

## MA Heating Immersion Circulator

### Middle class for a broad range of applications -20°C...200°C

Heating Immersion Circulator for any bath tanks up to 50 liters JULABO Heating Immersion Circulators are available for various bath tanks up to a capacity of 50 litres and come equipped with a bath clamp that fits onto all tanks with a wall thickness up to 26 mm. This clamp allows fast and problem-free assembling for existing as well as new bath tanks. The immersion depth is 16.5 cm (adjustable down to 14.5 cm). The immersed parts are made of high-quality stainless steel or plastic. The pump set, which is available as an accessory, provides pumping to external systems for provision of external temperature tasks. An integrated cooling coil for cooling-water connection is also available as an accessory.

### Your advantages

- MULTI-DISPLAY (LED) for actual and setpoint values, warning/safety functions and pump stage
- Keypad for setpoints, warning/safety values and menu functions
- PID2 temperature control with drift compensation
- ATC3 3-Point-Calibration
- Early warning system for low liquid level (DBGM 203 06 059.8)
- Adjustable high temperature cut-out, visible via display
- RS232 interface for online communication
- SMART PUMP, electronically adjustable pump stages



**Made**  
in Germany

### Technical Data

Order No.	9153000
Model series	TopTech
Category	Heating Immersion Circulators
Working temperature range (°C)	+20 ... +200
Temperature stability (°C)	0.01
Setting / display resolution	0.01 (-9.99...99.99) / 0.1 °C
Temperature Display	LED
Heating capacity (kW)	1
Pump capacity flow rate (l/min)	11-16
Pump capacity flow pressure (psi)	3.3-6.5
Digital interface	RS232, Optional Profibus
Ambient temperature	5...40 °C
Dimensions W x L x H (inch)	5.1 x 5.9 x 13
Weight (LBS)	9
Classification according to DIN12876-1	Classification III (FL) according to DIN 12876-1
Cooling coil	optional
Usable immersion depth (inch)	8-14.5
Power requirement V / Hz / A	115/60/9
Available voltage versions	230 V / 50-60 Hz 100-115 V / 50-60 Hz

For temperature applications near or below ambient temperature: use a cooling coil or JULABO immersion cooler.

## Characteristics

### Display



#### Several values at a glance

Large Multi-Display (LED), easy to read across the room, for actual value and up to 3 setpoints, warning functions, high temperature cut-off, selected pump stages (resolution 0.01/0.1 °C)

### Technical Features



#### Clever pump system

Reliable and consistent pump capacity, electronically adjustable pump stages



#### Serial connection

RS232 interface for PC connection, e.g. for data communication and recording of measured values

### Operation



#### Comfortable and detailed

Comfortable keypad with additional menu functions for pump stages, calibration, control parameters, programmer, warnings, etc.

### Warning & Safety Functions



#### Early warning system for low liquid level

Maximum safety for applications, optical and audible alarm, allows user to refill bath fluid before the unit shuts down

### Temperature Control



#### Highly precise

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



#### Early warning system for high/low temperature limits

Maximum safety for applications, optical and audible alarm, convertible to automated cut-off function



#### Highest measuring accuracy

'Absolute Temperature C alibration' for manual compensation of a temperature difference, 3-point calibration



#### Protective functions

Adjustable high temperature cut-off or dry-running protection



#### For flammable bath fluids

Classification III (FL) according to DIN 12876-1

### JULABO Contact

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