



Water Heater



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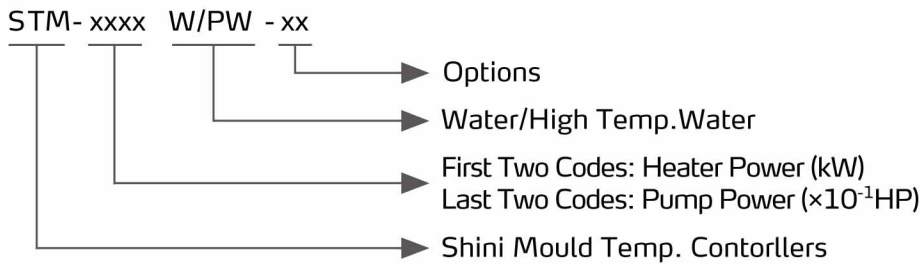
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STM-607W



Refer carefully to this manual before operation.

■ Coding Principle



■ Features

- For standard STM-W, the maximum heating temperature reach up to 120°C/248°F.
- P.I.D controller with 4.3" LCD with an intuitive and user-friendly interface.
- Standard equipped with flow display function.
- In build weekly timer with °C/°F unit conversion.
- The multi-stage P.I.D. controller can maintain stable mould temperature with a precision of +/- 0.5°C/0.9°F.
- SSR solid-state relay.
- Adopt a high-efficiency water pump.
- Multiple built-in safety displayers and alarm devices, such as phase reverse protector, pump overload protector, and overheat protectors.
- Equipped with high/low pressure protection, auto water supplying and air exhausting functions.
- Direct cooling with excellent refrigerating effect. Auto refilling device cools down the temperature to set value directly.
- Modbus RTU data communication via RS485 for centralized control.
- Standard buzzer



Control Panel



Internal Structure

■ Options

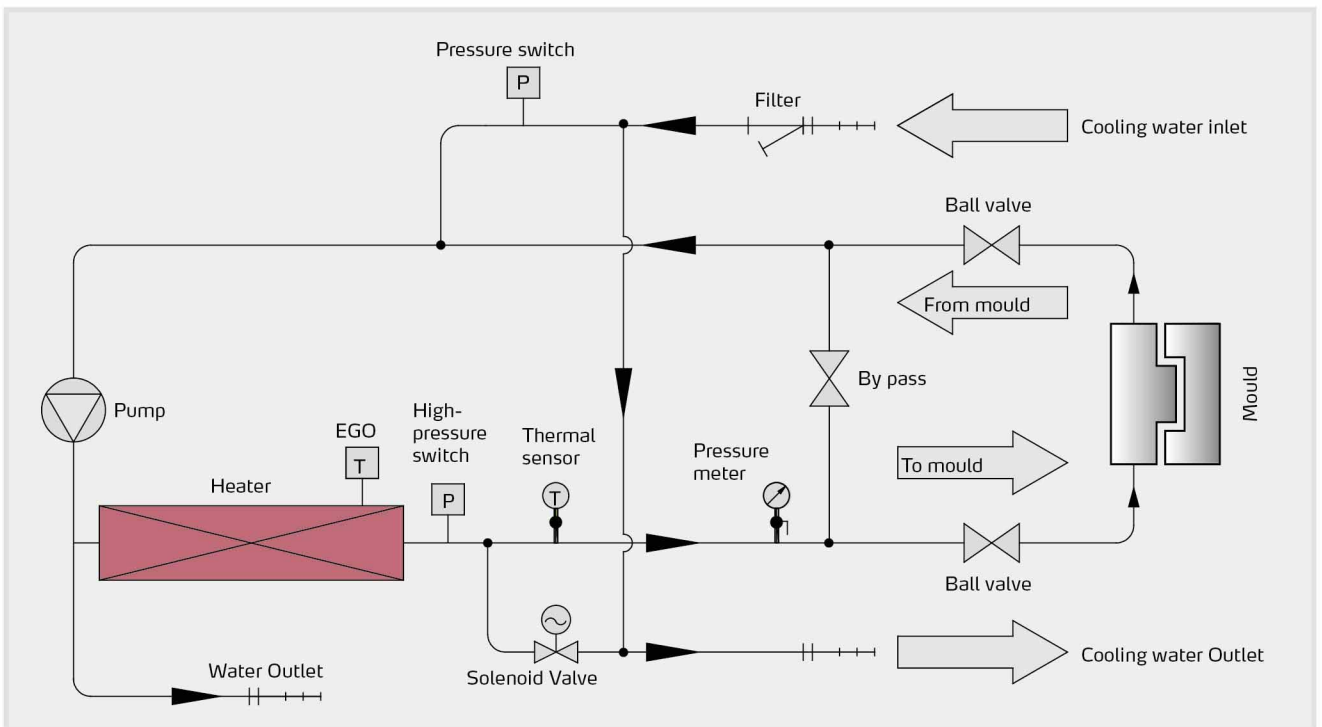
- Displays of mould temperature and return water temperature of mould are optional, and add "TS" at end of the model code.
- For models optional with magnetic pump (excluded for STM-3650W and STM-D models), and add "M" at the end of the model code.
- Water-removing via compress air (Exclude for STM-PW), add "A" at the end of the model code.
- Water Flowmeter, add "V" at the end of the model code. (Max operating temperature 120°C).
- It could option with magnetic filter to prolong service life of magnetic pump (only suitable for models with magnetic pump), and add "MF" at the end of the model code.

STM-W Series

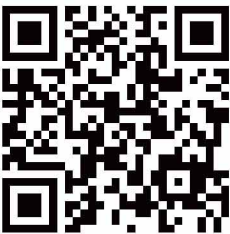
■ Application

STM-W series water heaters are used to heat up the mould and maintain temperature, and also they can be used in other similar applications. This series of machines use water as the medium that saves production cost and ensures good working environment. As water circulates in the hermetic pipes, it remains in liquid state even the mould temperature is higher than 100°C, which can enhance flow rate and improve heat transfer effect. Besides, there are multiple options and accessories of this series to meet different production requirements.

■ Working Principle



System flow for STM-W (Direct Cooling)



3D animation
(Tencent)



3D animation
(Youtube)



■ Specifications

Model		STM-607W	STM-910W	STM-1220W	STM-2440W	STM-3650W
Max.Temp.		120°C/248°F(140°C/284°F)**				
Heater(kW)		6	9	12	24	36
Pump Power(kW) (50/60Hz)		0.55/0.63	0.75/0.92	1.5/1.9	2.8/3.4	4
Max. pump Flow (50/60Hz)	L/min	27/30	42/50	74/84	90/90	100/100
	gal/min	7.1/7.9	11/13.2	19.5/22	23.8/23.8	26.4/26.4
Max. pump Pressure(bar) (50/60Hz)		3.8/5	5.0/6.4	6.2/7.2	8.0/10.2	8.0/8.0
Heating Tank Number		1	1	1	2	3
Heating Tank Capacity	L	3.0	3.0	3.0	7.4	17.7
	gal	0.8	0.8	0.8	2.0	4.7
Cooling Method		Direct				
Inlet/Outlet (inch)		$\frac{3}{4}$ / $\frac{3}{4}$	$\frac{3}{4}$ / $\frac{3}{4}$	1 / 1	1 / 1	1 / 1
Dimensions (H×W×D)	mm	620×320×865	620×320×865	630×320×885	830×360×955	965×470×1100
	inch	24.4×12.5×34	24.4×12.5×34	24.8×12.5×34.8	32.6×14.2×37.6	38×18.5×43.3
Weight	kg	55	60	69	140	150
	lb	121	132	151.8	308	330

Notes: 1) Pump testing standard: Power of 50/60Hz, purified water at 20°C/68°F.
(There is ±10% tolerance for either max. flowrate or max.pressure).

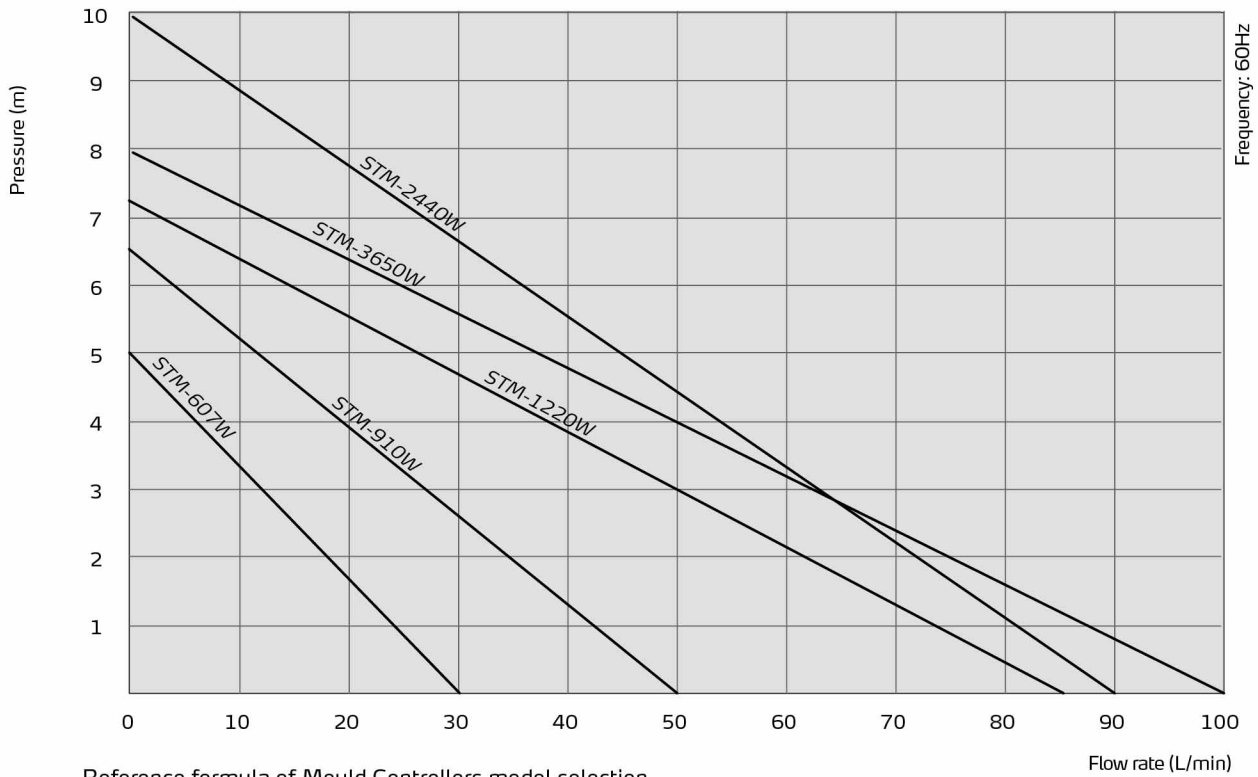
2) Power supply: 3Φ, 230/400/460/575VAC, 50/60Hz.

3) "*" stands for for heating the machine to 140°C/284°F,
cooling water pressure should not be lower than 4kgf/cm².

We reserve the right to change specifications without prior notice.

STM-W Series

■ Pump Performance



Reference formula of Mould Controllers model selection

Heater Power (kW) = mould weight (kg) × mould specific heat (kcal/kg°C) × temperature difference between mould and environment (°C) × safety coefficient / heating duration / 860

Notes: safety coefficient range 1.3~1.5.

Flow Rate (L/min) = heater power (kW) × 860 / [heating medium specific (kcal/kg°C) × heating medium density (kg/L) × in/outlet temperature difference (°C) × time (60)]

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