

CF41 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
- Bright VFD display and interactive LCD dialog display
- Highly precise ICC cascade temperature control
- RS232/RS485 interface for PC connection
- SMART PUMP, electronically adjustable pump stages
- Pt100 External sensor connection for measurement and control
- Integrated programmer for 6 x 60 program steps
- Unique early warning system for low liquid level
- ATC3 3-Point-Calibration
- TCF Temperature Control Features
- 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
- 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	70
Pump capacity flow rate l/min	22 ... 26
Pump capacity flow pressure psi	5.8 ... 10.2
Maximum suction psi	2.9 ... 5.8
Power consumption A	13

Order No.	9400341.03			
Cooling capacity (Ethanol)				
°C	20	0	-20	-30
kW ¹	0.47	0.4	0.28	0.12
Refrigerant stage 1				
Refrigerant	R452A			
Filling weight g	153			
Global Warming Potential for R452A	2140			
Carbon dioxide equivalent t	0.32742			

¹ 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		Cooling	
Order No.	9 400 341	Cooling of compressor	1-stage Air
Available voltage versions:			
9400341.13	230V/60Hz (Nema N6-20 Plug) (R449A)		
9400341.02	115V/60Hz (Nema N5-20 Plug) (R449A)		
9400341.03	230V/50Hz (Schuko Plug - CEE 7/4 Plug Type F) (R452A)		
9400341.04	230V/50Hz (UK Plug Type BS1363A) (R452A)		
Bath		Other	
Bath tank	Stainless steel	Classification	Classification III (FL)
Bath cover	integrated	IP Code	IP 21
Usable bath opening in. (W x L / D)	7.5 x 1.2 / 7.5	Pump type	Immersion Pump
Electronics		Dimensions and volumes	
Interfaces	Alarm output optional, REG/EPROG optional, RS485, Standby-Input optional	Weight lbs	97
External pt100 sensor connection	integrated	Barbed fittings inner diameter mm	8/12 mm
Integrated programmer	6x60 steps	Dimensions in. (W x L x H)	11 x 18.1 x 18.1
Temperature control	ICC	Filling volume l	4 ... 5.5
Absolute temperature calibration	3 Point Calibration	Pump connections	M16x1 male
Temperature display	LCD		
Temperature values		Included in delivery	
Working temperature range °C	-40 ... +200	2 Barbed fittings for tubing 8 and 12 mm ID. (Pump connections M16x1 male)	
Temperature stability °C	±0.02		
Ambient temperature °C	+5 ... +40		
Setting the resolution of the temperature display °C	0.01		

All Benefits

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S3

For flammable bath fluid
Classification III (FL) according to DIN 12876-1



ATC3

ATC3. Calibration.
'Absolute Temperature Calibration' for compensating a physically caused temperature difference, 3-point calibration.
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TCF

Process. Under control.
Full control of the dynamic, access to all important control parameters for individual process optimization.



ACC

100 % Cooling capacity
'Active Cooling Control' for cooling available throughout the entire working temperature range, fast cool-down even at higher temperatures
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Early warning system for high/low temperature limits
Maximum safety for applications, optical and audible alarm, convertible to automated cut-off function



Energy saving cooling
Proportional cooling control for automatic adjustment of cooling power or temporary switch-off of compressor as needed to save up to 90 % energy in comparison to unregulated cooling machines
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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.
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JULABO. Quality.
Highest standards of quality for a long product life.



Quick start.
Individual JULABO consultation and comprehensive manuals at your disposal.
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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.
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ICC

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