STM-W/O Series

Dual-purpose Water / Oil Heaters

The STM-W/O series of dual-purpose heaters are used to heat up the mould and maintain this temperature, although they can be used in other similar applications. High temperature water or oil from the mould is cooled by indirect cooling and then sent to the pipe heaters via high-pressure pump for heating to a constant temperature. This unique design allows the user to choose between water and oil as a heat transfer medium. With our optimised design the OMRON temperature controller can maintain an accuracy of ±1°C.

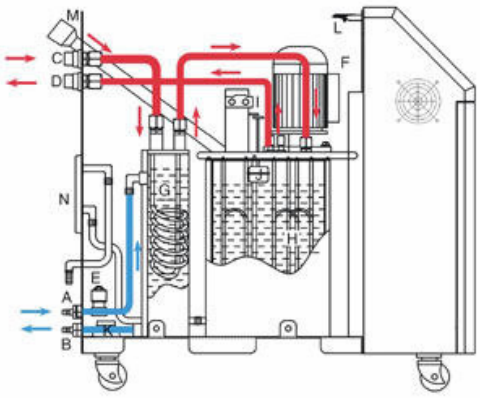
STM-607-W/O

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.
- User's choice of heat transfer medium between water and oil.
- Inner parts made from stainless steel to ensure corrosion-free operation.
- Attractive appearance, easy to access and maintain.
- Maximum temperature of 95°C for water and 160°C for oil.
- Automatic cooling water supply and mould purging facility as standard.
- Leak-stop function is achieved by switching to the negative pressure mode.

Inner structure

Illustration of working principle (indirect cooling)



High temperature water / oil from the mould passes through the cooling pipes of the cooling tank and then flows into the heating tank to be heated, and the onto the mould by the pump (F).

If the water / oil overheats, this will activate the solenoid valve (E) that allows cold water to flow into the cooling tank (G) via inlet (A) to reduce the water temperature. If the water / oil reaches the upper limits of the temperature sensor, the machine will stop and raise the alarm. If the floating ball (J) in the heating tank falls below a safe level, the microswitch (I) will start the low-level alarm.

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

Applications

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

Specifications

Model	Max. temp.	Heater (kw)	Pump (kw)	Max. pump flow (L/min)	Pump pressure (bar)	Heating tank	Heating tank volume (L)	Cooling method	Mould coupling (inch)	Dimensions (mm) (H x W x D)	Weight (kg)
STM-607-W/O	W: 95℃ O:160℃	6	0.55	60	3.8	1	12	Indirect cooling	3/8" (2 x 2)	630x280x735	62
STM-907-W/O		9(4.5)	0.55	60	3.8	1	20	Indirect cooling	3/8" (2 x 2)	700x280x780	75

Note: power supply: 3Φ, 230/400/460/575V, 50/60Hz.

Model selection

Mould clamping force (T)	Moulding capacity (kg/hr)	Pump flow (L/min)
Below 100	Below 12	30
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

We reserve the right to change specifications without prior notice.

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