

PRESTO A45t Process system

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

Product features

- 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
- Heating capacity up to 12 kW
- Cooling capacity up to 3.5 kW
- 5,7" industrial color TFT touch screen
- Ports for USB, Ethernet, RS232, Modbus
- SD-Card slot
- Analog connections, RS485, Profibus DP (accessory)



Technical data

| | | | |
|------------------------------------|-----------------------------------|--|----------------------|
| Available voltage versions | | Cooling | |
| Order No. | 9 420 452.T | Cooling of compressor | 1-stage Air |
| Available voltage versions: | | | |
| 9 420 452.07 | 400V/3PNPE/50Hz (Plug 32A CEE) | | |
| 9 420 452.16 | 208-230V/3PPE/60Hz (Without Plug) | | |
| 9 420 452.06 | 230V/3PPE/50Hz (Plug 63A 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 the resolution of the temperature display °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 lbs | 463 | Ambient temperature °C | +5.0 ... +40 |
| Dimensions in. (W x L x H) | 20.9 x 26.2 x 49.6 | Temperature display resolution °C | 0.01 |
| Pump connections | M30x1.5 male | | |

Performance values

400V/3PNPE/50Hz (Plug 32A CEE)

| 400V/3PNPE/50Hz | | | | | | | |
|------------------------------------|------------|-----|-----|-----|-----|-----|-----|
| Heating capacity kW | 12 | | | | | | |
| 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 psi | 7 ... 46.4 | | | | | | |
| Power | 22 A | | | | | | |

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

| 208V/3PPE/60Hz | | | | | | | |
|------------------------------------|------------|-----|-----|-----|-----|-----|-----|
| Heating capacity kW | 10 | | | | | | |
| 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 psi | 7 ... 43.5 | | | | | | |
| Power | 39 A | | | | | | |

| 230V/3PPE/60Hz | | | | | | | |
|------------------------------------|------------|-----|-----|-----|-----|-----|-----|
| Heating capacity kW | 12 | | | | | | |
| 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 psi | 7 ... 46.4 | | | | | | |
| Power | 40 A | | | | | | |

230V/3PPE/50Hz (Plug 63A CEE)

| 230V/3PPE/50Hz | | | | | | | |
|------------------------------------|------------|-----|-----|-----|-----|-----|-----|
| Heating capacity kW | 12 | | | | | | |
| 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 psi | 7 ... 46.4 | | | | | | |
| Power | 40 A | | | | | | |

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.



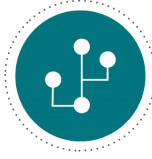
Control from the external application
External Pt100 sensor connection for precise measurement and control directly in the external application



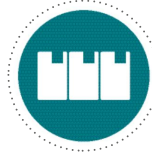
Highest measuring accuracy
'Absolute Temperature Calibration' for manual compensation of a temperature difference, 3-point calibration



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



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.