

CORIO CP-449F Refrigerated / heating circulator

Refrigerated circulators from the CORIO CP range are suitable for applications with a temperature range up to +200°C. The enhanced pump performance ensures they are suitable for easy temperature control tasks in combination with external applications.

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

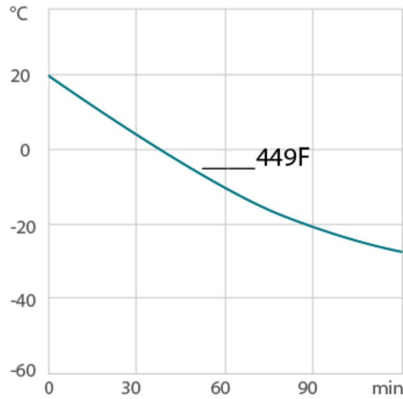
The 449F cooling machine uses natural, environmentally friendly refrigerant and was also developed with a focus on energy efficiency. This leads to significant operating cost savings in many application scenarios and thus to a faster amortization of the investment. At the same time, the lower energy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



Product features

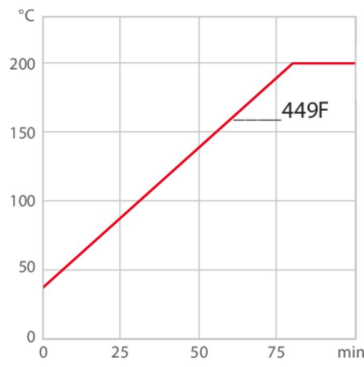
- Models for internal and external applications
- Bright, white, easy to read display
- Very quiet
- powerful and infinitely adjustable pressure pump
- USB connection
- RS232 interface for online communication
- Bath lid and drain tap included
- Removable ventilation grid
- Refrigeration unit without side vents
- Class III (FL) according to DIN 12876-1
- easy switching between internal and external circulation
- Integrated pump connection M16×1
- Space-saving cooling coil design provides more usable space in the bath tank
- early warning system for low liquid level

Cool-down time



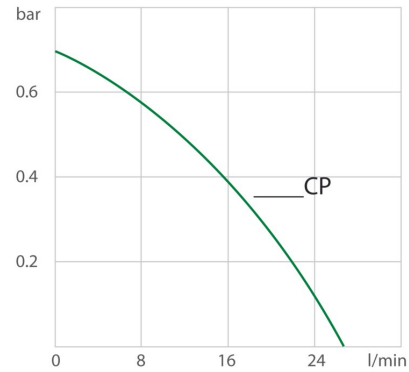
Medium: Ethanol

Heat-up time



Medium: Thermal

Pump capacity



Medium: Water

Performance values

115V/60Hz (Nema N5-15 Plug)

| | |
|---------------------------------|--------------|
| Heating capacity kW | 1 |
| Viscosity max. cSt | 50 |
| Pump capacity flow rate l/min | 8 ... 27 |
| Pump capacity flow pressure psi | 1.5 ... 10.2 |
| Power consumption A | 12 |

Order No. 9013716.N1.02

Cooling capacity (Ethanol)

| °C | 20 | 0 | -10 | -20 | -30 |
|----|------|------|------|-----|------|
| kW | 0.44 | 0.35 | 0.27 | 0.2 | 0.06 |

*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. | 9 013 716 |
| Available voltage versions: | |
| 9013716.N1.01 | 100V/50-60Hz (Nema N5-15 Plug) (R290) |

Bath

| | |
|-------------------------------------|-----------------|
| Bath tank | Stainless steel |
| Bath cover | integrated |
| Usable bath opening in. (W x L / D) | 11 x 13.8 / 7.9 |

| | |
|-------------------|---|
| 9013716.N1.02 | 115V/60Hz (Nema N5-15 Plug) (R290) |
| 9013716.N1.33 | 200-230V/50-60Hz (Schuko Plug - CEE 7/4 Plug Type F) (R290) |
| 9013716.N1.33.chn | 200-230V/50-60Hz (CN Plug) (R290) |
| 9013716.N1.04 | 200-230V/50-60Hz (UK Plug Type BS1363A) (R290) |
| 9013716.N1.05 | 200-230V/50-60Hz (CH Plug Type SEV 1011) (R290) |

Cooling

| | |
|-----------------------|-------------|
| Cooling of compressor | 1-stage Air |
|-----------------------|-------------|

Other

| | |
|----------------|-------------------------|
| Classification | Classification III (FL) |
| IP Code | IP 21 |
| Pump function | Pressure Pump |
| Pump type | Immersion Pump |

Electronics

| | |
|----------------------------------|---------------------|
| Interfaces | RS232, USB |
| Temperature control | PID1 |
| Absolute temperature calibration | 3 Point Calibration |
| Temperature display | LED |
| Temperature setting | Keypad |
| Electronic Timer hr:min | 0 ... 999 |

Dimensions and volumes

| | |
|--------------------------------|--------------------|
| Weight lbs | 87.1 |
| Barbed fittings inner diameter | 8/12 mm |
| Dimensions in. (W x L x H) | 14.6 x 23.2 x 27.2 |
| Filling volume l | 21 ... 30 |
| Pump connections | M16x1 male |

Temperature values

| | |
|--|--------------|
| Setting the resolution of the temperature display °C | 0.1 |
| Working temperature range °C | -32 ... +200 |
| Temperature stability °C | ±0.03 |
| Ambient temperature °C | +5 ... +40 |
| Temperature display resolution °C | 0.01 ... 0.1 |

Included in delivery

2 Barbed fittings for tubing 8 and 12 mm ID. (Pump connections M16x1 male)

All Benefits



Brilliant.

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



Switch on. And off you go.

Intelligent operating concept. Ready for operation with just a few quick and easy steps.



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.



Everything at the front.

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



Exact.

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



Locked in.

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



Connection. Easy.
Inclined pump connections (M16×1) facilitate the connection of applications. Each unit includes 2 barbed fittings of 8/12 mm diameter each.



Powerful. Adjustable.
Strong pressure pump, continuously adjustable.



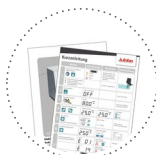
Early warning system for low liquid level.
Maximum safety for your application. Optical and audible alarm allows user to refill bath fluid in time.



Connectivity.
Remote control made easy. CORIO CP circulators feature a USB connection and RS232 interface.



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



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.



Highest measuring accuracy
'Absolute Temperature Calibration' for manual compensation of a temperature difference, 3-point calibration



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