

## FC1600T Chiller

FC recirculating coolers with a particularly powerful pump and Pt100 connection are preferably used for precise temperature control of large-volume external applications. They can be integrated into process control systems via the permanently integrated analog connection.



### Product features

- Adjustable ratio for feed/return temperatures
- Easy filling system located at the front
- Activation of pump for filling
- Bright MULTI-DISPLAY (LED)
- Upper and lower temperature warning functions with interval tone
- Integrated freezing protection and dry-running protection
- Rapid and easy operation via seamless, splash-proof keypad
- Liquid level indication on the front
- Self-test, reciprocal sensor monitoring, pump motor and compressor overload protection
- Complete shut-down with audible signal in case of an alarm
- removable venting grid for simplified removal of dust
- RS232 interface for PC connection
- High temperature stability
- Integrated heater with 1.2 kW capacity
- Connections for external Pt100 sensor
- Analog Connections for programming (0..10V / 0...24mA) and temperature recorder (0V = 0°C)
- Pressure Indicator

### Performance values

230V/50Hz (Schuko Plug - CEE 7/4 Plug Type F)	
Heating capacity kW	1.2
Pump capacity flow rate l/min	28
Pump capacity flow pressure bar	3.5
Power consumption A	8

Order No.	9600166.03				
Cooling capacity (Ethanol)					
°C	20	10	5	0	-10
kW <sup>1</sup>	1.45	1.05	0.8	0.65	0.25
Refrigerant stage 1					
Refrigerant	R134a				
Filling weight g	750				
Global Warming Potential for R134a	1430				
Carbon dioxide equivalent t	1.0725				

<sup>1</sup> Performance specifications measured in accordance with DIN 12876. Cooling capacities up to 20 °C measured with ethanol; over 20 °C with thermal oil unless otherwise specified. Performance specifications apply at an ambient temperature of 20 °C. Performance values may differ with other bath fluids.

## Technical data

<b>Available voltage versions</b>		<b>Cooling</b>	
Order No.	9 600 166	Cooling of compressor	1-stage Air
Available voltage versions:			
9600166.03	230V/50Hz (Schuko Plug - CEE 7/4 Plug Type F) (R134a)		
9600166.13	230V/60Hz (Schuko Plug - CEE 7/4 Plug Type F) (R134a)		
9600166.05	230V/50Hz (CH Plug Type SEV 1011) (R134a)		
9600166.04	230V/50Hz (UK Plug Type BS1363A) (R134a)		
<b>Bath</b>		<b>Other</b>	
Bath tank	Stainless steel	Sound pressure level dbA	58
		Classification	Classification III (FL)
		IP Code	IP 21
		Pump type	Immersion Pump
<b>Electronics</b>		<b>Dimensions and volumes</b>	
Interfaces	Alarm output, REG/EPROG, RS232, Stakei, Standby-Input	Weight kg	67
External pt100 sensor connection	integrated	Barbed fittings inner diameter mm	8/12 mm
Temperature control	PID1	Dimensions cm (W × L × H)	46 x 61 x 49
Temperature display	2x LED	Filling volume l	8 ... 11
Temperature setting	Keypad	Pump connections	M16x1 male
<b>Temperature values</b>		<b>Included in delivery</b>	
Working temperature range °C	-15 ... +80	2 Barbed fittings for tubing 8 and 12 mm ID. (Pump connections M16x1 male)	
Temperature stability °C	±0.2		
Ambient temperature °C	+5 ... +40		
Setting the resolution of the temperature display °C	0.1		

## All Benefits



**100% Checked.**  
100% testing. 100% quality. Each JULABO Circulator undergoes thorough quality testing before leaving the factory.



**Green technology.**  
Development consistently applied environmentally friendly materials and technologies.



**100 % Cooling capacity**  
'Active Cooling Control' for cooling available throughout the entire working temperature range, fast cool-down even at higher temperatures



**Control of the external application**  
External Pt100 sensor connection for precise measurement and control directly in the external application



**For flammable bath fluid**  
Classification III (FL) according to DIN 12876-1



**JULABO. Quality.**  
Highest standards of quality for a long product life.



**Quick start.**  
Individual JULABO consultation and comprehensive manuals at your disposal.



**Satisfied customers.**  
11 subsidiaries and more than 100 partners worldwide guarantee fast and qualified JULABO support.



**Services 24/7.**  
Around the clock availability. You can find suitable accessories, data sheets, manuals, case studies, and more at [www.julabo.com](http://www.julabo.com).



**For higher demands**  
PID Temperature control with drift compensation and adjustable parameters, improved temperature stability for external applications, temperature stability  $\pm 0.01$  °C internal,  $< \pm 0.1$  °C external.



**Early warning system for high/low temperature limits**  
Maximum safety for applications, optical and audible alarm, convertible to automated cut-off function



**Connection of additional equipment**  
Stakei connections for solenoid valve