# DYNEO DD-1201F-BF Beer forcing test refrigerated / heating circulating bath

The beer force test is a method used to determine the shelf life and stability of beer. This test is performed to analyze a beer's shelf life and tendency to microbiological or chemical change. The objective of this test is to quickly predict the beer's behavior over long storage periods. This is done by bottling beer samples and simulating artificial, accelerated aging by means of temperature cycles. This is repeated until an initial turbidity is detected by a photometer. The force test is particularly useful for breweries optimizing their product quality assurance process, helping them identify potential problems before their beer is released to the market.

DYNEO DD-1201F-BF has all the temperature profiles necessary to perform the force test, for both stabilized and untreated beer, already installed. If specific changes to the program settings are needed, the user can make these changes at any time and in a simplified manner.



Julabo

## **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

## **Technical data**

Available voltage versions		Cooling	
Order No.	9 021 719	Cooling of compressor	1-stage Air
Available voltage versions:			
9021719.N1.04.D	200-230V/50-60Hz (UK Plug Type BS1363A) (R1270)		
9021719.N1.05.D	200-230V/50-60Hz (CH Plug Type SEV 1011) (R1270)		
9021719.N1.33.D	200-230V/50-60Hz (Schuko Plug - CEE 7/4 Plug Type F) (R1270)		
9021719.N1.33.chn.D	200-230V/50-60Hz (CN Plug) (R1270)		



#### 9021719.N1.22.D

100-115V/50-60Hz (Nema N5-20 Plug) (R1270)

Bath		Other	
Bath tank	Stainless steel	Classification	Classification III (FL)
Bath cover	integrated	IP Code	IP 21
Usable bath opening cm (W x L / D) 35 x 40 / 30		Pump function	Pressure Pump
		Pump type	Immersion Pump
		User Interface Language	Chinese, English,

Chinese, English, French, German, Italian, Japanese, Korean, Portuguese, Russian, Spanish

Electronics	
Interfaces	Alarm output optional, REG/EPROG optional, RS232 optional, Standby-Input optional, USB
External pt100 sensor connection	integrated
Integrated programmer	8x60 steps
Temperature control	PID3
Absolute temperature calibration	3 Point Calibration
Temperature display	3.5" TFT Display
Temperature setting	Shaft Encoder
Electronic Timer h:min	00:00 99:59

Dimensions and volumes		
Weight kg	68	
Barbed fittings inner diameter mm	8/12 mm	
Dimensions cm ( $W \times L \times H$ )	45 x 64 x 95	
Filling volume I	48 56	
Pump connections	M16x1 male	

Temperature values		Included in delivery
Setting the resolution of the temperature display °C	0.01	Stainless steel insert basket for 20 x 0.5 liter bottles Plexiglass bath cover.
Working temperature range °C	-40 +100	
Temperature stability °C	±0.01	
Ambient temperature °C	+5 +40	
Temperature display resolution °C	0.01	

# 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.



#### Highly precise

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



#### Brilliance. In color.

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





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



# Process stability.

application.

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



# ATC3. Calibration.

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



# Connection. Easy.

Inclined pump connections (M16×1) facilitate the connection of applications. Each unit includes 2 barbed fittings of 8/12 mm diameter each.



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. Under control.

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



#### Stable. Mobile.

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



### 100 % Cooling capacity

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