



F25-HE



F32-HE



FP50-HE

### HighTech Series

for working temperatures from -50 °C to 200 °C

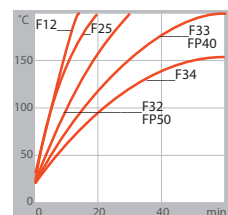
Refrigerated/heating circulators of the HighTech series provide innovative technology for demanding applications. The units provide a powerful pressure and suction pump, electronically adjustable. The intelligent ICC Cascade Temperature Control automatically adjusts to the application and achieves maximum control accuracy; especially with difficult, external applications.

#### Models with HE circulator

- ICC Cascade Temperature Control for the highest precision, stability  $\pm 0.01$  °C
- VFD Comfort-Display with simultaneous setpoint and internal/external value indication (resolution 0.01 °C)
- Integrated programmer (1 x 10 steps) with real time clock
- RS232 interface
- Powerful pressure and suction pump, electronically adjustable in stages
- Automatic adjustment of pump capacity to viscosity characteristics

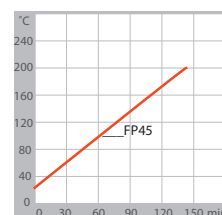
#### Heat-up times

Bath fluid: Thermal H



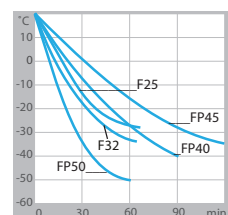
#### Heat-up time

Bath fluid: Thermal H



#### Cool-down times

Bath fluid: Ethanol



JULABO Order No.	JULABO Model	Working temperature range °C	Temp. stab. °C	Heat. cap. kW	Cooling capacity kW (Bath fluid: Ethanol)					Pump cap./Flow rate			Bath open./ Bath depth W x L/D cm	Fill. vol. liters	dimension W x L x H cm
					20 °C	0 °C	-20 °C	-30 °C	-40 °C	l/min.	Press. bar	Suction bar			
9 212 625	F25-HE	-28 ... 200	$\pm 0.01$	2	0.26	0.2	0.06	--	--	22-26	0.4-0.7	0.2-0.4	12 x 14 / 14	4.5	23 x 42 x 64
9 212 632	F32-HE	-35 ... 200	$\pm 0.01$	2	0.45	0.39	0.15	0.06	--	22-26	0.4-0.7	0.2-0.4	18 x 12 / 15	8	31 x 42 x 66
9 212 634	F34-HE	-30 ... 150	$\pm 0.01$	2	0.45	0.32	0.14	0.03	--	22-26	0.4-0.7	0.2-0.4	24 x 30 / 15	20	38 x 58 x 64
9 212 640	FP40-HE	-40 ... 200	$\pm 0.01$	2	0.68	0.5	0.32	0.17	0.04	22-26	0.4-0.7	0.2-0.4	23 x 14 / 20	16	37 x 46 x 71
9 212 645	FP45-HE	-42 ... 200	$\pm 0.01$	2	0.85	0.7	0.42	0.28	0.08	22-26	0.4-0.7	0.2-0.4	23 x 26 / 20	26	38 x 58 x 69
9 212 650	FP50-HE	-50 ... 200	$\pm 0.01$	2	0.9	0.8	0.5	0.32	0.16	22-26	0.4-0.7	0.2-0.4	18 x 12 / 15	8	42 x 49 x 72

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



## Applications

- External temperature control applications, particularly for distillation apparatus and miniplant installations
- Jacketed reaction vessels
- Autoclaves
- Kilo labs
- Pilot plants

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The top-of-the-line HL circulators provide most sophisticated technology and maximum functionality for the most demanding applications.

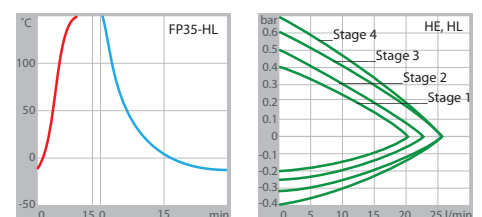
### Additional benefits of models with HL circulator

- Convenient operation via additional LCD-Display
- Integrated programmer (6 x 60 steps) with real time clock
- Combined RS232 / RS485 interface
- Both °C and °F available
- Stakei connection for solenoid valve

The model FP35-HL is designed for external temperature control applications requiring fast temperature changes due to its small volume.

FP models: energy saving proportional cooling control

**Heat-up/cool-down time** Bath fluid: Thermal H10S  
**Pump capacity** Bath fluid: water



JULABO Order No.	JULABO Model	Working temp. range °C	Temp. stab. °C	Heat. cap. kW	Cooling capacity kW (bath fluid: Ethanol)					Pump cap./Flow rate			Bath open./ Bath depth W x L/D cm	Fill. vol. liters	Dimensions W x L x H cm
					20	0	-20	-30	-40°C	l/min.	Press. bar	Suct. bar			
9 312 625	F25-HL	-28 ... 200	±0.01	2	0.26	0.2	0.06	--	--	22-26	0.4-0.7	0.2-0.4	12 x 14 / 14	4.5	23 x 42 x 64
9 312 632	F32-HL	-35 ... 200	±0.01	2	0.45	0.39	0.15	0.06	--	22-26	0.4-0.7	0.2-0.4	18 x 12 / 15	8	31 x 42 x 66
9 312 633	F33-HL	-30 ... 200	±0.01	2	0.5	0.32	0.12	0.03	--	22-26	0.4-0.7	0.2-0.4	23 x 14 / 20	16	36 x 46 x 71
9 312 618	FP35-HL	-35 ... 150	±0.01	2	0.45	0.39	0.15	0.05	--	22-26	0.4-0.7	0.2-0.4	18 x 12 / --	2.5	31 x 42 x 66
9 312 640	FP40-HL	-40 ... 200	±0.01	2	0.68	0.5	0.32	0.17	0.04	22-26	0.4-0.7	0.2-0.4	23 x 14 / 20	16	37 x 46 x 71
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9 312 650	FP50-HL	-50 ... 200	±0.01	2	0.9	0.8	0.5	0.32	0.16	22-26	0.4-0.7	0.2-0.4	18 x 12 / 15	8	42 x 49 x 72

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