

## 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).



### 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
- Removable ventilation grid
- 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 versions		Bath	
Order No.	9 660 003	Bath tank	Stainless steel
Available voltage versions:			
9 660 003.01	100V/50-60Hz (Nema N5-15 Plug)		
9 660 003.13	230V/60Hz (Schuko Plug - CEE 7/4 Plug Type F)		
9 660 003.02	115V/60Hz (Nema N5-15 Plug)		
9 660 003.03	230V/50Hz (Schuko Plug - CEE 7/4 Plug Type F)		
9 660 003.04	230V/50Hz (UK Plug Type BS1363A)		
9 660 003.05	230V/50Hz (CH Plug Type SEV 1011)		
Cooling		Other	
Cooling of compressor	1-stage Air	Sound pressure level dbA	55
		Classification	Classification I (NFL)
		IP Code	IP 21
		Pump type	Centrifugal Pump
Electronics		Dimensions and volumes	
Temperature control	PID1	Weight lbs	77.2
Temperature display	LED	Barbed fittings inner diameter	8/12 mm
Temperature setting	Keypad	Dimensions in. (W × L × H)	9.8 x 19.7 x 23.6
		Filling volume l	3 ... 4.5
		Pump connections	M16x1 male
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

### 100V/50-60Hz (Nema N5-15 Plug)

100V/50Hz						100V/60Hz					
Cooling capacity (Water Glycol)						Cooling capacity (Water Glycol)					
°C	20	10	0	-10	-20	°C	20	10	0	-10	-20
kW	0.3	0.25	0.2	0.15	0.1	kW	0.3	0.25	0.2	0.15	0.1
Refrigerant	R134a					Refrigerant	R134a				
Filling volume g	140					Filling volume g	140				
Global Warming Potential for R134a	1430					Global Warming Potential for R134a	1430				
Carbon dioxide equivalent t	0.2					Carbon dioxide equivalent t	0.2				
Pump capacity flow rate l/min	15					Pump capacity flow rate l/min	15				
Pump capacity flow pressure bar	5.1					Pump capacity flow pressure bar	5.1				

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

220V/60Hz					
Cooling capacity (Water Glycol)					
°C	20	10	0	-10	-20
kW	0.3	0.25	0.2	0.15	0.1
Refrigerant	R134a				
Filling volume g	160				
Global Warming Potential for R134a	1430				
Carbon dioxide equivalent t	0.229				
Pump capacity flow rate l/min	15				
Pump capacity flow pressure bar	5.1				

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

115V/60Hz					
Cooling capacity (Water Glycol)					
°C	20	10	0	-10	-20
kW	0.3	0.25	0.2	0.15	0.1
Refrigerant	R134a				
Filling volume g	155				
Global Warming Potential for R134a	1430				
Carbon dioxide equivalent t	0.222				
Pump capacity flow rate l/min	15				
Pump capacity flow pressure bar	5.1				

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

### 230V/50Hz

Cooling capacity (Water Glycol)

°C	20	10	0	-10	-20
kW	0.3	0.25	0.2	0.15	0.1

Refrigerant R134a

Filling volume g 133

Global Warming Potential for R134a 1430

Carbon dioxide equivalent t 0.19

Pump capacity flow rate l/min 15

Pump capacity flow pressure bar 5.1

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

### 230V/50Hz

Cooling capacity (Water Glycol)

°C	20	10	0	-10	-20
kW	0.3	0.25	0.2	0.15	0.1

Refrigerant R134a

Filling volume g 133

Global Warming Potential for R134a 1430

Carbon dioxide equivalent t 0.19

Pump capacity flow rate l/min 15

Pump capacity flow pressure bar 5.1

## 230V/50Hz (CH Plug Type SEV 1011)

### 230V/50Hz

Cooling capacity (Water Glycol)

°C	20	10	0	-10	-20
kW	0.3	0.25	0.2	0.15	0.1

Refrigerant R134a

Filling volume g 133

Global Warming Potential for R134a 1430

Carbon dioxide equivalent t 0.19

Pump capacity flow rate l/min 15

Pump capacity flow pressure bar 5.1

## All Benefits

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

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

**Green technology.**

Development consistently applied environmentally friendly materials and technologies.

**100% Checked.**

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

**Satisfied customers.**

11 subsidiaries and more than 100 partners worldwide guarantee fast and qualified JULABO support.

**Quick start.**

Individual JULABO consultation and comprehensive manuals at your disposal.