

FL300 Recirculating Coolers for installation below a lab bench

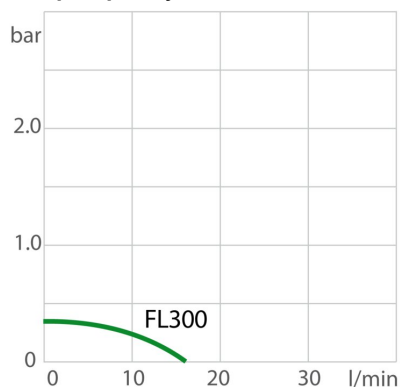
The compact FL models are suited for a wide variety of cooling tasks. Installation under a lab bench saves valuable space. 2 variants: Air-cooled (FL) and water-cooled (FLW).



Product features

- 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)

Pump capacity



Medium: Water

Performance values

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

Pump capacity flow rate l/min 15

Pump capacity flow pressure bar 0.35

Power consumption A 3

Order No.	9660003.03				
Cooling capacity (Ethanol)					
°C	20	10	0	-10	-20
kW ¹	0.3	0.25	0.2	0.15	0.1
Refrigerant stage 1					
Refrigerant	R134a				
Filling weight g	133				
Global Warming Potential for R134a	1430				
Carbon dioxide equivalent t	0.19019				

¹ 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.

Technical data

Available voltage versions		Cooling	
Order No.	9 660 003	Cooling of compressor	1-stage Air
Available voltage versions:			
9660003.01	100V/50-60Hz (Nema N5-15 Plug) (R134a)		
9660003.13	230V/60Hz (Schuko Plug - CEE 7/4 Plug Type F) (R134a)		
9660003.02	115V/60Hz (Nema N5-15 Plug) (R134a)		
9660003.03	230V/50Hz (Schuko Plug - CEE 7/4 Plug Type F) (R134a)		
9660003.04	230V/50Hz (UK Plug Type BS1363A) (R134a)		
9660003.05	230V/50Hz (CH Plug Type SEV 1011) (R134a)		
Bath		Other	
Bath tank	Stainless steel	Sound pressure level dbA	55
		Classification	Classification I (NFL)
		IP Code	IP 21
		Pump type	Centrifugal Pump
Electronics		Dimensions and volumes	
Interfaces	RS232	Weight kg	35
Temperature control	PID1	Barbed fittings inner diameter mm	8/12 mm
Temperature display	LED	Dimensions cm (W × L × H)	25 x 50 x 60
Temperature setting	Keypad	Filling volume l	3 ... 4.5
		Pump connections	M16x1 male
Temperature values		Included in delivery	
Setting the resolution of the temperature display °C	0.1	2 Barbed fittings for tubing 8 and 12 mm ID. (Pump connections M16x1 male)	
Return flow temperature max. °C	80		
Working temperature range °C	-20 ... +40		
Temperature stability °C	±0.5		

Ambient temperature °C	+5 ... +40
Setting the resolution of the temperature display °C	0.1

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 life.



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.



Precise
PID Temperature control with set control parameters, temperature stability $\pm 0.02 \dots \pm 0.2 \text{ } ^\circ\text{C}$



Connection of additional equipment
Stake connections for solenoid valve