Mould Temp. Controllers

STM-1220W-D

Refer carefully to this manual before operation.

STM-W-D Series

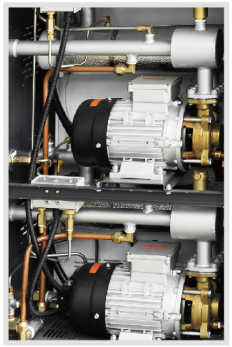
Coding Principle

STM- xxxx W - D - xx

- xx → Options
- D → Double-stage
- W → Water type
- xxxx → First Two Codes: Heater Power (kW); Last Two Codes: Pump Power (×10^{-1}HP)
- STM- → Shini Mould Temp. Controllers

Features

- Adopt SSR solid-state relay with heating output, the max. heating temperature can reach 120℃ with the precision of ±0.5℃.
- Adopt a vertical structure with a small footprint.
- The controller adopts an easy operation 4.3" touch screen, both heaters with independent temperature control.
- Adopt high-efficient water pump.
- In-build multiple safety plus warning devices, such as reverse phase, pump overload, overheat, and high and low-pressure protection.
- The unit is capable of startup air purge, auto water refill, auto exhaust function.
- Direct cooling with a superior cooling effect. Auto refilling device can cool down the temperature to set the value rapidly.
- RS485 communication interface achieves centralized monitoring with the host.



Inner structure

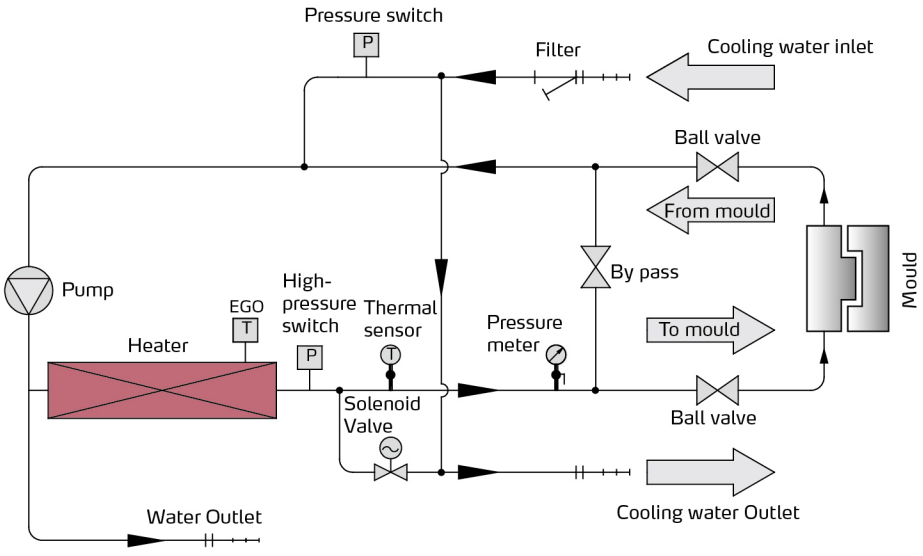
Application

STM-W-D series water heaters are used to heat the mould and maintain a set temperature. It can be used in other similar applications. This series of machines use water as the heat transfer medium. It saves production costs, is easy to clean, and ensures a good working environment. As water circulates in the hermetic pipes, it remains in a liquid state even if the mould temperature is higher than 100℃, enhancing flow rate and improving the heat transfer effect. Besides, there are multiple options and accessories of this series to meet different production requirements.

Options

- For models optional with mould temperature and mould return water temperature display, add "TS" at the end of the model code.
- For models optional with water purging via compressor air, add "A" at the end of the model code.
- For models optional with manual water purging via compressor air, add "MA" at the end of the model code.

Working Principle



3D animation (Tencent)

3D animation (Youtube)

System flow (Direct Cooling)

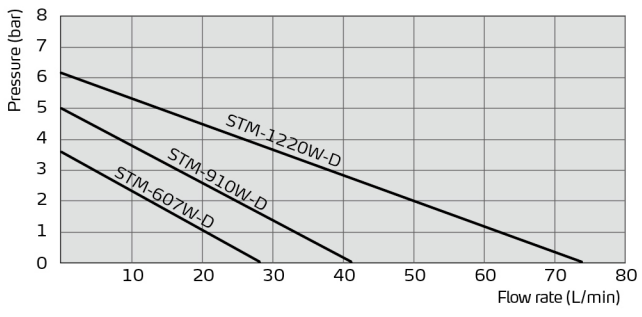
Specifications

Model	Max. Temp.	Heater (kW)	Pump Powe 50Hz/60Hz (kW)	Max. pump Flow 50Hz/60Hz (L/min)	Max. pump Pressure 50Hz/60Hz (bar)	Heating Tank Number	Heating Tank Capacity	Cooling Method	Inlet/Outlet (inch)	Dimensions (H×W×D)	Weight (kg)
STM-607W-D	120℃ (140℃)**	6×2	0.55×2 0.63×2	27×2/30×2	3.8/5	2	3.0×2	Direct	3/4/3/4	990×380×910	116
STM-910W-D	120℃ (140℃)**	9×2	0.75×2 0.92×2	42×2/50×2	5.0/6.4	2	3.0×2	Direct	3/4/3/4	990×380×910	120
STM-1220W-D	120℃ (140℃)**	12×2	1.5×2 1.9×2	74×2-84×2	6.2/7.2	2	3.0×2	Direct	1/1	990×380×930	130

Notes: 1) Pump testing standard: Power of 50/60Hz, purified water at 20°C
(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℃
cooling water pressure should not be lower than 4kgf/cm².
4) To ensure stable water temperature, cooling water pressure
should not be less than 2kgf/cm², but also no more than 5kgf/cm².

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(h) / 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 (60Min)]

Shini Group

Addr: No. 23, Minhe St., Shulin Dist.,
New Taipei, Taiwan

Tel: +886 2 2680 9119

Fax: +886 2 2680 9229

Email: shini@shini.com

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- Taiwan
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