FORMAX®

HERE BEGINS YOUR ULTIMATE VALUE

FMC Series

High Water Temperature Controller

FMC-9WP

Please read the brochure carefully before operation.

FMC-WP&WPA High Water Temperature Controller

Coding Principle

FMC - XX - XX - XX

- XX (last): Option
- XX (middle): WP: Water Type for Max. 160°C; WPA: Water Type for Max. 180°C
- XX (first): Heater Capacity (KW)
- FMC: Formax Temperature Controller

Features

- PID temperature controller with digital display and actual temperature.
- Reservation timer for 0~9999 mins. The tempera ture unit (℃/℉) is changeable also.
- Adopts high efficiency water cycle 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 and media shortage alarm that can automatically detect abnormal situation and alarm via buzzer.
- Automatic refilled water and exhaust function.
- Equipped RS485 to realize central monitoring online.
- Rapid heating and cooling and stable temperature.

Magnetic Pump Standard
for FMC-WPA

Application

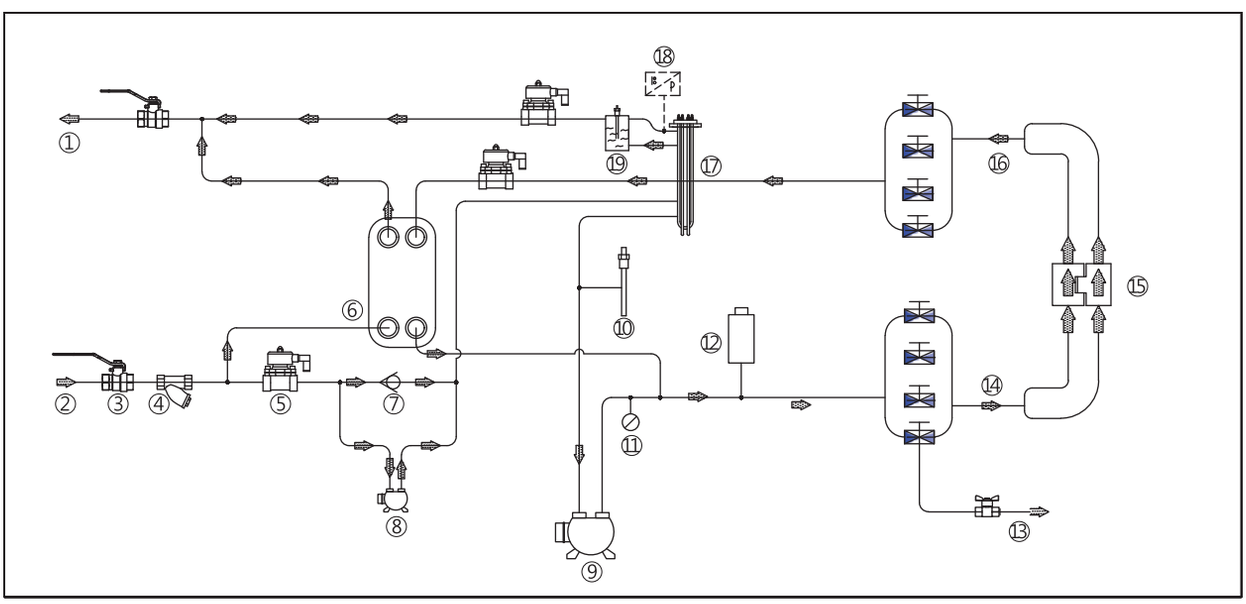
FMC-WP&WPA series water temperature controllers have standard model (160/180℃) which is used to heat up the mold and maintain temperature, also this model can be used in other similar applications. High temperature water from the mold is returned to the cooling tank and cooled by indirect cooling. It is then pressurized by the high-pressure pump, sent to the heating tank and finally to the mold with a constant temperature. The newly applied PID temperature control can maintain accuracy and stability.

Options

- Electrical circuit built to comply with CE safety equipment as option.
- Automatic water drain function when changing the mold (Denotes “L”).
- Water filters as option (Denotes "F").
- External PT100 (Denotes “PT100”).

Working Principle

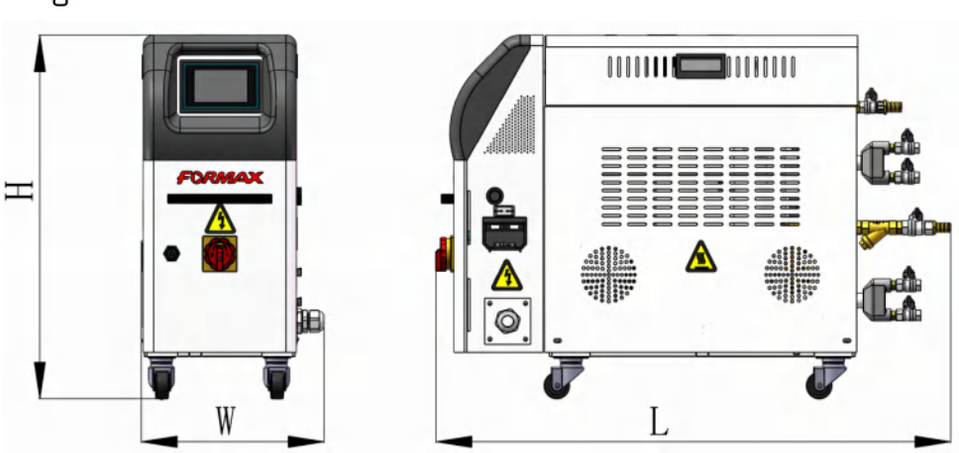
High temperature water returns to the machine and then be pressure by pump to the heater. After being heated, water will be forced to mold and continue the circle. In the process, if the water temperature is too high, the system will activate the solenoid valve to let cooling water cool down the temperature 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 cooling water pressure fails to reach the set value, pressure switch will send a signal of water storage to launch low pressure alarm and machine stops.



FMC-WP&WPA System Flow Drawing (Indirect Cooling)

① Cooling water outlet
② Cooling water inlet
③ Ball valve
④ Filter
⑤ Solenoid valve
⑥ Heat exchanger
⑦ Check valve
⑧ Booster pump
⑨ Pump
⑩ Themocouple
⑪ Pressure gague
⑫ Pressure relief valve
⑬ Discharge port
⑭ Hot media in
⑮ Mold
⑯ Hot media out
⑰ Heater
⑱ Pressure switch
⑲ Floating ball switch

Outline Drawings



Specifications

Modle	FMC-	9WP	12WP	24WP	9WPA	12WPA	24WPA
Temperature Range	℃	50 ~ 160					
Media		Water					
Heater	kW	9	12	24	9	12	24
Cooling Way		Direct Cooling					
Cooling Capacity	Kcal/hr	9000	10800	25200	9000	10800	25200
Pump	Type	Gear pump			Magnetic pump		
	Power(Kw)	0.75	1.5	2.2	0.75	1.5	2.2
	Max. pressure (Kg/c㎡)	4.5	7	6	5	7	9
	Max. output (Ltr/min)	50	85	120	50	90	90
Booster Pump	kW	0.48					
Total Power	kW	9.75	13.5	26.2	9.75	13.5	26.2
Min. Water Pressure	Kg/c ㎡	2					
Cooling Water Pipe	Inch/set	1/2" PT					
★ Splitter and Connector	Inch/set	3/8" PT 4 inlet / 4 outlet		3/8" PT 6 inlet / 6 outlet	3/8" PT 4 inlet / 4 outlet		3/8" PT 6 inlet / 6 outlet
★ Teflon Hose	Inch/set	3/8"-2.5M*8		3/8"-2.5M*12	3/8"-2.5M*8		3/8"-2.5M*12
Dimension(LxWxH)	mm	970*380*700		960*430*820	970*380*700		960*430*820
Weight	kG	50	60	60	50	60	70

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℃(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.

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