PRESTO A40 Process system

JULABO's air-cooled PRESTO A40 process system combines high performance and a very compact design with all the advantages of the PRESTO series for a working temperature range from -40 °C to +250 °C.

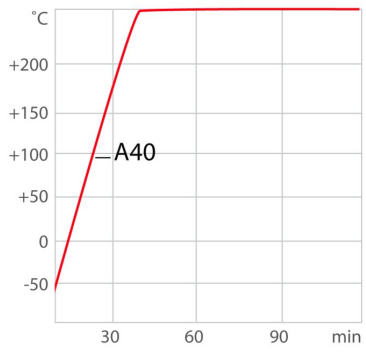


The highly dynamic temperature control systems PRESTO are designed for high-precision temperature control for a wide range of applications such as reactor vessels or material stress tests. Moreover, by using efficient components, the process systems can compensate exothermic and endothermic reactions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

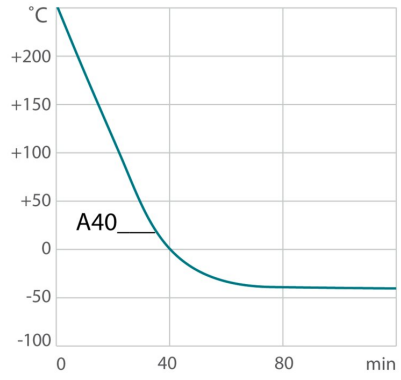
- Heating capacity up to 2.7 kW
- Temperature stability ±0.01 °C ... ±0.05 °C
- Alarm output
- Built-in 5.7'' industrial color touchscreen
- External Pt100 sensor connection
- Second external Pt100 sensor connection (accessory)
- Connections for USB, Ethernet, RS232, and Alarm output
- Analog connections, RS485, Profibus DP (accessory)
- Pump pressure up to 1.7 bar, max. flow rate 40 l/min
- Removable ventilation grid
- RS232
- RS485 (Accessory)
- Profibus DP (Accessory)
- Cooling capacity up to 1.2 kW

Heat-up time



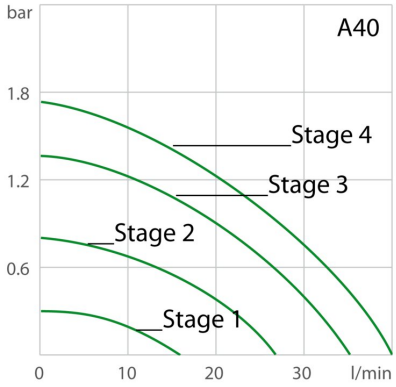
Medium: Thermal HL

Cool-down time



Medium: Thermal HL

Pump capacity



Performance values

208V/60Hz (Nema N6-20 Plug)	
Heating capacity kW	2.3
Viscosity max. cSt	50
Pump capacity flow pressure l/min	0 ... 40
Pump capacity pressure psi	1.5 ... 18.9
Power consumption A	15

Order No.	9420401.14				
Cooling capacity 1 (Ethanol)					
°C	20	0	-10	-20	-30
kW [1]	1.2	0.9	0.8	0.4	0.15

Refrigerant stage 1	
Refrigerant	R449A
Filling weight g	430
Global Warming Potential for R449A	1397
Carbon dioxide equivalent t	0.60071

[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.
Cooling capacity 1 = capacity at minimum pump level, cooling capacity 2 = capacity at maximum pump level

Technical data

Available voltage versions	
Order No.	9 420 401
Available voltage versions:	
9420401.33	200-230V/50-60Hz (Schuko Plug - CEE 7/4 Plug Type F) (R449A)
9420401.04	230V/50-60Hz (UK Plug Type BS1363A) (R449A)
9420401.05	230V/50-60Hz (CH Plug Type SEV 1011) (R449A)
9420401.14	208V/60Hz (Nema N6-20 Plug) (R449A)

Cooling	
Cooling of compressor	1-stage Air

Other	
Sound pressure level dbA	55
Classification	Classification III (FL)
IP Code	IP 21
Pump type	Centrifugal Pump
Pump type Magnetically coupled	1

Electronics	
Interfaces	Alarm output, Ethernet, Modbus, USB, RS232, SD memory card, Standby-Input optional, REG/EPROG optional, RS485 optional, Profibus optional,
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

Filling volume expansion vessel l	4.8
Internal usable expansion volume l	2.7
Minimal process volume l	3.5
Active heat exchanger volume l	1.7
Weight lbs	174.2
Dimensions in. (W × L × H)	13 x 23.2 x 26.4
Pump connections	M24x1.5 male

Temperature values

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

All Benefits

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.



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.



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.