STM-W Series

SHINI plastics technologies

Water Heaters

STM - W series water heaters have both standard and high temperature models, which are used to heat up the mould and maintain temperature, although they can be used in other similar applications. High temperature water from the mould is returned to the cooling tank and cooled by either indirect cooling (For high temperature models) or direct cooling (for standard models). It is then pressurised by the high - pressure pump, sent to the heating tank and finally to the mould with a constant temperature. The OMRON temperature controller can maintain an accuracy of ± 1℃.

STM-910W

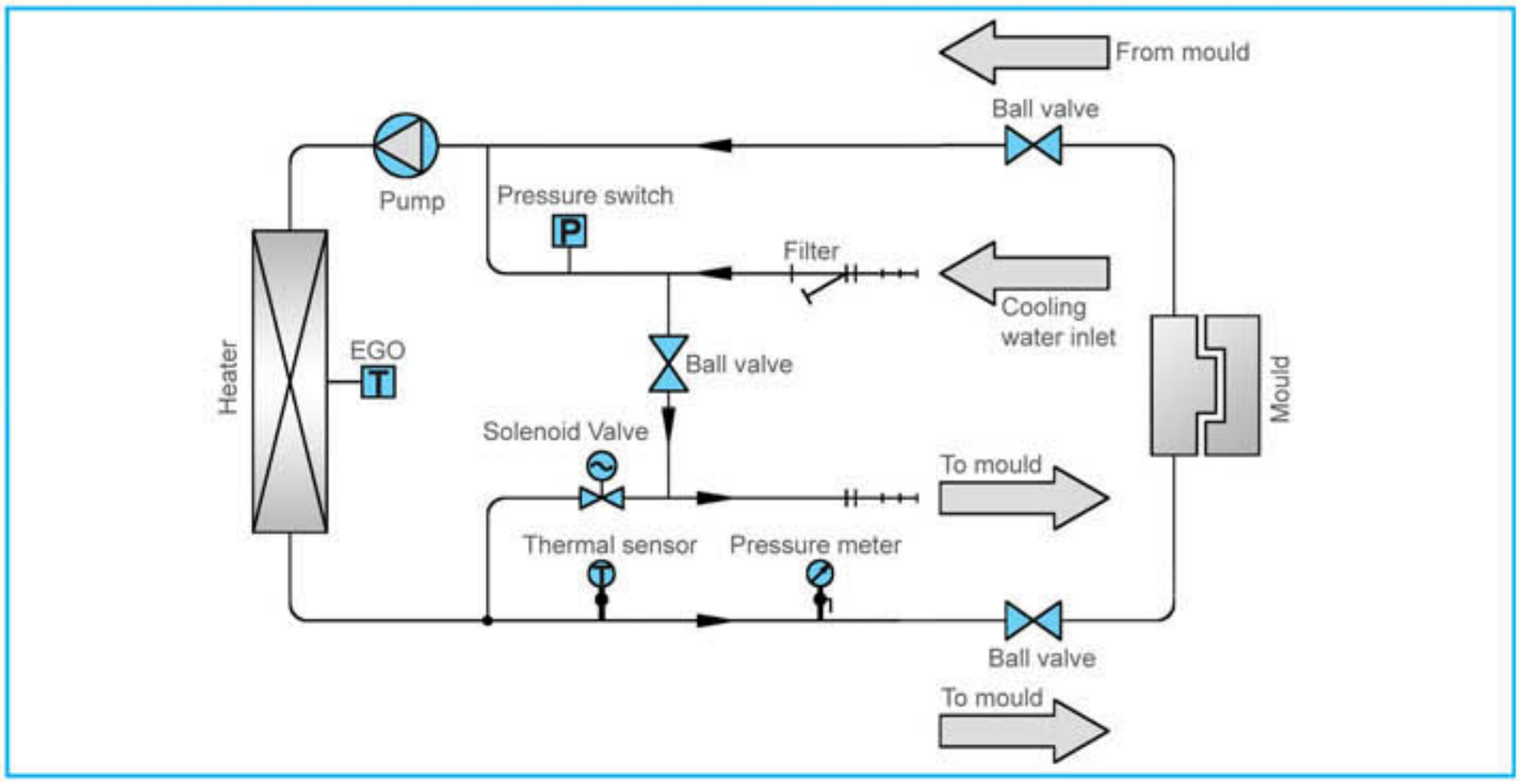
Features

- P.I.D. multi - stage temperature control system can maintain a mould temperature with accuracy of ± 1℃.
- Adopt high efficiency high temperature pump with great pressure and stable performance.
- Multiple safety devices can automatically detect abnormal performance and indicate this via visible alarm.
- Compact design, easy to operate and maintain.
- Inner parts made from stainless steel to ensure corrosion - free operation.
- With stable performance and accuracy within ± 1℃, for standard STM - W, the heating temperature can reach 120 °C, while for STM - PW, it can reach 160 °C.
- STM - W adopts direct cooling method for better cooling effect and automatic water refilling to quickly reduce water temperature to the set - point.
- STM - PW adopts indirect cooling method to maintain accurate temperature and quick heat transfer by means of steady cooling water flow.
- Pump reverse running for water drainage is an optional function for STM - W.
- Water manifolds and Teflon hose are optional.
- Upon request, it can be built to comply with worldwide electrical safety standards (For example : CE, UL, CSA, JIS etc.).

STM-607-PW

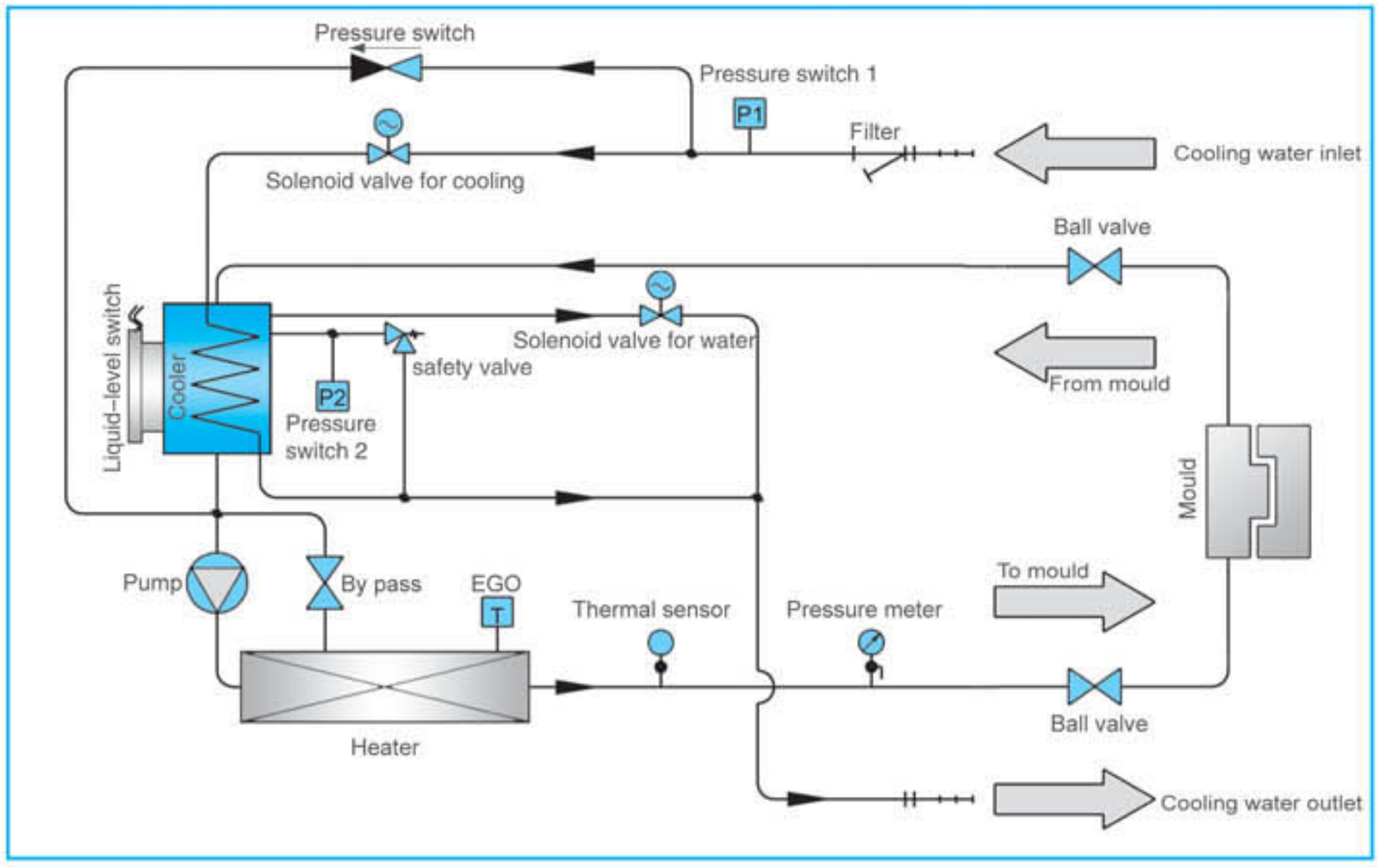
STM-W Series

System Flow for STM-W (direct cooling)



High temperature water returns to the machine and then be pressured by pump to the heaters. After being heated, water will be forced to mould and continue the circle. In the process, if the temperature is too high, the system will activate the solenoid valve to let cooling water cool down the temp. directly until the water is down to the system requirement. If the temp. keep increasing and reach to the set point of EGO, system will alarm and stop operation. The system will have low pressure alarm and stop working if cooling water pressure doesn't reach set point.ci

System Flow for STM-PW (indirect cooling)



From the mould, high temperature water returns to the cooling tank via pipelines, and then be pressured by pump to the heaters. After being heated, water will flow to the mould and continue it's circulation. In this process, solenoid valve for water refill up will be activated to fill water into the system when liquid level switch detects that the liquid level has dropped down to the set point. However, if the temperature of that water is over high, the system will activate the solenoid valve for cooling to let cooling water come into the system and cools down that water indirectly, thus constant temperature can be maintained. System will activate its over high temperature alarm and stop working when that water keeps beyond EGO set point. Safety valve will be opened for pressure release when system pressure has reached its set point. If the system pressure keeps beyond the set point of the pressure switch 2, the system itself will activate the solenoid valve for water refill up to release the pressure. If the cooling water pressure could not reach the set point, pressure switch 1 will send the signal for system to activate its over low pressure alarm and stop working.

Applications

Mainly used for heating up and maintaining a constant mould temperature, or in other fields that require a constant flow of hot water.

Specifications (STM-W)

Model	Max. Temp.	Pipe Heater (kW)	Pump Power (kW) (50 / 60Hz)	Max. pump Flow (L / min) (50 / 60Hz)	Max. pump Pressure (bar) (50 / 60Hz)	Heating Tank Number	Heating Tank Capacity (L)	Cooling Method	Mould Coupling* (inch)	Inlet/Outlet (inch)	Dimensions (mm) (H×W×D)	Weight (kg)
STM-304W	120 °C	3	0.25 / 0.28	12 / 12	4.0 / 4.9	1	1.0	Direct	3/8" (1 × 2)	1/2" / 1/2"	350 × 320 × 680	40
STM-607W		6	0.55 / 0.63	27 / 30	3.8 / 5	1	3.0		3/8" (2 × 2)	3/4" / 3/4"	635 × 280 × 740	55
STM-607W-D		6 × 2	2×0.55 / 2×0.63	2×27 / 2×30	3.8 / 5	2	2 × 3.0		3/8" (4 × 2)	3/4" / 3/4"	655 × 510 × 740	95
STM-910W		9	0.75 / 0.92	42 / 50	5.0 / 6.4	1	3.0		3/8" (2 × 2)	3/4" / 3/4"	635 × 280 × 740	60
STM-910W-D		9 × 2	2×0.75 / 2×0.92	2×42 / 2×50	5.0 / 6.4	2	2 × 3.0		3/8" (4 × 2)	3/4" / 3/4"	655 × 510 × 740	105
STM-1220W		12	1.5 / 1.9	74 / 84	6.2 / 7.2	2	6.0		3/8" (4 × 2)	1" / 1"	695 × 340 × 815	120
STM-2440W		24	2.8 / 3.4	90 / 90	8.0 / 10.2	2	7.4		1"(1 × 2)	1" / 1"	870 × 360 × 930	140
STM-3650W		36	4	100 / 100	8.0 / 8.0	4	17.7			1" / 1"	980 × 415 × 930	150

Note: 1) " D " stands for double stage, " * " stands for options.

2) Automatic drain facility can be added for all models as optional feature. (Model denotes " R ")

3) In order to maintain stable temp. of heat transfer media, cooling water pressure should be no less than 2 kg / cm^2 , but also no more than 5 kg / cm^2.

4) Pump testing standard： Power of 50 / 60Hz，purified water at 20℃. (There is ± 10% tolerance for either max. flowrate or max.pressure).

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

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Specifications (STM-PW)

model	Max. temp.	Heater (kw)	Pump (kw) (50 / 60Hz)	Max. pump flow (L / min) (50 / 60Hz)	Max. pump pressure (bar) (50 / 60Hz)	Heating chamber number	tank (L)		Cooling method	Mould coupling* (inch)	Inlet/Outlet (inch)	Dimensions (mm) (H × W × D)	Weight (kg)
							Heating	cooling					
STM-607-PW	160 °C	6	0.55 / 0.63	27 / 30	3.8 / 5.0	1	3.4	2	Indirect	3/8" (2 × 2)	3/4" / 3/4"	765 × 320 × 765	80
STM-910-PW		9	0.75 / 0.92	42 / 50	5.0 / 6.4	1	3.4	2			3/4" / 3/4"	765 × 320 × 765	85
STM-1220-PW		12	1.5 / 1.9	74 / 84	6.2 / 7.2	1	3.4	4.6		1" (1 × 2)	1" / 1"	795 × 340 × 820	95

Note: 1) " PW " stands for high temp. water heaters. " * " stands for options.

2) To ensure stable water temperature, cooling water pressure should not be less than 2 kg / cm^2, but also no more than 5 kg / cm^2.

3) Pump testing standard: Power of 50 / 60Hz, purified water at 20℃. (There is ± 10% tolerance for either max. flowrate or max.pressure).

4) Power supply: 3Φ, 230 / 400 / 460 / 575V, 50 / 60HZ.

Model Selection Guide for STM-W

Mould Clamping Force (T)	Moulding Capacity (kg / hr)	Pump Flow (L/min)
Below 25	Below 3	10
25~50	3~6	25
50~100	6~12	
100~200	12~25	

Mould Clamping Force (T)	Moulding Capacity (kg / hr)	Pump Flow (L / min)
200~300	25~40	40
300~650	40~80	60
Above 650	Above 80	120

Model Selection Guide for STM-PW

Mould Clamping Force (T)	Moulding Capacity (kg / hr)	Pump Flow (L / min)
Below 50	Below 6	27
50~100	6~12	
100~200	12~25	

Mould Clamping Force (T)	Moulding Capacity (kg / hr)	Pump Flow (L / min)
200~300	25~40	40
300~650	40~80	58
Above 650	Above 80	100

We reserve the right to change specifications without prior notice.

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