

## Refrigerated Circulators

### CORIO CD Refrigerated/Heating Circulators

for working temperatures from -40 °C to +150 °C

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

- Models for internal and external applications
- Bright, white, easy-to-read display
- Very quiet
- Easy change-over from internal to external circulation and vice versa
- External pump connections (M16×1)
- USB interface
- 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

To adapt the CORIO Refrigerated/Heating Circulator to your individual application, we offer a comprehensive range of accessories (bath fluid, tubing, adapter and more).

#### Applications

Temperature control of samples in a circulator bath or temperature control of an external application. For example measuring cells, refractometers, polarimeters, photometers, viscometers, fermenters, electrophoresis chambers, chromatography columns, rotary evaporators, rheometers and more.

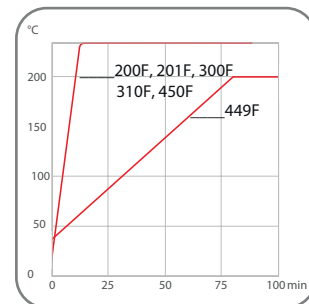


#### Maintenance. Friendly.

The magnetic front grid can be removed easily for user-friendly cleaning and maintenance. Without tools.

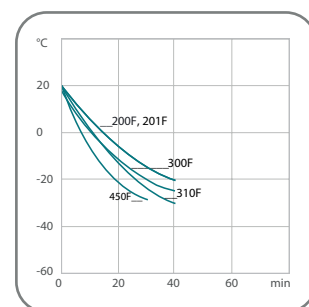
#### Heat-up time

Bath fluid: Thermal



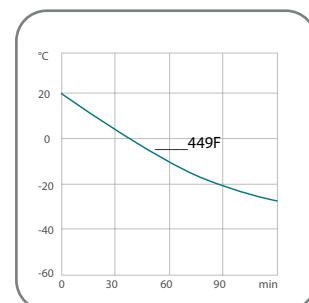
#### Cool-down time

Bath fluid: Ethanol



#### Cool-down time

Bath fluid: Ethanol





## CORIO™ CD-200F

|  |                           |               |
|--|---------------------------|---------------|
| <b>Order No.</b>                             | <b>9 012 701</b>          |               |
| Working temperature range °C                 | -20 ... +150              |               |
| Temperature stability °C                     | ± 0.03                    |               |
| Heating capacity kW                          | 2                         |               |
| Cooling capacity kW<br>(Bath fluid: Ethanol) | <b>+20 °C</b>             | <b>0 °C</b>   |
|  | 0.22                      | 0.17          |
|  | <b>-10 °C</b>             | <b>-20 °C</b> |
|  | 0.13                      | 0.06          |
| Pump capacity                                | l/min                     | bar           |
| Flow rate / Pressure                         | 15                        | 0.35          |
| Bath opening / Bath depth cm                 | W × L / D<br>13 × 15 / 15 |               |
| Filling volume liters                        | 3 ... 4                   |               |
| Dimensions cm                                | W × L × H<br>23 × 39 × 65 |               |



## CORIO™ CD-201F

|  |                           |               |
|--|---------------------------|---------------|
| <b>Order No.</b>                             | <b>9 012 702</b>          |               |
| Working temperature range °C                 | -20 ... +150              |               |
| Temperature stability °C                     | ± 0.03                    |               |
| Heating capacity kW                          | 2                         |               |
| Cooling capacity kW<br>(Bath fluid: Ethanol) | <b>+20 °C</b>             | <b>0 °C</b>   |
|  | 0.22                      | 0.16          |
|  | <b>-10 °C</b>             | <b>-20 °C</b> |
|  | 0.12                      | 0.06          |
| Pump capacity                                | l/min                     | bar           |
| Flow rate / Pressure                         | 15                        | 0.35          |
| Bath opening / Bath depth cm                 | W × L / D<br>13 × 15 / 15 |               |
| Filling volume liters                        | 3 ... 4                   |               |
| Dimensions cm                                | W × L × H<br>44 × 41 × 44 |               |



## CORIO™ CD-300F

|  |                           |               |
|--|---------------------------|---------------|
| <b>Order No.</b>                             | <b>9 012 703</b>          |               |
| Working temperature range °C                 | -25 ... +150              |               |
| Temperature stability °C                     | ± 0.03                    |               |
| Heating capacity kW                          | 2                         |               |
| Cooling capacity kW<br>(Bath fluid: Ethanol) | <b>+20 °C</b>             | <b>0 °C</b>   |
|  | 0.31                      | 0.28          |
|  | <b>-10 °C</b>             | <b>-20 °C</b> |
|  | 0.20                      | 0.11          |
| Pump capacity                                | l/min                     | bar           |
| Flow rate / Pressure                         | 15                        | 0.35          |
| Bath opening / Bath depth cm                 | W × L / D<br>13 × 15 / 15 |               |
| Filling volume liters                        | 3 ... 4                   |               |
| Dimensions cm                                | W × L × H<br>24 × 42 × 66 |               |



## CORIO™ CD-310F

|  |                           |               |
|--|---------------------------|---------------|
| <b>Order No.</b>                             | <b>9 012 713.N1*</b>      |               |
| Working temperature range °C                 | -30 ... +150              |               |
| Temperature stability °C                     | ± 0.03                    |               |
| Heating capacity kW                          | 2                         |               |
| Cooling capacity kW<br>(Bath fluid: Ethanol) | <b>+20 °C</b>             | <b>0 °C</b>   |
|  | 0.31                      | 0.28          |
|  | <b>-10 °C</b>             | <b>-20 °C</b> |
|  | 0.22                      | 0.13          |
| Pump capacity                                | l/min                     | bar           |
| Flow rate / Pressure                         | 15                        | 0.35          |
| Bath opening / Bath depth cm                 | W × L / D<br>13 × 15 / 15 |               |
| Filling volume liters                        | 3 ... 4                   |               |
| Dimensions cm                                | W × L × H<br>23 × 40 × 65 |               |



## CORIO™ CD-450F

|  |                           |               |
|--|---------------------------|---------------|
| <b>Order No.</b>                             | <b>9 012 714.N1*</b>      |               |
| Working temperature range °C                 | -30 ... +150              |               |
| Temperature stability °C                     | ± 0.03                    |               |
| Heating capacity kW                          | 2                         |               |
| Cooling capacity kW<br>(Bath fluid: Ethanol) | <b>+20 °C</b>             | <b>0 °C</b>   |
|  | 0.45                      | 0.38          |
|  | <b>-10 °C</b>             | <b>-20 °C</b> |
|  | 0.28                      | 0.17          |
| Pump capacity                                | l/min                     | bar           |
| Flow rate / Pressure                         | 15                        | 0.35          |
| Bath opening / Bath depth cm                 | W × L / D<br>13 × 15 / 15 |               |
| Filling volume liters                        | 3 ... 4                   |               |
| Dimensions cm                                | W × L × H<br>23 × 40 × 65 |               |



## CORIO™ CD-449F

|  |                           |               |
|--|---------------------------|---------------|
| <b>Order No.</b>                             | <b>9 012 716.N1</b>       |               |
| Working temperature range °C                 | -32 ... +150              |               |
| Temperature stability °C                     | ± 0.03                    |               |
| Heating capacity kW                          | 2                         |               |
| Cooling capacity kW<br>(Bath fluid: Ethanol) | <b>+20 °C</b>             | <b>0 °C</b>   |
|  | 0.45                      | 0.36          |
|  | <b>-10 °C</b>             | <b>-20 °C</b> |
|  | 0.28                      | 0.21          |
| Pump capacity                                | l/min                     | bar           |
| Flow rate / Pressure                         | 15                        | 0.35          |
| Bath opening / Bath depth cm                 | W × L / D<br>28 × 35 / 20 |               |
| Filling volume liters                        | 21 ... 30                 |               |
| Dimensions cm                                | W × L × H<br>37 × 59 × 69 |               |

\*also available with synthetic refrigerant (replace .N1 with .S1 in order number)

## Refrigerated Circulators



### CORIO™ CD-600F

|  |                           |               |               |
|--|---------------------------|---------------|---------------|
| <b>Order No.</b>                             | <b>9 012 704</b>          |               |               |
| Working temperature range °C                 | -35 ... +150              |               |               |
| Temperature stability °C                     | ± 0.03                    |               |               |
| Heating capacity kW                          | 2                         |               |               |
| Cooling capacity kW<br>(Bath fluid: Ethanol) | <b>+20 °C</b>             | <b>0 °C</b>   | <b>-10 °C</b> |
|  | 0.6                       | 0.46          | 0.29          |
|  | <b>-20 °C</b>             | <b>-30 °C</b> | <b>-40 °C</b> |
|  | 0.18                      | 0.06          | -             |
| Pump capacity                                | l/min                     | bar           |               |
| Flow rate / Pressure                         | 15                        | 0.35          |               |
| Bath opening / Bath depth cm                 | W × L / D<br>22 × 15 / 15 |               |               |
| Filling volume liters                        | 5 ... 7.5                 |               |               |
| Dimensions cm                                | W × L × H                 |               |               |
|  | 33 × 47 × 69              |               |               |



### CORIO™ CD-601F

|  |                           |               |               |
|--|---------------------------|---------------|---------------|
| <b>Order No.</b>                             | <b>3</b>                  |               |               |
| Working temperature range °C                 | -35 ... +150              |               |               |
| Temperature stability °C                     | ± 0.03                    |               |               |
| Heating capacity kW                          | 2                         |               |               |
| Cooling capacity kW<br>(Bath fluid: Ethanol) | <b>+20 °C</b>             | <b>0 °C</b>   | <b>-10 °C</b> |
|  | 0.6                       | 0.46          | 0.29          |
|  | <b>-20 °C</b>             | <b>-30 °C</b> | <b>-40 °C</b> |
|  | 0.18                      | 0.06          | -             |
| Pump capacity                                | l/min                     | bar           |               |
| Flow rate / Pressure                         | 15                        | 0.35          |               |
| Bath opening / Bath depth cm                 | W × L / D<br>22 × 15 / 20 |               |               |
| Filling volume liters                        | 8 ... 10                  |               |               |
| Dimensions cm                                | W × L × H                 |               |               |
|  | 33 × 47 × 74              |               |               |

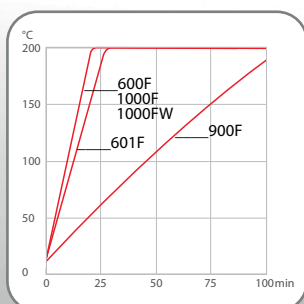


### CORIO™ CD-900F

|  |                           |               |               |
|--|---------------------------|---------------|---------------|
| <b>Order No.</b>                             | <b>9 012 706</b>          |               |               |
| Working temperature range °C                 | -38 ... +150              |               |               |
| Temperature stability °C                     | ± 0.03                    |               |               |
| Heating capacity kW                          | 2                         |               |               |
| Cooling capacity kW<br>(Bath fluid: Ethanol) | <b>+20 °C</b>             | <b>0 °C</b>   | <b>-10 °C</b> |
|  | 0.9                       | 0.8           | 0.55          |
|  | <b>-20 °C</b>             | <b>-30 °C</b> | <b>-40 °C</b> |
|  | 0.35                      | 0.15          | 0.02          |
| Pump capacity                                | l/min                     | bar           |               |
| Flow rate / Pressure                         | 15                        | 0.35          |               |
| Bath opening / Bath depth cm                 | W × L / D<br>26 × 35 / 20 |               |               |
| Filling volume liters                        | 21 ... 30                 |               |               |
| Dimensions cm                                | W × L × H                 |               |               |
|  | 39 × 62 × 75              |               |               |

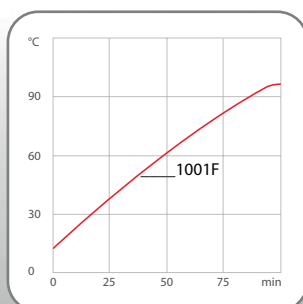
#### Heat-up time

Bath fluid: Thermal



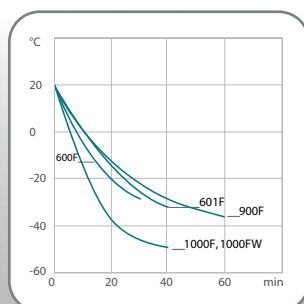
#### Heat-up time

Bath fluid: Thermal



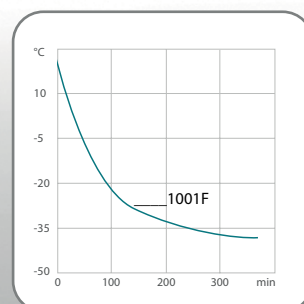
#### Cool-down time

Bath fluid: Ethanol



#### Cool-down time

Bath fluid: Ethanol







## CORIO™ CD-1000F

|  |                           |               |               |
|--|---------------------------|---------------|---------------|
| <b>Order No.</b>                             | <b>9 012 707</b>          |               |               |
| Working temperature range °C                 | -40 ... +150              |               |               |
| Temperature stability °C                     | ± 0.03                    |               |               |
| Heating capacity kW                          | 2                         |               |               |
| Cooling capacity kW<br>(Bath fluid: Ethanol) | <b>+20 °C</b>             | <b>0 °C</b>   | <b>-10 °C</b> |
|  | 1                         | 0.98          | 0.75          |
|  | <b>-20 °C</b>             | <b>-30 °C</b> | <b>-40 °C</b> |
|  | 0.53                      | 0.27          | 0.13          |
| Pump capacity                                | l/min                     | bar           |               |
| Flow rate / Pressure                         | 15                        | 0.35          |               |
| Bath opening / Bath depth cm                 | W × L / D<br>18 × 13 / 15 |               |               |
| Filling volume liters                        | 5 ... 7.5                 |               |               |
| Dimensions cm                                | W × L × H                 |               |               |
|  | 42 × 49 × 74              |               |               |

## CORIO™ CD-1000FW

|  |                           |               |               |
|--|---------------------------|---------------|---------------|
| <b>Order No.</b>                             | <b>9 012 727</b>          |               |               |
| Working temperature range °C                 | -40 ... +150              |               |               |
| Temperature stability °C                     | ± 0.03                    |               |               |
| Heating capacity kW                          | 2                         |               |               |
| Cooling capacity kW<br>(Bath fluid: Ethanol) | <b>+20 °C</b>             | <b>0 °C</b>   | <b>-10 °C</b> |
|  | 1                         | 0.98          | 0.75          |
|  | <b>-20 °C</b>             | <b>-30 °C</b> | <b>-40 °C</b> |
|  | 0.53                      | 0.27          | 0.13          |
| Pump capacity                                | l/min                     | bar           |               |
| Flow rate / Pressure                         | 15                        | 0.35          |               |
| Bath opening / Bath depth cm                 | W × L / D<br>18 × 13 / 15 |               |               |
| Filling volume liters                        | 5 ... 7.5                 |               |               |
| Dimensions cm                                | W × L × H                 |               |               |
|  | 42 × 49 × 74              |               |               |

## CORIO™ CD-1001F

|  |                           |               |               |
|--|---------------------------|---------------|---------------|
| <b>Order No.</b>                             | <b>9 012 708</b>          |               |               |
| Working temperature range °C                 | -38 ... +100              |               |               |
| Temperature stability °C                     | ± 0.03                    |               |               |
| Heating capacity kW                          | 2                         |               |               |
| Cooling capacity kW<br>(Bath fluid: Ethanol) | <b>+20 °C</b>             | <b>0 °C</b>   | <b>-10 °C</b> |
|  | 1                         | 0.95          | 0.63          |
|  | <b>-20 °C</b>             | <b>-30 °C</b> | <b>-40 °C</b> |
|  | 0.35                      | 0.13          | -             |
| Pump capacity                                | l/min                     | bar           |               |
| Flow rate / Pressure                         | 15                        | 0.35          |               |
| Bath opening / Bath depth cm                 | W × L / D<br>35 × 41 / 30 |               |               |
| Filling volume liters                        | 42 ... 56                 |               |               |
| Dimensions cm                                | W × L × H                 |               |               |
|  | 45 × 64 × 95              |               |               |



### Saves energy.

CORIO models come with various modes for the refrigeration unit: permanently on, permanently off, or on as refrigeration is needed. CORIO CD-600F to CORIO CD-1001F additionally contain a continuous automatic adjustment of the cooling capacity at the operating point to minimize the power consumption and the heat waste.

## Refrigerated Circulators

### CORIO CP Refrigerated/Heating Circulators

for working temperatures from -50 °C to +200 °C

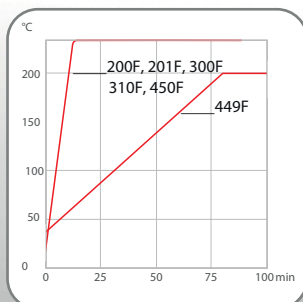
Refrigerated Circulators from the CORIO CP range are suitable for applications with a temperature range from -50°C to +200°C. The enhanced pump performance ensures they are suitable for easy temperature control tasks in combination with external applications.

- Models for internal and external applications
- Bright, white, easy-to-read display
- Very quiet
- Easy change-over from internal to external circulation and vice versa
- External pump connections (M16×1)
- pump capacity, infinitely adjustable
- USB interface
- RS232 interface
- 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
- System for low liquid level
- Class III (FL) according to DIN 12876-1

To adapt the CORIO Refrigerated/Heating Circulator to your individual application, we offer a comprehensive range of accessories (bath fluid, tubing, adapter and more)

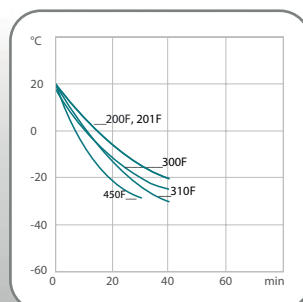
#### Heat-up time

Bath fluid: Thermal



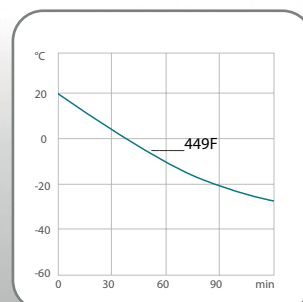
#### Cool-down time

Bath fluid: Ethanol



#### Cool-down time

Bath fluid: Ethanol





## CORIO™ CP-200F

|   |                           |               |
|---|---------------------------|---------------|
| <b>Order No.</b>                          | <b>9 013 701</b>          |               |
| Working temperature range °C              | -20 ... +200              |               |
| Temperature stability °C                  | ± 0.03                    |               |
| Heating capacity kW                       | 2                         |               |
|   | <b>+20 °C</b>             | <b>0 °C</b>   |
| Cooling capacity kW (Bath fluid: Ethanol) | 0.2                       | 0.15          |
|   | <b>-10 °C</b>             | <b>-20 °C</b> |
|   | 0.1                       | 0.02          |
| Pump capacity                             | l/min                     | bar           |
| Flow rate / Pressure                      | 8 ... 27                  | 0.1 ... 0.7   |
| Bath opening / Bath depth cm              | W × L / D<br>13 × 15 / 15 |               |
| Filling volume liters                     | 3 ... 4                   |               |
| Dimensions cm                             | W × L × H<br>23 × 39 × 65 |               |



## CORIO™ CP-201F

|   |                           |               |
|---|---------------------------|---------------|
| <b>Order No.</b>                          | <b>9 013 702</b>          |               |
| Working temperature range °C              | -20 ... +200              |               |
| Temperature stability °C                  | ± 0.03                    |               |
| Heating capacity kW                       | 2                         |               |
|   | <b>+20 °C</b>             | <b>0 °C</b>   |
| Cooling capacity kW (Bath fluid: Ethanol) | 0.2                       | 0.15          |
|   | <b>-10 °C</b>             | <b>-20 °C</b> |
|   | 0.1                       | 0.02          |
| Pump capacity                             | l/min                     | bar           |
| Flow rate / Pressure                      | 8 ... 27                  | 0.1 ... 0.7   |
| Bath opening / Bath depth cm              | W × L / D<br>13 × 15 / 15 |               |
| Filling volume liters                     | 3 ... 4                   |               |
| Dimensions cm                             | W × L × H<br>44 × 41 × 44 |               |



## CORIO™ CP-300F

|   |                           |               |
|---|---------------------------|---------------|
| <b>Order No.</b>                          | <b>9 013 703</b>          |               |
| Working temperature range °C              | -25 ... +200              |               |
| Temperature stability °C                  | ± 0.03                    |               |
| Heating capacity kW                       | 2                         |               |
|   | <b>+20 °C</b>             | <b>0 °C</b>   |
| Cooling capacity kW (Bath fluid: Ethanol) | 0.3                       | 0.27          |
|   | <b>-10 °C</b>             | <b>-20 °C</b> |
|   | 0.19                      | 0.08          |
| Pump capacity                             | l/min                     | bar           |
| Flow rate / Pressure                      | 8 ... 27                  | 0.1 ... 0.7   |
| Bath opening / Bath depth cm              | W × L / D<br>13 × 15 / 15 |               |
| Filling volume liters                     | 3 ... 4                   |               |
| Dimensions cm                             | W × L × H<br>24 × 42 × 66 |               |



## CORIO™ CP-310F

|   |                           |               |
|---|---------------------------|---------------|
| <b>Order No.</b>                          | <b>9 013 713.N1*</b>      |               |
| Working temperature range °C              | -30 ... +200              |               |
| Temperature stability °C                  | ± 0.03                    |               |
| Heating capacity kW                       | 2                         |               |
|   | <b>+20 °C</b>             | <b>0 °C</b>   |
| Cooling capacity kW (Bath fluid: Ethanol) | 0.3                       | 0.27          |
|   | <b>-10 °C</b>             | <b>-20 °C</b> |
|   | 0.21                      | 0.12          |
| Pump capacity                             | l/min                     | bar           |
| Flow rate / Pressure                      | 8 ... 27                  | 0.1 ... 0.7   |
| Bath opening / Bath depth cm              | W × L / D<br>13 × 15 / 15 |               |
| Filling volume liters                     | 3 ... 4                   |               |
| Dimensions cm                             | W × L × H<br>23 × 40 × 65 |               |



## CORIO™ CP-450F

|   |                           |               |
|---|---------------------------|---------------|
| <b>Order No.</b>                          | <b>9 013 714.N1*</b>      |               |
| Working temperature range °C              | -30 ... +200              |               |
| Temperature stability °C                  | ± 0.03                    |               |
| Heating capacity kW                       | 2                         |               |
|   | <b>+20 °C</b>             | <b>0 °C</b>   |
| Cooling capacity kW (Bath fluid: Ethanol) | 0.44                      | 0.37          |
|   | <b>-10 °C</b>             | <b>-20 °C</b> |
|   | 0.27                      | 0.16          |
| Pump capacity                             | l/min                     | bar           |
| Flow rate / Pressure                      | 8 ... 27                  | 0.1 ... 0.7   |
| Bath opening / Bath depth cm              | W × L / D<br>13 × 15 / 15 |               |
| Filling volume liters                     | 3 ... 4                   |               |
| Dimensions cm                             | W × L × H<br>23 × 40 × 65 |               |



## CORIO™ CP-449F

|   |                           |               |
|---|---------------------------|---------------|
| <b>Order No.</b>                          | <b>9 013 716.N1</b>       |               |
| Working temperature range °C              | -32 ... +200              |               |
| Temperature stability °C                  | ± 0.03                    |               |
| Heating capacity kW                       | 2                         |               |
|   | <b>+20 °C</b>             | <b>0 °C</b>   |
| Cooling capacity kW (Bath fluid: Ethanol) | 0.44                      | 0.35          |
|   | <b>-10 °C</b>             | <b>-20 °C</b> |
|   | 0.27                      | 0.2           |
| Pump capacity                             | l/min                     | bar           |
| Flow rate / Pressure                      | 8 ... 27                  | 0.1 ... 0.7   |
| Bath opening / Bath depth cm              | W × L / D<br>28 × 35 / 20 |               |
| Filling volume liters                     | 21 ... 30                 |               |
| Dimensions cm                             | W × L × H<br>37 × 59 × 69 |               |

\*also available with synthetic refrigerant (replace .N1 with .S1 in order number)

## Refrigerated Circulators



### CORIO™ CP-600F

|  |                           |             |        |
|--|---------------------------|-------------|--------|
| <b>Order No.</b>                             | 9 013 704                 |             |        |
| Working temperature range °C                 | -35 ... +200              |             |        |
| Temperature stability °C                     | ± 0.03                    |             |        |
| Heating capacity kW                          | 2                         |             |        |
| Cooling capacity kW<br>(Bath fluid: Ethanol) | +20 °C                    | 0 °C        | -10 °C |
|  | 0.6                       | 0.44        | 0.27   |
|  | -20 °C                    | -30 °C      | -40 °C |
|  | 0.16                      | 0.04        | -      |
| Pump capacity                                | l/min                     | bar         |        |
| Flow rate / Pressure                         | 8 ... 27                  | 0.1 ... 0.7 |        |
| Bath opening / Bath depth cm                 | W × L / D<br>22 × 15 / 15 |             |        |
| Filling volume liters                        | 5 ... 7.5                 |             |        |
| Dimensions cm                                | W × L × H                 |             |        |
|  | 33 × 47 × 69              |             |        |



### CORIO™ CP-601F

|  |                           |             |        |
|--|---------------------------|-------------|--------|
| <b>Order No.</b>                             | 9 013 705                 |             |        |
| Working temperature range °C                 | -35 ... +200              |             |        |
| Temperature stability °C                     | ± 0.03                    |             |        |
| Heating capacity kW                          | 2                         |             |        |
| Cooling capacity kW<br>(Bath fluid: Ethanol) | +20 °C                    | 0 °C        | -10 °C |
|  | 0.6                       | 0.44        | 0.27   |
|  | -20 °C                    | -30 °C      | -40 °C |
|  | 0.16                      | 0.04        | -      |
| Pump capacity                                | l/min                     | bar         |        |
| Flow rate / Pressure                         | 8 ... 27                  | 0.1 ... 0.7 |        |
| Bath opening / Bath depth cm                 | W × L / D<br>22 × 15 / 20 |             |        |
| Filling volume liters                        | 8 ... 10                  |             |        |
| Dimensions cm                                | W × L × H                 |             |        |
|  | 33 × 47 × 74              |             |        |

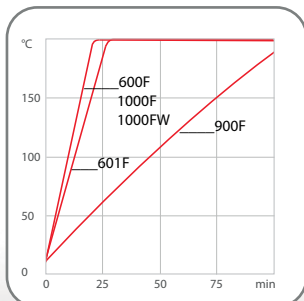


### CORIO™ CP-900F

|  |                           |             |        |
|--|---------------------------|-------------|--------|
| <b>Order No.</b>                             | 9 013 706                 |             |        |
| Working temperature range °C                 | -38 ... +200              |             |        |
| Temperature stability °C                     | ± 0.03                    |             |        |
| Heating capacity kW                          | 2                         |             |        |
| Cooling capacity kW<br>(Bath fluid: Ethanol) | +20 °C                    | 0 °C        | -10 °C |
|  | 0.9                       | 0.8         | 0.52   |
|  | -20 °C                    | -30 °C      | -40 °C |
|  | 0.31                      | 0.11        | -      |
| Pump capacity                                | l/min                     | bar         |        |
| Flow rate / Pressure                         | 8 ... 27                  | 0.1 ... 0.7 |        |
| Bath opening / Bath depth cm                 | W × L / D<br>26 × 35 / 20 |             |        |
| Filling volume liters                        | 21 ... 30                 |             |        |
| Dimensions cm                                | W × L × H                 |             |        |
|  | 39 × 62 × 75              |             |        |

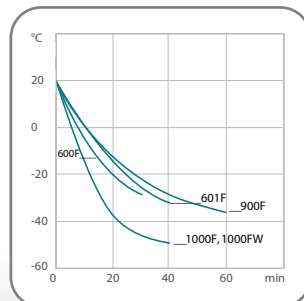
### Heat-up time

Bath fluid: Thermal



### Cool-down time

Bath fluid: Ethanol







## CORIO™ CP-1000F

|  |                           |               |               |
|--|---------------------------|---------------|---------------|
| <b>Order No.</b>                             | 9 013 707                 |               |               |
| Working temperature range °C                 | -50 ... +200              |               |               |
| Temperature stability °C                     | ± 0.03                    |               |               |
| Heating capacity kW                          | 2                         |               |               |
| Cooling capacity kW<br>(Bath fluid: Ethanol) | <b>+20 °C</b>             | <b>0 °C</b>   | <b>-10 °C</b> |
|  | 1                         | 0.96          | 0.73          |
|  | <b>-20 °C</b>             | <b>-30 °C</b> | <b>-40 °C</b> |
|  | 0.51                      | 0.25          | 0.11          |
| Pump capacity                                | l/min                     | bar           |               |
| Flow rate / Pressure                         | 8 ... 27                  | 0.1 ... 0.7   |               |
| Bath opening / Bath depth cm                 | W × L / D<br>18 × 13 / 15 |               |               |
| Filling volume liters                        | 5 ... 7.5                 |               |               |
| Dimensions cm                                | W × L × H<br>42 × 49 × 74 |               |               |

## CORIO™ CP-1000FW

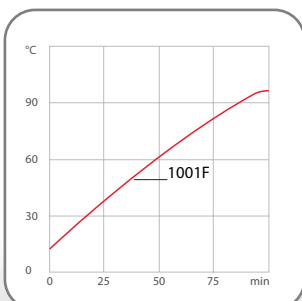
|  |                           |               |               |
|--|---------------------------|---------------|---------------|
| <b>Order No.</b>                             | 9 013 727                 |               |               |
| Working temperature range °C                 | -50 ... +200              |               |               |
| Temperature stability °C                     | ± 0.03                    |               |               |
| Heating capacity kW                          | 2                         |               |               |
| Cooling capacity kW<br>(Bath fluid: Ethanol) | <b>+20 °C</b>             | <b>0 °C</b>   | <b>-10 °C</b> |
|  | 1                         | 0.96          | 0.73          |
|  | <b>-20 °C</b>             | <b>-30 °C</b> | <b>-40 °C</b> |
|  | 0.51                      | 0.25          | 0.11          |
| Pump capacity                                | l/min                     | bar           |               |
| Flow rate / Pressure                         | 8 ... 27                  | 0.1 ... 0.7   |               |
| Bath opening / Bath depth cm                 | W × L / D<br>18 × 13 / 15 |               |               |
| Filling volume liters                        | 5 ... 7.5                 |               |               |
| Dimensions cm                                | W × L × H<br>42 × 49 × 74 |               |               |

## CORIO™ CP-1001F

|  |                           |               |               |
|--|---------------------------|---------------|---------------|
| <b>Order No.</b>                             | 9 013 708                 |               |               |
| Working temperature range °C                 | -38 ... +100              |               |               |
| Temperature stability °C                     | ± 0.03                    |               |               |
| Heating capacity kW                          | 2                         |               |               |
| Cooling capacity kW<br>(Bath fluid: Ethanol) | <b>+20 °C</b>             | <b>0 °C</b>   | <b>-10 °C</b> |
|  | 1                         | 0.9           | 0.6           |
|  | <b>-20 °C</b>             | <b>-30 °C</b> | <b>-40 °C</b> |
|  | 0.6                       | 0.12          | -             |
| Pump capacity                                | l/min                     | bar           |               |
| Flow rate / Pressure                         | 8 ... 27                  | 0.1 ... 0.7   |               |
| Bath opening / Bath depth cm                 | W × L / D<br>35 × 41 / 30 |               |               |
| Filling volume liters                        | 42 ... 56                 |               |               |
| Dimensions cm                                | W × L × H<br>45 × 64 × 95 |               |               |

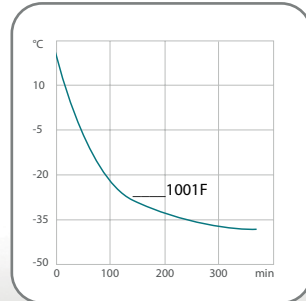
### Heat-up time

Bath fluid: Thermal



### Cool-down time

Bath fluid: Ethanol





### JULABO Thermal Bath Fluids

JULABO Thermal bath fluids have been carefully chosen following long term testing. They are highly suitable for all of your temperature control applications guaranteeing safe and reliable operation. Choosing the proper bath fluid is critical for high performance temperature control. The viscosity and heat transfer characteristics of the Thermal fluids are specifically selected for use with JULABO temperature control instruments.

#### Advantages

- Broad temperature ranges
- Low viscosity
- High stability
- Good thermal conductivity
- Almost odorless
- Long life



#### Makes routine laboratory work easier.

JULABO Thermal bath fluids are delivered in containers with a handy drain tap.



#### Tidy.

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



### Thermal G

Order No. 5 liters 8 940 125

Order No. 10 liters 8 940 124

Working temperature range °C -30 ... +80

Flash point °C -

Fire point °C -

Viscosity, (kinematic at +20 °C) mm<sup>2</sup>/s 4.13 mPas

Density (at +20 °C) g/cm<sup>3</sup> 1.0681 g/cm<sup>3</sup>

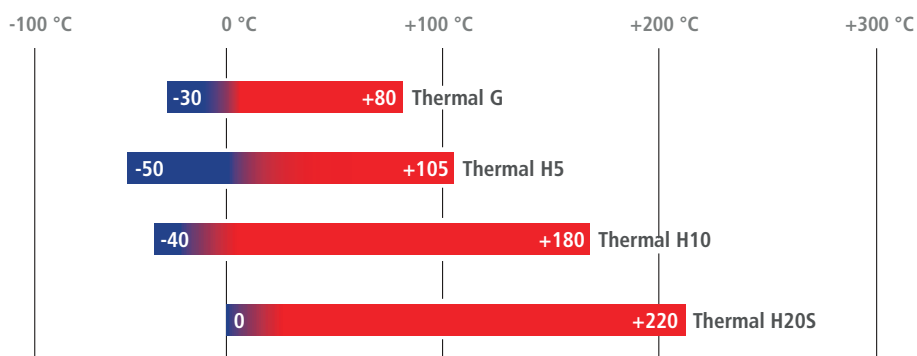
Pour point °C -44

Boiling point °C +109

Ignition temperature °C +410

Color light yellow

#### Working temperature range





## Thermal H5

|   |              |
|---|--------------|
| Order No. 5 liters                                  | 8 940 107    |
| Order No. 10 liters                                 | 8 940 106    |
| Working temperature range °C                        | -50 ... +105 |
| Flash point °C                                      | >+120        |
| Fire point °C                                       | +142         |
| Viscosity, (kinematic at +20 °C) mm <sup>2</sup> /s | 5.66         |
| Density (at +20 °C) g/cm <sup>3</sup>               | 0.92         |
| Pour point °C                                       | -100         |
| Boiling point °C                                    | +288         |
| Ignition temperature °C                             | +350         |
| Color   | clear        |

## Thermal H10

|   |              |
|---|--------------|
| Order No. 5 liters                                  | 8 940 115    |
| Order No. 10 liters                                 | 8 940 114    |
| Working temperature range °C                        | -40 ... +180 |
| Flash point °C                                      | >+165        |
| Fire point °C                                       | +220         |
| Viscosity, (kinematic at +20 °C) mm <sup>2</sup> /s | 10           |
| Density (at +20 °C) g/cm <sup>3</sup>               | 0.93         |
| Pour point °C                                       | <-60         |
| Boiling point °C                                    | +288         |
| Ignition temperature °C                             | +370         |
| Color   | clear        |

## Thermal H20S

|   |             |
|---|-------------|
| Order No. 5 liters                                  | 8 940 109   |
| Order No. 10 liters                                 | 8 940 108   |
| Working temperature range °C                        | 0 ... +220  |
| Flash point °C                                      | >+200       |
| Fire point °C                                       | +264        |
| Viscosity, (kinematic at +20 °C) mm <sup>2</sup> /s | 20          |
| Density (at +20 °C) g/cm <sup>3</sup>               | 0.95        |
| Pour point °C                                       | -70         |
| Boiling point °C                                    | +424        |
| Ignition temperature °C                             | +385        |
| Color   | light brown |

### JULABO Thermal bath fluids based on silicone ...

... are chemically inert substances which do not affect metals like iron, copper, zinc, aluminum, chrome or nickel. Compared to other fluids, JULABO Thermal fluids have an extraordinarily low electrical conductivity. When properly stored, the fluids will last for 12 months and longer as they are not susceptible to climatic influences.

### JULABO Thermal bath fluids based on water-glycol ...

... (monoethyleneglycol with anti-corrosion additives) have excellent thermal characteristics and a low viscosity. In addition, they provide anti-freeze protection, i.e. they can be applied at temperatures below the freezing point of water.

### More information on JULABO Thermal bath fluids ...

... in our brochure 'Thermal Bath Fluids' at [www.julabo.com](http://www.julabo.com).



## Refrigerated Circulators Accessories



### Water bath protective media to prevent the formation of algae and bacteria and descaling agent

| Order No. | Description                         | Suitable for |
|-----------|-------------------------------------|--------------|
| 8 940 006 | Aqua Stabil, 6 bottles 100 ml each  | CORIO        |
| 8 940 012 | Aqua Stabil, 12 bottles 100 ml each | CORIO        |
| 9 940 200 | Descaling agent 1 Liter             | CORIO        |



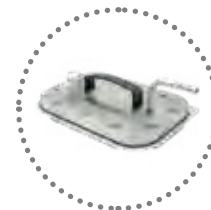
### Hollow balls to reduce heat loss, evaporation, oxygen input, odors, action of light

| Order No. | Description   | Suitable for |
|-----------|---|--------------|
| 8 970 010 | Hollow balls, Polypropylene®, 20 mm Ø, 1000 pcs (up to +100 °C, for water only) | CORIO        |



### Heat exchangers / Cooling installations

| Order No. | Description                             | Suitable for  |
|-----------|---|---|
| 9 970 240 | Bath cover with built-in heat exchanger | CD-200F, CP-200F, CD-201F, CP-201F CD-300F, CP-300F, CD-310F, CP-310F, CD-450F, CP-450F |
| 9 970 242 | Bath cover with built-in heat exchanger | CD-600F, CD-601F, CD-1000F, CD-1000FW CP-600F, CP-601F, CP-1000F, CP-1000FW             |



### Lockable bath cover / condensation trap

| Order No. | Description                     | Suitable for  |
|-----------|---------------------------------|---|
| 9 970 243 | Lockable bath cover             | CD-200F, CP-200F, CD-201F, CP-201F CD-300F, CP-300F, CD-310F, CP-310F, CD-450F, CP-450F |
| 9 970 700 | Condensation trap with bath lid | CD-600F, CD-601F, CD-1000F, CD-1000FW CP-600F, CP-601F, CP-1000F, CP-1000FW             |



### CR® tubing (-30 °C ... +120 °C)

| Order No. | Description           | Suitable for |
|-----------|-----------------------|--------------|
| 8 930 008 | 1 m, 8 mm inner dia.  | CD, CP       |
| 8 930 010 | 1 m, 10 mm inner dia. | CD, CP       |
| 8 930 012 | 1 m, 12 mm inner dia. | CD, CP       |



### Viton® tubing (-35 °C ... +200 °C)

| Order No. | Description           | Suitable for |
|-----------|-----------------------|--------------|
| 8 930 108 | 1 m, 8 mm inner dia.  | CD, CP       |
| 8 930 110 | 1 m, 10 mm inner dia. | CD, CP       |
| 8 930 112 | 1 m, 12 mm inner dia. | CD, CP       |



### PTFE tubing (-60 °C ... +180 °C)

| Bestell-Nr. | Bezeichnung                               | Einsetzbar für |
|-------------|---|----------------|
| 8 930 140   | PTFE tubing 8 mm ID × 10 mm OD per meter  | CD, CP         |
| 8 930 142   | PTFE tubing 12 mm ID × 14 mm OD per meter | CD, CP         |





## Tubing insulation (-50 °C ... +100 °C)

| Order No. | Description                          | Suitable for        |
|-----------|--------------------------------------|---------------------|
| 8 930 410 | 1 m, for tubing 8 - 10 mm inner dia. | CR® / Viton® tubing |
| 8 930 412 | 1 m, for tubing 12 mm inner dia.     | CR® / Viton® tubing |



## Tube clamps

| Order No. | Description           | Suitable for                              |
|-----------|-----------------------|---|
| 8 970 480 | 2 Tube clamps, size 1 | CR® / Viton® tubing 8 mm inner dia.       |
| 8 970 481 | 2 Tube clamps, size 2 | CR® / Viton® tubing 10 - 12 mm inner dia. |



## Metal tubing flexible, insulated (-50 °C ... +200 °C)

| Order No. | Description                                 | Suitable for |
|-----------|---|--------------|
| 8 930 220 | 0.5 m Metal tubing, 2 fittings M16×1 female | CD, CP       |
| 8 930 221 | 1 m Metal tubing, 2 fittings M16×1 female   | CD, CP       |
| 8 930 222 | 1.5 m Metal tubing, 2 fittings M16×1 female | CD, CP       |
| 8 930 223 | 3 m Metal tubing, 2 fittings M16×1 female   | CD, CP       |
| 8 930 224 | 2 m Metal tubing, 2 fittings M16×1 female   | CD, CP       |



## Adapters and connectors

| Order No. | Description   | Suitable for |
|-----------|---|--------------|
| 8 970 446 | 2 Barbed fittings for tubing 8 mm inner dia.                                | CD, CP       |
| 8 970 447 | 2 Barbed fittings for tubing 10 mm inner dia.                               | CD, CP       |
| 8 970 445 | 2 Barbed fittings for tubing 12 mm inner dia.                               | CD, CP       |
| 8 970 443 | 1 Adapter M16×1 male to M16×1 male  | CD, CP       |
| 8 970 490 | 2 Collar nuts M16×1 female  | CD, CP       |
| 8 970 442 | 2 Elbow fittings 90°, M16×1 female / male                                   | CD, CP       |
| 8 970 448 | 2 Elbow fittings 90°, M16×1 male/female, side length 1 × 54 mm / 1 × 120 mm | CD, CP       |
| 8 890 004 | 2 Adapters M16×1 female to NPT 1/4" male                                    | CD, CP       |
| 8 890 005 | 2 Adapters M16×1 female to NPT 1/4" female                                  | CD, CP       |
| 8 890 006 | 2 Adapters M16×1 female to NPT 3/8" male                                    | CD, CP       |
| 8 890 007 | 2 Adapters M16×1 female to NPT 3/8" female                                  | CD, CP       |
| 8 890 008 | 2 Adapters M16×1 female to NPT 1/2" male                                    | CD, CP       |
| 8 890 009 | 2 Adapters M16×1 female to NPT 1/2" female                                  | CD, CP       |
| 8 890 010 | 2 Adapters M16×1 male to NPT 1/4" female                                    | CD, CP       |
| 8 891 008 | 1 Adapter M16×1 male to BSP 1/2" female                                     | CD, CP       |
| 8 891 009 | 1 Adapter M16×1 male to BSP 3/4" female                                     | CD, CP       |
| 8 890 011 | 2 Adapters M16×1 female to tube 1/4" male                                   | CD, CP       |
| 8 890 012 | 2 Adapters M16×1 female to tube 3/8" male                                   | CD, CP       |
| 8 890 013 | 2 Adapters M16×1 female to tube 1/2" male                                   | CD, CP       |
| 8 890 024 | 2 Adapters M16×1 female to M16×1 female                                     | CD, CP       |



## Refrigerated Circulators Accessories



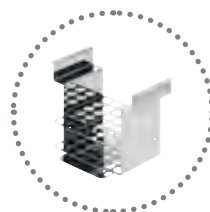
### Shut-off valves for loop circuit

| Order No. | Description                                | Suitable for |
|-----------|--|--------------|
| 8 970 457 | Shut-off valve (-30 °C ... +200 °C), M16×1 | CD, CP       |
| 8 970 456 | Shut-off valve (-10 °C ... +100 °C), M16×1 | CD, CP       |
| 8 970 850 | Shut-off valve (-60 °C ... +200 °C), M16×1 | CD, CP       |



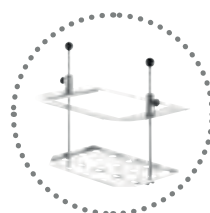
### Twin distributing adapters with barbed fittings

| Order No. | Description  | Suitable for            |
|-----------|--|-------------------------|
| 8 970 470 | Twin distributing adapter with barbed fittings           | Tubing 8 mm inner dia.  |
| 8 970 471 | Twin distributing adapter with barbed fittings           | Tubing 12 mm inner dia. |
| 8 970 472 | Twin distributing adapter with barbed fittings           | Tubing 10 mm inner dia. |
| 8 970 473 | Twin distributing adapter M16×1 female to 2 × M16×1 male | CD, CP                  |



### Test tube racks made out of stainless steel, up to +150 °C

| Order No. | Description                                      | Suitable for  |
|-----------|--|---|
| 9 970 320 | Test tube rack for 30 tubes 100 × 17 mm dia.     | CD-200F, CP-200F, CD-201F, CP-201F CD-300F, CP-300F, CD-310F, CP-310F, CD-450F, CP-450F |
| 9 970 321 | Test tube rack for 42 tubes 75 × 12 / 13 mm dia. | CD-200F, CP-200F, CD-201F, CP-201F CD-300F, CP-300F, CD-310F, CP-310F, CD-450F, CP-450F |
| 9 970 322 | Test tube rack for 42 tubes 40 × 10 / 11 mm dia. | CD-200F, CP-200F, CD-201F, CP-201F CD-300F, CP-300F, CD-310F, CP-310F, CD-450F, CP-450F |
| 9 970 323 | Test tube rack for 10 falcon tubes 50 ml         | CD-200F, CP-200F, CD-201F, CP-201F CD-300F, CP-300F, CD-310F, CP-310F, CD-450F, CP-450F |



### Immersion-height adjustable platforms

| Order No. | Description                          | Suitable for                       |
|-----------|--------------------------------------|------------------------------------|
| 9 970 506 | Immersion-height adjustable platform | CD-449F, CP-449F, CD-900F, CP-900F |



### Accessories Beer Forcing Test

| Order No. | Description  | Suitable for      |
|-----------|--|-------------------|
| 9 970 247 | Transparent bath cover, plexiglas, temperature range -10 °C ... +80 °C | CD1001F, CP-1001F |
| 9 970 337 | Basket for 20 bottles 0.33 l / 0.5 l, stainless steel                  | CD1001F, CP-1001F |



### Castor platform

| Order No. | Description     | Suitable for |
|-----------|-----------------|--------------|
| 8 910 040 | Castor platform | CD, CP       |



## Software und Hardware zur Gerätesteuerung, Datenaufzeichnung und Visualisierung, Schnittstellen

| Bestell-Nr. | Bezeichnung   | Einsetzbar für |
|-------------|---|----------------|
| 8 901 102   | EasyTEMP Software (kostenlos unter <a href="http://www.julabo.com">www.julabo.com</a> ) | CD, CP         |
| 8 901 105   | EasyTEMP Professional Software, inkl. USB-Dongle  | CD, CP         |
| 9 900 110   | USB-Kabel 2 m, Typ A-B  | CD, CP         |
| 9 900 112   | USB 2.0 Repeater-Verlängerungskabel, Länge = 5 m  | CD, CP         |
| 9 900 114   | USB 2.0 Repeater-Verlängerungskabel, Länge = 10 m                                       | CD, CP         |
| 8 980 073   | RS232-Schnittstellenkabel, Länge 2,5 m mit 9-pol.-Stecker/9-pol.-Buchse                 | CP             |
| 8 980 074   | RS232-Schnittstellenkabel, Länge 5 m mit 9-pol.-Stecker/9-pol.-Buchse                   | CP             |
| 8 980 031   | Ethernet / RS232-Schnittstellenkonverter für Temperiergeräte                            | CP             |
| 8 980 032   | Ethernet / RS232-Schnittstellenkonverter für bis zu 4 JULABO Geräte                     | CP             |
| 8 980 033   | Ethernet / RS232-Schnittstellenkonverter für bis zu 8 JULABO Geräte                     | CP             |



## Kalibrier- und Herstellerzertifikate

| Bestell-Nr. | Bezeichnung  | Einsetzbar für |
|-------------|--|----------------|
| 8 902 901   | 1-Punkt-Hersteller-Kalibrierzertifikat                   | CORIO          |
| 8 902 903   | 3-Punkt-Hersteller-Kalibrierzertifikat                   | CORIO          |
| 8 902 905   | 5-Punkt-Hersteller-Kalibrierzertifikat                   | CORIO          |
| 8 903 025   | Hersteller-Prüfzertifikat für JULABO Geräte, Kategorie 2 | CORIO          |



## IQ/OQ-Dokumentation

| Bestell-Nr. | Bezeichnung                      | Einsetzbar für |
|-------------|----------------------------------|----------------|
| 2 310 120   | IQ/OQ Dokumentation, Kategorie 2 | CORIO          |



## Wartung

| Bestell-Nr. | Bezeichnung   | Einsetzbar für |
|-------------|---|----------------|
| 2 350 102   | Wartung JULABO Geräte, Kategorie 2<br>Zur Wartung zählen vorbeugende Maßnahmen, die helfen, die Funktionsfähigkeit aufrecht zu erhalten, zur Minimierung von Ausfallzeiten und Kosten. Eine JULABO Wartung beinhaltet folgende Tätigkeiten: Sichtprüfung, Reinigung, Funktionsprüfung und Ausstellung eines Wartungsprotokolls. | CORIO          |