

## FL4003 Powerful model in tower version

The FL models shown here have higher cooling capacity, powerful circulating pumps, and internal bath volumes of up to 30 liters. 2 variants: Air-cooled (FL) and water-cooled (FLW).



### Product features

- Ergonomic design and easy operation
- Splash-proof keypad
- Large, bright LED display
- Reliable Microprocessor PID temperature control
- Precise PID temperature control
- Powerful immersion pumps, suitable for continuous operation
- Permissible temperature in return line +80°C
- Easy filling from the top with hinged protective lid
- 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)
- Pressure Indicator

### Technical data

|  |                                |                                |                        |
|--|--------------------------------|--------------------------------|------------------------|
| <b>Available voltage versions</b>                    |                                | <b>Bath</b>                    |                        |
| Order No.  | 9 663 040                      | Bath tank                      | Stainless steel        |
| <b>Available voltage versions:</b>                   |                                |                                |                        |
| 9 663 040.16   | 230V/3PPE/60Hz (Without Plug)  |                                |                        |
| 9 663 040.07   | 400V/3PNPE/50Hz (Plug 16A CEE) |                                |                        |
| <b>Cooling</b>                                       |                                | <b>Other</b>                   |                        |
| Cooling of compressor                                | 1-stage Air                    | Sound pressure level dbA       | 67                     |
|  |                                | Classification                 | Classification I (NFL) |
|  |                                | IP Code                        | IP 21                  |
|  |                                | Pump type                      | Immersion Pump         |
| <b>Electronics</b>                                   |                                | <b>Dimensions and volumes</b>  |                        |
| Temperature control                                  | PID1                           | Weight lbs                     | 326.3                  |
| Temperature display                                  | LED                            | Barbed fittings inner diameter | 3/4"                   |
| Temperature setting                                  | Keypad                         | Dimensions in. (W x L x H)     | 23.6 x 29.9 x 45.3     |
|  |                                | Filling volume l               | 24 ... 30              |
|  |                                | Pump connections               | G3/4" male             |
| <b>Temperature values</b>                            |                                |                                |                        |
| 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/3PPE/60Hz (Without Plug)

| 230V/3PPE/60Hz                     |              |     |     |     |     |
|------------------------------------|--------------|-----|-----|-----|-----|
| Cooling capacity                   |              |     |     |     |     |
| °C                                 | 20           | 10  | 0   | -10 | -20 |
| kW                                 | 4            | 3.4 | 2.4 | 1.5 | 0.6 |
| Refrigerant                        | R449A        |     |     |     |     |
| Filling volume g                   | 1800         |     |     |     |     |
| Global Warming Potential for R449A | 1397         |     |     |     |     |
| Carbon dioxide equivalent t        | 2.515        |     |     |     |     |
| Pump capacity flow rate l/min      | 40           |     |     |     |     |
| Pump capacity flow pressure psi    | 7.3 ... 43.5 |     |     |     |     |
| Power                              | 11 A         |     |     |     |     |

### 400V/3PNPE/50Hz (Plug 16A CEE)

| 400V/3PNPE/50Hz                    |              |     |     |     |      |
|------------------------------------|--------------|-----|-----|-----|------|
| Cooling capacity                   |              |     |     |     |      |
| °C                                 | 20           | 10  | 0   | -10 | -20  |
| kW                                 | 4            | 3.4 | 2.4 | 1.5 | 0.65 |
| Refrigerant                        | R452A        |     |     |     |      |
| Filling volume g                   | 2220         |     |     |     |      |
| Global Warming Potential for R452A | 2140         |     |     |     |      |
| Carbon dioxide equivalent t        | 4.751        |     |     |     |      |
| Pump capacity flow rate l/min      | 40           |     |     |     |      |
| Pump capacity flow pressure psi    | 7.3 ... 43.5 |     |     |     |      |
| Power                              | 8 A          |     |     |     |      |

## 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.



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Individual JULABO consultation and comprehensive manuals at your disposal.



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