



**PRECISION HEATED PLATES – Standard Design  
Glove Box – Antechamber - Vacuum Applications  
Remote Control - Max. Temperature 200 °C  
Model family: HTP-MA1-200**

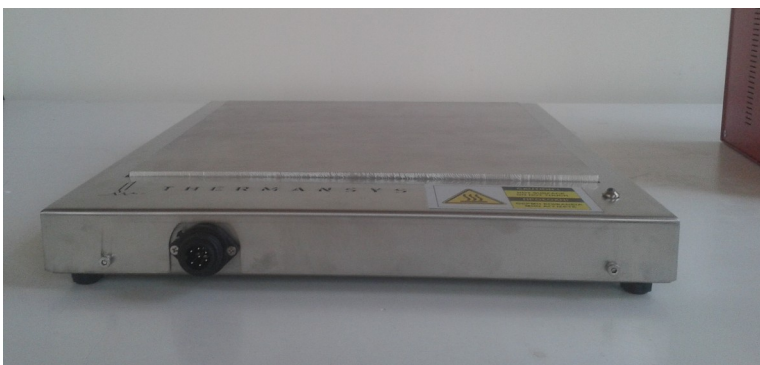
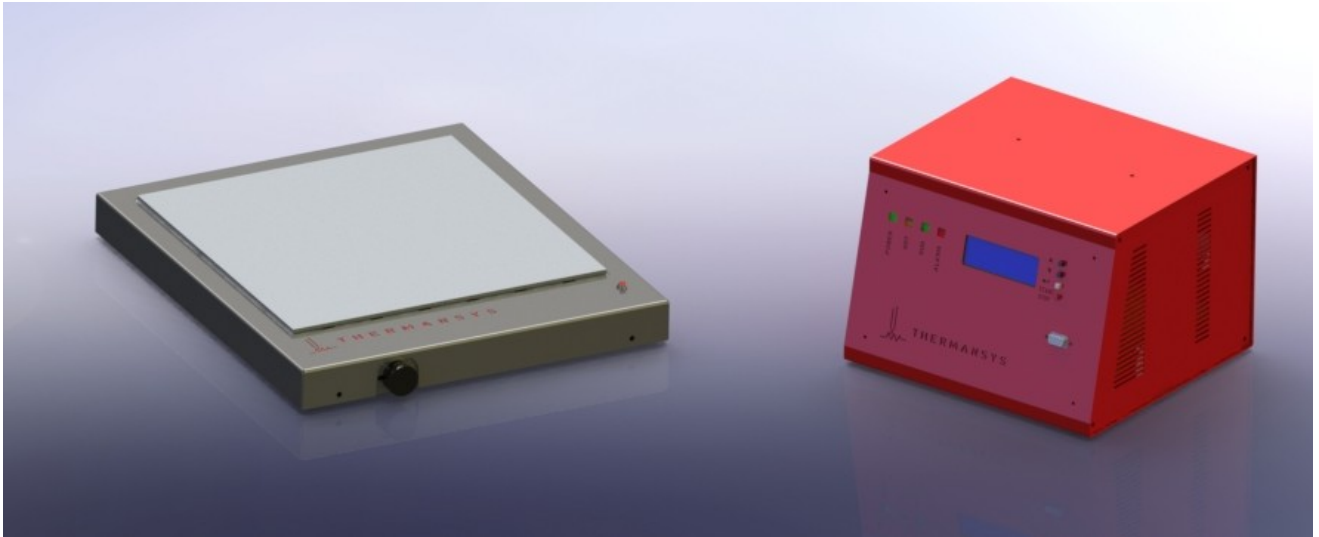
## Description.

**THERMANSYS HTP-MA1-200 Precision Heated Plates** family was designed to provide accurate and uniform surface temperature control. Ideal choice for applications requiring heating under Vacuum or inert atmosphere

Controlled and monitored through a flexible conduit by a remote control box the heated plate body can operate inside closed Vacuum chambers or other controlled atmosphere containers. A special Vacuum (and pressure) sealing feedthrough is available for such applications providing leak free passage of the interconnection conduit into the chamber. Ideal choice for Glove boxes, and Glove Box Antechambers.

The outer shell of the heated plate body is made of corrosion-free stainless steel ASTM 304. The heated body is made from Aluminum providing superior heat transfer and temperature uniformity. All the materials of construction including insulation are specially selected to be compatible with Vacuum applications up to **10<sup>-3</sup> torr (mmHg)**.

Suitable for many applications including Electronics/Semiconductors, Pharmaceuticals/Cosmetics, Plastics, Agricultural and other.



***Standard design include stainless steel shield border around the heated surface to avoid accidental touch of the heated surface.***



***Vacuum (and pressure) sealing feed-through***

### Contact details:

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Information and data contained in this document was considered correct at the time of publication.

Thermansys® is reserving the right to make modifications as a result of design improvements.

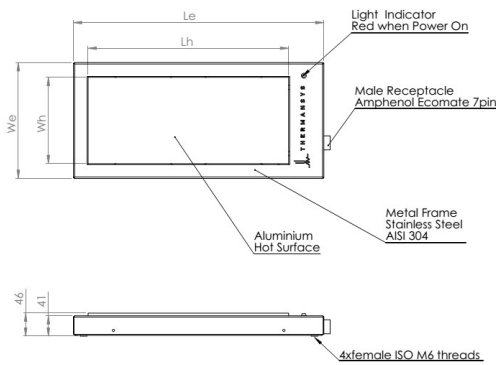
## Specifications.

- Temperature control range, 5 °C above ambient to 200 °C. Monitoring resolution 0.1 °C.
- Operating Power: 230VAC – 50/60Hz.
- Pt100 type temperature sensor.
- Temperature control setting resolution 0.1 °C. Typical control fluctuation  $\pm 0.1$  °C PID control.
- Burst firing insures silent operation and compliance with EMC standards.
- Heater galvanic isolation relay. Heater failure, thyristor failure, temperature sensor failure, alarms and interlocks.

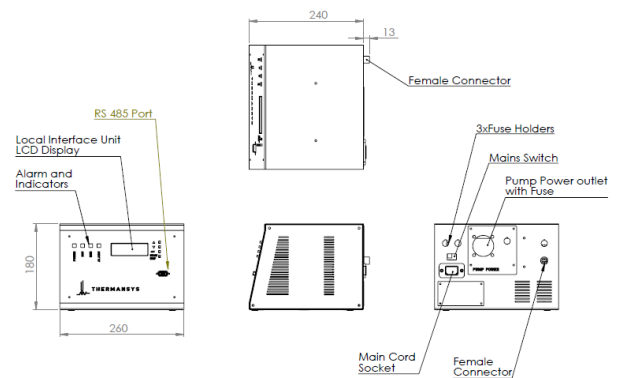
### Optional features:

- Remote, touch screen temperature controller, running the specially designed PYROLOGISM 2.0 software on a 10.0in Tablet PC  
**Add suffix \_TSC**
- Vacuum (and pressure) sealing feed-through for operation inside sealed chamber, Vacuum rating 10-3 torr (mmHg), pressure rating 0.5 bar Gauge
  - ✓ Feedthrough flange: DN25 CF/ DN40 CF  
**Add suffix: \_FT25CF/ \_FT40CF**
  - ✓ Feedthrough flange: DN25KF/ DN40 KF  
**Add suffix \_FT25KF/ \_FT40KF**

## Ordering Information.



**DRAWING 1. HTP-MA1-200 Precision Heated Plates Dimensions**



**DRAWING 2. HTP-CPU-A3 unit Dimensions**

Compliant with **Low Voltage Directive 2006/95/EC** (harmonized referenced standard EN 61010-1: 2001 and EN 61010-2-010:2003) and **EMC Directive 2004/108/EC** (harmonized referenced standard EN 61326-1:2006)

**TABLE1. HTP-MA1-200 Precision Heated Plates Models**

Model Part Number	Max. Temp. °C x Heat up time* (min)	Heated Surface dimensions Lh x Wh (mm) see drawing 1	Surface Uniformity % set point (Center and up to 30mm from edges)	Surface Uniformity % set point (Edges)	External dimensions Le x We (mm) see drawing 1	Nominal Heater Max. Power (W)
<b>HTP-MA1...</b>						
-L18W18-200	200 x 20	180x180	<0.5	<2	280x240	800
-L26W26-200	200 x 20	260x260	<0.5	<2	360x320	1000
-L30W18-200	200 x 20	300x180	<0.5	<2	400x240	1200
-L30W30-200	200 x 20	300x300	<0.5	<2	400x360	1600
-L40W18-200	200 x 20	400x180	<0.5	<2	500x240	1600
-L40W30-200	200 x 20	400x300	<0.5	<2	500x360	1800
-L40W40-200	200 x 20	400x400	<0.5	<2	500x460	2000

\* Hot plate working with no load..

### Ordering Example:

**HTP-AM1-L40W18-200:** This Part Number includes one HTP-MA1-200 Precision Heated Plate having 400x180mm heated surface.

 HELLENIC PRODUCT.

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