

DYNEO DD-1001F-BF Beer forcing test refrigerated / heating circulating bath

The JULABO beer forcing test bath in conjunction with a photometer determines the product life of beer before clouding. The simulated aging process is achieved through a programmable temperature profile, which is repeated, until the first clouding develops.

Product features

- Automatic cycles of temperature ramps simulate aging
- Pre-programmed temperature profiles for forcing test
- Program modification possible at any time
- Large bath opening with insert for 20 bottles, 0.5 liters each (Racks for other bottle sizes on request)
- Removable Plexiglass® cover
- RS232 interface for online communication
- powerful and infinitely adjustable pressure pump
- Flow rate 27 l/min, pressure 0.7 bar
- large color TFT display, multilingual interface
- central rotary knob (controller) simplifies operation
- Integrated programmer
- Integrated external Pt100 connection
- PID3 cascade temperature control



Performance values

230V/50Hz (Schuko Plug - CEE 7/4 Plug Type F)	
Heating capacity kW	2
Viscosity max. cSt	50
Pump capacity flow rate l/min	8 ... 27
Pump capacity flow pressure bar	0.1 ... 0.7
Power consumption A	16

Order No.	9021709.33.D					
Cooling capacity (Ethanol)						
°C	20	10	0	-10	-20	-30
kW	1	0.95	0.85	0.6	0.32	0.12
* 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.						
Refrigerant stage 1						
Refrigerant	R449A					
Filling weight g	170					
Global Warming Potential for R449A	1397					
Carbon dioxide equivalent t	0.23749					

Technical data

Available voltage versions		Bath	
Order No.	9 021 709.D	Bath tank	Stainless steel
Available voltage versions:		Bath cover	integrated
9021709.04.D	230V/50-60Hz (UK Plug Type BS1363A) (R449A)	Usable bath opening cm (W x L / D)	35 x 41 / 30
9021709.05.D	230V/50-60Hz (CH Plug Type SEV 1011) (R449A)		
9021709.33.D	230V/50-60Hz (Schuko Plug - CEE 7/4 Plug Type F) (R449A)		
9021709.33.chn.D	230V/50-60Hz (CN Plug) (R449A)		
Cooling		Other	
Cooling of compressor	1-stage Air	Classification	Classification III (FL)
		Pump function	Pressure Pump
		Pump type	Immersion Pump
		User Interface Language	Chinese, English, French, German, Italian, Japanese, Korean, Portuguese, Russian, Spanish
Electronics		Dimensions and volumes	
Interfaces	Alarm output optional, REG/EPROG optional, RS232 optional, Standby-Input optional, USB	Weight kg	73.7
External pt100 sensor connection	integrated	Barbed fittings inner diameter	8/12 mm
Integrated programmer	8x60 steps	Dimensions cm (W x L x H)	45 x 64 x 95
Temperature control	PID3	Filling volume l	48 ... 56
Absolute temperature calibration	3 Point Calibration	Pump connections	M16x1 male
Temperature display	3.5" TFT Display		
Temperature setting	Shaft Encoder		

Electronic Timer hr:min	00:00 ... 99:59
Temperature values	
Setting the resolution of the temperature display °C	0.01
Working temperature range °C	-38 ... +100
Temperature stability °C	±0.01
Ambient temperature °C	+5 ... +40
Temperature display resolution °C	0.01

Included in delivery

Stainless steel insert basket for 20 x 0.5 liter bottles Plexiglass bath cover.

All Benefits



Handle with ease.
Makes day-to-day work easy. Comfortably move your JULABO Circulator around by using the ergonomic handles (front and rear).



Wide range.
Refrigerated and heating circulator in various combinations, circulator in various sizes. Maximum flexibility through a large selection of accessories.



Information. Everything clear.
Information in plain text on a large color screen.



Turn. Push. Go.
Easy operation of all parameters using the central controller.



Powerful. Adjustable.
Strong pressure pump, continuously adjustable.



RS232.
Connection using the optional RS232 interface.



Temperature. Under control.
External Pt100 sensor connection for precise measurement and control directly in the external application.



Highly precise
PID Temperature control with drift compensation and adjustable control parameters, temperature stability $\pm 0.01 \dots \pm 0.02$ °C



Brilliance. In color.
Large color display with vivid luminance is easy to read, even from a large distance.



Multi-lingual.
Operation in multiple languages.



Programmer. Integrated.
The integrated internal programmer makes it possible to automatically run temperature time profiles.



USB.
Remote control made easy using the integrated USB interface.



Analog I/O.
Analog interfaces for integration into process control systems (optional).



Fill level. Monitored.
Fill level indicator on the display for heat-transfer liquid.



Process stability.
Early warning - visual and acoustic - of critical states increases process stability.



Process. Under control.
Full regulation of the dynamics control, access to all important control parameters for individual process optimization.



ATC3. Calibration.
'Absolute Temperature Calibration' for compensating a physically caused temperature difference, 3-point calibration.



Stable. Mobile.
Rubber feet keep JULABO Circulators standing firm. Larger and more powerful units also have integrated rollers for easy handling.



Connection. Easy.
Inclined pump connections (M16x1) facilitate the connection of applications. Each unit includes 2 barbed fittings of 8/12 mm diameter each.



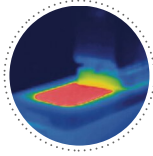
100 % Cooling capacity
'Active Cooling Control' for cooling available throughout the entire working temperature range, fast cool-down even at higher temperatures



More bath.
Designed for more comfort. Thanks to the recessed cooling coil, the internal bath provides more space.



Space saving. Free up space.
Place your JULABO Circulator right next to an application, another unit, or wall. That saves space. This is made possible by eliminating vents and connections on the sides.



Solid.
Minimized energy loss through high-quality insulation.



Tidy.
The special drain tap for easy draining of bath fluids without tools.



Condensation protection.
Superb design solution. Integrated ventilation directs air over the bath lid and minimizes condensation.



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.



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.