



Product Data Sheet

F70-ME Ultra-Low Refrigerated Circulator

[Print Data Sheet](#)

Product Image



Order Information

Model: F70-ME
Order no.: 9160670

Available mains power:
230V / 50Hz

Similar Models

These models could also be interesting for you:

F81-HL
F81-ME
FP88-ME

Sales & Support:

+49 7823 51-190

Monday to Friday
7:30 am - 17:00 pm

JULABO Labortechnik GmbH
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Pictures may differ from original.

Description

Ultra-low Refrigerated Circulator with 2-stage cascade-cooling

JULABO Ultra-Low Refrigerated Circulators for heating and cooling are suitable for external temperature tasks. Powerful circulating pump systems and high heating and cooling capacities guarantee short heat-up and cool-down times. ACC 'Active Cooling Control' provides active cooling control across the whole temperature range. An energy saving feature with only minor loss of heat is provided by the proportional cooling capacity control in the 'FP' refrigeration units. The inevitable dust accumulation that occurs in refrigeration systems is solved by means of an easily removed venting grill, which allows for easy cleaning. The units are equipped with handles or castors for an easy transportation. All models have a drain tap on the front allowing the fluid to be drained easily. Additionally the instruments are equipped with an improved insulation to help avoid ice-formation, and have a visual liquid level display.

Advantages

- o VFD COMFORT DISPLAY, resolution 0.1 °C
- o Keypad for setpoints, warning/safety values and menu functions
- o PID3 cascade temperature control
- o ATC3 3-Point-Calibration
- o Pt100 External sensor connection for measurement and control
- o SMART PUMP, electronically adjustable pump stages
- o Early warning system for low liquid level (DBGM 203 06 059.8)
- o Adjustable high temperature cut-out, visible via display
- o RS232 interface for online communication
- o Integrated programmer for 10 program steps
- o Active Cooling Control

Technical Specifications

Working temperature range	-70 ... 100 °C
Temperature control	PID, cascade
Temperature stability	±0.02 °C
Display	VFD
Display resolution	0.1 °C
Integrated programmer	available
Heater capacity	1300 W
Cooling capacity	20 0 -20 -40 -60 °C 340 220 170 130 70 W
Refrigerant	R404A + R23
Pump capacity	Pressure: 450 mbar Flow rate: 11-16 l/min
Digital interfaces	RS232
External Pt100 sensor connection	available
Bath opening / bath depth (W x L / D)	12 x 12 / 13 cm
Filling volume	4.5 Liters
Dimensions (W x L x H)	42 x 54 x 71 cm
Weight	63 kg
Ambient temperature	5...40 °C
Classification according to DIN 12876-1	3 (FL)

Miscellaneous

Condensation trap to prevent ice formation available as accessory.



Product Data Sheet

FW95-SL Ultra-Low Refrigerated Circulators

[Print Data Sheet](#)

Product Image



Order Information

Model: FW95-SL
Order no.: 9350796N

Available mains power:
400V / 3 Ph. / 50Hz
230V / 3 Ph. / 60Hz

Downloads

- [EasyTemp Software](#)
- [Interactive product demo](#)
- [Easy BlackBox software](#)

Similar Models

These models could also be interesting for you:

F95-SL
FPW91-SL
FP88-MS

Sales & Support:

+49 7823 51-190

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Technical changes reserved.
Pictures may differ from original.

Description

Water-cooled Ultra-low Refrigerated Circulator with 2-stage cascade-cooling

JULABO Ultra-Low Refrigerated Circulators for heating and cooling are suitable for external temperature tasks. Powerful circulating pump systems and high heating and cooling capacities guarantee short heat-up and cool-down times. ACC 'Active Cooling Control' provides active cooling control across the whole temperature range. An energy saving feature with only minor loss of heat is provided by the proportional cooling capacity control in the 'FP' refrigeration units. The inevitable dust accumulation that occurs in refrigeration systems is solved by means of an easily removed venting grill, which allows for easy cleaning. The units are equipped with handles or castors for an easy transportation. All models have a drain tap on the front allowing the fluid to be drained easily. Additionally the instruments are equipped with an improved insulation to help avoid ice-formation, and have a visual liquid level display.

Advantages

- o VFD COMFORT DISPLAY, resolution 0.01 °C
- o LCD DIALOG DISPLAY backlit for convenient interactive operation
- o Keypad for setpoints, warning/safety values and menu functions
- o ICC (Intelligent Cascade Control), self-optimizing temperature control
- o TCF Temperature Control Features to optimize the control behaviour
- o ATC3 3-Point-Calibration
- o Pt100 External sensor connection for measurement and control
- o SMART PUMP, electronically adjustable pump stages
- o Early warning system for low liquid level (DBGM 203 06 059.8)
- o Adjustable high temperature cut-out, visible via display
- o RS232/RS485 interface for online communication
- o Integrated programmer for 6 x 60 program steps
- o Connections for solenoid valve and HSP booster pump
- o Active Cooling Control

Technical Specifications

Working temperature range	-95 ... 0 °C					
Temperature control	ICC					
Temperature stability	±0.05 °C					
Display	VFD + LCD					
Display resolution	0.01 °C					
Integrated programmer	available					
Heater capacity	3000 W					
Cooling capacity	0	-20	-40	-60	-80	°C
	1700	1500	1300	1100	360	W
Refrigerant	R404A + R23					
Pump capacity	Pressure: 700 mbar Suction: 400 mbar Flow rate: 22-26 l/min					
Digital interfaces	RS232, RS485, optional Profibus					
External Pt100 sensor connection	available					
Bath opening / bath depth (W x L / D)	Ø = 7 / 20 cm					
Filling volume	22 Liters					
Dimensions (W x L x H)	59 x 76 x 116 cm					
Weight	214 kg					
Ambient temperature	5...40 °C					
Classification according to DIN 12876-1	3 (FL)					

Miscellaneous

Optional: Electronic module with analog connections for external programming, temperature recorder, standby, alarm (Order no. 8 900 100)



Product Data Sheet

FPW91-SL Ultra-Low Refrigerated Circulators

[Print Data Sheet](#)

Product Image



Description

Water-cooled Ultra-low Refrigerated Circulator with 2-stage cascade-cooling and proportional cooling control

JULABO Ultra-Low Refrigerated Circulators for heating and cooling are suitable for external temperature tasks. Powerful circulating pump systems and high heating and cooling capacities guarantee short heat-up and cool-down times. ACC 'Active Cooling Control' provides active cooling control across the whole temperature range. An energy saving feature with only minor loss of heat is provided by the proportional cooling capacity control in the 'FP' refrigeration units. The inevitable dust accumulation that occurs in refrigeration systems is solved by means of an easily removed venting grill, which allows for easy cleaning. The units are equipped with handles or castors for an easy transportation. All models have a drain tap on the front allowing the fluid to be drained easily. Additionally the instruments are equipped with an improved insulation to help avoid ice-formation, and have a visual liquid level display.

Advantages

- o VFD COMFORT DISPLAY, resolution 0.01 °C
- o LCD DIALOG DISPLAY backlit for convenient interactive operation
- o Keypad for setpoints, warning/safety values and menu functions
- o ICC (Intelligent Cascade Control), self-optimizing temperature control
- o TCF Temperature Control Features to optimize the control behaviour
- o ATC3 3-Point-Calibration
- o Pt100 External sensor connection for measurement and control
- o SMART PUMP, electronically adjustable pump stages
- o Early warning system for low liquid level (DBGM 203 06 059.8)
- o Adjustable high temperature cut-out, visible via display
- o RS232/RS485 interface for online communication
- o Integrated programmer for 6 x 60 program steps
- o Connections for solenoid valve and HSP booster pump
- o Proportional cooling control
- o Active Cooling Control

Order Information

Model: FPW91-SL

Order no.: 9350793N

Available mains power:
400V / 3 Ph. / 50Hz
230V / 3 Ph. / 60Hz
480V / 3 Ph. / 60Hz

Downloads

- [EasyTemp Software](#)
- [Interactive product demo](#)
- [Easy BlackBox software](#)

Similar Models

These models could also be interesting for you:

[FPW91-SL-180C](#)
[FPW55-SL](#)

Sales & Support:

+49 7823 51-190

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Technical Specifications

Working temperature range	-90 ... 100 °C
Temperature control	ICC
Temperature stability	±0.2 °C
Display	VFD + LCD
Display resolution	0.01 °C
Integrated programmer	available
Heater capacity	3000 W
Cooling capacity	20 0 -20 -40 -60 -80 °C 5200 4700 4000 3500 2300 800 W
Refrigerant	R404A + R23
Pump capacity	Pressure: 700 mbar Suction: 400 mbar Flow rate: 22-26 l/min
Digital interfaces	RS232, RS485, optional Profibus
External Pt100 sensor connection	available
Bath opening / bath depth (W x L / D)	Ø = 7 / 20 cm
Filling volume	22 Liters
Dimensions (W x L x H)	85 x 76 x 116 cm
Weight	296 kg
Ambient temperature	5...40 °C
Classification according to DIN 12876-1	3 (FL)

Miscellaneous

Optional: Electronic module with analog connections for external programming, temperature recorder, standby, alarm (Order no. 8 900 100)
Option: bath opening 28 x 23 cm instead of filling port on request.
HST booster heater and HSP booster pump for increased heater and pump capacity available (accessories).



Product Data Sheet

FPW90-SL Ultra-Low Refrigerated Circulators

[Print Data Sheet](#)

Product Image



Order Information

Model: FPW90-SL

Order no.: 9350791N

Available mains power:
400V / 3 Ph. / 50Hz
230V / 3 Ph. / 60Hz
230V / 3 Ph. / 50Hz

Downloads

- [EasyTemp Software](#)
- [Interactive product demo](#)
- [Easy BlackBox software](#)

Similar Models

These models could also be interesting for you:

[FPW90-SL-150C](#)
[FP90-SL](#)
[FPW91-SL](#)

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Description

Water-cooled Ultra-low Refrigerated Circulator with 2-stage cascade-cooling and proportional cooling control

JULABO Ultra-Low Refrigerated Circulators for heating and cooling are suitable for external temperature tasks. Powerful circulating pump systems and high heating and cooling capacities guarantee short heat-up and cool-down times. ACC 'Active Cooling Control' provides active cooling control across the whole temperature range. An energy saving feature with only minor loss of heat is provided by the proportional cooling capacity control in the 'FP' refrigeration units. The inevitable dust accumulation that occurs in refrigeration systems is solved by means of an easily removed venting grill, which allows for easy cleaning. The units are equipped with handles or castors for an easy transportation. All models have a drain tap on the front allowing the fluid to be drained easily. Additionally the instruments are equipped with an improved insulation to help avoid ice-formation, and have a visual liquid level display.

Advantages

- o VFD COMFORT DISPLAY, resolution 0.01 °C
- o LCD DIALOG DISPLAY backlit for convenient interactive operation
- o Keypad for setpoints, warning/safety values and menu functions
- o ICC (Intelligent Cascade Control), self-optimizing temperature control
- o TCF Temperature Control Features to optimize the control behaviour
- o ATC3 3-Point-Calibration
- o Pt100 External sensor connection for measurement and control
- o SMART PUMP, electronically adjustable pump stages
- o Early warning system for low liquid level (DBGM 203 06 059.8)
- o Adjustable high temperature cut-out, visible via display
- o RS232/RS485 interface for online communication
- o Integrated programmer for 6 x 60 program steps
- o Connections for solenoid valve and HSP booster pump
- o Proportional cooling control
- o Active Cooling Control

Technical Specifications

Working temperature range	-90 ... 100 °C
Temperature control	ICC
Temperature stability	±0.05 °C
Display	VFD + LCD
Display resolution	0.01 °C
Integrated programmer	available
Heater capacity	3000 W
Cooling capacity	20 0 -20 -40 -60 -80 °C 1800 1700 1600 1350 750 150 W
Refrigerant	R404A + R23
Pump capacity	Pressure: 700 mbar Suction: 400 mbar Flow rate: 22-26 l/min
Digital interfaces	RS232, RS485, optional Profibus
External Pt100 sensor connection	available
Bath opening / bath depth (W x L / D)	Ø = 7 / 20 cm
Filling volume	22 Liters
Dimensions (W x L x H)	59 x 76 x 116 cm
Weight	214 kg
Ambient temperature	5...40 °C
Classification according to DIN 12876-1	3 (FL)

Miscellaneous

Optional: Electronic module with analog connections for external programming, temperature recorder, standby, alarm (Order no. 8 900 100)
Option: bath opening 28 x 23 cm instead of filling port on request.
HST booster heater and HSP booster pump for increased heater and pump capacity available (accessories).



Product Data Sheet

FPW90-SL-150C Ultra-Low Refrigerated Circulators

[Print Data Sheet](#)

Product Image



Description

Water-cooled Ultra-low Refrigerated Circulator with extended temperature range and proportional cooling control

JULABO Ultra-Low Refrigerated Circulators for heating and cooling are suitable for external temperature tasks. Powerful circulating pump systems and high heating and cooling capacities guarantee short heat-up and cool-down times. ACC 'Active Cooling Control' provides active cooling control across the whole temperature range. An energy saving feature with only minor loss of heat is provided by the proportional cooling capacity control in the 'FP' refrigeration units. The inevitable dust accumulation that occurs in refrigeration systems is solved by means of an easily removed venting grill, which allows for easy cleaning. The units are equipped with handles or castors for an easy transportation. All models have a drain tap on the front allowing the fluid to be drained easily. Additionally the instruments are equipped with an improved insulation to help avoid ice-formation, and have a visual liquid level display.

Advantages

- o VFD COMFORT DISPLAY, resolution 0.01 °C
- o LCD DIALOG DISPLAY backlit for convenient interactive operation
- o Keypad for setpoints, warning/safety values and menu functions
- o ICC (Intelligent Cascade Control), self-optimizing temperature control
- o TCF Temperature Control Features to optimize the control behaviour
- o ATC3 3-Point-Calibration
- o Pt100 External sensor connection for measurement and control
- o SMART PUMP, electronically adjustable pump stages
- o Early warning system for low liquid level (DBGM 203 06 059.8)
- o Adjustable high temperature cut-out, visible via display
- o RS232/RS485 interface for online communication
- o Integrated programmer for 6 x 60 program steps
- o Connections for solenoid valve and HSP booster pump
- o Proportional cooling control
- o Active Cooling Control

Order Information

Model: FPW90-SL-150C
Order no.: 9350791N150

Available mains power:
 400V / 3 Ph. / 50Hz
 230V / 3 Ph. / 60Hz
 230V / 3 Ph. / 50Hz

Downloads

- ↓ EasyTemp Software
- ↓ Interactive product demo
- ↓ Easy BlackBox software

Similar Models

These models could also be interesting for you:

FPW90-SL
FP90-SL
FPW91-SL-180C

Sales & Support:

+49 7823 51-190

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 Pictures may differ from original.

Technical Specifications

Working temperature range	-90 ... 150 °C
Temperature control	ICC
Temperature stability	±0.05 °C
Display	VFD + LCD
Display resolution	0.01 °C
Integrated programmer	available
Heater capacity	3000 W
Cooling capacity	20 0 -20 -40 -60 -80 °C 1800 1700 1600 1350 750 150 W
Refrigerant	R404A + R23
Pump capacity	Pressure: 700 mbar Suction: 400 mbar Flow rate: 22-26 l/min
Digital interfaces	RS232, RS485, optional Profibus
External Pt100 sensor connection	available
Bath opening / bath depth (W x L / D)	Ø = 7 / 20 cm
Filling volume	22 Liters
Dimensions (W x L x H)	59 x 76 x 116 cm
Weight	214 kg
Ambient temperature	5...40 °C
Classification according to DIN 12876-1	3 (FL)

Miscellaneous

Optional: Electronic module with analog connections for external programming, temperature recorder, standby, alarm (Order no. 8 900 100)
 Option: bath opening 28 x 23 cm instead of filling port on request.
 HST booster heater and HSP booster pump for increased heater and pump capacity available (accessories).



Product Data Sheet

FPW55-SL Ultra-Low Refrigerated Circulators

[Print Data Sheet](#)

Product Image



Order Information

Model: FPW55-SL

Order no.: 9350756N

Available mains power:
400V / 3 Ph. / 50Hz
230V / 3 Ph. / 60Hz

Downloads

- [EasyTemp Software](#)
- [Interactive product demo](#)
- [Easy BlackBox software](#)

Similar Models

These models could also be interesting for you:

FPW55-SL-150C
FPW91-SL
FPW91-SL-180C

Sales & Support:

+49 7823 51-190

Monday to Friday
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Pictures may differ from original.

Description

Water-cooled Ultra-low Refrigerated Circulator with 2-stage cascade-cooling and proportional cooling control

JULABO Ultra-Low Refrigerated Circulators for heating and cooling are suitable for external temperature tasks. Powerful circulating pump systems and high heating and cooling capacities guarantee short heat-up and cool-down times. ACC 'Active Cooling Control' provides active cooling control across the whole temperature range. An energy saving feature with only minor loss of heat is provided by the proportional cooling capacity control in the 'FP' refrigeration units. The inevitable dust accumulation that occurs in refrigeration systems is solved by means of an easily removed venting grill, which allows for easy cleaning. The units are equipped with handles or castors for an easy transportation. All models have a drain tap on the front allowing the fluid to be drained easily. Additionally the instruments are equipped with an improved insulation to help avoid ice-formation, and have a visual liquid level display.

Advantages

- o VFD COMFORT DISPLAY, resolution 0.01 °C
- o LCD DIALOG DISPLAY backlit for convenient interactive operation
- o Keypad for setpoints, warning/safety values and menu functions
- o ICC (Intelligent Cascade Control), self-optimizing temperature control
- o TCF Temperature Control Features to optimize the control behaviour
- o ATC3 3-Point-Calibration
- o Pt100 External sensor connection for measurement and control
- o SMART PUMP, electronically adjustable pump stages
- o Early warning system for low liquid level (DBGM 203 06 059.8)
- o Adjustable high temperature cut-out, visible via display
- o RS232/RS485 interface for online communication
- o Integrated programmer for 6 x 60 program steps
- o Connections for solenoid valve and HSP booster pump
- o Proportional cooling control
- o Active Cooling Control

Technical Specifications

Working temperature range	-60 ... 100 °C
Temperature control	ICC
Temperature stability	±0.05 °C
Display	VFD + LCD
Display resolution	0.01 °C
Integrated programmer	available
Heater capacity	3000 W
Cooling capacity	20 0 -20 -40 -60 °C 5500 4100 2200 1000 130 W
Refrigerant	R404A
Pump capacity	Pressure: 700 mbar Suction: 400 mbar Flow rate: 22-26 l/min
Digital interfaces	RS232, RS485, optional Profibus
External Pt100 sensor connection	available
Bath opening / bath depth (W x L / D)	Ø = 7 / 23 cm
Filling volume	27 Liters
Dimensions (W x L x H)	59 x 76 x 116 cm
Weight	192 kg
Ambient temperature	5...40 °C
Classification according to DIN 12876-1	3 (FL)

Miscellaneous

Optional: Electronic module with analog connections for external programming, temperature recorder, standby, alarm (Order no. 8 900 100)
Option: bath opening 28 x 23 cm instead of filling port on request.
HST booster heater and HSP booster pump for increased heater and pump capacity available (accessories).



Product Data Sheet

FPW55-SL-150C Ultra-Low Refrigerated Circulators

[Print Data Sheet](#)

Product Image



Order Information

Model: FPW55-SL-150C

Order no.: 9350756N150

Available mains power:

400V / 3 Ph. / 50Hz

230V / 3 Ph. / 60Hz

Downloads

- [EasyTemp Software](#)
- [Interactive product demo](#)
- [Easy BlackBox software](#)

Similar Models

These models could also be interesting for you:

FPW55-SL

FPW91-SL

FPW91-SL-180C

Sales & Support:

+49 7823 51-190

Monday to Friday
7:30 am - 17:00 pm

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Description

Water-cooled Ultra-low Refrigerated Circulator with extended temperature range and proportional cooling control

JULABO Ultra-Low Refrigerated Circulators for heating and cooling are suitable for external temperature tasks. Powerful circulating pump systems and high heating and cooling capacities guarantee short heat-up and cool-down times. ACC 'Active Cooling Control' provides active cooling control across the whole temperature range. An energy saving feature with only minor loss of heat is provided by the proportional cooling capacity control in the 'FP' refrigeration units. The inevitable dust accumulation that occurs in refrigeration systems is solved by means of an easily removed venting grill, which allows for easy cleaning. The units are equipped with handles or castors for an easy transportation. All models have a drain tap on the front allowing the fluid to be drained easily. Additionally the instruments are equipped with an improved insulation to help avoid ice-formation, and have a visual liquid level display.

Advantages

- o VFD COMFORT DISPLAY, resolution 0.01 °C
- o LCD DIALOG DISPLAY backlit for convenient interactive operation
- o Keypad for setpoints, warning/safety values and menu functions
- o ICC (Intelligent Cascade Control), self-optimizing temperature control
- o TCF Temperature Control Features to optimize the control behaviour
- o ATC3 3-Point-Calibration
- o Pt100 External sensor connection for measurement and control
- o SMART PUMP, electronically adjustable pump stages
- o Early warning system for low liquid level (DBGM 203 06 059.8)
- o Adjustable high temperature cut-out, visible via display
- o RS232/RS485 interface for online communication
- o Integrated programmer for 6 x 60 program steps
- o Connections for solenoid valve and HSP booster pump
- o Proportional cooling control
- o Active Cooling Control

Technical Specifications

Working temperature range	-60 ... 150 °C
Temperature control	ICC
Temperature stability	±0.05 °C
Display	VFD + LCD
Display resolution	0.01 °C
Integrated programmer	available
Heater capacity	3000 W
Cooling capacity	20 0 -20 -40 -60 °C 5500 4100 2200 1000 130 W
Refrigerant	R404A
Pump capacity	Pressure: 700 mbar Suction: 400 mbar Flow rate: 22-26 l/min
Digital interfaces	RS232, RS485, optional Profibus
External Pt100 sensor connection	available
Bath opening / bath depth (W x L / D)	Ø = 7 / 23 cm
Filling volume	27 Liters
Dimensions (W x L x H)	59 x 76 x 116 cm
Weight	192 kg
Ambient temperature	5...40 °C
Classification according to DIN 12876-1	3 (FL)

Miscellaneous

Optional: Electronic module with analog connections for external programming, temperature recorder, standby, alarm (Order no. 8 900 100)
Option: bath opening 28 x 23 cm instead of filling port on request.
HST booster heater and HSP booster pump for increased heater and pump capacity available (accessories).



Product Data Sheet

FPW52-SL Ultra-Low Refrigerated Circulators

[Print Data Sheet](#)

Product Image



Order Information

Model: FPW52-SL

Order no.: 9350753N

Available mains power:
400V / 3 Ph. / 50Hz
230V / 3 Ph. / 60Hz

Similar Models

These models could also be interesting for you:

FPW52-SL-150C
FPW55-SL

Sales & Support:

+49 7823 51-190

Monday to Friday
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Pictures may differ from original.

Description

Water-cooled Ultra-low Refrigerated Circulator with 2-stage cascade-cooling and proportional cooling control

JULABO Ultra-Low Refrigerated Circulators for heating and cooling are suitable for external temperature tasks. Powerful circulating pump systems and high heating and cooling capacities guarantee short heat-up and cool-down times. ACC 'Active Cooling Control' provides active cooling control across the whole temperature range. An energy saving feature with only minor loss of heat is provided by the proportional cooling capacity control in the 'FP' refrigeration units. The inevitable dust accumulation that occurs in refrigeration systems is solved by means of an easily removed venting grill, which allows for easy cleaning. The units are equipped with handles or castors for an easy transportation. All models have a drain tap on the front allowing the fluid to be drained easily. Additionally the instruments are equipped with an improved insulation to help avoid ice-formation, and have a visual liquid level display.

Advantages

- o VFD COMFORT DISPLAY, resolution 0.01 °C
- o LCD DIALOG DISPLAY backlit for convenient interactive operation
- o Keypad for setpoints, warning/safety values and menu functions
- o ICC (Intelligent Cascade Control), self-optimizing temperature control
- o TCF Temperature Control Features to optimize the control behaviour
- o ATC3 3-Point-Calibration
- o Pt100 External sensor connection for measurement and control
- o SMART PUMP, electronically adjustable pump stages
- o Early warning system for low liquid level (DBGM 203 06 059.8)
- o Adjustable high temperature cut-out, visible via display
- o RS232/RS485 interface for online communication
- o Integrated programmer for 6 x 60 program steps
- o Connections for solenoid valve and HSP booster pump
- o Proportional cooling control
- o Active Cooling Control

Technical Specifications

Working temperature range	-60 ... 100 °C												
Temperature control	ICC												
Temperature stability	±0.05 °C												
Display	VFD + LCD												
Display resolution	0.01 °C												
Integrated programmer	available												
Heater capacity	3000 W												
Cooling capacity	<table border="1"> <tbody> <tr> <td>20</td> <td>0</td> <td>-20</td> <td>-40</td> <td>-60</td> <td>°C</td> </tr> <tr> <td>3000</td> <td>2800</td> <td>1600</td> <td>650</td> <td>100</td> <td>W</td> </tr> </tbody> </table>	20	0	-20	-40	-60	°C	3000	2800	1600	650	100	W
20	0	-20	-40	-60	°C								
3000	2800	1600	650	100	W								
Refrigerant	R404A												
Pump capacity	Pressure: 700 mbar Suction: 400 mbar Flow rate: 22-26 l/min												
Digital interfaces	RS232, RS485, optional Profibus												
External Pt100 sensor connection	available												
Bath opening / bath depth (W x L / D)	Ø = 7 / 22 cm												
Filling volume	24 Liters												
Dimensions (W x L x H)	59 x 76 x 116 cm												
Weight	190 kg												
Ambient temperature	5...40 °C												
Classification according to DIN 12876-1	3 (FL)												

Miscellaneous

Optional: Electronic module with analog connections for external programming, temperature recorder, standby, alarm (Order no. 8 900 100) Option: bath opening 28 x 23 cm instead of filling port on request. HST booster heater and HSP booster pump for increased heater and pump capacity available (accessories).



Product Data Sheet

FPW52-SL-150C Ultra-Low Refrigerated Circulators

[Print Data Sheet](#)

Product Image



Order Information

Model: FPW52-SL-150C

Order no.: 9350753N150

Available mains power:
400V / 3 Ph. / 50Hz
230V / 3 Ph. / 60Hz

Similar Models

These models could also be interesting for you:

FPW52-SL
FPW55-SL-150C
FP55-SL-150C

Sales & Support:

+49 7823 51-190

Monday to Friday
7:30 am - 17:00 pm

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Pictures may differ from original.

Description

Water-cooled Ultra-low Refrigerated Circulator with extended temperature range and proportional cooling control

JULABO Ultra-Low Refrigerated Circulators for heating and cooling are suitable for external temperature tasks. Powerful circulating pump systems and high heating and cooling capacities guarantee short heat-up and cool-down times. ACC 'Active Cooling Control' provides active cooling control across the whole temperature range. An energy saving feature with only minor loss of heat is provided by the proportional cooling capacity control in the 'FP' refrigeration units. The inevitable dust accumulation that occurs in refrigeration systems is solved by means of an easily removed venting grill, which allows for easy cleaning. The units are equipped with handles or castors for an easy transportation. All models have a drain tap on the front allowing the fluid to be drained easily. Additionally the instruments are equipped with an improved insulation to help avoid ice-formation, and have a visual liquid level display.

Advantages

- o VFD COMFORT DISPLAY, resolution 0.01 °C
- o LCD DIALOG DISPLAY backlit for convenient interactive operation
- o Keypad for setpoints, warning/safety values and menu functions
- o ICC (Intelligent Cascade Control), self-optimizing temperature control
- o TCF Temperature Control Features to optimize the control behaviour
- o ATC3 3-Point-Calibration
- o Pt100 External sensor connection for measurement and control
- o SMART PUMP, electronically adjustable pump stages
- o Early warning system for low liquid level (DBGM 203 06 059.8)
- o Adjustable high temperature cut-out, visible via display
- o RS232/RS485 interface for online communication
- o Integrated programmer for 6 x 60 program steps
- o Connections for solenoid valve and HSP booster pump
- o Proportional cooling control
- o Active Cooling Control

Technical Specifications

Working temperature range	-60 ... 150 °C
Temperature control	ICC
Temperature stability	±0.05 °C
Display	VFD + LCD
Display resolution	0.01 °C
Integrated programmer	available
Heater capacity	3000 W
Cooling capacity	20 0 -20 -40 -60 -80 °C 3000 2800 1600 650 100 W
Refrigerant	R404A
Pump capacity	Pressure: 700 mbar Suction: 400 mbar Flow rate: 22-26 l/min
Digital interfaces	RS232, RS485, optional Profibus
External Pt100 sensor connection	available
Bath opening / bath depth (W x L / D)	Ø = 7 / 22 cm
Filling volume	24 Liters
Dimensions (W x L x H)	59 x 76 x 116 cm
Weight	190 kg
Ambient temperature	5...40 °C
Classification according to DIN 12876-1	3 (FL)

Miscellaneous

Optional: Electronic module with analog connections for external programming, temperature recorder, standby, alarm (Order no. 8 900 100) Option: bath opening 28 x 23 cm instead of filling port on request. HST booster heater and HSP booster pump for increased heater and pump capacity available (accessories).



Product Data Sheet

FP90-SL Ultra-Low Refrigerated Circulators

[Print Data Sheet](#)

Product Image



Order Information

Model: FP90-SL
Order no.: 9350790N

Available mains power:
400V / 3 Ph. / 50Hz
230V / 3 Ph. / 60Hz
230V / 3 Ph. / 50Hz

Downloads

- ↓ [EasyTemp Software](#)
- ↓ [Interactive product demo](#)
- ↓ [Easy BlackBox software](#)

Similar Models

These models could also be interesting for you:

FP90-SL-150C
FPW90-SL
FPW91-SL

Sales & Support:

+49 7823 51-190

Monday to Friday
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Description

Ultra-low Refrigerated Circulator with 2-stage cascade-cooling and proportional cooling control

JULABO Ultra-Low Refrigerated Circulators for heating and cooling are suitable for external temperature tasks. Powerful circulating pump systems and high heating and cooling capacities guarantee short heat-up and cool-down times. ACC 'Active Cooling Control' provides active cooling control across the whole temperature range. An energy saving feature with only minor loss of heat is provided by the proportional cooling capacity control in the 'FP' refrigeration units. The inevitable dust accumulation that occurs in refrigeration systems is solved by means of an easily removed venting grill, which allows for easy cleaning. The units are equipped with handles or castors for an easy transportation. All models have a drain tap on the front allowing the fluid to be drained easily. Additionally the instruments are equipped with an improved insulation to help avoid ice-formation, and have a visual liquid level display.

Advantages

- o VFD COMFORT DISPLAY, resolution 0.01 °C
- o LCD DIALOG DISPLAY backlit for convenient interactive operation
- o Keypad for setpoints, warning/safety values and menu functions
- o ICC (Intelligent Cascade Control), self-optimizing temperature control
- o TCF Temperature Control Features to optimize the control behaviour
- o ATC3 3-Point-Calibration
- o Pt100 External sensor connection for measurement and control
- o SMART PUMP, electronically adjustable pump stages
- o Early warning system for low liquid level (DBGM 203 06 059.8)
- o Adjustable high temperature cut-out, visible via display
- o RS232/RS485 interface for online communication
- o Integrated programmer for 6 x 60 program steps
- o Connections for solenoid valve and HSP booster pump
- o Proportional cooling control
- o Active Cooling Control

Technical Specifications

Working temperature range	-90 ... 100 °C
Temperature control	ICC
Temperature stability	±0.05 °C
Display	VFD + LCD
Display resolution	0.01 °C
Integrated programmer	available
Heater capacity	3000 W
Cooling capacity	20 0 -20 -40 -60 -80 °C 1800 1700 1600 1350 750 150 W
Refrigerant	R404A + R23
Pump capacity	Pressure: 700 mbar Suction: 400 mbar Flow rate: 22-26 l/min
Digital interfaces	RS232, RS485, optional Profibus
External Pt100 sensor connection	available
Bath opening / bath depth (W x L / D)	Ø = 7 / 20 cm
Filling volume	22 Liters
Dimensions (W x L x H)	59 x 76 x 116 cm
Weight	195 kg
Ambient temperature	5...40 °C
Classification according to DIN 12876-1	3 (FL)

Miscellaneous

Optional: Electronic module with analog connections for external programming, temperature recorder, standby, alarm (Order no. 8 900 100)
Option: bath opening 28 x 23 cm instead of filling port on request.
HST booster heater and HSP booster pump for increased heater and pump capacity available (accessories).



Product Data Sheet

FP90-SL-150C Ultra-Low Refrigerated Circulators

[Print Data Sheet](#)

Product Image



Order Information

Model: FP90-SL-150C

Order no.: 9350790N150

Available mains power:
400V / 3 Ph. / 50Hz
230V / 3 Ph. / 60Hz
230V / 3 Ph. / 50Hz

Similar Models

These models could also be interesting for you:

FP90-SL
FPW91-SL-180C
FPW90-SL-150C

Sales & Support:

+49 7823 51-190

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Description

Ultra-low Refrigerated Circulator with extended temperature range and proportional cooling control

JULABO Ultra-Low Refrigerated Circulators for heating and cooling are suitable for external temperature tasks. Powerful circulating pump systems and high heating and cooling capacities guarantee short heat-up and cool-down times. ACC 'Active Cooling Control' provides active cooling control across the whole temperature range. An energy saving feature with only minor loss of heat is provided by the proportional cooling capacity control in the 'FP' refrigeration units. The inevitable dust accumulation that occurs in refrigeration systems is solved by means of an easily removed venting grill, which allows for easy cleaning. The units are equipped with handles or castors for an easy transportation. All models have a drain tap on the front allowing the fluid to be drained easily. Additionally the instruments are equipped with an improved insulation to help avoid ice-formation, and have a visual liquid level display.

Advantages

- o VFD COMFORT DISPLAY, resolution 0.01 °C
- o LCD DIALOG DISPLAY backlit for convenient interactive operation
- o Keypad for setpoints, warning/safety values and menu functions
- o ICC (Intelligent Cascade Control), self-optimizing temperature control
- o TCF Temperature Control Features to optimize the control behaviour
- o ATC3 3-Point-Calibration
- o Pt100 External sensor connection for measurement and control
- o SMART PUMP, electronically adjustable pump stages
- o Early warning system for low liquid level (DBGM 203 06 059.8)
- o Adjustable high temperature cut-out, visible via display
- o RS232/RS485 interface for online communication
- o Integrated programmer for 6 x 60 program steps
- o Connections for solenoid valve and HSP booster pump
- o Proportional cooling control
- o Active Cooling Control

Technical Specifications

Working temperature range	-90 ... 150 °C
Temperature control	ICC
Temperature stability	±0.05 °C
Display	VFD + LCD
Display resolution	0.01 °C
Integrated programmer	available
Heater capacity	3000 W
Cooling capacity	20 0 -20 -40 -60 -80 °C 1800 1700 1600 1350 750 150 W
Refrigerant	R404A + R23
Pump capacity	Pressure: 700 mbar Suction: 400 mbar Flow rate: 22-26 l/min
Digital interfaces	RS232, RS485, optional Profibus
External Pt100 sensor connection	available
Bath opening / bath depth (W x L / D)	Ø = 7 / 20 cm
Filling volume	22 Liters
Dimensions (W x L x H)	59 x 76 x 116 cm
Weight	214 kg
Ambient temperature	5...40 °C
Classification according to DIN 12876-1	3 (FL)

Miscellaneous

Optional: Electronic module with analog connections for external programming, temperature recorder, standby, alarm (Order no. 8 900 100) Option: bath opening 28 x 23 cm instead of filling port on request. HST booster heater and HSP booster pump for increased heater and pump capacity available (accessories).



Product Data Sheet

FP88-ME Ultra-Low Refrigerated Circulator

[Print Data Sheet](#)

Product Image



Order Information

Model: FP88-ME

Order no.: 9160688

Available mains power:
230V / 50Hz
230V / 60Hz

Downloads

- + [EasyTemp Software](#)
- + [Interactive product demo](#)
- + [Easy BlackBox software](#)

Similar Models

These models could also be interesting for you:

FP88-HL
F83-ME
LH85

Sales & Support:

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Monday to Friday
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Description

Ultra-low Refrigerated Circulator with 2-stage cascade-cooling

JULABO Ultra-Low Refrigerated Circulators for heating and cooling are suitable for external temperature tasks. Powerful circulating pump systems and high heating and cooling capacities guarantee short heat-up and cool-down times. ACC 'Active Cooling Control' provides active cooling control across the whole temperature range. An energy saving feature with only minor loss of heat is provided by the proportional cooling capacity control in the 'FP' refrigeration units. The inevitable dust accumulation that occurs in refrigeration systems is solved by means of an easily removed venting grill, which allows for easy cleaning. The units are equipped with handles or castors for an easy transportation. All models have a drain tap on the front allowing the fluid to be drained easily. Additionally the instruments are equipped with an improved insulation to help avoid ice-formation, and have a visual liquid level display.

Advantages

- o VFD COMFORT DISPLAY, resolution 0.1 °C
- o Keypad for setpoints, warning/safety values and menu functions
- o PID3 cascade temperature control
- o ATC3 3-Point-Calibration
- o Pt100 External sensor connection for measurement and control
- o SMART PUMP, electronically adjustable pump stages
- o Early warning system for low liquid level (DBGM 203 06 059.8)
- o Adjustable high temperature cut-out, visible via display
- o RS232 interface for online communication
- o Integrated programmer for 10 program steps
- o Proportional cooling control
- o Active Cooling Control

Technical Specifications

Working temperature range	-88 ... 100 °C
Temperature control	PID, cascade
Temperature stability	±0.02 °C
Display	VFD
Display resolution	0.1 °C
Integrated programmer	available
Heater capacity	1300 W
Cooling capacity	20 0 -20 -40 -60 -80 °C 1000 960 920 730 590 150 W
Refrigerant	R404A + R23
Pump capacity	Pressure: 450 mbar Flow rate: 11-16 l/min
Digital interfaces	RS232
External Pt100 sensor connection	available
Bath opening / bath depth (W x L / D)	13 x 15 / 16 cm
Filling volume	8 Liters
Dimensions (W x L x H)	55 x 61 x 90 cm
Weight	119 kg
Ambient temperature	5...40 °C
Classification according to DIN 12876-1	3 (FL)

Miscellaneous

Condensation trap to prevent ice formation available as accessory.
Option: water-cooled model available



Product Data Sheet

FP88-HL Ultra-Low Refrigerated Circulators

[Print Data Sheet](#)

Product Image



Order Information

Model: FP88-HL

Order no.: 9310688

Available mains power:
230V / 50Hz
230V / 60Hz

Downloads

- + [EasyTemp Software](#)
- + [Interactive product demo](#)
- + [Easy BlackBox software](#)

Similar Models

These models could also be interesting for you:

F83-HL
FP88-MS
LH85

Sales & Support:

+49 7823 51-190

Monday to Friday
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Description

Ultra-low Refrigerated Circulator with 2-stage cascade-cooling

JULABO Ultra-Low Refrigerated Circulators for heating and cooling are suitable for external temperature tasks. Powerful circulating pump systems and high heating and cooling capacities guarantee short heat-up and cool-down times. ACC 'Active Cooling Control' provides active cooling control across the whole temperature range. An energy saving feature with only minor loss of heat is provided by the proportional cooling capacity control in the 'FP' refrigeration units. The inevitable dust accumulation that occurs in refrigeration systems is solved by means of an easily removed venting grill, which allows for easy cleaning. The units are equipped with handles or castors for an easy transportation. All models have a drain tap on the front allowing the fluid to be drained easily. Additionally the instruments are equipped with an improved insulation to help avoid ice-formation, and have a visual liquid level display.

Advantages

- o VFD COMFORT DISPLAY, resolution 0.01 °C
- o LCD DIALOG DISPLAY backlit for convenient interactive operation
- o Keypad for setpoints, warning/safety values and menu functions
- o ICC (Intelligent Cascade Control), self-optimizing temperature control
- o TCF Temperature Control Features to optimize the control behaviour
- o ATC3 3-Point-Calibration
- o Pt100 External sensor connection for measurement and control
- o SMART PUMP, electronically adjustable pump stages
- o Early warning system for low liquid level (DBGM 203 06 059.8)
- o Adjustable high temperature cut-out, visible via display
- o RS232/RS485 interface for online communication
- o Integrated programmer for 6 x 60 program steps
- o Connections for solenoid valve and HSP booster pump
- o Proportional cooling control
- o Active Cooling Control

Technical Specifications

Working temperature range	-88 ... 100 °C
Temperature control	ICC
Temperature stability	±0.02 °C
Display	VFD + LCD
Display resolution	0.01 °C
Integrated programmer	available
Heater capacity	1300 W
Cooling capacity	20 0 -20 -40 -60 -80 °C 1000 960 920 730 590 150 W
Refrigerant	R404A + R23
Pump capacity	Pressure: 700 mbar Suction: 400 mbar Flow rate: 22-26 l/min
Digital interfaces	RS232, RS485, optional Profibus
External Pt100 sensor connection	available
Bath opening / bath depth (W x L / D)	13 x 15 / 16 cm
Filling volume	8 Liters
Dimensions (W x L x H)	55 x 60 x 92 cm
Weight	121 kg
Ambient temperature	5...40 °C
Classification according to DIN 12876-1	3 (FL)

Miscellaneous

Optional: Electronic module with analog connections for external programming, temperature recorder, standby, alarm (Order no. 8 900 100)
Option: water-cooled model available



Product Data Sheet

FP55-SL Ultra-Low Refrigerated Circulators

[Print Data Sheet](#)

Product Image



Description

Ultra-low Refrigerated Circulator with 2-stage cascade-cooling and proportional cooling control

JULABO Ultra-Low Refrigerated Circulators for heating and cooling are suitable for external temperature tasks. Powerful circulating pump systems and high heating and cooling capacities guarantee short heat-up and cool-down times. ACC 'Active Cooling Control' provides active cooling control across the whole temperature range. An energy saving feature with only minor loss of heat is provided by the proportional cooling capacity control in the 'FP' refrigeration units. The inevitable dust accumulation that occurs in refrigeration systems is solved by means of an easily removed venting grill, which allows for easy cleaning. The units are equipped with handles or castors for an easy transportation. All models have a drain tap on the front allowing the fluid to be drained easily. Additionally the instruments are equipped with an improved insulation to help avoid ice-formation, and have a visual liquid level display.

Advantages

- o VFD COMFORT DISPLAY, resolution 0.01 °C
- o LCD DIALOG DISPLAY backlit for convenient interactive operation
- o Keypad for setpoints, warning/safety values and menu functions
- o ICC (Intelligent Cascade Control), self-optimizing temperature control
- o TCF Temperature Control Features to optimize the control behaviour
- o ATC3 3-Point-Calibration
- o Pt100 External sensor connection for measurement and control
- o SMART PUMP, electronically adjustable pump stages
- o Early warning system for low liquid level (DBGM 203 06 059.8)
- o Adjustable high temperature cut-out, visible via display
- o RS232/RS485 interface for online communication
- o Integrated programmer for 6 x 60 program steps
- o Connections for solenoid valve and HSP booster pump
- o Proportional cooling control
- o Active Cooling Control

Order Information

Model: FP55-SL
Order no.: 9350755N

Available mains power:
 400V / 3 Ph. / 50Hz
 230V / 3 Ph. / 60Hz

Similar Models

These models could also be interesting for you:

FP55-SL-150C
FPW55-SL
FPW55-SL-150C

Sales & Support:

+49 7823 51-190

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Technical Specifications

Working temperature range	-55 ... 100 °C
Temperature control	ICC
Temperature stability	±0.05 °C
Display	VFD + LCD
Display resolution	0.01 °C
Integrated programmer	available
Heater capacity	3000 W
Cooling capacity	20 0 -20 -40 -60 °C 5200 4100 2200 700 130 W
Refrigerant	R404A
Pump capacity	Pressure: 700 mbar Suction: 400 mbar Flow rate: 22-26 l/min
Digital interfaces	RS232, RS485, optional Profibus
External Pt100 sensor connection	available
Bath opening / bath depth (W x L / D)	Ø = 7 / 23 cm
Filling volume	27 Liters
Dimensions (W x L x H)	85 x 76 x 116 cm
Weight	192 kg
Ambient temperature	5...40 °C
Classification according to DIN 12876-1	3 (FL)

Miscellaneous

Optional: Electronic module with analog connections for external programming, temperature recorder, standby, alarm (Order no. 8 900 100) Option: bath opening 28 x 23 cm instead of filling port on request. HST booster heater and HSP booster pump for increased heater and pump capacity available (accessories).



Product Data Sheet

FP55-SL-150C Ultra-Low Refrigerated Circulators

[Print Data Sheet](#)

Product Image



Description

Ultra-low Refrigerated Circulator with extended temperature range and proportional cooling control

JULABO Ultra-Low Refrigerated Circulators for heating and cooling are suitable for external temperature tasks. Powerful circulating pump systems and high heating and cooling capacities guarantee short heat-up and cool-down times. ACC 'Active Cooling Control' provides active cooling control across the whole temperature range. An energy saving feature with only minor loss of heat is provided by the proportional cooling capacity control in the 'FP' refrigeration units. The inevitable dust accumulation that occurs in refrigeration systems is solved by means of an easily removed venting grill, which allows for easy cleaning. The units are equipped with handles or castors for an easy transportation. All models have a drain tap on the front allowing the fluid to be drained easily. Additionally the instruments are equipped with an improved insulation to help avoid ice-formation, and have a visual liquid level display.

Advantages

- o VFD COMFORT DISPLAY, resolution 0.01 °C
- o LCD DIALOG DISPLAY backlit for convenient interactive operation
- o Keypad for setpoints, warning/safety values and menu functions
- o ICC (Intelligent Cascade Control), self-optimizing temperature control
- o TCF Temperature Control Features to optimize the control behaviour
- o ATC3 3-Point-Calibration
- o Pt100 External sensor connection for measurement and control
- o SMART PUMP, electronically adjustable pump stages
- o Early warning system for low liquid level (DBGM 203 06 059.8)
- o Adjustable high temperature cut-out, visible via display
- o RS232/RS485 interface for online communication
- o Integrated programmer for 6 x 60 program steps
- o Connections for solenoid valve and HSP booster pump
- o Proportional cooling control
- o Active Cooling Control

Order Information

Model: FP55-SL-150C

Order no.: 9350755N150

Available mains power:
400V / 3 Ph. / 50Hz
230V / 3 Ph. / 60Hz

Similar Models

These models could also be interesting for you:

FP55-SL
FPW55-SL
FPW55-SL-150C

Sales & Support:

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Technical Specifications

Working temperature range	-55 ... 150 °C
Temperature control	ICC
Temperature stability	±0.05 °C
Display	VFD + LCD
Display resolution	0.01 °C
Integrated programmer	available
Heater capacity	3000 W
Cooling capacity	20 0 -20 -40 -60 °C 5200 4100 2200 700 130 W
Refrigerant	R404A
Pump capacity	Pressure: 700 mbar Suction: 400 mbar Flow rate: 22-26 l/min
Digital interfaces	RS232, RS485, optional Profibus
External Pt100 sensor connection	available
Bath opening / bath depth (W x L / D)	Ø = 7 / 23 cm
Filling volume	27 Liters
Dimensions (W x L x H)	85 x 76 x 116 cm
Weight	192 kg
Ambient temperature	5...40 °C
Classification according to DIN 12876-1	3 (FL)

Miscellaneous

Optional: Electronic module with analog connections for external programming, temperature recorder, standby, alarm (Order no. 8 900 100) Option: bath opening 28 x 23 cm instead of filling port on request. HST booster heater and HSP booster pump for increased heater and pump capacity available (accessories).



Product Data Sheet

FP52-SL Ultra-Low Refrigerated Circulators

[Print Data Sheet](#)

Product Image



Order Information

Model: FP52-SL
Order no.: 9350752N

Available mains power:
400V / 3 Ph. / 50Hz
230V / 3 Ph. / 60Hz

Similar Models

These models could also be interesting for you:

FP52-SL-150C
FPW52-SL
FP55-SL

Sales & Support:

+49 7823 51-190

Monday to Friday
7:30 am - 17:00 pm

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Description

Ultra-low Refrigerated Circulator with 2-stage cascade-cooling and proportional cooling control

JULABO Ultra-Low Refrigerated Circulators for heating and cooling are suitable for external temperature tasks. Powerful circulating pump systems and high heating and cooling capacities guarantee short heat-up and cool-down times. ACC 'Active Cooling Control' provides active cooling control across the whole temperature range. An energy saving feature with only minor loss of heat is provided by the proportional cooling capacity control in the 'FP' refrigeration units. The inevitable dust accumulation that occurs in refrigeration systems is solved by means of an easily removed venting grill, which allows for easy cleaning. The units are equipped with handles or castors for an easy transportation. All models have a drain tap on the front allowing the fluid to be drained easily. Additionally the instruments are equipped with an improved insulation to help avoid ice-formation, and have a visual liquid level display.

Advantages

- o VFD COMFORT DISPLAY, resolution 0.01 °C
- o LCD DIALOG DISPLAY backlit for convenient interactive operation
- o Keypad for setpoints, warning/safety values and menu functions
- o ICC (Intelligent Cascade Control), self-optimizing temperature control
- o TCF Temperature Control Features to optimize the control behaviour
- o ATC3 3-Point-Calibration
- o Pt100 External sensor connection for measurement and control
- o SMART PUMP, electronically adjustable pump stages
- o Early warning system for low liquid level (DBGM 203 06 059.8)
- o Adjustable high temperature cut-out, visible via display
- o RS232/RS485 interface for online communication
- o Integrated programmer for 6 x 60 program steps
- o Connections for solenoid valve and HSP booster pump
- o Proportional cooling control
- o Active Cooling Control

Technical Specifications

Working temperature range	-60 ... 100 °C
Temperature control	ICC
Temperature stability	±0.05 °C
Display	VFD + LCD
Display resolution	0.01 °C
Integrated programmer	available
Heater capacity	3000 W
Cooling capacity	20 0 -20 -40 -60 °C 3000 2800 1600 650 100 W
Refrigerant	R404A
Pump capacity	Pressure: 700 mbar Suction: 400 mbar Flow rate: 22-26 l/min
Digital interfaces	RS232, RS485, optional Profibus
External Pt100 sensor connection	available
Bath opening / bath depth (W x L / D)	Ø = 7 / 22 cm
Filling volume	24 Liters
Dimensions (W x L x H)	59 x 76 x 116 cm
Weight	190 kg
Ambient temperature	5...40 °C
Classification according to DIN 12876-1	3 (FL)

Miscellaneous

Optional: Electronic module with analog connections for external programming, temperature recorder, standby, alarm (Order no. 8 900 100) Option: bath opening 28 x 23 cm instead of filling port on request. HST booster heater and HSP booster pump for increased heater and pump capacity available (accessories).



Product Data Sheet

FP52-SL-150C Ultra-Low Refrigerated Circulators

[Print Data Sheet](#)

Product Image



Order Information

Model: FP52-SL-150C

Order no.: 9350752N150

Available mains power:
400V / 3 Ph. / 50Hz
230V / 3 Ph. / 60Hz

Similar Models

These models could also be interesting for you:

FP52-SL
FPW52-SL
FP55-SL

Sales & Support:

+49 7823 51-190

Monday to Friday
7:30 am - 17:00 pm

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Description

Ultra-low Refrigerated Circulator with extended temperature range and proportional cooling control

JULABO Ultra-Low Refrigerated Circulators for heating and cooling are suitable for external temperature tasks. Powerful circulating pump systems and high heating and cooling capacities guarantee short heat-up and cool-down times. ACC 'Active Cooling Control' provides active cooling control across the whole temperature range. An energy saving feature with only minor loss of heat is provided by the proportional cooling capacity control in the 'FP' refrigeration units. The inevitable dust accumulation that occurs in refrigeration systems is solved by means of an easily removed venting grill, which allows for easy cleaning. The units are equipped with handles or castors for an easy transportation. All models have a drain tap on the front allowing the fluid to be drained easily. Additionally the instruments are equipped with an improved insulation to help avoid ice-formation, and have a visual liquid level display.

Advantages

- o VFD COMFORT DISPLAY, resolution 0.01 °C
- o LCD DIALOG DISPLAY backlit for convenient interactive operation
- o Keypad for setpoints, warning/safety values and menu functions
- o ICC (Intelligent Cascade Control), self-optimizing temperature control
- o TCF Temperature Control Features to optimize the control behaviour
- o ATC3 3-Point-Calibration
- o Pt100 External sensor connection for measurement and control
- o SMART PUMP, electronically adjustable pump stages
- o Early warning system for low liquid level (DBGM 203 06 059.8)
- o Adjustable high temperature cut-out, visible via display
- o RS232/RS485 interface for online communication
- o Integrated programmer for 6 x 60 program steps
- o Connections for solenoid valve and HSP booster pump
- o Proportional cooling control
- o Active Cooling Control

Technical Specifications

Working temperature range	-60 ... 150 °C
Temperature control	ICC
Temperature stability	±0.05 °C
Display	VFD + LCD
Display resolution	0.01 °C
Integrated programmer	available
Heater capacity	3000 W
Cooling capacity	20 0 -20 -40 -60 °C 3000 2800 1600 650 100 W
Refrigerant	R404A
Pump capacity	Pressure: 700 mbar Suction: 400 mbar Flow rate: 22-26 l/min
Digital interfaces	RS232, RS485, optional Profibus
External Pt100 sensor connection	available
Bath opening / bath depth (W x L / D)	Ø = 7 / 22 cm
Filling volume	24 Liters
Dimensions (W x L x H)	59 x 76 x 116 cm
Weight	190 kg
Ambient temperature	5...40 °C
Classification according to DIN 12876-1	3 (FL)

Miscellaneous

Optional: Electronic module with analog connections for external programming, temperature recorder, standby, alarm (Order no. 8 900 100) Option: bath opening 28 x 23 cm instead of filling port on request. HST booster heater and HSP booster pump for increased heater and pump capacity available (accessories).



Product Data Sheet

FP51-SL Ultra-Low Refrigerated Circulators

[Print Data Sheet](#)

Product Image



Order Information

Model: FP51-SL

Order no.: 9350751

Available mains power:
400V / 3 Ph. / 50Hz
230V / 3 Ph. / 60Hz

Downloads

+ EasyTemp Software

Similar Models

These models could also be interesting for you:

FP52-SL
FPW52-SL
FP55-SL

Sales & Support:

+49 7823 51-190

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Description

Ultra-low Refrigerated Circulator with proportional cooling control

JULABO Ultra-Low Refrigerated Circulators for heating and cooling are suitable for external temperature tasks. Powerful circulating pump systems and high heating and cooling capacities guarantee short heat-up and cool-down times. ACC 'Active Cooling Control' provides active cooling control across the whole temperature range. An energy saving feature with only minor loss of heat is provided by the proportional cooling capacity control in the 'FP' refrigeration units. The inevitable dust accumulation that occurs in refrigeration systems is solved by means of an easily removed venting grill, which allows for easy cleaning. The units are equipped with handles or castors for an easy transportation. All models have a drain tap on the front allowing the fluid to be drained easily. Additionally the instruments are equipped with an improved insulation to help avoid ice-formation, and have a visual liquid level display.

Advantages

- o VFD COMFORT DISPLAY, resolution 0.01 °C
- o LCD DIALOG DISPLAY backlit for convenient interactive operation
- o Keypad for setpoints, warning/safety values and menu functions
- o ICC (Intelligent Cascade Control), self-optimizing temperature control
- o TCF Temperature Control Features to optimize the control behaviour
- o ATC3 3-Point-Calibration
- o Pt100 External sensor connection for measurement and control
- o SMART PUMP, electronically adjustable pump stages
- o Early warning system for low liquid level (DBGM 203 06 059.8)
- o Adjustable high temperature cut-out, visible via display
- o RS232/RS485 interface for online communication
- o Integrated programmer for 6 x 60 program steps
- o Connections for solenoid valve and HSP booster pump
- o Proportional cooling control
- o Active Cooling Control

Technical Specifications

Working temperature range	-51 ... 200 °C				
Temperature control	ICC				
Temperature stability	±0.05 °C				
Display	VFD + LCD				
Display resolution	0.01 °C				
Integrated programmer	available				
Heater capacity	3000 W				
Cooling capacity	20	0	-20	-40	°C
	2000	1500	1000	260	W
Refrigerant	R507				
Pump capacity	Pressure: 700 mbar Suction: 400 mbar Flow rate: 22-26 l/min				
Digital interfaces	RS232, RS485, optional Profibus				
External Pt100 sensor connection	available				
Bath opening / bath depth (W x L / D)	18 x 12 / 20 cm				
Filling volume	11 Liters				
Dimensions (W x L x H)	46 x 55 x 89 cm				
Weight	90 kg				
Ambient temperature	5...40 °C				
Classification according to DIN 12876-1	3 (FL)				

Miscellaneous

Optional: Electronic module with analog connections for external programming, temperature recorder, standby, alarm (Order no. 8 900 100)



Product Data Sheet

F95-SL Ultra-Low Refrigerated Circulators

[Print Data Sheet](#)

Product Image



Order Information

Model: F95-SL
Order no.: 9350795N

Available mains power:
400V / 3 Ph. / 50Hz
230V / 3 Ph. / 60Hz

Downloads

- + [EasyTemp Software](#)
- + [Interactive product demo](#)
- + [Easy BlackBox software](#)

Similar Models

These models could also be interesting for you:

FW95-SL
FPW91-SL
LH85

Sales & Support:

+49 7823 51-190

Monday to Friday
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Description

Ultra-low Refrigerated Circulator with 2-stage cascade-cooling

JULABO Ultra-Low Refrigerated Circulators for heating and cooling are suitable for external temperature tasks. Powerful circulating pump systems and high heating and cooling capacities guarantee short heat-up and cool-down times. ACC 'Active Cooling Control' provides active cooling control across the whole temperature range. An energy saving feature with only minor loss of heat is provided by the proportional cooling capacity control in the 'FP' refrigeration units. The inevitable dust accumulation that occurs in refrigeration systems is solved by means of an easily removed venting grill, which allows for easy cleaning. The units are equipped with handles or castors for an easy transportation. All models have a drain tap on the front allowing the fluid to be drained easily. Additionally the instruments are equipped with an improved insulation to help avoid ice-formation, and have a visual liquid level display.

Advantages

- o VFD COMFORT DISPLAY, resolution 0.01 °C
- o LCD DIALOG DISPLAY backlit for convenient interactive operation
- o Keypad for setpoints, warning/safety values and menu functions
- o ICC (Intelligent Cascade Control), self-optimizing temperature control
- o TCF Temperature Control Features to optimize the control behaviour
- o ATC3 3-Point-Calibration
- o Pt100 External sensor connection for measurement and control
- o SMART PUMP, electronically adjustable pump stages
- o Early warning system for low liquid level (DBGM 203 06 059.8)
- o Adjustable high temperature cut-out, visible via display
- o RS232/RS485 interface for online communication
- o Integrated programmer for 6 x 60 program steps
- o Connections for solenoid valve and HSP booster pump
- o Active Cooling Control

Technical Specifications

Working temperature range	-95 ... 0 °C					
Temperature control	ICC					
Temperature stability	±0.05 °C					
Display	VFD + LCD					
Display resolution	0.01 °C					
Integrated programmer	available					
Heater capacity	3000 W					
Cooling capacity	0	-20	-40	-60	-80	°C
	1700	1500	1300	1100	360	W
Refrigerant	R404A + R23					
Pump capacity	Pressure: 700 mbar Suction: 400 mbar Flow rate: 22-26 l/min					
Digital interfaces	RS232, RS485, optional Profibus					
External Pt100 sensor connection	available					
Bath opening / bath depth (W x L / D)	Ø = 7 / 20 cm					
Filling volume	22 Liters					
Dimensions (W x L x H)	59 x 76 x 116 cm					
Weight	214 kg					
Ambient temperature	5...40 °C					
Classification according to DIN 12876-1	3 (FL)					

Miscellaneous

Optional: Electronic module with analog connections for external programming, temperature recorder, standby, alarm (Order no. 8 900 100)



Product Data Sheet

F83-ME Ultra-Low Refrigerated Circulator

[Print Data Sheet](#)

Product Image



Order Information

Model: F83-ME
Order no.: 9160683

Available mains power:
230V / 50Hz
230V / 60Hz

Similar Models

These models could also be interesting for you:

F83-HL
FP88-HL
LH85

Sales & Support:

+49 7823 51-190

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Pictures may differ from original.

Description

Ultra-low Refrigerated Circulator with 2-stage cascade-cooling

JULABO Ultra-Low Refrigerated Circulators for heating and cooling are suitable for external temperature tasks. Powerful circulating pump systems and high heating and cooling capacities guarantee short heat-up and cool-down times. ACC 'Active Cooling Control' provides active cooling control across the whole temperature range. An energy saving feature with only minor loss of heat is provided by the proportional cooling capacity control in the 'FP' refrigeration units. The inevitable dust accumulation that occurs in refrigeration systems is solved by means of an easily removed venting grill, which allows for easy cleaning. The units are equipped with handles or castors for an easy transportation. All models have a drain tap on the front allowing the fluid to be drained easily. Additionally the instruments are equipped with an improved insulation to help avoid ice-formation, and have a visual liquid level display.

Advantages

- o VFD COMFORT DISPLAY, resolution 0.1 °C
- o Keypad for setpoints, warning/safety values and menu functions
- o PID3 cascade temperature control
- o ATC3 3-Point-Calibration
- o Pt100 External sensor connection for measurement and control
- o SMART PUMP, electronically adjustable pump stages
- o Early warning system for low liquid level (DBGM 203 06 059.8)
- o Adjustable high temperature cut-out, visible via display
- o RS232 interface for online communication
- o Integrated programmer for 10 program steps
- o Active Cooling Control

Technical Specifications

Working temperature range	-83 ... 50 °C
Temperature control	PID, cascade
Temperature stability	±0.02 °C
Display	VFD
Display resolution	0.1 °C
Integrated programmer	available
Heater capacity	1300 W
Cooling capacity	20 0 -20 -40 -60 -80 °C 900 780 720 600 380 120 W
Refrigerant	R404A + R23
Pump capacity	Pressure: 450 mbar Flow rate: 11-16 l/min
Digital interfaces	RS232
External Pt100 sensor connection	available
Bath opening / bath depth (W x L / D)	13 x 15 / 16 cm
Filling volume	8 Liters
Dimensions (W x L x H)	55 x 61 x 90 cm
Weight	116 kg
Ambient temperature	5...40 °C
Classification according to DIN 12876-1	3 (FL)

Miscellaneous

Condensation trap to prevent ice formation available as accessory.



Product Data Sheet

F83-HL Ultra-Low Refrigerated Circulators

[Print Data Sheet](#)

Product Image



Description

Ultra-low Refrigerated Circulator with 2-stage cascade-cooling

JULABO Ultra-Low Refrigerated Circulators for heating and cooling are suitable for external temperature tasks. Powerful circulating pump systems and high heating and cooling capacities guarantee short heat-up and cool-down times. ACC 'Active Cooling Control' provides active cooling control across the whole temperature range. An energy saving feature with only minor loss of heat is provided by the proportional cooling capacity control in the 'FP' refrigeration units. The inevitable dust accumulation that occurs in refrigeration systems is solved by means of an easily removed venting grill, which allows for easy cleaning. The units are equipped with handles or castors for an easy transportation. All models have a drain tap on the front allowing the fluid to be drained easily. Additionally the instruments are equipped with an improved insulation to help avoid ice-formation, and have a visual liquid level display.

Advantages

- o VFD COMFORT DISPLAY, resolution 0.01 °C
- o LCD DIALOG DISPLAY backlit for convenient interactive operation
- o Keypad for setpoints, warning/safety values and menu functions
- o ICC (Intelligent Cascade Control), self-optimizing temperature control
- o TCF Temperature Control Features to optimize the control behaviour
- o ATC3 3-Point-Calibration
- o Pt100 External sensor connection for measurement and control
- o SMART PUMP, electronically adjustable pump stages
- o Early warning system for low liquid level (DBGM 203 06 059.8)
- o Adjustable high temperature cut-out, visible via display
- o RS232/RS485 interface for online communication
- o Integrated programmer for 6 x 60 program steps
- o Connections for solenoid valve and HSP booster pump
- o Active Cooling Control

Order Information

Model: F83-HL
Order no.: 9310683

Available mains power:
 230V / 50Hz
 230V / 60Hz

Similar Models

These models could also be interesting for you:

FP88-HL
F83-ME
LH85

Sales & Support:

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Technical Specifications

Working temperature range	-83 ... 50 °C
Temperature control	ICC
Temperature stability	±0.02 °C
Display	VFD + LCD
Display resolution	0.01 °C
Integrated programmer	available
Heater capacity	1300 W
Cooling capacity	20 0 -20 -40 -60 -80 °C 900 780 720 600 380 120 W
Refrigerant	R404A + R23
Pump capacity	Pressure: 700 mbar Suction: 400 mbar Flow rate: 22-26 l/min
Digital interfaces	RS232, RS485, optional Profibus
External Pt100 sensor connection	available
Bath opening / bath depth (W x L / D)	13 x 15 / 16 cm
Filling volume	8 Liters
Dimensions (W x L x H)	55 x 60 x 92 cm
Weight	118 kg
Ambient temperature	5...40 °C
Classification according to DIN 12876-1	3 (FL)

Miscellaneous

Optional: Electronic module with analog connections for external programming, temperature recorder, standby, alarm (Order no. 8 900 100)



Product Data Sheet

F81-ME Ultra-Low Refrigerated Circulator

[Print Data Sheet](#)

Product Image



Description

Ultra-low Refrigerated Circulator with 2-stage cascade-cooling

JULABO Ultra-Low Refrigerated Circulators for heating and cooling are suitable for external temperature tasks. Powerful circulating pump systems and high heating and cooling capacities guarantee short heat-up and cool-down times. ACC 'Active Cooling Control' provides active cooling control across the whole temperature range. An energy saving feature with only minor loss of heat is provided by the proportional cooling capacity control in the 'FP' refrigeration units. The inevitable dust accumulation that occurs in refrigeration systems is solved by means of an easily removed venting grill, which allows for easy cleaning. The units are equipped with handles or castors for an easy transportation. All models have a drain tap on the front allowing the fluid to be drained easily. Additionally the instruments are equipped with an improved insulation to help avoid ice-formation, and have a visual liquid level display.

Advantages

- o VFD COMFORT DISPLAY, resolution 0.1 °C
- o Keypad for setpoints, warning/safety values and menu functions
- o PID3 cascade temperature control
- o ATC3 3-Point-Calibration
- o Pt100 External sensor connection for measurement and control
- o SMART PUMP, electronically adjustable pump stages
- o Early warning system for low liquid level (DBGM 203 06 059.8)
- o Adjustable high temperature cut-out, visible via display
- o RS232 interface for online communication
- o Integrated programmer for 10 program steps
- o Active Cooling Control

Order Information

Model: F81-ME
Order no.: 9160681

Available mains power:
 230V / 50-60Hz

Similar Models

These models could also be interesting for you:

F83-HL
F81-HL
F83-ME

Sales & Support:

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Technical Specifications

Working temperature range	-81 ... 100 °C
Temperature control	PID, cascade
Temperature stability	±0.02 °C
Display	VFD
Display resolution	0.1 °C
Integrated programmer	available
Heater capacity	1300 W
Cooling capacity	20 0 -20 -40 -60 -80 °C 450 380 360 320 270 70 W
Refrigerant	R404A + R23
Pump capacity	Pressure: 450 mbar Flow rate: 11-16 l/min
Digital interfaces	RS232
External Pt100 sensor connection	available
Bath opening / bath depth (W x L / D)	13 x 15 / 16 cm
Filling volume	6.5 Liters
Dimensions (W x L x H)	50 x 58 x 88 cm
Weight	86 kg
Ambient temperature	5...40 °C
Classification according to DIN 12876-1	3 (FL)

Miscellaneous

Condensation trap to prevent ice formation available as accessory.



Product Data Sheet

F81-HL Ultra-Low Refrigerated Circulators

[Print Data Sheet](#)

Product Image



Order Information

Model: F81-HL
Order no.: 9310681

Available mains power:
230V / 50-60Hz

Similar Models

These models could also be interesting for you:

F83-HL
F81-ME
FP88-HL

Sales & Support:

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Monday to Friday
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Description

Ultra-low Refrigerated Circulator with 2-stage cascade-cooling

JULABO Ultra-Low Refrigerated Circulators for heating and cooling are suitable for external temperature tasks. Powerful circulating pump systems and high heating and cooling capacities guarantee short heat-up and cool-down times. ACC 'Active Cooling Control' provides active cooling control across the whole temperature range. An energy saving feature with only minor loss of heat is provided by the proportional cooling capacity control in the 'FP' refrigeration units. The inevitable dust accumulation that occurs in refrigeration systems is solved by means of an easily removed venting grill, which allows for easy cleaning. The units are equipped with handles or castors for an easy transportation. All models have a drain tap on the front allowing the fluid to be drained easily. Additionally the instruments are equipped with an improved insulation to help avoid ice-formation, and have a visual liquid level display.

Advantages

- o VFD COMFORT DISPLAY, resolution 0.01 °C
- o LCD DIALOG DISPLAY backlit for convenient interactive operation
- o Keypad for setpoints, warning/safety values and menu functions
- o ICC (Intelligent Cascade Control), self-optimizing temperature control
- o TCF Temperature Control Features to optimize the control behaviour
- o ATC3 3-Point-Calibration
- o Pt100 External sensor connection for measurement and control
- o SMART PUMP, electronically adjustable pump stages
- o Early warning system for low liquid level (DBGM 203 06 059.8)
- o Adjustable high temperature cut-out, visible via display
- o RS232/RS485 interface for online communication
- o Integrated programmer for 6 x 60 program steps
- o Connections for solenoid valve and HSP booster pump
- o Active Cooling Control

Technical Specifications

Working temperature range	-81 ... 100 °C
Temperature control	ICC
Temperature stability	±0.02 °C
Display	VFD + LCD
Display resolution	0.01 °C
Integrated programmer	available
Heater capacity	1300 W
Cooling capacity	20 0 -20 -40 -60 -80 °C 450 380 360 320 270 70 W
Refrigerant	R404A + R23
Pump capacity	Pressure: 700 mbar Suction: 400 mbar Flow rate: 22-26 l/min
Digital interfaces	RS232, RS485, optional Profibus
External Pt100 sensor connection	available
Bath opening / bath depth (W x L / D)	13 x 15 / 16 cm
Filling volume	6.5 Liters
Dimensions (W x L x H)	50 x 58 x 89 cm
Weight	88 kg
Ambient temperature	5...40 °C
Classification according to DIN 12876-1	3 (FL)

Miscellaneous

Optional: Electronic module with analog connections for external programming, temperature recorder, standby, alarm (Order no. 8 900 100)