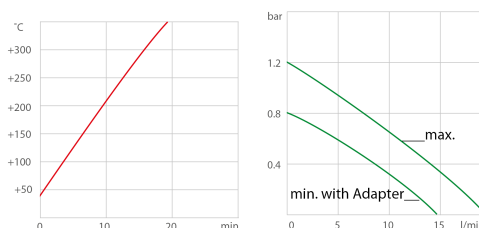# HT30-M1 High Temperature Circulator

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 +4 00 °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

Technical Data

Order No.	9800031
Category	High Temperature Circulators Forte HT
Working temperature range (°C)	+70 ... +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)	3
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
Analog connection input / output	Yes
Ambient temperature	5...40 °C
Dimensions W x L x H (cm)	23 x 23 x 58
Weight (kg)	27
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	230 V / 50 Hz 230 V / 60 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 frequeny (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

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

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

Technical Features

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

RS232 RS485 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

S3 For flammable bath fluids
Classification III (FL) according to DIN 12876-1