

## CORIO CD-1000F Refrigerated / heating circulator

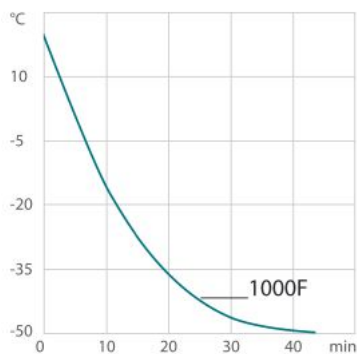
Refrigerated / heating circulators of the new CORIO series distinguish themselves with a great price-to-performance ratio. They are ideal for all standard tasks and routine work in laboratories and industry.

### 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
- Space-saving cooling coil design provides more usable space in the bath tank
- Bath lid and drain tap included
- Removable ventilation grid
- Refrigeration unit without side vents
- Class III (FL) according to DIN 12876-1
- Very quiet
- High-quality bath tanks made of stainless steel with bath lid and drain tap

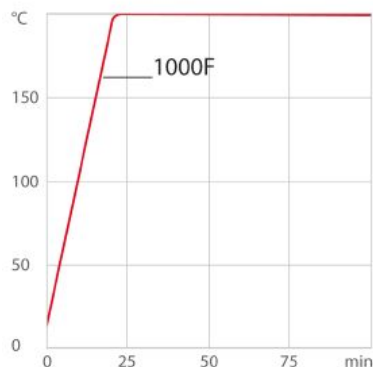


### Cool-down time



Medium: Ethanol

### Heat-up time (230V, 2kW heater)



Medium: Thermal

### Performance values

|                                 |     |
|---------------------------------|-----|
| 115V/60Hz (Nema N5-20 Plug)     |     |
| Heating capacity kW             | 1   |
| Viscosity max. cST              | 50  |
| Pump capacity flow rate l/min   | 16  |
| Pump capacity flow pressure psi | 4.8 |
| Power A                         | 16  |

|   |            |    |      |      |      |      |      |
|---|------------|----|------|------|------|------|------|
| Order No.   | 9012707.02 |    |      |      |      |      |      |
| Cooling capacity (Ethanol)  |            |    |      |      |      |      |      |
| °C  | 20         | 10 | 0    | -10  | -20  | -30  | -40  |
| kW  | 1          | 1  | 0.98 | 0.75 | 0.53 | 0.27 | 0.13 |
| * Performance specifications measured in accordance with DIN12876. 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. |            |    |      |      |      |      |      |
| Refrigerant stage 1   |            |    |      |      |      |      |      |
| Refrigerant   | R449A      |    |      |      |      |      |      |
| Filling volume g  | 190        |    |      |      |      |      |      |
| Global Warming Potential for R449A  | 1397       |    |      |      |      |      |      |
| Carbon dioxide equivalent t   | 0.265      |    |      |      |      |      |      |
| 230V/60Hz (Nema N6-20 Plug)   |            |    |      |      |      |      |      |
| Heating capacity kW   | 2          |    |      |      |      |      |      |
| Viscosity max. cST  | 50         |    |      |      |      |      |      |
| Pump capacity flow rate l/min   | 17         |    |      |      |      |      |      |
| Pump capacity flow pressure psi   | 6.2        |    |      |      |      |      |      |
| Power A   | 14         |    |      |      |      |      |      |
| Order No.   | 9012707.13 |    |      |      |      |      |      |
| Cooling capacity (Ethanol)  |            |    |      |      |      |      |      |
| °C  | 20         | 10 | 0    | -10  | -20  | -30  | -40  |
| kW  | 1          | 1  | 0.98 | 0.75 | 0.53 | 0.27 | 0.13 |
| * Performance specifications measured in accordance with DIN12876. 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. |            |    |      |      |      |      |      |
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## Technical data

| Available voltage versions  |  | Bath                                |                 |
|-----------------------------|--|-------------------------------------|-----------------|
| Order No.                   | 9 012 707                                | Bath tank                           | Stainless steel |
| Available voltage versions: |  | Bath cover                          | integrated      |
| 9012707.13                  | 230V/60Hz (Nema N6-20 Plug) (R449A)      | Usable bath opening in. (W x L / D) | 7.1 x 5.1 / 5.9 |
| 9012707.03.chn              | 230V/50Hz (CN Plug) (R449A)              |                                     |                 |
| 9012707.04                  | 230V/50Hz (UK Plug Type BS1363A) (R449A) |                                     |                 |

|            |   |
|------------|---|
| 9012707.05 | 230V/50Hz (CH Plug Type SEV 1011) (R449A)             |
| 9012707.02 | 115V/60Hz (Nema N5-20 Plug) (R449A)                   |
| 9012707.03 | 230V/50Hz (Schuko Plug - CEE 7/4 Plug Type F) (R449A) |
| 9012707.12 | 200V/50-60Hz (Nema N6-20 Plug) (R449A)                |

### 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

|                                  |                     |
|----------------------------------|---------------------|
| Digital interface                | USB                 |
| Temperature control              | PID1                |
| Absolute temperature calibration | 1 Point Calibration |
| Temperature display              | LED                 |
| Temperature setting              | Keypad              |

### Dimensions and volumes

|                                |                    |
|--------------------------------|--------------------|
| Weight lbs                     | 113.5              |
| Barbed fittings inner diameter | 8/12 mm            |
| Dimensions in. (W x L x H)     | 16.5 x 19.3 x 29.1 |
| Filling volume l               | 5 ... 7.5          |
| Pump connections               | M16x1 male         |

### Temperature values

|  |              |
|--|--------------|
| Setting the resolution of the temperature display °C | 0.1          |
| Working temperature range °C                         | -40 ... +150 |
| 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



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



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



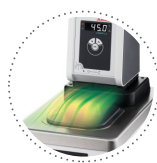
**Handle with ease.**  
Makes day-to-day work easy. Comfortably move your CORIO around by using the ergonomic handles (front and rear).



**Mobile.**  
Extra easy handling. Integrated castors for easy repositioning of refrigerated circulators.



**Space saving. Free up space.**  
Place your JULABO Circulator right next to an application, another unit, or wall. That saves space. This is made possible by eliminating vents and connections on the sides.



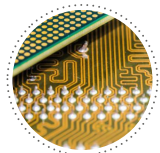
**Condensation protection.**  
Superb design solution. Integrated ventilation directs air over the bath lid and minimizes condensation.



**Green technology.**  
Development consistently applied environmentally friendly materials and technologies.



**Internal. External.**  
The pump is controlled via a lever located directly below the display. Easily change between internal and external circulation.



**Modern. Reliable.**  
High-grade components in every JULABO Circulator – platinum sensors, proven motor technology, CAN-Bus communication and much more.



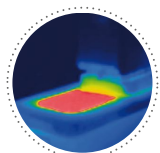
**Safety.**  
CORIO CD and CP comply with Class III (FL) according to DIN 12876-1 and switches off automatically in case of high temperature or low liquid level alarm.



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



**Solid.**  
Minimized energy loss through high-quality insulation.



**Stable.**  
Rubber feet allow for a secured footing of your CORIO to prevent damage to your laboratory equipment.



**Tidy.**  
The special drain tap for easy draining of bath fluids without tools.



**Touching permitted.**  
Optimum safety. The ergonomic plastic handle protects your fingers from hot surfaces.



**JULABO. Quality.**  
Highest standards of quality for a long product life.



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



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



**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.



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



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



**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.



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



**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



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