

## DYNEO DD-BC4 DYNEO DD Heating Circulator

DYNEO DD heating circulators for internal and external applications are equipped with closed bath tanks. The tanks are well insulated and include a coil for counter-cooling. An integrated drain tap makes emptying the tank safe and clean. The multilingual 3.5-inch color display and unique rotary knob provide for straightforward and intuitive operation.

Optional analog and digital interface  
 DYNEO thermostats can optionally be equipped with analogue and digital interfaces. To request the options, order number must be extended with .d for the digital and .a for the analog interface (9XXX XXXX.A / 9XXX XXX.D)



### Your advantages

- For internal and external applications
- USB connection
- Powerful and infinitely adjustable pressure pump
- Flow rate 27 l/min, pressure 0.7 bar
- Easy switching between internal and external circulation
- Large color TFT display, multilingual interface
- Central rotary knob (controller) simplifies operation
- Integrated programmer for 8 x 60 program steps
- Integrated external Pt100 connection
- RS232 interface or analog interfaces (optional)
- Bath cover included with delivery
- For internal and external applications
- High-quality thermal insulation of the bath tank
- Integrated programmer
- Integrated drain makes emptying liquid easy and safe.

### Technical data

Available voltage versions		Bath	
Order No.	9 021 504	Bath tank	Stainless steel
Available voltage versions:		Bath cover	integrated
9 021 504.33		Usable bath opening cm (W x L / D)	13 x 15 / 15
9 021 504.33.chn			
9 021 504.04			
9 021 504.05			
9 021 504.22			
Other		Electronics	
Classification	Classification III (FL)	External pt100 sensor connection	integrated
Pump function	Pressure Pump	Integrated programmer	8x60 steps
Pump type	Immersion Pump	Temperature control	PID2
		Absolute temperature calibration	3 Point Calibration
		Temperature display	3.5" TFT Display
		Temperature setting	Shaft Encoder
		Electronic Timer hr:min	99 ... 59
Dimensions and volumes		Temperature values	
Weight kg	8.5	Setting the resolution of the temperature display °C	0.01
Barbed fittings inner diameter	8/12 mm	Working temperature range °C	+20 ... +200
Dimensions cm (W x L x H)	23 x 41 x 42		

Filling volume l	3 ... 4.5	Temperature stability °C	±0.01
Pump connections	M16x1 male	Ambient temperature °C	+5 ... +40

### Performance values

#### 200-230V/50-60Hz (Schuko Plug - CEE 7/4 Plug Type F)

200V/50Hz		200V/60Hz	
Heating capacity kW	1.5	Heating capacity kW	1.5
Viscosity max. cST	50	Viscosity max. cST	50
Pump capacity flow rate l/min	8 ... 27	Pump capacity flow rate l/min	8 ... 27
Pump capacity flow pressure bar	0.1 ... 0.7	Pump capacity flow pressure bar	0.1 ... 0.7
230V/50Hz		230V/60Hz	
Heating capacity kW	2	Heating capacity kW	2
Viscosity max. cST	50	Viscosity max. cST	50
Pump capacity flow rate l/min	8 ... 27	Pump capacity flow rate l/min	8 ... 27
Pump capacity flow pressure bar	0.1 ... 0.7	Pump capacity flow pressure bar	0.1 ... 0.7

#### 200-230V/50-60Hz (CN Plug)

200V/50Hz		200V/60Hz	
Heating capacity kW	1.5	Heating capacity kW	1.5
Viscosity max. cST	50	Viscosity max. cST	50
Pump capacity flow rate l/min	8 ... 27	Pump capacity flow rate l/min	8 ... 27
Pump capacity flow pressure bar	0.1 ... 0.7	Pump capacity flow pressure bar	0.1 ... 0.7
230V/50Hz		230V/60Hz	
Heating capacity kW	2	Heating capacity kW	2
Viscosity max. cST	50	Viscosity max. cST	50
Pump capacity flow rate l/min	8 ... 27	Pump capacity flow rate l/min	8 ... 27
Pump capacity flow pressure bar	0.1 ... 0.7	Pump capacity flow pressure bar	0.1 ... 0.7

#### 200-230V/50-60Hz (UK Plug Type BS1363A)

200V/50Hz		200V/60Hz	
Heating capacity kW	1.5	Heating capacity kW	1.5
Viscosity max. cST	50	Viscosity max. cST	50
Pump capacity flow rate l/min	8 ... 27	Pump capacity flow rate l/min	8 ... 27
Pump capacity flow pressure bar	0.1 ... 0.7	Pump capacity flow pressure bar	0.1 ... 0.7
230V/50Hz		230V/60Hz	
Heating capacity kW	2	Heating capacity kW	2
Viscosity max. cST	50	Viscosity max. cST	50
Pump capacity flow rate l/min	8 ... 27	Pump capacity flow rate l/min	8 ... 27
Pump capacity flow pressure bar	0.1 ... 0.7	Pump capacity flow pressure bar	0.1 ... 0.7

#### 200-230V/50-60Hz (CH Plug Type SEV 1011)

200V/50Hz

Heating capacity kW	1.5
Viscosity max. cST	50
Pump capacity flow rate l/min	8 ... 27
Pump capacity flow pressure bar	0.1 ... 0.7

200V/60Hz

Heating capacity kW 1.5

Viscosity max. cST 50

Pump capacity flow rate l/min 8 ... 27

Pump capacity flow pressure bar 0.1 ... 0.7

230V/50Hz

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

230V/60Hz

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

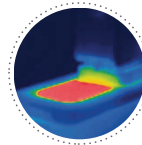
100-115V/50-60Hz (Nema N5-15 Plug)

100V/50Hz		100V/60Hz	
Heating capacity kW	0.8	Heating capacity kW	0.8
Viscosity max. cST	50	Viscosity max. cST	50
Pump capacity flow rate l/min	8 ... 27	Pump capacity flow rate l/min	8 ... 27
Pump capacity flow pressure bar	0.1 ... 0.7	Pump capacity flow pressure bar	0.1 ... 0.7
115V/50Hz		115V/60Hz	
Heating capacity kW	1	Heating capacity kW	1
Viscosity max. cST	50	Viscosity max. cST	50
Pump capacity flow rate l/min	8 ... 27	Pump capacity flow rate l/min	8 ... 27
Pump capacity flow pressure bar	0.1 ... 0.7	Pump capacity flow pressure bar	0.1 ... 0.7

All Benefits



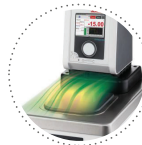
**100% Checked.**  
100% testing. 100% quality. Each JULABO Circulator undergoes thorough quality testing before leaving the factory.



**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.



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



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



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



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



**Services 24/7.**



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



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



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



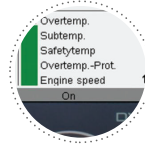
**Brilliance. In color.**  
Large color display with vivid luminance is easy to read, even from a large distance.



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



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



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



**RS232.**  
Connection using the optional RS232 interface.



**Multi-lingual.**  
Operation in multiple languages.



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



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



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



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



**Powerful. Adjustable.**  
Strong pressure pump, continuously adjustable.



**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



**Highest measuring accuracy**  
'Absolute Temperature Calibration' for manual compensation of a temperature difference, 3-point calibration



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



**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.