



TG1

The temperature controllers are used to automatically control the temperature of diathermic fluids in industrial processes, keeping it at a constant value.

TG1 series includes units for operation with **water** up to 95 °C (W version), **pressurised water** up to 140 °C (P version) and **thermal oil** up to 190°C (OH version) or 250°C (OHT version) in closed circuit, with micro-processor control to provide very accurate temperature control.

Units are available in **Small** and **Large** version.

Advantages

- High precision due to the PID logic of the controller
- Reliable operation without fluid leaks even in the worst working conditions
- Easy to use
- Maximum flexibility for very different applications
- Easy maintenance : the internal lay-out provides easy access to all the components that could require maintenance or replacement



Main features

- Electric heaters with low specific power to provide safe operation even at the heaviest conditions without compromising the oil characteristics
- Circulation pump with high flow rate and head pressure, centrifugal type for water, pressurised water and oil up to 190°C, with magnetic coupling for oil up to 250 °C
- Cooling circuit with high efficiency heat exchanger, finned canned coil for plate type
- Open filling and expansion tank (except for P version)
- Safety pressure switch and level switch
- Solenoid valve to control the cooling operation
- Manual by-pass between supply and return sides (OH and OHT versions)
- Water / oil pressure gauge
- Fluid pressure gauge on the pump discharge side
- Manual filling with magnetic level switch for the oil models
- Automatic filling for water and pressurised water models
- "Autotuning" function
- RS 485 interface port with Modbus communication protocol
- 0-10V or 4-20mA temperature transmission
- Double set point with remote switching between the two values
- Mechanical safety thermostat
- Auxiliary circuit at 24V
- Contactors to drive the electric heaters
- Operation and alarm lights
- Contactors and protections for each electrical device
- Standard colour RAL 9016

Technical specifications TG Small

Series/type	TG1 - W	TG1 - P	TG1 - OH	TG1 - OHT
Diathermic fluid	Water	Pressurized water	Diathermic oil	Diathermic oil
Max. op. temperature (°C)	95	140	190	250
Heating capacity (kW)	24-36-48		18-24-30-36	18-23-27-36
Cooling capacity	70 (1)		51 (2) - 100 (4)	
Pompa standard				
Power (kW)	3		3	2,8
Flow rate (l/min)	110÷280		110÷280	0÷80
Pressure (bar)	4,0÷3,2		4,0÷3,2	11,0÷0
Oversized pump				
Power (kW)	4		4	4
Flow rate (l/min)	110÷280		110÷280	0÷200
Pressure (bar)	5,8÷4,9		5,3÷4,5	8,8÷1,8
Expasione tank (l)	38	-	40	
Standard connections Process/cooling	1"-3/4"			
Dimensions (mm)	1100 x 450 x 1500 (h)			
Net weight (kg)	250			

Technical specifications TG Large

Series/type	TG1 - OH	TG1 - OHT
Diathermic fluid	Diathermic oil	Diathermic oil
Max. op. temperature (°C)	180	250
Heating capacity (kW)	20-30-40-50-60-80	20-30-40-50-60-80
Cooling capacity	80 (3)	51 (2) - 100 (4)
Pompa standard		
Power (kW)	3	3
Flow rate (l/min)	110÷280	0÷550
Pressure (bar)	4,0÷3,2	2,1÷0,9
Oversized pump		
Power (kW)	4	Max 7,5
Flow rate (l/min)	110÷280	Max 683
Pressure (bar)	5,7÷4,9	Max 3,2
Expasione tank (l)	45	
Standard connections Process/cooling	2"-3/4"	
Dimensions (mm)	1600 x 650 x 1910 (h)	
Net weight (kg)	--	

Options for all TG versions

- Pump with higher flow rate and/or head pressure
- Higher cooling capacity
- Daily/weekly programmer
- SSR (solid state relays)
- XHT version to operate up to 300°C
- Models with higher heating capacity
- Multi-circuit models (upon request)
- Non standard voltage/frequency

(1) Plate heat exchanger. Capacity at 10 °C DT between process water and cooling water.

(2) Finned canned coil heat exchanger. Capacity at 150 °C DT between leaving oil and cooling water.

(3) Plate heat exchanger. Capacity at 150 °C DT between leaving oil and cooling water.

(4) Option: Double finned canned coil heat exchanger. Capacity at 150 °C DT between leaving oil and cooling water.

Power supply 400 V - 3 Ph - 50 Hz.

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