 50Hz (Plug 16A CEE) (R452A)
9420452.16	208-230V 3PPE 60Hz (Without Plug) (R449A)
9420452.06	230V 3PPE 50Hz (Plug 32A CEE) (R452A)

Cooling

Cooling of compressor	1-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	7.5
Minimal process volume l	7.5
Active heat exchanger volume l	3.5
Weight lbs	463
Total dimensions in. (W x L x H)	20.9 x 26.2 x 49.6
Pump connections	M30x1.5 male

Temperature values

Working temperature range °C	-45 ... 250
Setting the resolution of the temperature display °C	0.01
Temperature stability °C	±0.05 ... ±0.1
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)	69

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.

Refer to 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-US9420452/260202