

## TEMPERATURE CONTROLLERS TG 1 E

The tool heater automatically controls the temperature of diathermic fluids in industrial applications where accuracy is important to guarantee quality of the final product.

TG1 series includes units suitable to operate with **diathermic oil up to 180 or 250 °C**.

All units operate in closed loop and are equipped with microprocessor control.

### MAIN FEATURES

**The hydraulic circuit** includes all the technical solutions to guarantee a reliable and long life operation, without fluid leaks even in the extreme operating conditions.

**Electric heaters** are selected to keep very low specific heat ( $W/cm^2$ ), especially for oil versions, where it can seriously compromise oil operating life and cause oil cracking.

**The circulation pump** is always a high performance pump, centrifugal type for water and pressurised water models. For oil models it is a centrifugal type with mechanical sealings up to 180 °C, peripheral or centrifugal with magnetic driving for oil up to 250 °C.

**The cooling circuit** equipped with high efficiency plates heat exchanger for use up to 180°C, or finned coil (nickel-plated) heat exchanger for higher temperatures.

**Manual top up** complete with magnetic level switch and level alarm.

**Electronic control** has been improved to provide user friendly interface with double temperature display (set point and actual temperature), alarm leds, general alarm contact. Interfaces 4÷20 mA and RS 485 as standard equipment.

**Accurate temperature control** via a double PID control logic and **auto-tuning** software that can be used or disabled on client's decision

**Easy operation and readings** the electronic interface allows easy settings and immediate understanding of the operating parameters.

### Standard equipment :

- Electronic control and interface card
- Electromechanical safety thermostat
- Circulation pump
- Expansion tank with level switch
- Manual oil top up
- 24V DC auxiliary circuits (110 V upon request)
- Two steps heating control with contactors
- Safety pressure switch
- Solenoid valve for cooling
- Manual by-pass
- Oil pressure gauge
- ON-OFF remote connection
- Protection for all electrical components

### Optionals:

- Non standard pump
- Double finned coil heat exchanger
- Non standard plates heat exchangers
- Ventilated electrical box
- Solid state relay (SSR)
- 80 liters oil tank
- Versions with higher heating capacity
- Versions suitable to operate up to 350 °C
- Versions with two independent circuits
- Versions with different voltages

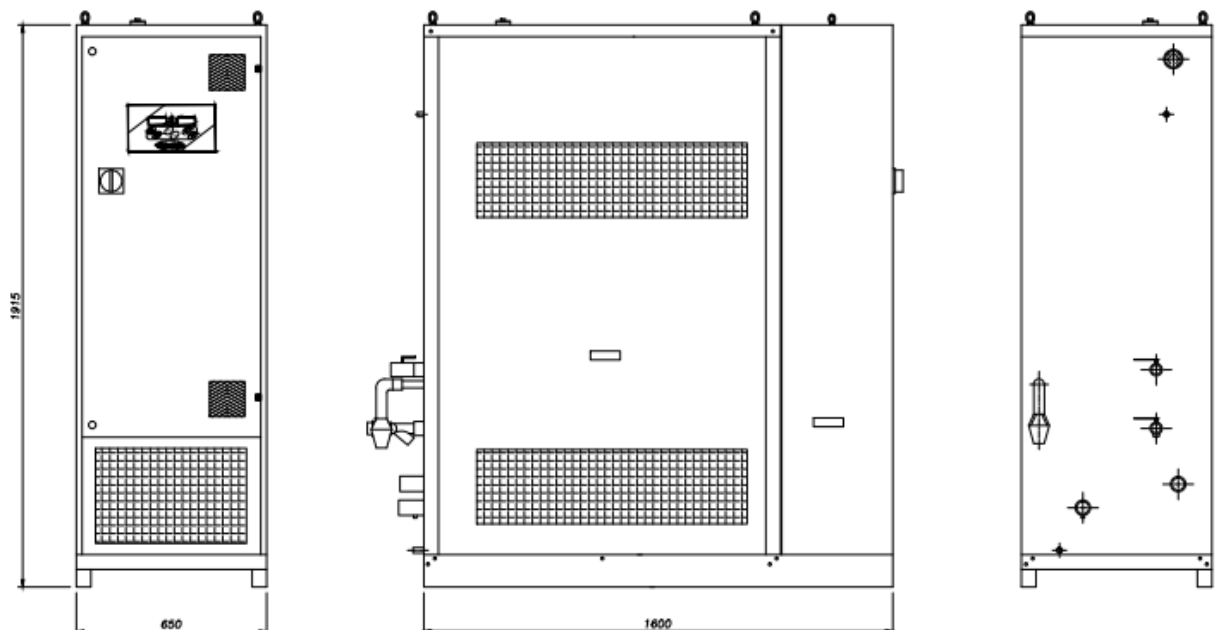
TG 1 E



## TECHNICAL DATA

Series/Model	TG1 E - OH	TG1 E - OHT
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 (kW)	80	51-100(*)
<b>Standard pump</b>		
Power (kW)	3	3
Flow rate (liters/minute)	110÷280	0÷550
Pressure (bar)	4,0÷3,2	2,1÷0,9
<b>Oversized pump</b>		
Power (kW)	4	Max 7,5
Flow rate (liters/minute)	110÷280	Max 683
Pressure (bar)	57÷49	Max 3,2
Expansion tank (l)	45	
<b>Standard connections</b>		
Process/cooling	2" - 3/4"	
Dimensions (mm)	1.600 x 650 x 1.910 (h)	
Net weight (kg)	--	

Cooling capacity : OH with DT 50 °C between outlet oil and inlet cooling water for models with plates heat exchanger  
 OHT with DT 150 °C between diathermic oil and cooling water for models with double finned coil heat exchanger  
 (\*) Cooling capacity with double coil heat exchanger (upon request), standard on 60 and 80 kW heating capacity models  
 Plate type heat exchanger with cooling capacity on request  
 Power supply 400V/3/50 Hz



Green Box Srl reserves the right to change the specifications of these machines without previous notice Rel 01 11/2013

