



Dodavatel:

Adresát:

**Fisher Scientific, spol. s r.o.**

Holandská 584  
533 01 Pardubice

IČ: 45539928 DIČ: CZ45539928  
Zápis OR KS Hradec Králové, C.1920

Odběratel:

**Fyzikální ústav AV ČR, v.v.i.**

Na Slovance 1999/2  
182 00 Praha

IČ: 68378271 DIČ: CZ68378271

**Fyzikální ústav AV ČR, v.v.i.**

Na Slovance 1999/2  
182 00 Praha

Kontaktní osoba:

Pobočka:

Telefon:

Fax:

Zakázka:

**ZP250-01028**

Poptávka:

Poptávka odběratele:

Vystavil:

Telefon:

Datum:

Platnost do:

**24.1.2025**
**2.5.2025**

VŘ-Dynamic temperature control system

Kód	Název zboží	Množství	MJ	Cena/MJ	Celkem bez DPH	DPH
5703-8115	Julabo Presto A80 Chladič 1 (Chiller 1)- JULABO 9420801	1,000	ks			21%
9995-4409	Julabo Presto A85 Chladič 2 (Chiller 2)- JULABO 9420852	1,000	ks			21%

Celkem bez DPH: 1 629 000,00 CZK


Sazba DPH	Základ	DPH
0 %	0,00	0,00
12 %	0,00	0,00
21 %	1 629 000,00	342 090,00

Celkem s DPH: **1 971 090,00 CZK**
**1. Celková cena CZK bez DPH: Total bid price (in CZK excl. VAT): 1 629 000 CZK**
**2. Technical characteristics of the bid** (lowest achievable negative temperature in °C).

Chladič 1 (chiller 1) JULABO PRESTO A80: - 80 °C

Chladič 2 (chiller 2)JULABO PRESTO A85: - 85 °C

**3. Délka záruky: Length of warranty period (in years)\_Záruční doba: 2 roky.**

Záruční a pozáruční servis zajišťuje naše servisní středisko. Fisher Scientific, spol. s r.o., Holandská 584, Pardubice, 533 01. Vedoucí servisu , [servis.cz@thermofisher.com](mailto:servis.cz@thermofisher.com)

## PRESTO A80 Process system

As air- or water-cooled versions, the units with 2-stage refrigeration unit offer high cooling and heating capacities for lowest temperatures down to -80 °C.

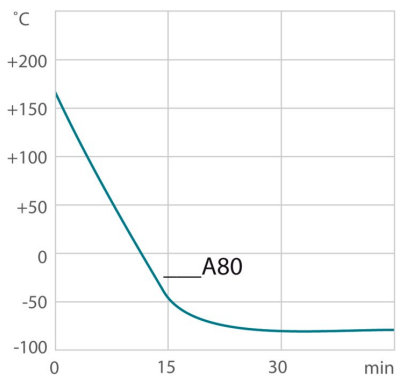
The highly dynamic temperature control systems PRESTO are designed for high-precision temperature control for a wide range of applications such as reactor vessels or material stress tests. Moreover, by using efficient components, the process systems can compensate exothermic and endothermic reactions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

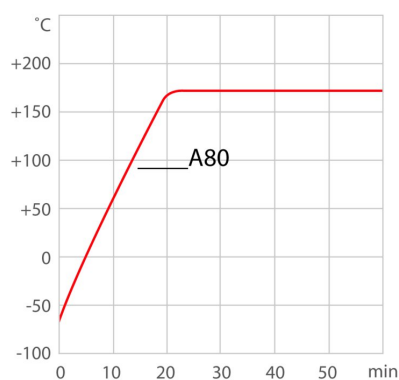
- Analog connections, RS485, Profibus DP (accessory)
- Space optimized design creates more room directly next to the units
- External Pt100 sensor connection
- Built-in 5.7" industrial color touchscreen
- Second external Pt100 sensor connection (accessory)
- Alarm output
- Temperature stability  $\pm 0.01$  °C ...  $\pm 0.05$  °C
- Pump pressure up to 1.7 bar, max. flow rate 40 l/min
- Heating capacity up to 3.4 kW
- Cooling capacity up to 1.2 kW
- removable ventilation grid

### Cool-down time



Medium: Thermal HL

### Heat-up time



Medium: Thermal HL

## Performance values

### 230V/50Hz (Schuko Plug - CEE 7/4 Plug Type F)

Heating capacity kW	1.8
Viscosity max. cSt	50
Pump capacity flow pressure l/min	0 ... 40
Pump capacity pressure bar	0.1 ... 1.7
Power consumption A	16

### Refrigerant variants

Order number including voltage version 9420801.03

#### Cooling capacity (Ethanol)

°C	20	0	-20	-40	-60	-80
kW <sup>1</sup>	1.2	1.2	1.1	1.1	0.65	0.1

#### Refrigerant stage 1

Refrigerant	R507
Filling weight g	1140
Global Warming Potential for R507	3985
Carbon dioxide equivalent t	4.5429

#### Refrigerant stage 2

Refrigerant	R23
Filling weight g	500
Global Warming Potential for R23	14800
Carbon dioxide equivalent t	7.4

Order number including voltage version 9420801.S1.03

#### Cooling capacity (Ethanol)

°C	20	0	-20	-40	-60
kW <sup>1</sup>	1.3	1.2	1.1	1	0.7

#### Refrigerant stage 1

Refrigerant	R449A
Filling weight g	1140
Global Warming Potential for R449A	1397
Carbon dioxide equivalent t	1.59258

#### Refrigerant stage 2

Refrigerant	R23
Filling weight g	500
Global Warming Potential for R23	14800
Carbon dioxide equivalent t	7.4

<sup>1</sup> 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.

## Technical data

### Available voltage versions

Order No. 9420801

#### Available voltage versions:

9420801.03	230V/50Hz (Schuko Plug - CEE 7/4 Plug Type F) (R507)
9420801.S1.03	230V/50Hz (Schuko Plug - CEE 7/4 Plug Type F) (R449A)
9420801.04	230V/50Hz (UK Plug Type BS1363A) (R507)
9420801.14	208V/60Hz (Nema N6-20 Plug) (R507)

### Cooling

Cooling of compressor 2-stage Air

Other		Electronics	
Sound pressure level dbA	68	Interfaces	Alarm output, Ethernet, Modbus TCP/IP, Profibus optional, REG/EPROG optional, RS232, RS485 optional, SD memory card, Standby-Input optional, USB
Classification	Classification III (FL)		
IP Code	IP 20		
Pump type	Centrifugal Pump		
Pump type Magnetically coupled	1		
		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		Temperature values	
Internal usable expansion volume l	5.6	Setting the resolution of the temperature display °C	0.01
Minimal process volume l	3.9	Working temperature range °C	-80 ... +250
Active heat exchanger volume l	1.7	Temperature stability °C	±0.01 ... ±0.05
Weight kg	164	Ambient temperature °C	+5 ... +40
Total dimensions cm (W × L × H)	43 x 65 x 126	Temperature display resolution °C	0.01
Pump connections	M24x1.5 male		

## 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.



### 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



### 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

**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.**

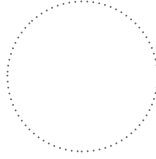
Highest standards of quality for a long product life.

**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](http://www.julabo.com).

## PRESTO A85 Process system

High cooling capacities enable extremely low temperatures down to  $-85\text{ }^{\circ}\text{C}$  possible. The high heating capacity, particularly with the A85t and the W85t, provides even more flexibility in the application.

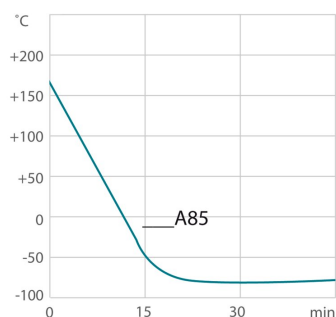
The highly dynamic temperature control systems PRESTO are designed for high-precision temperature control for a wide range of applications such as reactor vessels or material stress tests. Moreover, by using efficient components, the process systems can compensate exothermic and endothermic reactions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

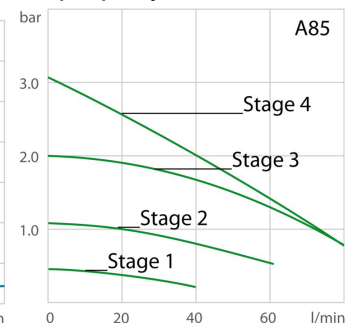
- Cooling capacity up to 2.8 kW
- External Pt100 sensor connection
- Connections for alarm-output, Pt100 external sensor and standby-input
- Analog connections, RS485, Profibus DP (accessory)
- Built-in 5.7" industrial color touchscreen
- Second external Pt100 sensor connection (accessory)
- Alarm output
- Heating capacity up to 15 kW
- Temperature stability  $\pm 0.05\text{ }^{\circ}\text{C}$  ...  $\pm 0.1\text{ }^{\circ}\text{C}$
- Pump pressure up to 3 bar, max. flow rate 80 l/min
- removable ventilation grid

Cool-down time

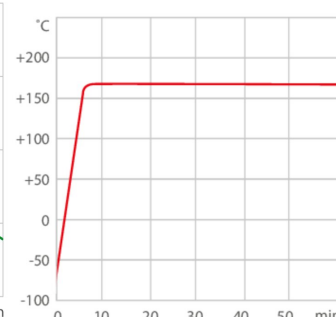


Medium: Thermal HL

Pump capacity

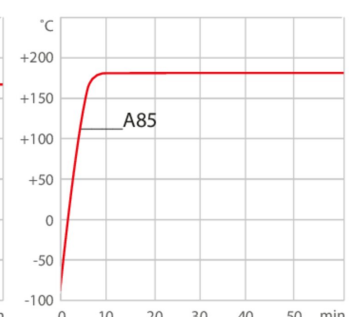


Heat-up time



Medium: Thermal HL

Heat-up time



Medium: Ethanol

## Performance values

### 230V/3PPE/50Hz (Plug 32A CEE)

Heating capacity kW	6
Viscosity max. cSt	50
Pump capacity flow pressure l/min	0 ... 80
Pump capacity pressure bar	0.1 ... 3

Order number including voltage version 9420852.06

#### Cooling capacity (Ethanol)

°C	20	0	-20	-30	-40	-60	-80
kW <sup>1</sup>	2.5	2.4	2.4	2.4	2.4	2.2	0.4

#### Refrigerant stage 1

Refrigerant	R507
Filling weight g	1600
Global Warming Potential for R507	3985
Carbon dioxide equivalent t	6.376

#### Refrigerant stage 2

Refrigerant	R23
Filling weight g	680
Global Warming Potential for R23	14800
Carbon dioxide equivalent t	10.064

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## Technical data

### Available voltage versions

Order No. 9420852

#### Available voltage versions:

9420852.07	400V/3PNPE/50Hz (Plug 32A CEE) (R507)
9420852.16	208-230V/3PPE/60Hz (Without Plug) (R507)
9420852.06	230V/3PPE/50Hz (Plug 32A CEE) (R507)

### Other

Sound pressure level dbA	69
Classification	Classification III (FL)
IP Code	IP 20
Pump type	Centrifugal Pump
Pump type Magnetically coupled	1

### Cooling

Cooling of compressor 2-stage Air

### Electronics

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

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

Internal usable expansion volume l 7

### Temperature values

Minimal process volume l	9.5	Setting the resolution of the temperature display °C	0.01
Active heat exchanger volume l	5	Working temperature range °C	-85 ... +250
Weight kg	365	Temperature stability °C	±0.05 ... ±0.1
Total dimensions cm (W × L × H)	61 x 108 x 125	Ambient temperature °C	+5 ... +40
Pump connections	M30x1.5 male	Temperature display resolution °C	0.01

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### For flammable bath fluid

Classification III (FL) according to DIN 12876-1



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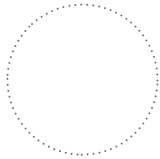
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