

PRESTO W40 Process system

JULABO's water-cooled PRESTO W40 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.

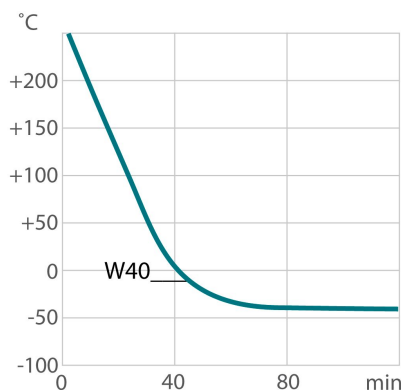
The highly dynamic temperature control systems PRESTO are designed for high-precision temperature control for a wide range of applications such as reactor vessels or material stress tests. Moreover, by using efficient components, the process systems can compensate exothermic and endothermic reactions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

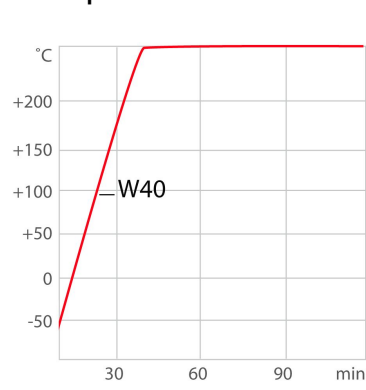
- Heating capacity up to 2.7 kW
- Temperature stability ± 0.01 °C ... ± 0.05 °C
- Alarm output
- Built-in 5.7" industrial color touchscreen
- External Pt100 sensor connection
- Second external Pt100 sensor connection (accessory)
- Connections for USB, Ethernet, RS232, and Alarm output
- Analog connections,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

Cool-down time



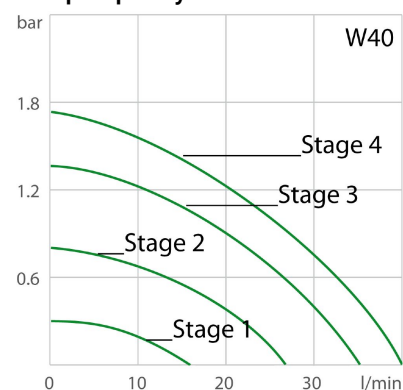
Medium: Thermal HL

Heat-up time



Medium: Thermal HL

Pump capacity



Performance values



230V/60Hz (Schuko Plug - CEE 7/4 Plug Type F)

Heating capacity kW	2.7
Viscosity max. cSt	50
Pump capacity flow rate l/min	0 ... 40
Pump capacity flow pressure psi	1.5 ... 24.7
Power consumption A	16

Order No. 9421401.33

Cooling capacity 1 (Ethanol)

°C	20	0	-10	-20	-30	-40
kW	1.2	1	0.8	0.55	0.3	0.07

* 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	-10	-20	-30
kW	1.2	1	0.8	0.4	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

Refrigerant stage 1

Refrigerant	R449A
Filling weight g	380
Global Warming Potential for R449A	1397
Carbon dioxide equivalent t	0.53086


208V/60Hz (Nema N6-20 Plug)

Heating capacity kW	2.3
Viscosity max. cSt	50
Pump capacity flow rate l/min	0 ... 40
Pump capacity flow pressure psi	1.5 ... 18.9
Power consumption A	15

Order No.	9421401.14				
Cooling capacity 1 (Ethanol)					
°C	20	0	-10	-20	-30
kW	1.2	1	0.8	0.5	0.2
* 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					
Refrigerant stage 1					
Refrigerant	R449A				
Filling weight g	380				
Global Warming Potential for R449A	1397				
Carbon dioxide equivalent t	0.53086				

Technical data

Available voltage versions		Cooling	
Order No.	9 421 401	Cooling of compressor	1-stage Water
Available voltage versions:		Cooling water temperature range °C	35
9421401.33	200-230V/50-60Hz (Schuko Plug - CEE 7/4 Plug Type F) (R449A)	Cooling water pressure max. psi	87
9421401.04	230V/50-60Hz (UK Plug Type BS1363A) (R449A)	Cooling water difference pressure psi	7.3
9421401.05	230V/50-60Hz (CH Plug Type SEV 1011) (R449A)	Cooling water consumption l/min	1
9421401.14	208V/60Hz (Nema N6-20 Plug) (R449A)		
Other		Electronics	
Sound pressure level dbA	53	Interfaces	Alarm output, Ethernet, Modbus, Profibus optional, REG/EPROG optional, RS232, RS485 optional, SD memory card, Standby-Input optional, USB
Classification	Classification III (FL)	External pt100 sensor connection	integrated
IP Code	IP 21	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
		Temperature setting	Touchscreen
Dimensions and volumes		Temperature values	
Internal usable expansion volume l	2.7	Setting the resolution of the temperature display °C	0.01
Minimal process volume l	3.5	Working temperature range °C	-40 ... +250
Active heat exchanger volume l	1.7	Temperature stability °C	±0.01 ... ±0.05

Weight lbs	172	Ambient temperature °C	+5 ... +40
Cooling Water Connection in	G¾	Temperature display resolution °C	0.01
Dimensions in. (W × L × H)	13 x 23.2 x 26.4		
Pump connections	M24x1.5 male		

All Benefits

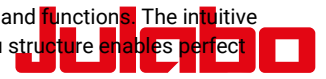
	<p>Convenience for several users Administrator level for customizing instrument settings, user levels with limited permissions for fast and safe defined access, password protection, all levels adjustable</p>		<p>100 % Cooling capacity 'Active Cooling Control' for cooling available throughout the entire working temperature range, fast cool-down even at higher temperatures</p>
	<p>Intelligent temperature control. Intelligent cascade control - automatic and self-optimizing adaptation of the PID control parameters with external stability of +/- 0.05 °C.</p>		<p>Full control 'Temperature Control Features', for individual optimization, access to all important control parameters, additional settings for band limit, limits, co-speedfactor etc.</p>
	<p>Control of the external application External Pt100 sensor connection for precise measurement and control directly in the external application</p>		<p>Highest measuring accuracy 'Absolute Temperature Calibration' for manual compensation of a temperature difference, 3-point calibration</p>
	<p>Intelligent pump system Reliable and consistent pump capacity, electronically adjustable pump stages or pressure value, automatic adjustment of pump capacity to viscosity</p>		<p>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.</p>
	<p>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</p>		<p>Continuous operation up to +40 °C Robust temperature control instrument, continuous operation even at ambient temperatures of up to +40 °C</p>
	<p>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.</p>		<p>Duplicate safety Adjustable high temperature cut-off for internal tank and for integrated expansion vessel</p>
	<p>For flammable bath fluid Classification III (FL) according to DIN 12876-1</p>		<p>Quick support If an error occurs, the integrated Black-Box function permits fast diagnosis by the JULABO service team</p>
	<p>100% Checked. 100% testing. 100% quality. Each JULABO Circulator undergoes thorough quality testing before leaving the factory.</p>		<p>Green technology. Development consistently applied environmentally friendly materials and technologies.</p>



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.