

# FLW1701 Recirculating Coolers for installation below a lab bench

The compact FL models are suited for a wide variety of cooling tasks. Installation under a lab bench saves valuable space. 2 variants: Air-cooled (FL) and water-cooled (FLW).

## Your advantages

- · Ergonomic design and easy operation
- · Splash-proof keypad
- · Large, bright LED display
- Reliable Microprocessor PID temperature control
- · Powerful immersion pumps, suitable for continuous operation
- Permissible temperature in return line +80°C
- Easy filling and Drain tap easily accessible
- · Low liquid level protection with optical and audible alarm signal
- · Integrated stainless steel bath tanks
- · Front drain
- · No side vents, instruments can be placed right next to other equipment
- RS232 interface for PC connection
- IP class according to IEC 60529: 21
- · Alarm output, potential-free change-over contact (max. 30 VA)



#### Technical data

| Available voltage vers                | sions     |               | Bath                           |                        |  |  |
|---------------------------------------|-----------|---------------|--------------------------------|------------------------|--|--|
| Order No.                             | 9 671 017 |               | Bath tank                      | Stainless steel        |  |  |
| Available voltage versions:           |           |               |                                |                        |  |  |
| 9 671 017.13                          |           |               |                                |                        |  |  |
| 9 671 017.02                          |           |               |                                |                        |  |  |
| 9 671 017.03                          |           |               |                                |                        |  |  |
| 9 671 017.04                          |           |               |                                |                        |  |  |
| Cooling                               |           |               | Other                          |                        |  |  |
| Cooling of compressor                 |           | 1-stage Water | Sound pressure level dbA       | 59                     |  |  |
| Cooling water pressure max. bar       |           | 6             | Classification                 | Classification I (NFL) |  |  |
| Cooling water difference pressure bar |           | 2 6           | IP Code                        | IP 21                  |  |  |
| Cooling water consumption I/min       |           | 2.8           | Pump type Centrifugal Pu       |                        |  |  |
| Electronics                           |           |               | Dimensions and volumes         |                        |  |  |
| Temperature control                   |           | PID1          | Weight kg                      | 82                     |  |  |
| Temperature display                   |           | LED           | Cooling Water Connection in    | G3⁄4                   |  |  |
| Temperature setting                   |           | Keypad        | Barbed fittings inner diameter | 8/12 mm                |  |  |
|                                       |           |               | Dimensions cm (W × L × H)      | 50 x 76 x 64           |  |  |
|                                       |           |               | Filling volume l               | 12 17                  |  |  |
|                                       |           |               | Pump connections               | M16x1 male             |  |  |
| Temperature values                    |           |               |                                |                        |  |  |

| Temperature values                                   |         |  |  |  |  |
|--|---------|--|--|--|--|
| Setting the resolution of the temperature display °C | 0.1     |  |  |  |  |
| Return flow temperature max. °C                      | 80      |  |  |  |  |
| Working temperature range °C                         | -20 +40 |  |  |  |  |
| Temperature stability °C                             | ±0.5    |  |  |  |  |
| Ambient temperature °C                               | 5 40    |  |  |  |  |



| Temperature display resolution °C | 0.1 |  |
|-----------------------------------|-----|--|
|-----------------------------------|-----|--|

## Performance values

# 230V/60Hz (Schuko Plug - CEE 7/4 Plug Type F)

| 208V/60Hz                          |       | 230V/60Hz                               |  |  |  |
|------------------------------------|-------|---|--|--|--|
| Cooling capacity (Water Glycol)    |       | Cooling capacity (Water Glycol)         |  |  |  |
| °C 20 10 0 -10 -20                 |       | °C 20 10 0 -10 -20                      |  |  |  |
| kW 1.7 1.5 1.1 0.85 0.4            |       | kW 1.7 1.5 1.1 0.85 0.4                 |  |  |  |
| Refrigerant                        | R404A | Refrigerant R404A                       |  |  |  |
| Filling volume g                   | 320   | Filling volume g 320                    |  |  |  |
| Global Warming Potential for R404A | 3922  | Global Warming Potential for R404A 3922 |  |  |  |
| Carbon dioxide equivalent t        | 1.255 | Carbon dioxide equivalent t 1.255       |  |  |  |
| Pump capacity flow rate I/min      | 23    | Pump capacity flow rate I/min 23        |  |  |  |
| Pump capacity flow pressure bar    | 1     | Pump capacity flow pressure bar 1       |  |  |  |

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

| 115V/60Hz                          |    |    |  |  |  |       |
|------------------------------------|----|----|--|--|--|-------|
| Cooling capacity (Water Glycol)    |    |    |  |  |  |       |
| °C                                 | 20 | 10 |  |  |  |       |
| kW 1.7 1.5 1.1 0.85 0.4            |    |    |  |  |  |       |
| Refrigerant R404A                  |    |    |  |  |  |       |
| Filling volume g                   |    |    |  |  |  | 300   |
| Global Warming Potential for R404A |    |    |  |  |  | 3922  |
| Carbon dioxide equivalent t        |    |    |  |  |  | 1.177 |
| Pump capacity flow rate I/min      |    |    |  |  |  | 23    |
| Pump capacity flow pressure bar    |    |    |  |  |  | 1     |

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

| 230V/50Hz                          |                                 |    |       |  |  |       |  |
|------------------------------------|---------------------------------|----|-------|--|--|-------|--|
| Coolin                             | Cooling capacity (Water Glycol) |    |       |  |  |       |  |
| °C                                 | 20                              | 10 |       |  |  |       |  |
| kW                                 | kW 1.7 1.5 1.1 0.85 0.4         |    |       |  |  |       |  |
| Refrig                             | erant                           |    | R452A |  |  |       |  |
| Filling volume g                   |                                 |    |       |  |  | 300   |  |
| Global Warming Potential for R452A |                                 |    |       |  |  | 2140  |  |
| Carbon dioxide equivalent t        |                                 |    |       |  |  | 0.642 |  |
| Pump capacity flow rate I/min      |                                 |    |       |  |  | 23    |  |
| Pump capacity flow pressure bar    |                                 |    |       |  |  | 1     |  |

## 230V/3PPE/50Hz (UK Plug Type BS1363A)

230V/50Hz



## Cooling capacity (Water Glycol)

| °C | 20  | 10  | 0   | -10  | -20 |
|----|-----|-----|-----|------|-----|
| kW | 1.7 | 1.5 | 1.1 | 0.85 | 0.4 |

| Refrigerant                        | R452A |
|------------------------------------|-------|
| Filling volume g                   | 300   |
| Global Warming Potential for R452A | 2140  |
| Carbon dioxide equivalent t        | 0.642 |
| Pump capacity flow rate I/min      | 23    |
| Pump capacity flow pressure bar    | 1     |

## **All Benefits**



## 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.



### JULABO. Quality.

Highest standards of quality for a long product



#### 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.



## Precise

PID Temperature control with set control parameters, temperature stability  $\pm 0.02...\pm 0.2$  °C