

## MAGIO MS-BC4 Heating circulator

Like all circulators in the MAGIO range, the heating circulators are characterised by premium quality and high performance combined with intuitive usability. The devices offer extra powerful pressure and suction pumps to meet the most challenging demands for temperature control of external applications. Samples can also be temperature controlled in the internal bath of the high-quality, insulated and closed bath tank.

### High resolution TFT touch display

The modern TFT touch display gives you all the important information at a glance. Three large, predefined main screens clearly display data and graphics with various application priorities. Menu navigation is self-explanatory, arranged by relevance to daily operations and easy to operate with the touch of a finger. The in-built help function provides detailed support in case of additional questions.



### Product features

- Models for internal and external applications from 3 to 26 liters
- Ideal for demanding external applications
- Simple control of complex applications
- Continuously adjustable, extremely powerful pressure / suction pump
- Large, high-resolution TFT touch display with multilingual user interface
- Parts being in contact with the medium made of stainless steel
- Flow rate 16 ... 31 l / min, pressure 0.24 ... 0.92 bar, suction 0.03 ... 0.4 bar
- Integrated programmer
- Integrated external Pt100 connection
- USB connection
- RS232 interface for online communication
- Ethernet
- analog interfaces (accessory)
- High-quality thermal insulation of the bath tanks
- Profibus DP (Accessory)
- Modbus
- RS232/RS485 interface for online communication
- Connections for solenoid valve
- Strong heating capacity of 3 kW (MX-Z) and 2 kW (MS-Z)

### Technical data

Available voltage versions		Bath	
Order No.	9 032 504	Bath tank	Stainless steel
Available voltage versions:		Bath cover	integrated
9 032 504.22	100-115V/50-60Hz (Nema N5-15 Plug)	Usable bath opening in. (W x L / D)	5.1 x 5.9 / 5.9
9 032 504.33	200-230V/50-60Hz (Schuko Plug - CEE 7/4 Plug Type F)		
9 032 504.04	200-230V/50-60Hz (UK Plug Type BS1363A)		
9 032 504.05	200-230V/50-60Hz (CH Plug Type SEV 1011)		
9 032 504.33.chn	200-230V/50-60Hz (CN Plug)		
Cooling		Other	
Cooling coil	integrated	Classification	Classification III (FL)
		IP Code	IP 21
		Pump function	Pressure Suction Pump

Electronics		Pump type	Immersion Pump
External pt100 sensor connection	integrated	<b>Dimensions and volumes</b>	
Integrated programmer	8x60 steps	Weight lbs	24.5
Temperature control	ICC	Dimensions in. (W x L x H)	9.1 x 16.1 x 16.5
Absolute temperature calibration	10 Point Calibration	Filling volume l	3 ... 4.5
Temperature display	Temperature display 7" TFT Touchscreen	Pump connections	M16x1 male
Temperature setting	Temperature setting Touchscreen		
Electronic Timer hr:min	00:00 ... 99:59		

Temperature values	
Setting the resolution of the temperature display °C	0.01
Working temperature range °C	+20.0 ... +300.0
Temperature stability °C	+/-0.01
Ambient temperature °C	+10.0 ... +40.0
Temperature display resolution °C	0.01

**Performance values**

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	70	Viscosity max. cST	70
Pump capacity flow rate l/min	16 ... 31	Pump capacity flow rate l/min	16 ... 31
Pump capacity flow pressure psi	3.5 ... 13.3	Pump capacity flow pressure psi	3.5 ... 13.3
Maximum suction psi	-0.4 ... -5.8	Maximum suction psi	-0.4 ... -5.8
Power	8 A	Power	8 A

115V/60Hz	
Heating capacity kW	1
Viscosity max. cST	70
Pump capacity flow rate l/min	16 ... 31
Pump capacity flow pressure psi	3.5 ... 13.3
Maximum suction psi	-0.4 ... -5.8
Power	10 A

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

200V/50Hz		200V/60Hz	
Heating capacity kW	1.6	Heating capacity kW	1.6
Viscosity max. cST	70	Viscosity max. cST	70
Pump capacity flow rate l/min	16 ... 31	Pump capacity flow rate l/min	16 ... 31
Pump capacity flow pressure psi	3.5 ... 13.3	Pump capacity flow pressure psi	3.5 ... 13.3
Maximum suction psi	-0.4 ... -5.8	Maximum suction psi	-0.4 ... -5.8
Power	8 A	Power	8 A

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230V/50Hz	
Heating capacity kW	2
Viscosity max. cST	70
Pump capacity flow rate l/min	16 ... 31
Pump capacity flow pressure psi	3.5 ... 13.3
Maximum suction psi	-0.4 ... -5.8
Power	10 A

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230V/60Hz	
Heating capacity kW	2
Viscosity max. cST	70
Pump capacity flow rate l/min	16 ... 31
Pump capacity flow pressure psi	3.5 ... 13.3
Maximum suction psi	-0.4 ... -5.8
Power	10 A

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

200V/50Hz		200V/60Hz	
Heating capacity kW	1.6	Heating capacity kW	1.6
Viscosity max. cST	70	Viscosity max. cST	70
Pump capacity flow rate l/min	16 ... 31	Pump capacity flow rate l/min	16 ... 31
Pump capacity flow pressure psi	3.5 ... 13.3	Pump capacity flow pressure psi	3.5 ... 13.3
Maximum suction psi	-0.4 ... -5.8	Maximum suction psi	-0.4 ... -5.8
Power	8 A	Power	8 A
230V/50Hz		230V/60Hz	
Heating capacity kW	2	Heating capacity kW	2
Viscosity max. cST	70	Viscosity max. cST	70
Pump capacity flow rate l/min	16 ... 31	Pump capacity flow rate l/min	16 ... 31
Pump capacity flow pressure psi	3.5 ... 13.3	Pump capacity flow pressure psi	3.5 ... 13.3
Maximum suction psi	-0.4 ... -5.8	Maximum suction psi	-0.4 ... -5.8
Power	10 A	Power	10 A

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

200V/50Hz		200V/60Hz	
Heating capacity kW	1.6	Heating capacity kW	1.6
Viscosity max. cST	70	Viscosity max. cST	70
Pump capacity flow rate l/min	16 ... 31	Pump capacity flow rate l/min	16 ... 31
Pump capacity flow pressure psi	3.5 ... 13.3	Pump capacity flow pressure psi	3.5 ... 13.3
Maximum suction psi	-0.4 ... -5.8	Maximum suction psi	-0.4 ... -5.8
Power	8 A	Power	8 A
230V/50Hz		230V/60Hz	
Heating capacity kW	2	Heating capacity kW	2
Viscosity max. cST	70	Viscosity max. cST	70
Pump capacity flow rate l/min	16 ... 31	Pump capacity flow rate l/min	16 ... 31
Pump capacity flow pressure psi	3.5 ... 13.3	Pump capacity flow pressure psi	3.5 ... 13.3
Maximum suction psi	-0.4 ... -5.8	Maximum suction psi	-0.4 ... -5.8
Power	10 A	Power	10 A

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

200V/50Hz		200V/60Hz	
Heating capacity kW	1.6	Heating capacity kW	1.6
Viscosity max. cST	70	Viscosity max. cST	70
Pump capacity flow rate l/min	16 ... 31	Pump capacity flow rate l/min	16 ... 31
Pump capacity flow pressure psi	3.5 ... 13.3	Pump capacity flow pressure psi	3.5 ... 13.3
Maximum suction psi	-0.4 ... -5.8	Maximum suction psi	-0.4 ... -5.8
Power	8 A	Power	8 A
230V/50Hz		230V/60Hz	
Heating capacity kW	1.8	Heating capacity kW	1.8
Viscosity max. cST	70	Viscosity max. cST	70
Pump capacity flow rate l/min	16 ... 31	Pump capacity flow rate l/min	16 ... 31

Pump capacity flow pressure psi	3.5 ... 13.3	Pump capacity flow pressure psi	3.5 ... 13.3
Maximum suction psi	-0.4 ... -5.8	Maximum suction psi	-0.4 ... -5.8
Power	8 A	Power	8 A

### 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.



**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).



**Highest measuring accuracy**  
'Absolute Temperature Calibration' for manual compensation of a temperature difference, 10-point calibration



**Touch display. Perfect operation.**  
With the touch display, the user always has an overview of all values and functions. The intuitive and multilingual menu structure enables perfect control.



**Intelligent temperature control.**  
Intelligent cascade control - automatic and self-optimizing adaptation of the PID control parameters with external stability of +/- 0.05 °C.



**Many interfaces.**  
Straight-forward remote control, data management, and integration into process structures. USB, Ethernet, RS232, SD card, and alarm off are permanently integrated. Further interfaces available as accessories.



**Maximum safety.**  
Classification III according to DIN12876-1 enables safe operation, even with flammable fluids. Automatic switch-off in the event of high temperature or low liquid level.



**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.



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



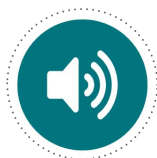
**Programmer. Integrated.**  
The integrated internal programmer makes it possible to automatically run temperature time profiles.



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



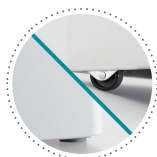
**Fill level. Monitored.**  
Fill level indicator on the display for heat-transfer liquid.



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



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



**Stable. Mobile.**



**Energy-saving.**  
The high-quality insulation of all relevant components saves energy.



**Everything made of stainless steel.**  
Quality and material compatibility at the highest level. All parts in contact with the medium are entirely made of stainless steel.



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



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



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



**Most powerful pump.**  
The integrated pressure/suction pump with performance values of 0.9 bar and -0.4 bar is the most powerful in its class and continuously adjustable.



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