



Integrating plastic technologies  
since 1965

# TEMPERATURE CONTROLLER

## STM Series



STM-910

### STANDARD OIL HEATERS

The STM series standard oil heaters are used to heat up the mould and maintain this temperature, although they can be used in other similar applications. High temperature oil from the mould is returned to the cooling tank and cooled by indirect cooling. It is then pressurised by the high-pressure pump, sent to the heating tank and finally to the mould with a constant temperature. With our optimised design, oil can reach a maximum of 200°C and the OMRON temperature controller can maintain an accuracy of +/- 1°C.

#### APPLICATIONS

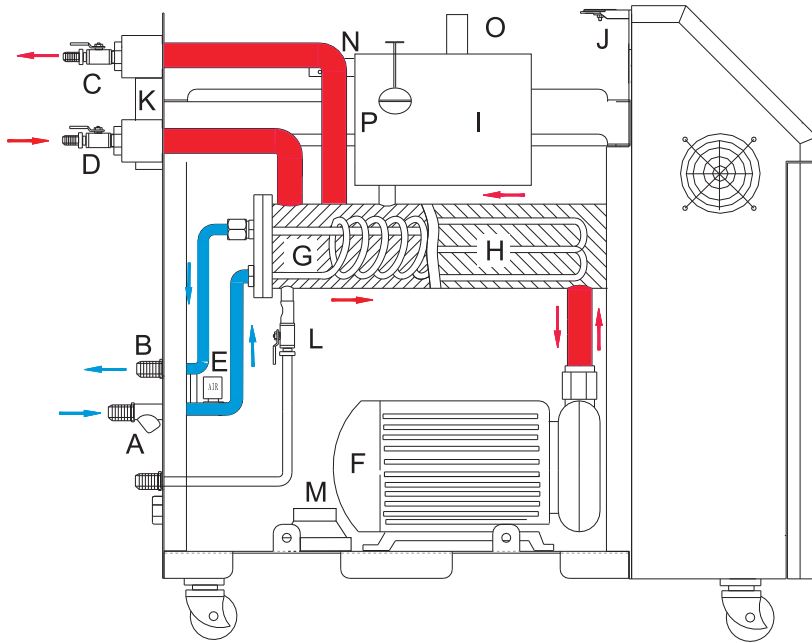
Mainly used for heating up and maintaining a constant mould temperature, and in other fields that require a constant flow of hot oil.

### MODEL SELECTION:

Mould clamping force (T)	Moulding capacity (kg/hr)	Pump flow (L/min)
Below 50	Below 6	30
50 ~ 100	6 ~ 12	
100 ~ 200	12 ~ 25	
200 ~ 300	25 ~ 40	40
300 ~ 650	40 ~ 80	60
Above 650	Above 80	100

### FEATURES:

- PID multi-stage temperature control system can maintain a mould temperature with accuracy of +/- 1 °C.
- Multiple safety devices can automatically detect abnormal performance and indicate this via visible alarm.
- Reliable mains isolator to cut power supply in case of emergency.
- German made SPECK pump features high pressure and stable performance.
- High temperature heat transfer oil is stable up to 200°C, suitable for long and continuous operation.
- Attractive appearance, easy to access and maintain.



- A. Cooling water inlet
- B. Cooling water outlet
- C. To mould
- D. From mould
- E. Solenoid valve
- F. Pump
- G. Cooling tank
- H. Pipe heater
- I. Oil tank
- J. Pressure meter
- K. Level mark
- L. Oil outlet
- M. Temp. sensor (EGO)
- N. Micro-switch
- O. Oil inlet
- P. Floating ball

WORKING PRINCIPLE

High temperature oil from the mould (D) is returned back to the cooling tank, and then sent to the heating tank by the pump (F) to be heated by the pipe heater (H), and then onto the mould.

In this process, any oil overheating activates the solenoid valve (E) to allow cooling water into the cooling tank (G) to reduce the oil temperature. If the oil reaches the upper limit of the temperature sensor, the machine will activate the overheat alarm. If the floating ball (P) in the oil tank (I) falls below a safe level, the machine will activate the low level alarm by means of a microswitch (N).

SPECIFICATIONS:

Model	Max. temp.	Pipe heater (kw)	Pump power (kw)	Max pump flow (L/min)	Max. pump pressure (bar)	Heating tank number	Main/sub. oil tank (L)	Cooling method	Mould coupling (inch)	Dimensions (mm) (Hx WxD)	Weight (kg)
STM -607	200 C	6	0.55	30	5.0	1	5/3.2	Indirect	3/4" (2x2)	630x280x735	60
STM -607-D		6x2	0.55x2	30x2	5.0	2	5x2/3.2x2		3/4" (4x2)	630x560x735	120
STM -910		9	0.75	45	6.0	1	8/15		3/4" (2x2)	630x280x735	74
STM -910-D		9x2	0.75x2	45x2	6.0	2	5/3.2		3/4" (4x2)	630x560x735	145
STM -1220		12	1.5	90	6.0	1	5x2/3.2x2		1" (1x2)	790x340x810	103
STM -2440		24	2.2	160	6.0	2	10/15		1-1/2" (1x2)	790x360x910	150

Note: "D" stands for dual-heating zones.  
Power supply: 3φ, 230/575V, 50/60Hz.