

The New PRESTO®



Thermodynamic Power

Julabo
THE TEMPERATURE CONTROL COMPANY

Hot & Cold

A Brand New Generation of Highly Dynamic Temperature Control Systems by JULABO

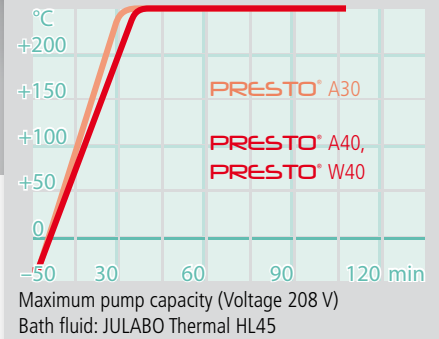
Reactor temperature control, tests for all kinds of substances or temperature simulation – the new **PRESTO**® are made for highly precise temperature control and rapid temperature changes.

PRESTO® provide large heating and cooling capacities covering a working temperature range from -40 °C to +250 °C. Highly efficient components allow extremely fast compensation of exothermic and endothermic reactions.

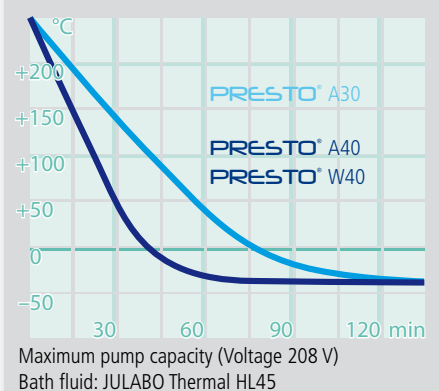
For optimized performance during operation the maximum heating capacity adjusts automatically to the power input of the main power supply (A40, W40).

The **PRESTO**® is hydraulically sealed. Temperature induced volume changes within the heat exchanger are accommodated by an integrated cooled expansion vessel.

Heat-up Times

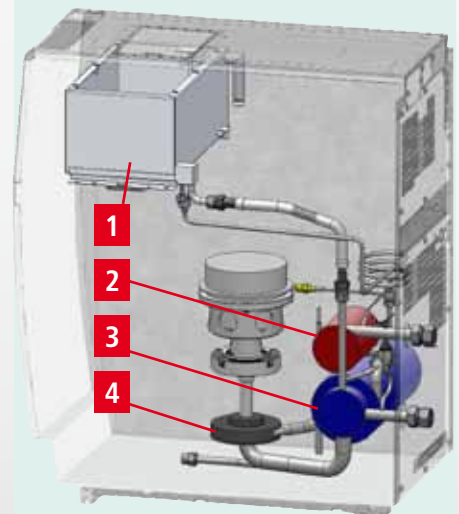


Cool-down Times



The **PRESTO**® Principle (with integrated refrigeration system)

- Expansion vessel (1)
- Heat exchanger
 - Heating section (2)
 - Refrigeration section (3)
- Circulating pump (4)



Stay in Touch

JULABO Sets New Standards for Intuitive Operation



A special feature of the new **PRESTO**® is the integrated 5.7" industrial touch screen. All important information is displayed clearly and concisely enhancing ease of use considerably. The new **PRESTO**® can be operated intuitively with the tip of your finger.

All essential information is presented in three pre-set views – everything important at a glance. In addition to the pre-set views you can customize your own views anytime. A total of eight languages are available.

Smooth laboratory workflow through innovative features: Password management permits the installation of two additional user levels via an administrator level. The administrator can prioritize and schedule recurring daily tasks. This allows for easy execution by limited access users.

The **PRESTO**® Operation

- **NEW** 5.7" industrial color touch screen
- **NEW** User defined views
- **NEW** 3 user levels with password protection
- Clearly structured display
- Intuitive menu navigation (multi-lingual)



Pump Power

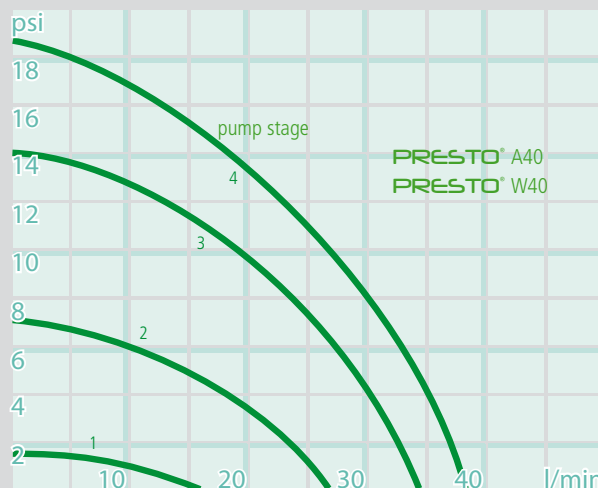
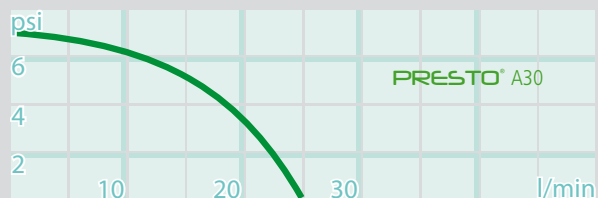
Powerful Pumps Provide High Flow Rates at Constant Pressure

Continuous parameter monitoring provides for the right pressure at any time. The pumps dynamically compensate for any viscosity changes of the temperature control fluid (A40, W40). Permanent internal monitoring and self-lubricating pumps ensure a long operating life of the new PRESTO®.

The new PRESTO® feature a closed temperature control circuit. The bath fluid has no contact with ambient air. Ergo: no moisture, no oxidation. Thus the lifetime of the bath fluid is increased significantly.

The closed circuit prevents the new PRESTO® from releasing oil vapors.

Pump Characteristics



The PRESTO® Pump

- **NEW** The pump capacity of the PRESTO® A40 and W40 can be adjusted in four stages or via a specified pressure value
- Permanently monitored pressure build-up
- Dynamic compensation of viscosity changes



Always Ready

Many Useful Features Simplify your Laboratory Routine

The new **PRESTO**[®] work with one bath fluid covering the entire working temperature range. That saves you from frequently changing the bath fluid and stocking extra bath fluid. The filling funnel of the new **PRESTO**[®] is easily accessible at the top of the unit.

As the new **PRESTO**[®] operate whisper quiet, you will hardly hear them in your laboratory. Even high room temperatures of up to +40 °C will not make the new **PRESTO**[®] sweat. Maintenance-free pumps and drives guarantee operational readiness.

All this ensures the maximum performance of the new **PRESTO**[®]. JULABO provides comprehensive support and short response times – anywhere in the world.

Application tips

Air or Water Cooling

The new **PRESTO**[®] are available with air or water cooling.

Air-cooled units do not use water and permit free positioning. We especially recommend air-cooled units when you look for a mobile solution. However, please note that the units use ambient air and heat-up the surroundings slightly.

Water-cooled units are connected to existing cooling water lines. These units are even quieter and can be completely encased by the respective application. Robust, wear-free heat exchangers guarantee the water-cooling of the new **PRESTO**[®]. This improves the efficiency of the heat exchanger dramatically.

Your **PRESTO**[®] Benefits

- Continuous operation at ambient temperatures **up to +40 °C**
- Just one bath fluid needed for the entire working temperature range
- Maximum efficiency and performance



Interfaces Unlimited

Extensive Interfaces. Remote Control via Network and Integration in Master Control Systems

The new PRESTO® feature an Ethernet interface for network connection. This interface permits full access to all operational functions of the new PRESTO®. To permit remote control via a network, the user interface of the touch panel is displayed 1:1 on the screen of the network PC. The USB interface – a novelty for dynamic temperature control systems – permits wireless control of the new PRESTO® from your workstation. Wireless remote control of the new PRESTO® can easily be done by using the *WirelessTEMP* products.



 **WirelessTEMP®**

The PRESTO® Interfaces

- **NEW** USB (host and device)
- **NEW** Ethernet interface
- **NEW** Slot for SD cards
- RS232

- Connections for
 - Alarm output
 - Pt100 external sensor
 - Standby input (Accessory)
 - Analog inputs and outputs (Accessory)
 - Flow sensors and pressure sensors (for PRESTO® A40, W40)

- Optional Interfaces:
 - Profibus DP
 - RS485
 - Modbus



One of a Kind

State-of-the-Art Technology Designed for Requirements in Modern Laboratories

The new **PRESTO**® are the only highly dynamic temperature control systems with closed sides – a JULABO tradition. A key requirement for development is the consistent channelling of airflow from the front to the back. This design does away with venting slots at the sides. The required installation space is reduced to a minimum. **PRESTO**® easily fits into tight spaces.

The design of the new **PRESTO**® also conforms to ergonomic criteria. The new **PRESTO**® can be transported by a single person as easily as pulling a cart. Slightly lift the new **PRESTO**® with its integrated telescopic handle at the front and move it on the back rollers.



Your **PRESTO**® Benefits

- Sides without venting slots
- Quiet as a whisper
- Easy to transport

The new PRESTO® by JULABO: Versatile,

JULABO Model

PRESTO A30



Working temperature range	-30 ... +250 °C
Temperature stability	±0.01 ... ±0.05 °C
Temperature control	ICC (Intelligent Cascade Control)

User Interface

Temperature setting / Display	5.7" industrial color TFT touch screen
Operating languages	German, English, French, Spanish, Italian, Chinese, Japanese, Russian
Setting / Display resolution	±0.01 °C
Graphical user interface	Intuitive with interactive user guidance and password management of user levels

Heating Capacity

2.3 kW

Cooling Capacity	°C	+200	+100	+20	0	-10	-20	-30
(JULABO Thermal HL Ethanol)	kW	0.5	0.5	0.5	0.4	0.3	0.2	0.05

Pump

Pump capacity	7.25 psi
Flow rate max. (at 0 psi)	25 l/min
Compatible thermal fluids	JULABO Thermal, Silicon Oil, Fluorinert™, Galden®
Viscosity max.	50 mm ² /s (50 cSt)
Pump connections	M24 x 1.5 male

Process volume min. (active heat exchanger volume)	2.4 liters (1.4 liters)
Internal usable expansion volume	1.5 liters

Digital / Analog Interfaces

Standard	Pt100 External Temperature Sensor, USB, USB Host, SD Memory Card (up to 2 GB), Ethernet, RS232, Alarm out
Accessory	Analog Interface Module (Input, Output, Standby-In), RS485, Profibus DP, Modbus

Safety Installations (according to IEC 61010-2-010)

Excess temperature protection	Tank and Reservoir, adjustable
Low liquid level protection	Float switch
Classification according to DIN 12876-1	Class III (FL)

Additional JULABO Safety Installations

Supervision of working sensors	Plausibility control
Reciprocal sensor monitoring between working and safety sensors	Difference > 25 °C
Alarm message	Optical and audible

Refrigeration unit	1-stage, air-cooled
--------------------	---------------------

Cooling water connection	---
--------------------------	-----

Permissible ambient temperature range	+5 ... +40 °C
---------------------------------------	---------------

Noise level (distance 1 m)	54 dBA
----------------------------	--------

Power requirement	208 V / 60 Hz (13.5 A)
-------------------	------------------------

Weight	137 lbs.
--------	----------

Overall dimensions W x L x H	9.53 x 22.95 x 24.09 inches
------------------------------	-----------------------------

JULABO Order No. 9 420 300

All data refers to the nominal voltage of 208 V, nominal frequency of 60 Hz and ambient temperature of +20 °C. Cooling capacity measured at max. pump stage. All pump data refers to a bath fluid with a specific density of 1 kg/dm³.

Technical changes without prior notification reserved.

Convenient, Safe and Reliable

JULABO Model	PRESTO A40	PRESTO W40																																
Working temperature range	-40 ... +250 °C	-40 ... +250 °C																																
Temperature stability	±0.01 ... ±0.05 °C	±0.01 ... ±0.05 °C																																
Temperature control	ICC (Intelligent Cascade Control)	ICC (Intelligent Cascade Control)																																
User Interface																																		
Temperature setting / Display	5.7" industrial color TFT touch screen	5.7" industrial color TFT touch screen																																
Operating languages	German, English, French, Spanish, Italian, Chinese, Japanese, Russian																																	
Setting / Display resolution	±0.01 °C	±0.01 °C																																
Graphical user interface	Intuitive with interactive user guidance and password management of user levels																																	
Heating Capacity	2.3 kW	2.3 kW																																
Cooling Capacity	<table border="1"> <thead> <tr> <th>°C</th> <th>+200</th> <th>+20</th> <th>0</th> <th>-10</th> <th>-20</th> <th>-30</th> <th>-40</th> </tr> </thead> <tbody> <tr> <td>(JULABO Thermal HL Ethanol)</td> <td>1.2</td> <td>1.2</td> <td>0.9</td> <td>0.8</td> <td>0.6</td> <td>0.3</td> <td>0.1</td> </tr> </tbody> </table>	°C	+200	+20	0	-10	-20	-30	-40	(JULABO Thermal HL Ethanol)	1.2	1.2	0.9	0.8	0.6	0.3	0.1	<table border="1"> <thead> <tr> <th>°C</th> <th>+200</th> <th>+20</th> <th>0</th> <th>-10</th> <th>-20</th> <th>-30</th> <th>-40</th> </tr> </thead> <tbody> <tr> <td>(JULABO Thermal HL Ethanol)</td> <td>1.2</td> <td>1.2</td> <td>1.0</td> <td>0.8</td> <td>0.55</td> <td>0.3</td> <td>0.06</td> </tr> </tbody> </table>	°C	+200	+20	0	-10	-20	-30	-40	(JULABO Thermal HL Ethanol)	1.2	1.2	1.0	0.8	0.55	0.3	0.06
°C	+200	+20	0	-10	-20	-30	-40																											
(JULABO Thermal HL Ethanol)	1.2	1.2	0.9	0.8	0.6	0.3	0.1																											
°C	+200	+20	0	-10	-20	-30	-40																											
(JULABO Thermal HL Ethanol)	1.2	1.2	1.0	0.8	0.55	0.3	0.06																											
Pump																																		
Pump capacity	1.45 ... 18.85 psi	1.45 ... 18.85 psi																																
Flow rate max. (at 0 psi)	16 ... 38 l/min	16 ... 38 l/min																																
Compatible thermal fluids	JULABO Thermal, Silicon Oil, Fluorinert™, Galden®																																	
Viscosity max.	50 mm ² /s (50 cSt)	50 mm ² /s (50 cSt)																																
Pump connections	M24 x 1.5 male	M24 x 1.5 male																																
Process volume min. (active heat exchanger volume)	3.5 liters (1.7 liters)	3.5 liters (1.7 liters)																																
Internal usable expansion volume	2.7 liters	2.7 liters																																
Digital / Analog Interfaces																																		
Standard	Pt100 External Temperature Sensor, USB, USB Host, SD Memory Card (up to 2 GB), Ethernet, RS232, Alarm out																																	
Accessory	Analog Interface Module (Input, Output, Standby-In), RS485, Profibus DP, Modbus																																	
Safety Installations (according to IEC 61010-2-010)																																		
Excess temperature protection	Tank and Reservoir, adjustable	Tank and Reservoir, adjustable																																
Low liquid level protection	Float switch	Float switch																																
Classification according to DIN 12876-1	Class III (FL)	Class III (FL)																																
Additional JULABO Safety Installations																																		
Supervision of working sensors	Plausibility control	Plausibility control																																
Reciprocal sensor monitoring between working and safety sensors	Difference > 25 °C	Difference > 25 °C																																
Alarm message	Optical and audible	Optical and audible																																
Refrigeration unit	1-stage, air-cooled	1-stage, water-cooled																																
Cooling water connection	---	G 3/4" / fitting for tubing 1/2" ID																																
Permissible ambient temperature range	+5 ... +40 °C	+5 ... +40 °C																																
Noise level (distance 1 m)	55 dBA	53 dBA																																
Power requirement	208 V / 60 Hz (15 A)	208 V / 60 Hz (15 A)																																
Weight	174 lbs.	172 lbs.																																
Overall dimensions W x L x H	12.72 x 22.95 x 26.06 inches	12.72 x 22.95 x 26.06 inches																																
JULABO Order No.	9 420 401	9 421 401																																

All data refers to the nominal voltage of 208 V, nominal frequency of 60 Hz and ambient temperature of +20 °C. Cooling capacity measured at max. pump stage. All pump data refers to a bath fluid with a specific density of 1 kg/dm³.

Technical changes without prior notification reserved.

Original PRESTO® Accessories

JULABO Thermal Bath Fluids

JULABO Description		Thermal P60	Thermal P90
JULABO Order No.	10 Liters 5 Liters	8 891 412 8 891 413	8 891 414 8 891 415
Working temperature range	°C	-60 ... +250	-90 ... +170
Flash point	°C	>+135	>+75
Fire point	°C	>+443	>+430
Viscosity, kinetic	mm ² /s	8 at 0 °C	3.5 at 0 °C
Density at +20 °C	g/cm ³	0.918	0.873
Pour point	°C	-65	-100
Boiling point	°C	>+205	+229
Ignition temperature	°C	>+443	+430
Color		clear	clear

Benefits

- Wide temperature ranges
- Low viscosity
- High stability
- Good heat conductivity
- Minimum odor
- Low corrosion tendency
- Low toxicity

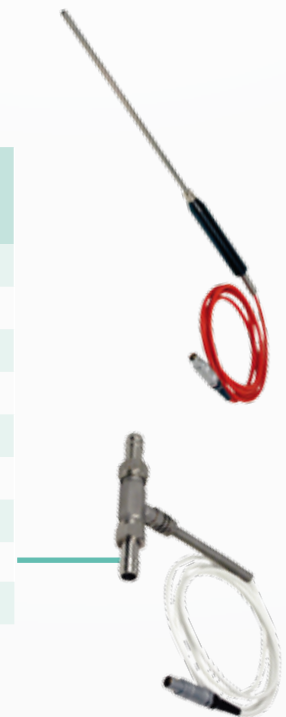


Working temperature range



Pt100 External sensors

JULABO Order No.	Description	A30	A40	W40
8 981 003	200 x 6 mm dia., stainless steel, 1.5 m cable	•	•	•
8 981 006	20 x 2 mm dia., stainless steel, 1.5 m cable	•	•	•
8 981 010	300 x 6 mm dia., stainless steel, 1.5 m cable	•	•	•
8 981 015	300 x 6 mm dia., stainless steel /PTFE coated, 3.0 m cable	•	•	•
8 981 013	600 x 6 mm dia., stainless steel /PTFE coated, 3.0 m cable	•	•	•
8 981 016	900 x 6 mm dia., stainless steel /PTFE coated, 3.0 m cable	•	•	•
8 981 014	1200 x 6 mm dia., stainless steel /PTFE coated, 3.0 m cable	•	•	•
8 981 021	M+R in-line Pt100 sensor, 2 fittings M24x1.5 male, 1.5 m cable	•	•	•
8 981 103	Extension cable 3.5 m for Pt100 sensor	•	•	•



Metal tubing flexible, triple insulated, -100 ... +350 °C

JULABO Order No.	Description	A30	A40	W40
8 930 261	1.0 m Metal tubing, 2 fittings M24x1.5 female	•	•	•
8 930 262	1.5 m Metal tubing, 2 fittings M24x1.5 female	•	•	•
8 930 263	2.0 m Metal tubing, 2 fittings M24x1.5 female	•	•	•
8 930 264	3.0 m Metal tubing, 2 fittings M24x1.5 female	•	•	•



for Optimal Temperature Control

Interfaces / Software & Hardware

JULABO Order No.	Description	A30	A40	W40
8 900 105	Electronic module with analog connections (Input, Output, Standby-In)	•	•	•
8 900 020	Profibus DP Interface	•	•	•
8 900 022	Modbus Interface	•	•	•
8 900 024	RS485 Interface	•	•	•
8 980 771	Pressure sensor, 2 fittings M24x1.5 male (-95 ... +250 °C)		•	•
8 970 815	Sight glass, -100...+280 °C, PN16/Class 230, 2 fittings M30x1.5 male	•	•	•
8 900 500	WirelessTEMP Remote Control	•	•	•
8 900 505	WirelessTEMP Remote Control, ATEX Version	•	•	•
8 900 540	Wireless USB Stick	•	•	•
8 900 530	WirelessTEMP Router for extending wireless range	•	•	•
8 901 102	EasyTEMP Software (free of charge at www.julabo.de)	•	•	•
8 901 105	EasyTEMP Professional Software, incl. USB-Dongle	•	•	•



Connectors / Valves / Adapters, etc.

JULABO Order No.	Description	A30	A40	W40
8 890 110	Adapter M24x1.5 male to M24x1.5 male	•	•	•
8 890 120	2 Elbow fittings 90°, M24x1.5 female/male	•	•	•
8 890 052	2 Adapters M24x1.5 female to M16x1 male	•	•	•
8 890 053	2 Adapters M24x1.5 female to NPT 1/4" female	•	•	•
8 890 054	2 Adapters M24x1.5 female to NPT 3/8" female	•	•	•
8 890 055	2 Adapters M24x1.5 female to NPT 1/2" female	•	•	•
8 890 056	2 Adapters M24x1.5 female to NPT 3/4" female	•	•	•
8 890 057	2 Adapters M24x1.5 female to NPT 1" female	•	•	•
8 890 058	2 Adapters M24x1.5 female to NPT 1/4" male	•	•	•
8 890 059	2 Adapters M24x1.5 female to NPT 3/8" male	•	•	•
8 890 060	2 Adapters M24x1.5 female to NPT 1/2" male	•	•	•
8 890 061	2 Adapters M24x1.5 female to NPT 3/4" male	•	•	•
8 890 062	2 Adapters M24x1.5 female to NPT 1" male	•	•	•
8 890 065	2 Adapters M24x1.5 female to tube 1/2"	•	•	•
8 890 066	2 Adapters M24x1.5 female to tube 1"	•	•	•
8 970 920	Filter mat	•		
8 970 921	Filter mat		•	
8 970 851	Shut-off valve M24x1.5 female/male, -40...+200 °C	•	•	•
8 970 832	External expansion vessel 3 liters	•	•	•

Cooling water connection

JULABO Order No.	Description	A30	A40	W40
8 930 312	Reinforced tubing (pressure proof) 1/2" inner dia.			•
8 970 482	2 Tube clamps			•
8 920 000	Particle filter for cooling water cycle			•

JULABO - founded in 1967 in Germany - develops and manufactures sophisticated innovative temperature control technology. **JULABO** units are equipped with state-of-the art control technology and are in use worldwide whenever temperature accuracy and immediate reaction to temperature changes are required. 400,000 **JULABO** products have been installed around the globe, highlighting **JULABO**'s prevalent role in industry and science worldwide. "Made in Germany" quality as well as fast and competent support from your local representative in more than 100 countries have made **JULABO** a leading company for temperature control solutions.

JULABO USA, Inc.

884 Marcon Boulevard
Allentown, PA 18109
United States of America
Tel. +1 (610) 231-0250
+1 (800) 458-5226 (Toll-Free)
Fax +1 (610) 231-0260
info@julabo.com
www.julabo.com

GERMANY

HEADQUARTERS
JULABO Labortechnik GmbH
Seelbach
info@julabo.de
www.julabo.de

UK

JULABO UK, Ltd.
Peterborough
info@julabo.co.uk
www.julabo.co.uk

JAPAN

JULABO Japan Co., Ltd.
Osaka
info@julabo-japan.co.jp
www.julabo-japan.co.jp

ITALIA

JULABO Italia Srl.
Milano
info@julaboitalia.it
www.julaboitalia.it

FRANCE

JULABO France
Colmar
info@julabo.fr
www.julabo.fr

KOREA

JULABO Korea Co., Ltd.
Seoul
info@julabo-korea.co.kr
www.julabo-korea.co.kr

CHINA

JULABO Technology (Beijing) Co., Ltd.
Beijing
info@julabo.com.cn
www.julabo.com.cn

SOUTH AMERICA

JULABO Sudamérica
Buenos Aires
info@julabo-sudamerica.com
www.julabo-sudamerica.com

SINGAPORE

JULABO Singapore Pte., Ltd.
Singapore
info@julabo-singapore.com
www.julabo-singapore.com

INDIA

SISKIN Instruments Co. (P) Ltd.
Bangalore
info@julabo.in
www.julabo.in

Plus more than
100 partner distributors
worldwide



www.julabo.com

Julabo
THE TEMPERATURE CONTROL COMPANY