

# T-REG

## Integrated thermoregulator



T-REG is an integrated solution that combines an electrical heater, a heat exchanger, and the connecting piping. The concept is designed for applications requiring quick and accurate temperature control to ensure high productivity and quality (e.g. in the plastic molding industry).

Integrated into a single unit, T-REG provides the electric heater that gives the plastic paste the right viscosity, a single-phase water-to-water heat exchanger that cools the mold to harden the plastic, and all the required piping between the two. The result is a compact, easy-to-install solution that offers extremely accurate temperature control. The same envelope is used for all models, which offer up to 12 kW heating and 70 kW cooling (based on 20 °C inlet temperature and 30 l/min cooling water). The unit has a footprint of 250×200×80 mm.

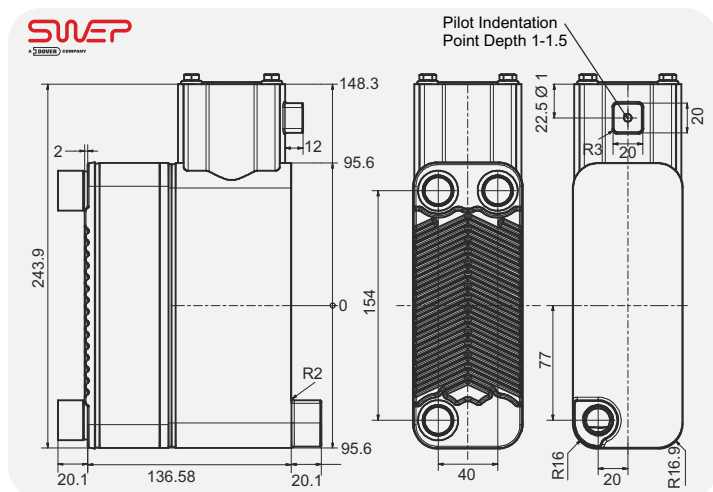


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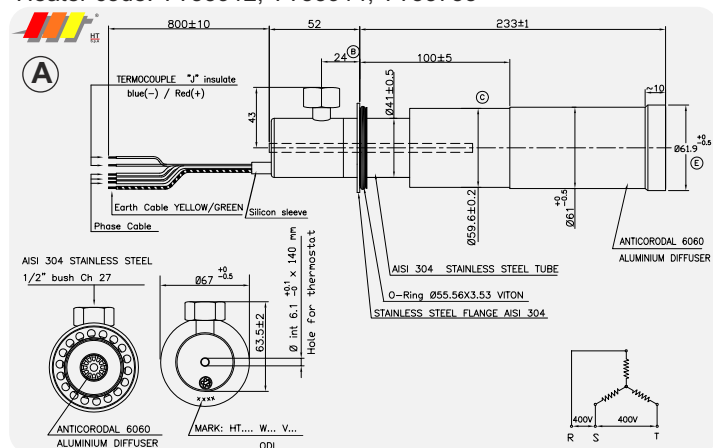


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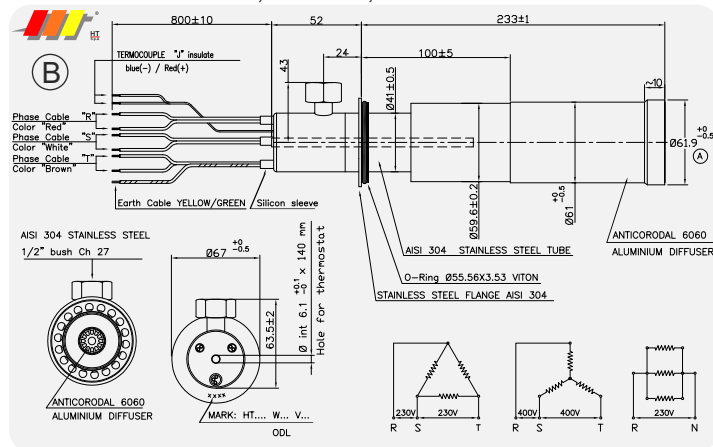
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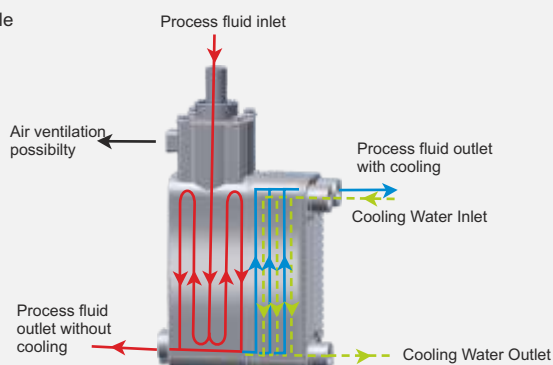
Heater code: YT53912, YT53914, YT53755



Heater code: YT57432, YT57433, YT57434



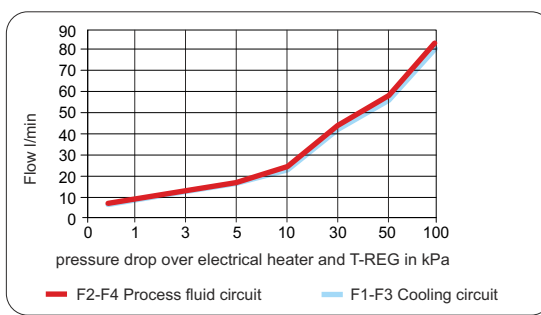
## Principle



A	Range	Heater code	Watt	Volt	W/Cm <sup>2</sup>
	T-REG × 24	YT53912	6000	400 V	6
	T-REG × 24	YT53914	9000	400 V	9.1
	T-REG × 24	YT53755	12000	400 V	12.1

B	Range	Heater code	Watt	Volt	W/Cm <sup>2</sup>
	T-REG × 24	YT57432	6000	400 V - 230 Δ	6
	T-REG × 24	YT57433	9000	400 V - 230 Δ	9.1
	T-REG × 24	YT57434	12000	400 V - 230 Δ	12.1

WATT	A or B1			B2			B3
	380V	400V	420V	220V	230V	240V	230V - 2 Ph
5415	6000	6615		5415	6000	6615	6000
8123	9000	9923		8123	9000	9923	9000
10830	12000	13230		10830	12000	13230	12000



## Design specification:

### Heating mode:

- 6,9 or 12 kW heater
- Working condition: water at 140°C, 10 bar
- Heater only with a built-in type "J" Thermocouple

### Cooling mode:

- Up to 70 kW cooling
- 20°C water inlet and 20 l/min
- 90°C water inlet and 45-50 l/min

### Maximum working pressure:

16 bar on both circuit.

### Channel plate measurement:

189 x 70 mm

### Material specification:

- BPHE parts in AISI 316 stainless steel:
  - Channel plates, Start/End plates, Connections, Support plate
- Frame in AISI 304 steel
- Heater: Core pipe: AISI 304, Dissipator: aluminum

Port	Available connections
Process fluid outlet without cooling (P4)	ISO-G 1/2" A int
Process fluid outlet with cooling (F2)	ISO-G 1/2" A int
Cooling water inlet (F1)	ISO-G 1/2" A int
Cooling water outlet (F3)	ISO-G 1/2" A int

### Air ventilation:

Possibility of draining unit from air by outlet on neck. Pilot indentation for possible use.

### Max number of plates:

24 plates are used for all heater sizes 6, 9, 12 kW

### Standard connection height:

20 mm

