



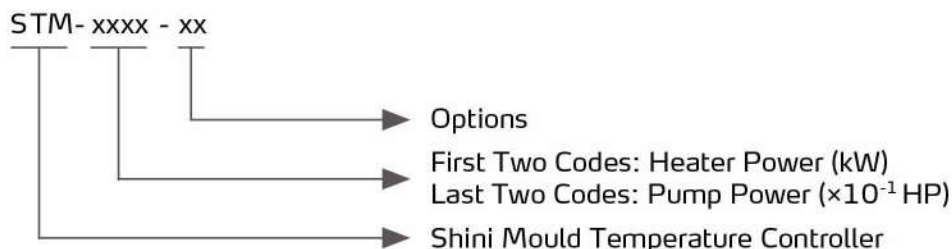
## Oil Heater

STM-910



Refer carefully to this manual before operation.

## ■ Coding Principle



## ■ Features

- For standard STM, the maximum heating temperature 200°C/392°F, while STM-HT maximum heating temperature is 300°C/572°F.
- P.I.D controller with 3.2" LCD with a user-friendly interface.
- The multi-stage controller can maintain stable mould temperature with a precision of  $\pm 0.5^{\circ}\text{C}/0.9^{\circ}\text{F}$ .
- In build weekly timer with  $^{\circ}\text{C}/^{\circ}\text{F}$  unit conversion.
- STM in build a high-temperature quality pump. STM-HT with a leakage-free sealess magnetic driven pump.
- In build multiple safety with display and alarm buzzer, such as reverse phase, pump overload, overheat, and low oil level alarm.
- Modbus RTU data communication via RS485.



STM-910-D



STM-2440HT

## ■ Options

- Displays of mould temperature and return oil temperature of mould are optional, and add "TS" at the end of the model code.
- For models optional with magnetic pump (excluded for STM-3650 and STM-D models), add "M" at the end of the model code.
- It could option with magnetic filter to prolong service life of magnetic pump (only suitable for models with magnetic pump). Add "MF" at the end of the model code.

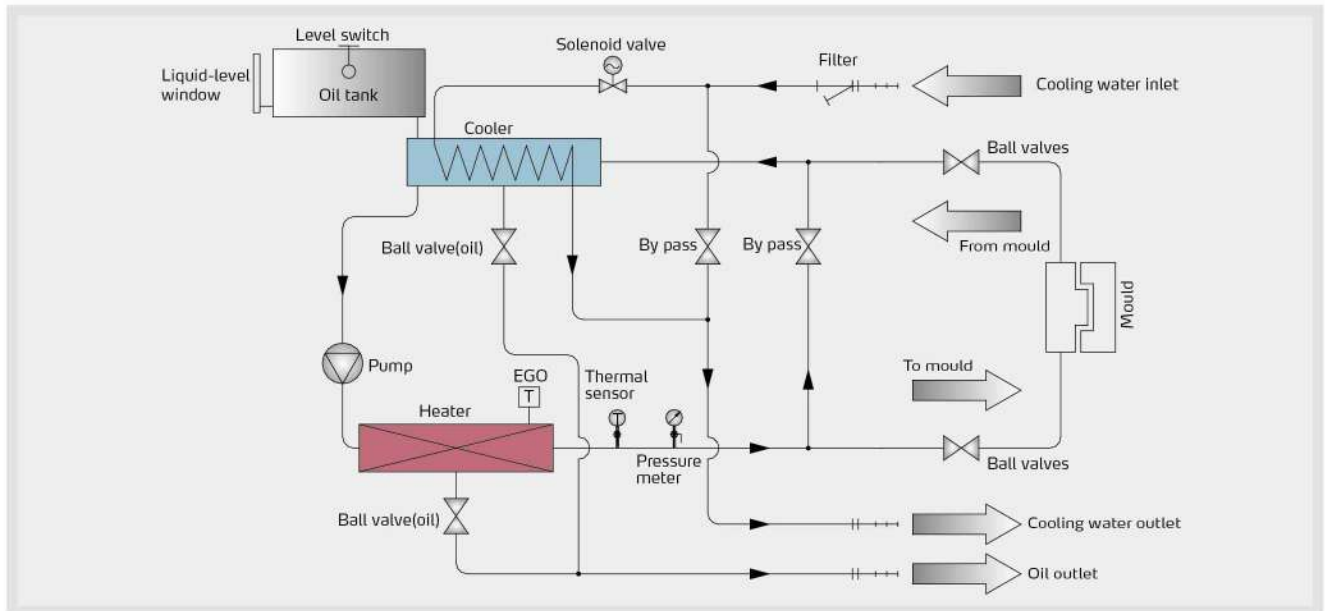


Control Panel

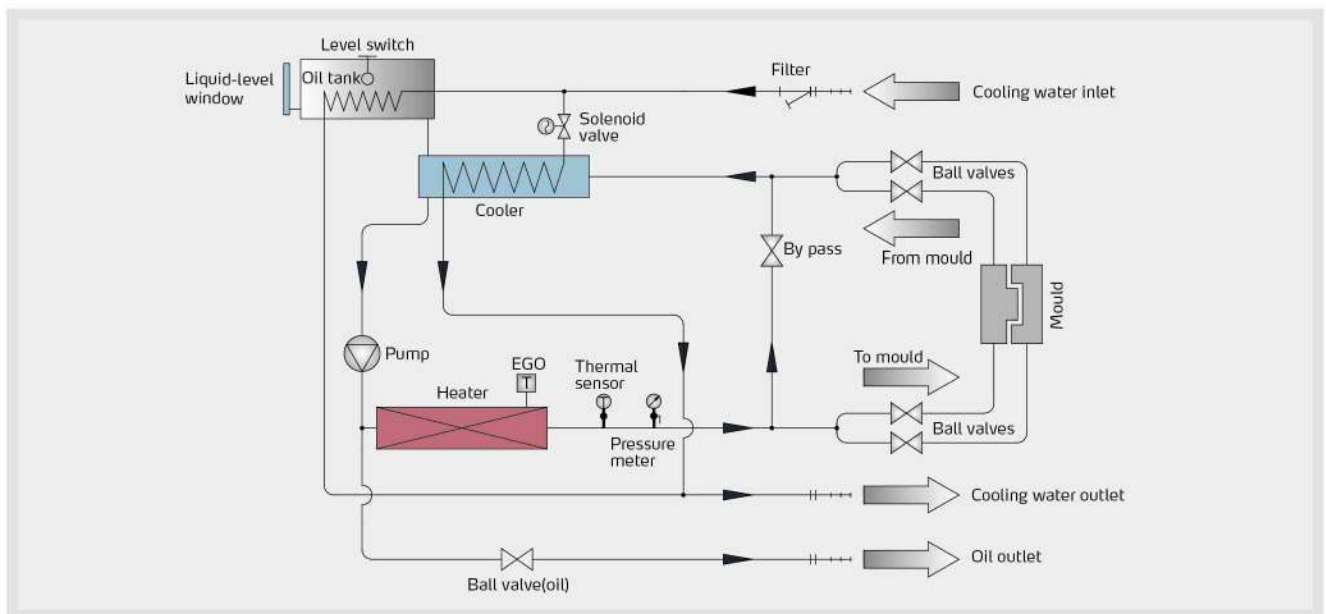
## ■ Application

STM series of oil heaters have both the standard and high temperature types, which can heat moulds up to 200°C and 300°C respectively. It's mainly applied to heating up and temperature maintenance of mould, and other fields with the same demands. This series of machines use oil as the medium so that rust can be avoided inside the mould. As oil has small specific heat, its heating and cooling rates are better than water heaters. The oil heaters can be used for moulds with high temperature demands, and multiple options and accessories are available for customers to meet different production requirements.

## ■ Working Principle



System flow for STM



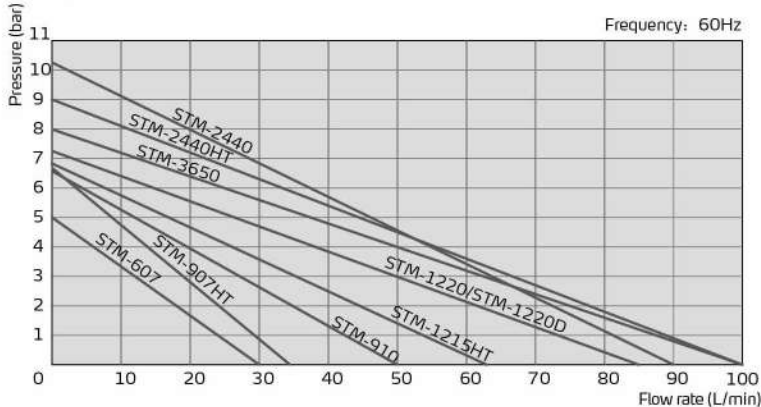
System flow for STM-HT

## Specifications

Model		STM-607	STM-607D	STM-910	STM-910D	STM-1220	STM-1220D	STM-2440	STM-3650	STM-907HT	STM-1215HT	STM-2440HT
Max. Temp.		200°C / 392°F								300°C / 572°F		
Pipe Heater (kW)		6	6×2	9	9×2	12	12×2	24	36	9	12	24
Pump Power (kW) (50/60Hz)		0.55/0.63	2×0.55 2×0.63	0.75/0.92		1.5/1.9	2×1.5 2×1.9	2.8/3.4	4/4	0.5/0.63	1.0/1.1	2.8/3.43
Max. pump Flow (50/60Hz)	L/min	27/30	2×27 2×30	42/50	2×42 2×50	74/84	2×74 2×84	90/90	100/100	28/34	58/63	100/100
	gal/min	7.1/7.9	2×7.1 2×7.9	11/13.2	2×11 2×13.2	19.5/22	2×19.5 2×22	23.7/23.7	26.4/26.4	7.4/9	15.3/16.6	26.4/26.4
Max. pump Pressure (bar)(50/60Hz)		3.8/5	3.8/5	5.0/6.4	5.0/6.4	6.2/7.2	6.2/7.2	8.0/10.2	8.0/8.0	4.8/6.5	5.8/6.8	8/9
Heating Tank Number		1	2	1	2	1	2	2	3	1	1	2
Main/Sub. Oil Tank	L	6/3.2	2×6/2×3.2	6/3.2	2×6/2×3.2	6.8/11.8	2×6.8/ 2×11.8	11/16	14/16	6/6	6.8/16	16/25
	gal	1.58/0.85	2×1.58/ 2×0.85	1.58/0.85	2×1.58/ 2×0.85	1.8/3.1	2×1.8/ 2×3.1	2.9/4.2	3.7/4.2	1.58/1.58	1.8/4.2	4.2/6.6
Cooling Method		Indirect										
Inlet/Outlet (inch)		3/4 / 3/4	3/4 / 3/4	3/4 / 3/4	3/4 / 3/4	1 / 1	1 / 1	1 / 1	1 1/4 / 1 1/4	3/4 / 3/4	1 / 1	1 / 1
Dimensions (H×W×D)	mm	700×350 ×900	700×535 ×900	700×350 ×900	700×535 ×900	755×320 ×900	795×690 ×935	900×407 ×1009	928×407 ×1000	695×280 ×740	1000×400 ×800	1050×515 ×910
	Inch	28×13.8 ×35.4	28×21 ×35.4	28×13.8 ×35.4	28×21× 35.4	29.7×12.6 ×35.4	31.4×27.2 ×36.8	35×16 ×39.7	36.5×16 ×39.4	27×10 ×29	31×13 ×32	39.4×20 ×35.8
Weight	kg	70	120	71	140	90	161	145	155	75	90	190
	lb	154	265	157	308	198	355	319	341	165	198	418

- Notes: 1) "D" stands for dual-heating zones. "HT" stands for high temperature model.  
2) 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).  
3) When machine works continuously, the suggested temperature should not higher than 180°C/356°F. (Including STM-HT)  
4) Power supply: 3Φ, 230 / 400 / 460 / 575VAC, 50 / 60Hz.

## Pump Performance



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

### 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(h) / 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 (60Min)]

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