

PRESTO A70 Process system

Product data sheet

The air-cooled PRESTO A70 is JULABO's most compact 2-stage process system and offers high cooling capacities for lowest temperatures down to -75 °C.



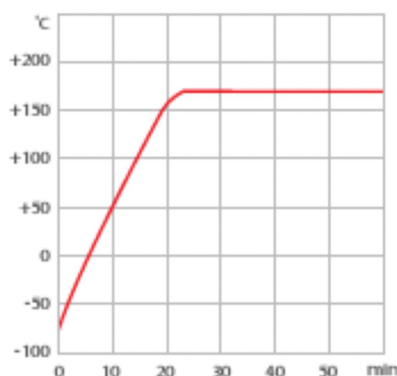
The highly dynamic temperature control systems PRESTO are designed for high-precision temperature control for a wide range of applications such as reactor vessels or material stress tests. Moreover, by using efficient components, the process systems can compensate exothermic and endothermic reactions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

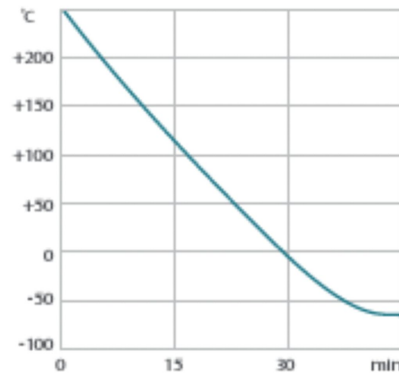
- Analog connections, RS485, Profibus DP (accessory)
- External Pt100 sensor connection
- Built-in 5.7" industrial color touchscreen
- Second external Pt100 sensor connection (accessory)
- Alarm output
- Temperature stability ± 0.01 °C ... ± 0.05 °C
- Pump pressure up to 1.7 bar, max. flow rate 40 l/min
- Removable ventilation grid

Heat-up time



Medium: Thermal HL90

Cool-down time



Medium: Thermal HL90

Performance values

208V/60Hz (Nema N5-20 Plug)	
Heating capacity kW	1.8
Viscosity max. cSt	50
Pump capacity flow rate l/min	16 ... 40
Pump capacity flow pressure psi	4.4 ... 24.7
Power A	16

Order No.	9420701.N1.14							
Cooling capacity 1 (Ethanol)								
°C	20	0	-20	-30	-40	-50	-60	-70
kW	1.12	1.06	0.98	0.93	0.9	0.69	0.45	0.23
* 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								
Cooling capacity 2 (Ethanol)								
°C	20	0	-20	-30	-40	-50	-60	-70
kW	0.97	0.91	0.84	0.79	0.75	0.55	0.38	0.12
* 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								
Note about natural refrigerants: Temperature control units using natural refrigerants are often subject to regulatory requirements regarding the installation site, operation, transport or disposal of the units. If you have any questions, we will be happy to advise you.								
Refrigerant stage 1				Refrigerant stage 2				
Refrigerant	R449A			Refrigerant	R170			
Filling weight g	650			Filling weight g	99			
Global Warming Potential for R449A	1397			Global Warming Potential for R170	6			
Carbon dioxide equivalent t	0.908			Carbon dioxide equivalent t	0.001			

Technical data

Available voltage versions		Cooling	
Order No.	9 420 701	Cooling of compressor	2-stage Air
Available voltage versions:			
9420701.N1.14	208V/60Hz (Nema N5-20 Plug) (R449A)		
9420701.N1.03	230V/50Hz (Schuko Plug - CEE 7/4 Plug Type F) (R449A)		
Other		Electronics	
Sound pressure level dbA	69	Interfaces	Alarm output, Ethernet, Modbus, Profibus optional, RS232, RS485 optional, Reg/Eprog optional, SD memory card, Standby-Input optional, USB
Classification	Classification III (FL)	External pt100 sensor connection	integrated
IP Code	IP 20	2nd external Pt100 sensor connection	accessory
Pump type	Centrifugal Pump	Integrated programmer	8x60 steps
Pump type Magnetically coupled	1	Temperature control	ICC
		Absolute temperature calibration	3 Point Calibration
		Temperature display	5.7" TFT Touchscreen

Dimensions and volumes	
Internal usable expansion volume l	4.8
Minimal process volume l	8
Active heat exchanger volume l	1.7
Weight lbs	330.7
Dimensions in. (W x L x H)	22.4 x 29.3 x 34.6
Pump connections	M24x1.5 male

Temperature setting	Touchscreen
Temperature values	
Setting the resolution of the temperature display °C	0.01
Working temperature range °C	-75 ... +250
Temperature stability °C	±0.01 ... ±0.05
Ambient temperature °C	+5 ... +40
Temperature display resolution °C	0.01



All Benefits


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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.
- 

100 % Cooling capacity
'Active Cooling Control' for cooling available throughout the entire working temperature range, fast cool-down even at higher temperatures
- 

Full control
'Temperature Control Features', for individual optimization, access to all important control parameters, additional settings for band limit, limits, co-speedfactor etc.
- 


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

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
- 


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
- 

Intelligent temperature control.
Intelligent cascade control - automatic and self-optimizing adaptation of the PID control parameters with external stability of +/- 0.05 °C.
- 

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

Intelligent pump system
Reliable and consistent pump capacity, electronically adjustable pump stages or pressure value, automatic adjustment of pump capacity to viscosity
- 

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.
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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



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.



100% Checked.

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

Julabo



Satisfied customers.

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