“Large Flow” Water Heater

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STM-607WF

Refer carefully to this manual before operation.

STM-WF Series

Coding Principle

STM - xxxx WF - xx

- xx → Options
- WF → Water "Large Flow"
- xxxx → First Two Codes: Heater Power (kW); Last Two Codes: Pump Power (×10^{-1} HP)
- STM → Shini Mould Temp. Contorller

Features

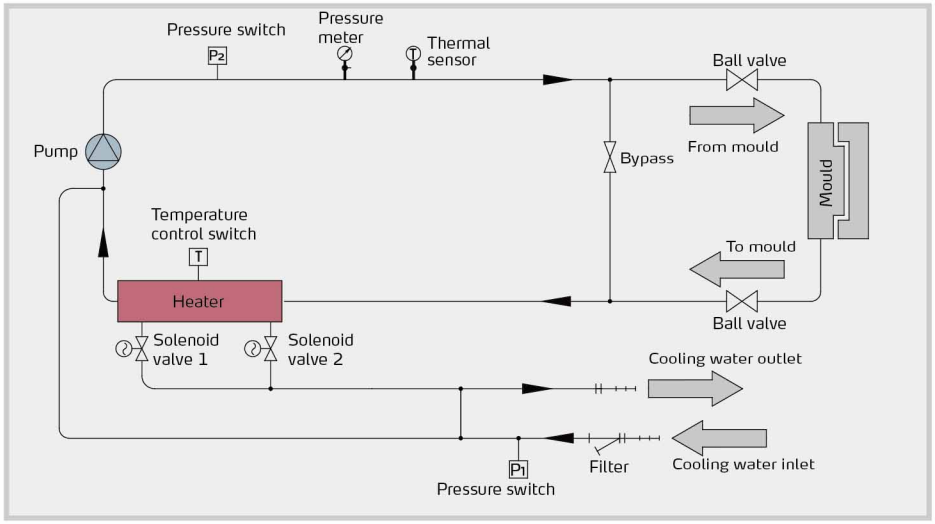
- Large water flow design with a maximum working temperature of 120℃.
- In build weekly timer with ℃°F unit conversion.
- P.I.D. multi-stage temperature control system can maintain a mould temperature with an accuracy of ±0.5℃.
- In build multiple safety with display and alarm buzzer, such as reverse 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

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

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.

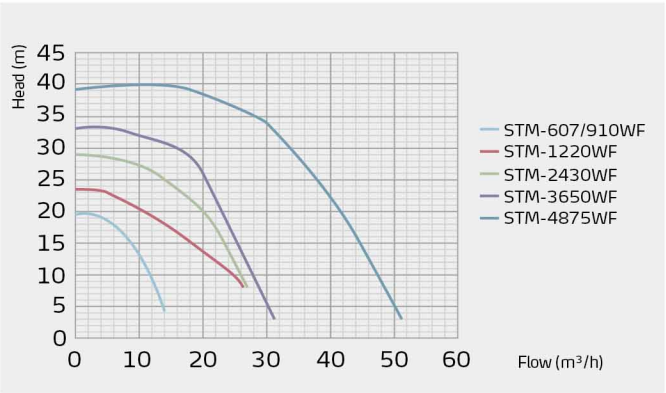
Specifications

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)		0.75/0.75	0.75/0.75	1.5/2.0	2.2/2.2	3.0/4.0	5.5/5.5
Rated pump Flow (50/60Hz)	m³/h	5.0/5.7	5.0/5.7	12.5/14.25	11.7/13.3	12.5/14.25	21.8/24.9
Rated pump Pressure(bar)(50/60Hz)		2.0/1.85	2.0/1.85	2.0/1.85	2.8/2.6	3.2/3.0	3.8/3.5
Heating Tank Number		1	1	1	2	3	4
Heating Tank Capacity	L	3.9	3.9	3.9	7.8	11.7	15.6
	gal	1.0	1.0	1.0	2.0	3.1	4.1
CoolingMethod		Direct					
Inlet/Outlet (inch)		$1^1/_4$			$1^1/_2$		$2^1/_2$
Dimensions (H×W×D)	mm	752×304×880	752×304×880	752×304×890	855×434×880	847×474×901	847×474×1031
	inch	29.6×12×34.6	29.6×12×34.6	26.3×12.5×35	33.7×17×34.6	33.3×18.7×35.5	33.3×18.7×40.6
Weight	kg	82	82	89	156	229	253
	lb	181	181	196	344	505	558

Notes: 1) Pipe pump (standard pump: 3Φ/400V/50Hz)
2) 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.
3) 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).
4) 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

Heater Power (kW) = mould weight (kg) × mould specific heat (kcal/kg℃) × temperature difference between mould and environment (℃) × 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℃) × heating medium density (kg/L) × in/outlet temperature difference (℃) × time (60)]

Notes: Water specific heat =1kcal/kg℃
Heating medium oil specific heat =0.49kcal/kg℃
Water density =1kg/L
Heating medium oil density =0.842kg/L