

FORMAX®

HERE BEGINS YOUR ULTIMATE VALUE

FMC Series
Oil Temperature
Controller

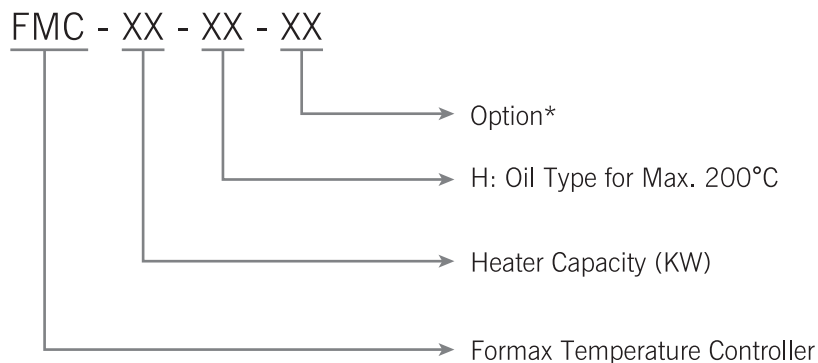
FMC-9H



Please read the brochure carefully before operation.

FMC-H Oil Temperature Controller

■ Coding Principle



FMC-9H-D

■ Features

Standard Configuration

- PID temperature controller with digital display and actual temperature.
- Reservation timer for 0~9999 mins. The temperature unit (°C/°F) is changeable also.
- Adopts high efficiency high temperature pump which can meet the demands of temperature control for precise molds and mold loop with minor diameter to achieve precise temperature control and high efficiency heat exchange.
- The control box and mechanical are designed in isolation, so the life of circuit is extended also.
- Safety devices include power reverse phase protection, pump overload protection, overheat protection, low level sensor, and media shortage alarm that can automatically detect abnormal situation and alarm via buzzer.
- Heater is made of stainless steel.
- For standard FMC-H the heating temperature can reach 200°C.
- Equipped RS485 to realize central monitoring online.

Options

- Electrical circuit built to comply with CE safety equipment as option.
- Automatic water drain function when changing the mold (Denotes "L")



Control Panel

■ Application

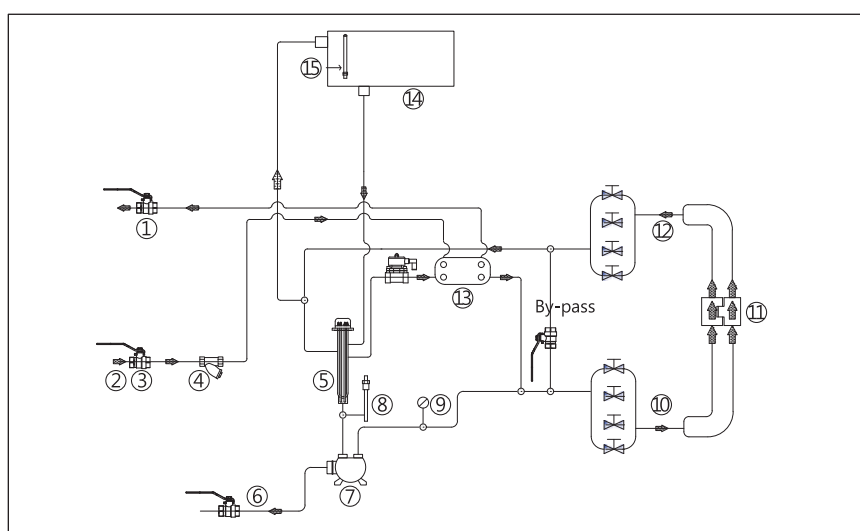
FMC-H series of oil temperature controller have both the standard and high temperature types. It's mainly applied to heating up and temperature maintenance of mold. It also can be applied to other fields with the same demands. High temperature oil form the mold is returned to the

cooler for indirectly cooling. Then the oil will be sent to the mold after being pressurized by pump and heated by the heater which realized heating and temperature maintenance of the oil. The newly applied PID temperature control can maintain accuracy and stability.

■ Working Principle

High temperature oil returns to the machine and then be pressure by pump to the heater. After being heated, oil will be forced to mold and continue the circle. In the process, if the oil temperature is too high, the system will activate the solenoid valve to let cooling water cool down the temperature directly until the temperature is

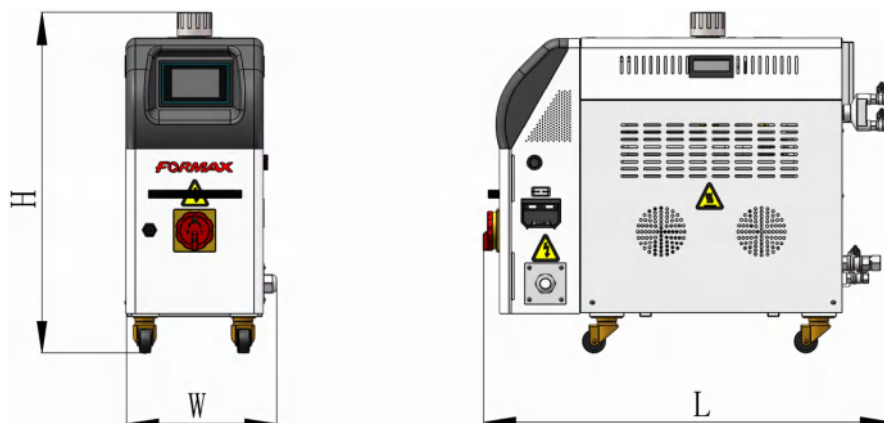
down to the system requirement. If the temperature keeps increasing and reaches to the set point of ultra high temperature, system will sound high pressure alarm and stop operation. When oil level is lower than standard value, oil level switch will send a signal of oil storage to launch low pressure alarm and machine stops.



FMC-H Standard Type System Flow

- ① Cooling water outlet
- ② Cooling water inlet
- ③ Ball valve
- ④ Filter
- ⑤ Heater
- ⑥ Oil drain port
- ⑦ Pump
- ⑧ Themocouple
- ⑨ Pressure gague
- ⑩ Hot media in
- ⑪ Mold
- ⑫ Hot media out
- ⑬ Heat exchanger
- ⑭ Oil tank
- ⑮ Oil level switch

■ Outline Drawings



■ Specifications

| Model | FMC- | 6H | 9H | 12H | 24H | 36H |
|---------------------------------|-------------------------------------|------------------------------|------|------------------------------|------------------------------|------------------------------|
| Temperature Range | °C | 50 ~ 200°C | | | | |
| Media | | Thermal oil | | | | |
| Heater | kW | 6 | 9 | 12 | 12x2 | 18x2 |
| Tank Capacity | | 7.5 | | | 11.1 | 15.4 |
| Cooling Way | | Direct cooling | | | | |
| Temperature Control | Kcal/hr | 7200 | 9000 | 12600 | 25200 | 35000 |
| Pump | Type | Gear pump | | | | |
| | Power(Kw) | 0.37 | 0.75 | 1.5 | 2.2 | 3 |
| | Max. pressure (Kg/cm ²) | 3.2 | 5 | 7.5 | 6 | 7 |
| | Max. output (Ltr/min) | 45 | 47 | 90 | 120 | 130 |
| Total Power | kW | 6.37 | 9.75 | 13.5 | 26.2 | 39 |
| Cooling Water Pipe | Inch/set | 1/2"PT | | | | |
| ★ Splitter and Connector | Inch/set | 3/8"PT 2 inlet / 2 outlet | | 3/8"PT 4 inlet / 4 outlet | 3/8"PT 6 inlet / 6 outlet | 3/8"PT 8 inlet / 8 outlet |
| ★ Teflon Hose | Inch/set | 3/8"-2.5Mx4 | | 3/8"-2.5Mx8 | 3/8"-2.5Mx12 | 3/8"-2.5Mx16 |
| ★ Oil Attached with the Machine | Ltr | 15 | | | 20 | 30 |
| Dimension(LxWxH) | mm | 930*375*725 | | | 930*425*835 | 970*425*965 |
| Weight | KG | 66 | 71 | 86 | 80 | 90 |

- Note: 1) To ensure the stability of the heating temperature, the working pressure of cooling water neither lower 2bar nor exceed 5 bar
 2) Pump testing standard : power of 50/60 Hz, purified water at 20°C(There is ±10% tolerance for either max. flowrate, or max. pressure)
 3) Power supply : 3Ø , 400VAC , 50Hz
 4) ★ Stands for options

Specifications are subject to change without prior notice.

FORMAX®

China
Formax Plastics Automation, Inc.

Dongguan
 No. 9, Taida Road, Chang'an Town, Dongguan City,
 Guangdong Province, China
 Tel. +86-769-3899-9898 Fax. +86-769-8533-3467

Kushan
 No.138-20, Hengshan Road, Kunshan, Jiangsu, China
 Tel. +86-512-5700-8308 Fax. +86-512-5700-8306

Taiwan
Formax Equipment Inc.

No.12, Ln.12, Anzhong st., Luzhu Dist.,
 Taoyuan City, Taiwan
 Tel. +886-3-2121-725 Fax. +886-3-2127-960

www.formaxpa.com
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