



"Large Flow" Water Heater

STM-607WF

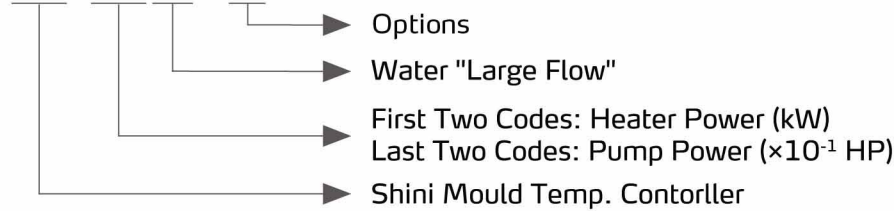


Refer carefully to this manual before operation.

STM-WF Series

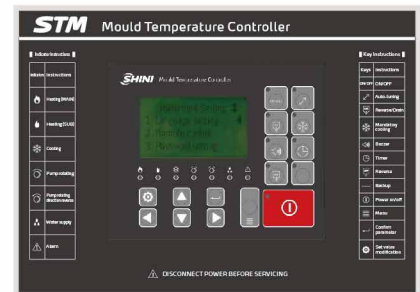
■ Coding Principle

STM - xxxx WF - xx

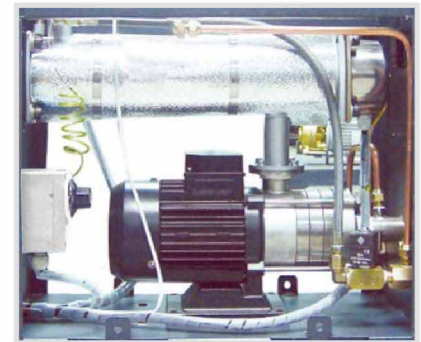


■ Features

- Large water flow design with a maximum working temperature of 120°C.
- In build weekly timer with °C/°F unit conversion.
- P.I.D. multi-stage temperature control system can maintain a mould temperature with an accuracy of $\pm 0.5^\circ\text{C}$.
- In build multiple safety with display and alarm buzzer, such as reverse phase, pump overload, overheat, and low water pressure.
- Direct cooling with excellent heating exchange. Auto refilling device cools down the temperature to set value directly.
- Modbus RTU data communication via RS485.



Control Panel

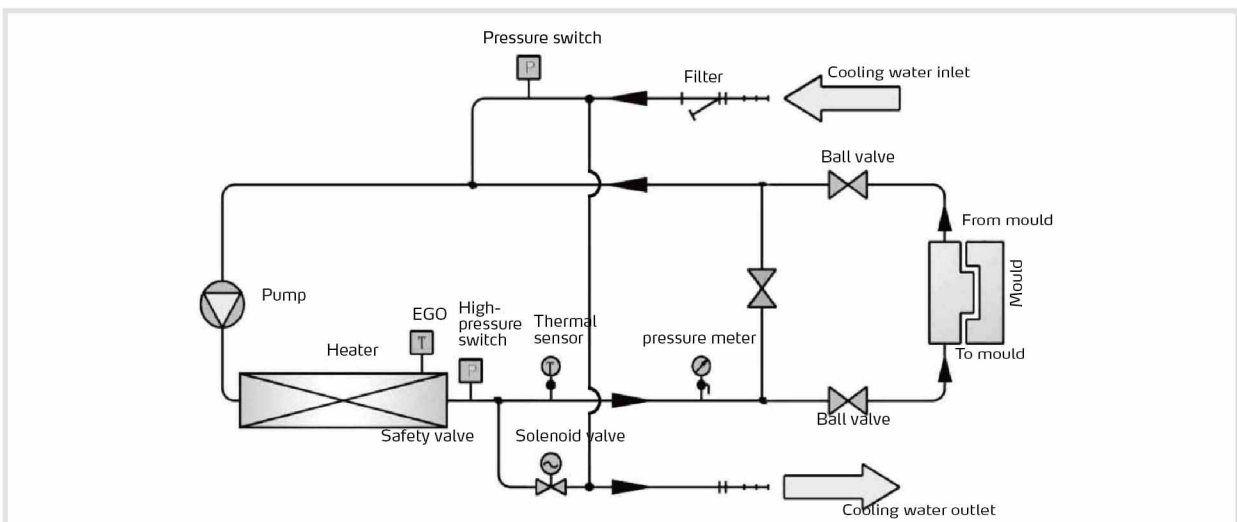


Inner Structure

■ Options

- Displays of mould temperature and return water temperature of mould are optional, and add "TS" at end of the model code.

■ Working Principle



System flow (Direct Cooling)



Application

STM-WF series "Large Flow" water heaters are used to heat up the mould and maintain temperature, and also they can be used in other similar applications. Compared with standard water heaters STM-W, this series of machines adopt large flow pump that are especially applicable to large flow and constant temperature productions, such as plates and extrusion molding etc. Besides, this series of models have multiple options and accessories to meet different production demands.

Specifications

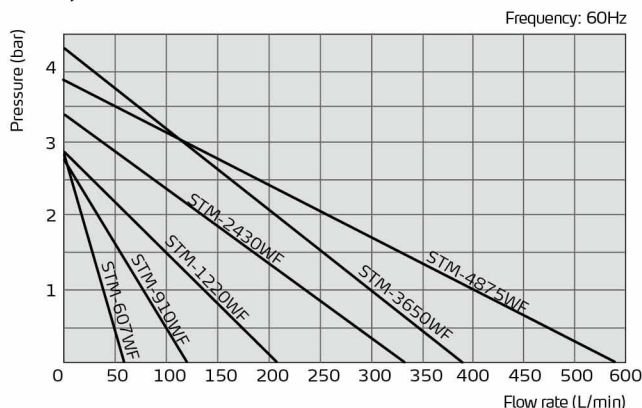
Model		STM-607WF	STM-910WF	STM-1220WF	STM-2430WF※	STM-3650WF※	STM-4875WF※
Max.Temp.		120°C/248°F					
Heater(kW)		6	9	12	24	36	48
Pump Power(kW) (50/60Hz)		0.55/0.55	0.75/0.75	1.1/1.5	2.2/2.2	3.0/4.0	5.5/5.5
Max. pump Flow (50/60Hz)	L/min	58/67	116/133	168/216	267/333	267/398	533/580
	gal/min	15.3/67.3	30.6/35.1	44.4/57	70.5/88	70.5/105	140.7/153
Max. pump Pressure(bar) (50/60Hz)		2.8/2.6	2.8/2.6	2.9/2.7	2.9/2.9	3.4 /4.3	4.5/3.8
Heating Tank Number		1	1	1	2	3	4
Heating Tank Capacity	L	3.0	3.0	3.2	7.2	12.0	16.0
	gal	0.8	0.8	0.85	1.9	3.2	4.2
Cooling Method		Direct					
Mould Coupling* (inch)		1 (1×2)	1 (1×2)	1½ (1×2)	1½ (1×2)	1½ (1×2)	1½ (1×2)
Inlet/Outlet (inch)		1 / 1	1 / 1	1½ / 1½	1½ / 1½	1½ / 1½	1½ / 1½
Dimensions (H×W×D)	mm	655×320×750	655×320×790	675×320×830	855×434×840	855×474×940	955×474×1100
	inch	25.5×12.5×29.3	25.5×12.5×30.8	26.3×12.5×32.3	33.3×16.9×32.8	33.3×18.5×36.7	37.2×18.5×42.9
Weight	kg	60	85	85	156	180	242
	lb	132	187	187	343	397	532

Notes: 1) "※" stands for vertical pump.

- In order to maintain stable temp. of heat transfer media, cooling water pressure should be no less than 2kgf/cm², but also no more than 5kgf/cm².
- Pump testing standard: Power of 50 / 60Hz, purified water in 20°C/68°F. (There is ± 10% tolerance for either max. flowrate or max. pressure).
- Power supply: 3Φ, 230/400/460/575VAC, 50/60Hz.

We reserve the right to change specifications without prior notice.

Pump Performance



Reference formula of Mould Controllers model selection

$$\text{Heater Power (kW)} = \text{mould weight (kg)} \times \text{mould specific heat (kcal/kg}^\circ\text{C)} \times \text{temperature difference between mould and environment (}^\circ\text{C)} \times \text{safety coefficient} / \text{heating duration} / 860$$

Notes: safety coefficient range 1.3-1.5.

$$\text{Flow Rate (L/min)} = \text{heater power (kw)} \times 860 / [\text{heating medium specific (kcal/kg}^\circ\text{C)} \times \text{heating medium density (kg/L)} \times \text{in/outlet temperature difference (}^\circ\text{C)} \times \text{time (60)}]$$

Notes: Water specific heat = 1kcal/kg°C
 Heating medium oil specific heat = 0.49kcal/kg°C
 Water density = 1kg/L
 Heating medium oil density = 0.842kg/L
 Time for heating = the time needed to heat from room temperature to set temperature

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