

## CF40 Cryo-compact circulator

The cryo-compact circulators of the CF series provide powerful cooling and heating capabilities in a space-saving, compact design. The instruments feature 2 kW heating capacity and classification III according to DIN 12876-1. The cryo-compact circulators have pump connections for external temperature control applications and a bath opening for temperature control of small objects.

### Product features

- Ergonomic design and easy operation
- Small overall dimensions for lowest space requirement
- Splash-proof keypad
- Large, bright LED display
- Precise PID temperature control
- RS232 interface for PC connection
- Adjustable high temperature cut-out, visible via display
- Pump connections for external temperature applications
- Bath opening for temperature control of small objects in the bath
- Front drain
- Extra bright displays, easy to read from a distance
- Precise temperature control
- Unique early warning system for low liquid level
- ATC3 3-Point-Calibration
- Class III (FL) according to DIN 12876-1



### Performance values

230V/50Hz (Schuko Plug - CEE 7/4 Plug Type F)	
Heating capacity kW	2
Viscosity max. cSt	30
Pump capacity flow rate l/min	15
Pump capacity flow pressure bar	0.35
Power consumption A	12

Order No.	9400340.03			
Cooling capacity (Ethanol)				
°C	20	0	-20	-30
kW <sup>1</sup>	0.47	0.4	0.28	0.12
Refrigerant stage 1				
Refrigerant	R452A			
Filling weight g	170			
Global Warming Potential for R452A	2140			
Carbon dioxide equivalent t	0.3638			

<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

<b>Available voltage versions</b>		<b>Cooling</b>	
Order No.	9 400 340	Cooling of compressor	1-stage Air
Available voltage versions:			
9400340.13	230V/60Hz (Nema N6-20 Plug) (R449A)		
9400340.02	115V/60Hz (Nema N5-15 Plug) (R449A)		
9400340.03	230V/50Hz (Schuko Plug - CEE 7/4 Plug Type F) (R452A)		
9400340.04	230V/50Hz (UK Plug Type BS1363A) (R452A)		
<b>Bath</b>		<b>Other</b>	
Bath tank	Stainless steel	Classification	Classification III (FL)
Bath cover	integrated	IP Code	IP 21
Usable bath opening cm (W x L / D)	19 x 3 / 19	Pump type	Immersion Pump
<b>Electronics</b>		<b>Dimensions and volumes</b>	
Temperature control	PID1	Weight kg	44
Temperature display	LED	Barbed fittings inner diameter mm	8/12 mm
		Dimensions cm (W x L x H)	28 x 46 x 46
		Filling volume l	4 ... 5.5
		Pump connections	M16x1 male
<b>Temperature values</b>		<b>Included in delivery</b>	
Working temperature range °C	-40 ... +150	2 Barbed fittings for tubing 8 and 12 mm ID. (Pump connections M16x1 male)	
Temperature stability °C	±0.03		
Ambient temperature °C	+5 ... +40		
Setting the resolution of the temperature display °C	0.1		

## All Benefits



**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).



**Precise**  
PID Temperature control with set control parameters, temperature stability  $\pm 0.02 \dots \pm 0.2 \text{ } ^\circ\text{C}$