

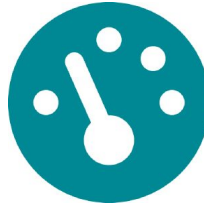
CORIO CD-449F Refrigerated / heating circulator

Refrigerated / heating circulators of the CORIO series distinguish themselves with a great price-to-performance ratio. They are ideal for all standard tasks and routine work in laboratories and industry.

The CORIO CP-449F refrigerated circulator has an exceptionally large bath volume. This makes the unit ideal for precisely tempering larger or a variety of different samples in the bath.

High energy efficiency

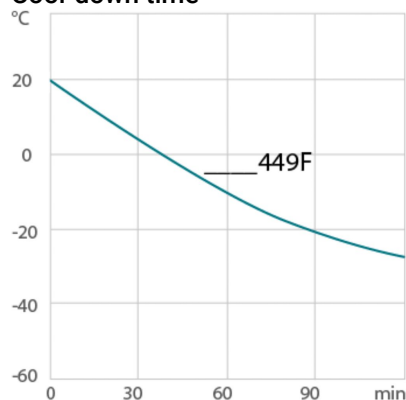
The 449F cooling machine uses natural, environmentally friendly refrigerant and was also developed with a focus on energy efficiency. This leads to significant operating cost savings in many application scenarios and thus to a faster amortization of the investment. At the same time, the lower energy consumption makes a positive contribution to climate protection.



Product features

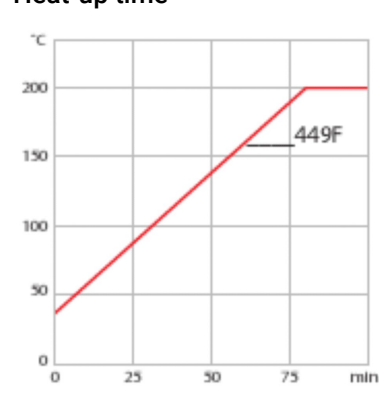
- Models for internal and external applications
- Bright, white, easy to read display
- Very quiet
- Easy pump change-over between internal and external circulation
- External pump connections
- USB connection
- Bath lid and drain tap included
- Removable ventilation grid
- Refrigeration unit without side vents
- Class III (FL) according to DIN 12876-1

Cool-down time



Medium: Ethanol

Heat-up time



Medium: Thermal

Performance values

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

Heating capacity kW	2
Viscosity max. cSt	50
Pump capacity flow rate l/min	15
Pump capacity flow pressure bar	0.35
Power consumption A	12

Order No. 9012716.N1.03

Cooling capacity (Ethanol)

°C	20	0	-10	-20	-30
kW	0.45	0.36	0.28	0.21	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.

Note about natural refrigerants:

Temperature control units using natural refrigerants are often subject to regulatory requirements regarding the installation site, operation, transport or disposal of the units. If you have any questions, we will be happy to advise you.

Refrigerant stage 1

Refrigerant R290

Filling weight g 41

Global Warming Potential 3
for R290

Carbon dioxide equivalent 0.000123
t

Technical data

Available voltage versions

Order No.	9 012 716
Available voltage versions:	
9012716.N1.01	100V/50-60Hz (Nema N5-15 Plug) (R290)
9012716.N1.02	115V/60Hz (Nema N5-15 Plug) (R290)
9012716.N1.03	230V/50Hz (Schuko Plug - CEE 7/4 Plug Type F) (R290)
9012716.N1.03.chn	230V/50Hz (CN Plug) (R290)
9012716.N1.04	230V/50Hz (UK Plug Type BS1363A) (R290)
9012716.N1.05	230V/50Hz (CH Plug Type SEV 1011) (R290)
9012716.N1.13	230V/60Hz (Schuko Plug - CEE 7/4 Plug Type F) (R290)

Bath

Bath tank	Stainless steel
Bath cover	integrated
Usable bath opening cm (W x L / D)	28 x 35 / 20

Cooling

Cooling of compressor 1-stage Air

Other

Classification	Classification III (FL)
IP Code	IP 21
Pump function	Pressure Pump

Electronics		Dimensions and volumes	
Interfaces	USB	Weight kg	39.5
Temperature control	PID1	Barbed fittings inner diameter	8/12 mm
Absolute temperature calibration	1 Point Calibration	Dimensions cm (W x L x H)	37 x 59 x 69
Temperature display	LED	Filling volume l	21 ... 30
Temperature setting	Keypad	Pump connections	M16x1 male

Temperature values		Included in delivery	
Setting the resolution of the temperature display °C	0.1	2 Barbed fittings for tubing 8 and 12 mm ID. (Pump connections M16x1 male)	
Working temperature range °C	-32 ... +150		
Temperature stability °C	±0.03		
Ambient temperature °C	+5 ... +40		
Temperature display resolution °C	0.01 ... 0.1		

All Benefits



100% Checked.
100% testing. 100% quality. Each JULABO Circulator undergoes thorough quality testing before leaving the factory.



Satisfied customers.
11 subsidiaries and more than 100 partners worldwide guarantee fast and qualified JULABO support.



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



Timer. Integrated.
CORIO circulators include an integrated timer function. When the set time has elapsed, a signal sounds and the device switches off. Setting range: 0 ... 999 minutes.



Connection. Easy.
Inclined pump connections (M16x1) facilitate the connection of applications. Each unit includes 2 barbed fittings of 8/12 mm diameter each.



Exact.
You can rely on it. PID1 control and 'Active Cooling Control' make the new CORIO precise and perfect.



ATC.
Absolute Temperature Calibration, 1-point calibration (CD).



Services 24/7.
Around the clock availability. You can find suitable accessories, data sheets, manuals, case studies, and more at www.julabo.com.



Quick support
If an error occurs, the integrated Black-Box function permits fast diagnosis by the JULABO service team



Brilliant.
Very bright display makes it easy to read even from a distance.



Everything at the front.
All operating controls and safety functions are accessed easily and comfortably from the front.



Locked in.
The lockable power plug guarantees safe connection. More process safety.



Switch on. And off you go.
Intelligent operating concept. Ready for operation with just a few quick and easy steps.



Connectivity.
Remote control made easy. CORIO CD circulators feature a USB connection.



Early warning system for low liquid level
Maximum safety for applications, optical and audible alarm, allows user to refill bath fluid before the unit shuts down