

## F12-ED Refrigerated/Heating Circulator

### The Base for routine laboratory applications.

JULABO Refrigerated & Heating Circulators for heating and cooling are suitable for external temperature tasks and for temperature applications directly in the bath. A model from three different series' with different capacities can be selected. Powerful circulating pump systems and high heating and cooling capacities guarantee short heat-up and cool-down times. The inevitable dust accumulation that occurs in refrigeration systems is solved by means of an easily removed venting grill, which allows for easy cleaning. Depending on the model, the units are equipped with handles or castors for an easy transportation. All models have a drain screw on the front allowing the fluid to be drained easily. The compact assembly of each unit enables a space to be saved in the laboratory.



### Your advantages

- Bright LED temperature display, resolution 0.1 °C
- Keypad for setpoint, switches automatically to the actual value
- PID1 temperature control
- Adjustable high temperature cut-out / dry-running protection

### Technical Data

Order No.	9116612
Model series	Economy
Category	Refrigerated - Heating Circulators
Working temperature range (°C)	-20... 100
Temperature stability (°C)	±0.03
Setting / display resolution	0.1 °C
Temperature Display	LED
Heating capacity (kW)	2
Cooling capacity (Medium Ethanol)	
20°C	0.16 kW

0°C	0.1 kW
-20°C	0.02 kW
Pump capacity flow rate (l/min)	15
Pump capacity flow pressure (bar)	0.35
Bath opening / bath depth (W x L / D cm)	13 x 15 / 13
Pump connections	M10x1
Barbed fittings diameter (inner dia. / mm)	8 / 10
Filling volume liters	4.5
Refrigerant	R134a
Ambient temperature	5...40 °C
Dimensions W x L x H (cm)	10 x 36 x 56
Weight (kg)	
Classification according to DIN12876-1	Classification I (NFL) according to DIN 12876-1
Included with each unit	2 each barbed fittings for tubing 8 and 10 mm inner dia. (pump connections M10x1 female).
Cooling of compressor	Air
Power requirement V / Hz / A	230/50/11

## Available voltage versions

230 V / 50 Hz  
 115 V / 60 Hz  
 230 V / 60 Hz  
 100 V / 50-60 Hz

## Characteristics



### Easy to read

Large LED temperature display for actual value and setpoint (resolution 0.1 °C)



### Clear and simple

3-key operation for easy setpoint adjustment



### Precise

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



### Consistent cooling capacity

Easily removable venting grid for quick and easy cleaning

## Other characteristics

Removable venting grid for convenient cleaning to maintain cooling performance.

Technical changes without prior notification.  
Images may deviate from the original.