

The 'TopTech' Series / The 'HighTech' Series

for working temperatures from -95 °C to +100 °C

These units contain 2 compressors using cascade-technology, filled with different refrigerants. This ensures that ultralow working temperatures are achieved. The units are designed for continuous operation. Additional features are:



- Active Cooling Control throughout the entire temperature range



- Removable venting grid:
Hassle-free cleaning of the condenser

- Drain port easily accessible on the front



FP88-ME

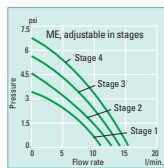
F95-SL

Applications

- Freezing point determination
- Calibration at low temperatures
- Petroleum testing
- Cell cultivation at low temperatures

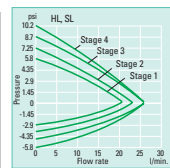
Pump capacities

Bath fluid: Water



Pump capacities

Bath fluid: Water



JULABO Order No.	JULABO Model	Working temp. range °C	Temp. stab. °C	Heat cap. kW	Pump capacity 20	Cooling capacity kW (Bath fluid: Ethanol) 0 -20 -40 -60 -80°C	Bath opening/ filling port cm bath depth/in	Fill. vol. liters	Dimensions W x L x H in	Weight lbs
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Technical features

Technical features															
															
9 160 688	FP88-ME	-88 ... 100	±0.02	1.3	see diagram	1.1	0.96	0.92	0.73	0.59	0.15	5.1 x 5.9 / 6.3	8	21.7 x 24 x 35.4	261.8
															
9 310 688	FP88-HL	-88 ... 100	±0.02	1.3	see diagram	1.1	0.96	0.92	0.73	0.59	0.15	5.1 x 5.9 / 6.3	8	21.7 x 23.6 x 36.2	266.2
9 350 795 N	FW5-SL	-95 ... 0	±0.05	3	diagram	--	2.0	1.9	1.65	1.2	0.36	dia. 2.8 / 7.9	22	23.2 x 29.9 x 45.7	442.2
9 350 796 N	FW95-SL ¹⁾	-95 ... 0	±0.05	3		--	2.0	1.9	1.65	1.2	0.36	dia. 2.8 / 7.9	22	23.2 x 29.9 x 45.7	435.6

¹⁾FW95-SL is water-cooled.

Cooling water connection G^{3/4"} male with barbed fittings for tubing ^{3/4"} inner dia.

Included with each unit: 2 each barbed fittings for tubing 8 and 12 mm inner dia. (pump connections M16x1 male)

Voltage: Available in 230V/60Hz or 230V/50Hz

F95-SL, FW95-SL: Available in
230V(3 Ph.)/60Hz or 400V(3 Ph.)/50Hz

High Dynamic Temperature Control System

For large scale applications with high demands

- Extremely wide temperature ranges without changing fluids
- Closed system avoids oxidation and ensures prolonged lifetime of the bath fluid
- Rapid heat-up and cool-down times throughout the entire temperature range
- Compensates exothermic and endothermic reactions quickly and with exceptional performance
- Cooling of compressor: water-cooled



Magnum91

JULABO Order No.	JULABO Model	Working temp. range °C	Temp. stab. °C	Heat. cap. kW	Cooling capacity kW						Pump capacity Flow rate / Pressure l/min. psi	Dimensions W x L x H in	Weight lbs			
					+200	+20	-50	-60	-70	-80°C						
																
9 410 191	Magnum91	-91 ... +250	±0.05...±0.2	6	4.0	5.0	4.0	2.5	1.5	0.7	24-35	11.6-31.9	28 x 35 x 65		924	

Cooling water connection G^{3/4} male with barbed fittings for tubing 10 mm inner dia.

Voltage: Available in 230V(3 Ph.)/60Hz or 400V(3 Ph.)/50Hz

Refrigerated/Ultra-Low Refrigerated Circulators

with high power pressure pump

For temperature control of systems requiring high pump capacities and high flow rates



- Energy-saving proportional cooling control with reduced heat generation

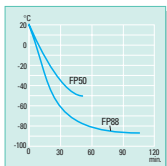


- Active Cooling Control throughout the entire temperature range



- Removable venting grid
- Front drain accessibility

Cool-down times:
Bath fluid: Ethanol



FP50-MS



FP88-MS

JULABO Order No.	JULABO Model	Working temp. range °C	Temp. stab. °C	Heat. cap. kW	Cooling capacity kW (Bath fluid: Ethanol)						Pressure pump capacity max. psi	Bath opening/ bath depth WxL / D in	Filling volume liters	Dimensions W x L x H in	Weight lbs	
					20	0	-20	-40	-60	-80°C						
Technical features (see icon feature page) PID2 ATC RS232 S3																
9 238 650	FP50-MS	-50 ... +100	±0.02	1.3	0.9	0.8	0.5	0.14	--	--	22	13.1	7.1 x 4.7 / 5.9	5.5...8	16.5 x 19.3 x 29.9	125.4
9 238 688	FP88-MS	-88 ... +100	±0.05	1.3	1.1	0.96	0.92	0.73	0.59	0.15	22	13.1	5.1 x 5.9 / 6.3	5.5...8	21.7 x 24 x 35.8	266.2

Technical features
(see icon feature page)



Included with each unit: 2 each barbed fittings for tubing 8 and 12 mm inner dia. (pump connections M16x1 male)

Voltage: Available in 230V/60Hz or 230V/50Hz