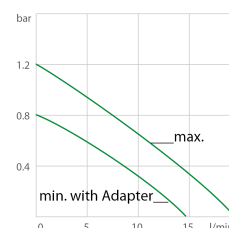
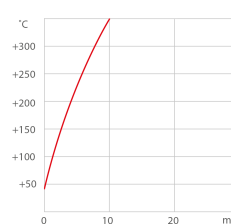


HT60-M2-CU High Temperature Circulator

2-zone technique for working temperatures up to 400 °C

JULABO high temperature circulators: The response to present requirements in the market. Peak performance, rapid heating and cooling, fast action in case of exotherm reactions - these are only few of the features of our high temperature circulators. The self-optimizing controller (ICC - Intelligent Cascade Control) ensures high temperature stability. The classic PID control parameters are available at the touch of a button for modification at any time. MULTI-DISPLAY (LED) and interactive LCD display offer convenient operation. The implemented heating automation, strong pump and controlled cooling produce rapid and precise results for temperature applications to +400 °C. The instruments are completely sealed. This prevents the release of oil fumes and results in long life time of the heat transfer liquid. Automatic air-purge allows easy filling. Electrical connections and the optional Profibus permit future-oriented automation technology. JULABO high temperature circulators are recommended for applications using jacketed reactors and autoclaves, distillation columns as well as laboratory, miniplant and process-scale applications.



- Heat-up time (thermal h350)
- Pump capacity (thermal h350)

Your advantages

- Working temperature range up to 400 °C
- Self-optimizing ICC temperature controller
- Strong pumping capacity 18 l/min - 1.2 bar max
- Automatic air-purge allows easy filling
- Automated heat-up feature adjusts to external systems
- Bright MULTI-DISPLAY (LED) with display resolution 0.01 °C
- Backlit interactive 4-line LCD display
- On-line communication via built-in RS232 interface
- Stand-by input for external emergency switch-off
- Integrated programmer stores up to 6 profiles (60 sections each)
- Electronic level indication
- ATC function for simple correction of temperature variations
- ATC function allows use as testing instrument according to ISO 9000
- Tap water cooling for temperatures from 40 to 400 °C and rapid cooling
- Cooling capacity up to 15 kW (with tap water 20°C)

Technical Data

Order No.	9800065
Category	High Temperature Circulators Forte HT
Working temperature range (°C)	+40 ... +400
Temperature stability (°C)	±0.01-0.1
Setting / display resolution	0.01 °C
Integrated programmer	6x60 steps
Temperature Display	LCD, LED

Heating capacity (kW)	7
Cooling capacity	°C 20 kW 15
Pump capacity flow rate (l/min)	14-18
Pump capacity flow pressure (bar)	0.8-1.2
Pump connections	M16x1
Filling volume liters	2
External Pt100 sensor connection	integrated
Digital interface	RS232, RS485 Optional: Profibus
Ambient temperature	5...40 °C
Dimensions W x L x H (cm)	43 x 23 x 58
Weight (kg)	35
Classification according to DIN12876-1	Classification III (FL)
Display for pump pressure and filling volume	Backlit indicator
Filling volume expansion vessel liters	1.6+0.9
Dimensions Control unit B x T x H	25 x 25 x 18
Available voltage versions	400 V / 3 Ph. / 50 Hz

Characteristics

Display



Easy to read

Large LED temperature display for actual value and setpoint (resolution 0.1 °C)



Additional plain text information

Comfortable LCD dialog display for interactive operation with plain text display



Pump stage and liquid level

Backlit indicator for selected pump stages and filling volume on Presto® PLUS, Magnum 91 & Forte HT

Operation



Clearly structured

Comfortable, splash-proof keypad for setpoint adjustment, high/low temperatures, timer and shaking frequency (SW models)

Temperature Control



For perfect results

'Intelligent Cascade Control', automatic & self optimizing adjustment of PID control parameters, temperature stability ±0.005 °C internal, <±0.05 °C external



Full control

'Temperature Control Features' for individual optimization, access to all important control parameters, additional settings for band limit, limits, Co-Speedfactor etc.



High measuring accuracy

'Absolute Temperature Calibration' for manual compensation of a temperature difference, 1-point calibration

Technical Features



Control from the external application

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



Connection compliant to standard

RS232/RS485 dual-interface for serial data transmission according to EIA-485 industry standard (2-wire bus technology), upgradable with Profibus DP



Optimal program control

For the execution of time and temperature dependant profiles, 6 temperature profiles with 60 steps max., with real time clock

Warning & Safety Functions




Early warning system for high/low temperature limits

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



Enhanced protective functions

Maximum safety, adjustable high temperature cut-off or dry-running protection, additional display of setpoints permits easy and precise adjustments

 **For flammable bath fluids**
Classification III (FL) according to
DIN 12876-1