

## CF40 Cryo-Compact Circulator

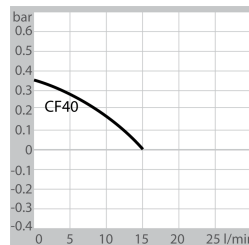
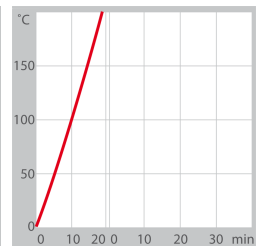
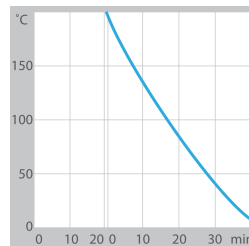
The first choice for routine and straightforward laboratory applications from -40°C to 150°C

Cryo-Compact Circulator for internal and external temperature applications

The CF series offers compact refrigerated/heating circulators. With small overall dimensions the units can even be placed on a very small surface or within a complex installation. All models offer a heating capacity of 2 kW and classification 3 according to DIN12876-1. The maximum ambient temperature of +40°C as well as a ventilation air cooling allow installing the units very closely side by side with other units or directly under a fume hood. Furthermore all the models feature pump connections for external temperature applications and a bath opening for temperature control of small objects directly in the circulator bath. Wetted parts are made of high quality stainless steel or plastic. The instruments provide a reliable Microprocessor electronics with high temperature stability as well as warning and safety functions.

### Your advantages

- Ergonomic design and easy operation
- Small overall dimensions for lowest space requirement
- Splash-proof keypad
- Large, bright LED temperature display
- Precise PID temperature control
- RS232 interface for PC connection
- Adjustable high temperature cut-off
- Classification 3 according to DIN12876-1
- Pump connections for external temperature applications
- Bath opening for temperature control of small objects in the bath
- Front drain



- Cool-down time (Ethanol)
- Heat-up time (thermal)
- Pump capacity (Water)

### Technical Data

Order No.	9400340				
Model series	Economy				
Category	Cryo-Compact Circulators				
Working temperature range (°C)	-40 ... +150				
Temperature stability (°C)	±0.03				
Setting / display resolution	0.1 °C				
Temperature Display	LED				
Heating capacity (kW)	2				
Cooling capacity (Medium Ethanol)	°C	20	0	-20	-30
	kW	0.47	0.4	0.28	0.12
Pump capacity flow rate (l/min)	15				
Pump capacity flow pressure (bar)	0.35				
Bath opening / bath depth (W x L / D cm)	19 x 3 / 19				

Pump connections	M16x1
Barbed fittings diameter (inner dia. / mm)	8 / 12
Filling volume liters	5.5
Refrigerant stage 1	R404A
Filling volume refrigerant stage 1 (g)	153
Global Warming Potential for R404A	3922
Carbon dioxide equivalent stage 1 (t)	0.6
Digital interface	RS232 Optional: Profibus
Ambient temperature	5...40 °C
Dimensions W x L x H (cm)	28 x 46 x 46
Weight (kg)	41
Classification according to DIN12876-1	Classification III (FL)
Included with each unit	2 each barbed fittings for tubing 8 and 12 mm inner dia. (pump connections M16x1 female).
Cooling of compressor	Air
Available voltage versions	230 V / 50 Hz 230 V / 60 Hz 115 V / 60 Hz

## Characteristics

### Display



#### Easy to read

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

### Technical Features



#### Serial connection

RS232 interface for PC connection, e.g. for data communication and recording of measured values

### Operation



#### Time saving

Comfortable and simple operation for setpoint adjustment

### Warning & Safety Functions



#### Protective functions

Adjustable high temperature cut-off or dry-running protection

### Temperature Control



#### Precise

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



#### For flammable bath fluids

Classification III (FL) according to DIN 12876-1