# Julabo

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## FL1703 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

Return flow temperature max. °C

Temperature display resolution °C

80

0.1

- 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 volta	ge versions		Bath					
Order No. 9 663 017			Bath tank	Stainless steel				
Available voltage v	versions:							
9 663 017.03	230V/50Hz (Schuko Pl Type F)	lug - CEE 7/4 Plug						
9 663 017.04	230V/50Hz (UK Plug T	ype BS1363A)						
9 663 017.13	230V/60Hz (Schuko Pl Type F)	lug - CEE 7/4 Plug						
Cooling			Other					
Cooling of compre	ssor	1-stage Air	Sound pressure level dbA	67				
			Classification	Classification I (NFL)				
			IP Code	IP 21				
			Pump type	Centrifugal Pump				
Electronics			Dimensions and volumes					
Temperature contr	ol	PID1	Weight kg	91				
Temperature displ	ау	LED	Barbed fittings inner diameter	3⁄4"				
Temperature setting Ko		Keypad	Dimensions cm ( $W \times L \times H$ )	50 x 76 x 64				
			Filling volume I	12 17				
			Pump connections	G¾"				
Temperature v	alues							
Setting the resolut display °C	ion of the temperature	0.1						



## Performance values

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

230V/50Hz									
Cooling capacity (Water Glycol)									
°C	20	10	0	-10	-20				
kW	1.7	1.4	1	0.75	0.3				
Refrig	R452A								
Filling	690								
Globa	2140								
Carbo	1.477								
Pump	40								

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

Pump capacity flow pressure bar

#### 230V/50Hz

Cooling capacity (Water Glycol)										
°C	20	10								
kW	W 1.7 1.4 1 0.75 0.3									
Refrig	erant	R452A								
Filling	volum	e g	690							
Global	Warm	ning Po	2140							
Carbo	n dioxi	de equ	1.477							
Pump	capac	ity flov	40							
Pump	capac	ity flov	0.5 3							

0.5 ... 3

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

208V/60Hz				230	230V/60Hz								
Cooling capacity (Water Glycol)				Соо	Cooling capacity								
°C	20	10	0	-10	-20		°C	20	10	0	-10	-20	
kW	1.7	1.4	0.9	0.6	0.2		kW	1.7	1.4	0.9	0.6	0.2	
Refrigerant R449A				Refr	gerant		R449A						
Filling volume g 590				Fillir	g volum	ne g	590						
Global Warming Potential for R449A 1397				1397	Glob	al Warn	ning Po	1397					
Carbon dioxide equivalent t 0.824					Cart	on diox	ide equ	0.824					
Pump capacity flow rate I/min 40					Pum	р сарас	ity flow	40					
Pump capacity flow pressure bar 0					0.5 3	Pum	р сарас	ity flow	0.5 3				

## Benefits

Precise PID Temperature control with set control parameters, temperature stability ±0.02...±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.



#### Services 24/7.

Around the clock availability. You can find suitable accessories, data sheets, manuals, case studies, and more at www.julabo.com.





#### 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.