

## PRESTO A45 Process System

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

### Your advantages

- For highly precise, external temperature applications
- Rapid heating and cooling
- Wide working temperature ranges without changing fluids
- Highest performance with small footprint
- Space-saving design optimizes space utilization in your lab
- 5,7" industrial color TFT touch screen
- USB connection
- Ethernet
- SD-Card slot
- RS232
- Modbus
- RS485 (Accessory)
- Profibus DP (Accessory)
- CCC Anschlüsse für Alarm-Ausgang, Pt100-Externfühler und Standby-Eingang
- Removable ventilation grid
- Heating capacity up to 12 kW
- Cooling capacity up to 3.5 kW



### Technical data

Available voltage versions		Cooling	
Order No.	9 420 452	Cooling of compressor	1-stage Air
Available voltage versions:			
9 420 452.07	400V/3PNPE/50Hz (Plug 16A CEE)		
9 420 452.16	208-230V/3PPE/60Hz (Without Plug)		
9 420 452.06	230V/3PPE/50Hz (Plug 32A CEE)		
Other		Electronics	
Sound pressure level dba	69	External pt100 sensor connection	integrated
Classification	Classification III (FL)	2nd external Pt100 sensor connection	accessory
IP Code	IP 20	Integrated programmer	8x60 steps
Pump type	Centrifugal Pump	Temperature control	ICC
Pump type Magnetically coupled	1	Absolute temperature calibration	3 Point Calibration
		Temperature display	5.7" TFT Touchscreen
		Temperature setting	Touchscreen
Dimensions and volumes		Temperature values	
Internal usable expansion volume l	7.5	Setting display resolution °C	0.01
Minimal process volume l	7.5	Working temperature range °C	-45.0 ... +250.0
Active heat exchanger volume l	3.5	Temperature stability °C	+/-0.05 ... +/-0.1
Weight kg	210	Ambient temperature °C	+5.0 ... +40
Dimensions cm (W x L x H)	53 x 66.5 x 126	Temperature display resolution °C	0.01
Pump connections	M30x1.5 male		

## Power and capacities

### 400V/3PNPE/50Hz (Plug 16A CEE)

400V/3PNPE/50Hz							
Heating capacity kW	6						
Cooling capacity (Ethanol)							
°C	200	20	0	-10	-20	-30	-40
kW	3.4	3.5	3.3	2.6	1.8	1	0.3
Viscosity max. cST	50						
Refrigerant	R452A						
Filling volume g	1320						
Global Warming Potential for R452A	2140						
Carbon dioxide equivalent t	2.825						
Pump capacity flow rate l/min	35 ... 76						
Pump capacity flow pressure bar	0.48 ... 3.2						

### 208-230V/3PPE/60Hz (Without Plug)

208V/3PPE/60Hz							
Heating capacity kW	5.5						
Cooling capacity (Ethanol)							
°C	200	20	0	-10	-20	-30	-40
kW	3.4	3.5	3.1	2.5	1.8	0.7	0.2
Viscosity max. cST	50						
Refrigerant	R449A						
Filling volume g	1050						
Global Warming Potential for R449A	1397						
Carbon dioxide equivalent t	1.467						
Pump capacity flow rate l/min	35 ... 76						
Pump capacity flow pressure bar	0.48 ... 3						

230V/3PPE/60Hz							
Heating capacity kW	6						
Cooling capacity (Ethanol)							
°C	200	20	0	-10	-20	-30	-40
kW	3.4	3.5	3.1	2.5	1.8	0.7	0.2
Viscosity max. cST	50						
Refrigerant	R449A						
Filling volume g	1050						
Global Warming Potential for R449A	1397						
Carbon dioxide equivalent t	1.467						
Pump capacity flow rate l/min	35 ... 76						
Pump capacity flow pressure bar	0.48 ... 3.2						

### 230V/3PPE/50Hz (Plug 32A CEE)

230V/3PPE/50Hz							
Heating capacity kW	6						
Cooling capacity (Ethanol)							
°C	200	20	0	-10	-20	-30	-40
kW	3.4	3.5	3.3	2.6	1.8	1	0.3
Viscosity max. cST	50						
Refrigerant	R452A						
Filling volume g	1320						
Global Warming Potential for R452A	2140						
Carbon dioxide equivalent t	2.825						
Pump capacity flow rate l/min	35 ... 76						
Pump capacity flow pressure bar	0.48 ... 3.2						

**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.



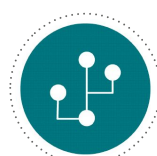
**Control from the external application**  
External Pt100 sensor connection for precise measurement and control directly in the external application



**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



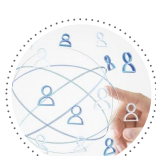
**Quick support**  
If an error occurs, the integrated Black-Box function permits fast diagnosis by the JULABO service team



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



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



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



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



**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](http://www.julabo.com).