

## BOX TYPE FURNACES

### Burn off – dense refractory chamber– embedded resistors

### Model family: **BOX-CW10-1100**

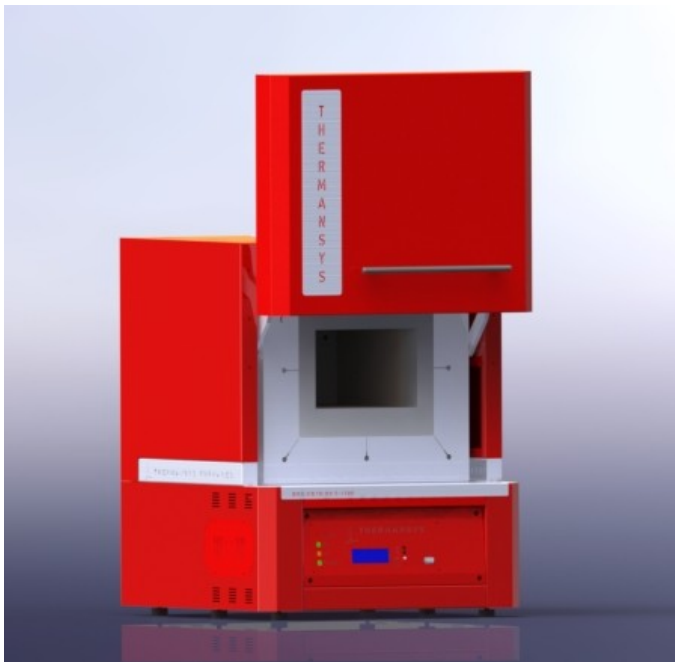
#### Description.

**BOX-CW10-1100** model family designed to serve under the most demanding burn off, ashing/combustion applications environments. Ideal choice for wax removal this model presents an every day partner for professionals working in dental, jewelry or other similar areas.

Constructed with seamless, hard, glass-like refractory with embedded resistors provides the highest degree of your investment protection against harsh gaseous environments, molted metals splashes and carbon or other deposits.

Heated from four sides of the chamber performs excellently in terms of temperature uniformity. Having as major priority the economical operation this furnace was carefully designed with a double wall ceramic insulation serving from one hand as a heat exchanger preheating the incoming air and from the other as a heat barrier improving the overall thermal insulation.

With adjustable air opening in the back side and a tall exhaust chimney at the top, creating a strong natural convection, the entire volume of the chamber can be refreshed several times per minute. The preheated incoming air is entering and exiting the chamber through multiple holes creating a smooth and temperature uniform laminar air stream through the sample satisfying uniformly and continuously the combustion needs for oxygen.

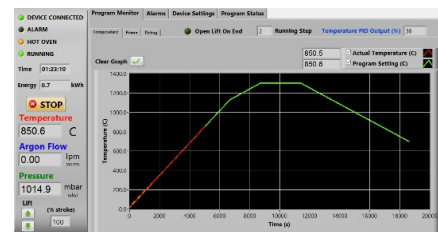


**Ergonomic design with no protruding edges, bolts or other features combines stainless steel parts with painted finish parts for an improved aesthetic result.**

**Standard equipped with a Digital LCD display temperature controller providing 15 step programming with 1 program storage.**



**Optionally equipped with a sophisticated, remote, touch screen, temperature controller, running the specially designed PYROLOGISM 2.0 software, provides a really unique and friendly, windows oriented architecture interface with multiple, advanced features and peripherals.**



#### Key features.

- Control strategy by Thermansys PCC (Power Consistent Control) insures silent operation and compliance with EMC standards.
- Modern double wall construction keeps external surfaces temperature low, emphasizing in operator safety.
- PID control, accurate and uniform temperature profiles.
- Lift up door keep hot surfaces away from operator.
- Optional Touch screen computer running the user friendly, PYROLOGISM 2.0 software. .
- Heater failure, open control thermocouple detection alarms and interlocks.
- Stand alone over-temperature limiter (Watchdog) with manual reset in accordance with EN 60519-2 to protect the heater and load.

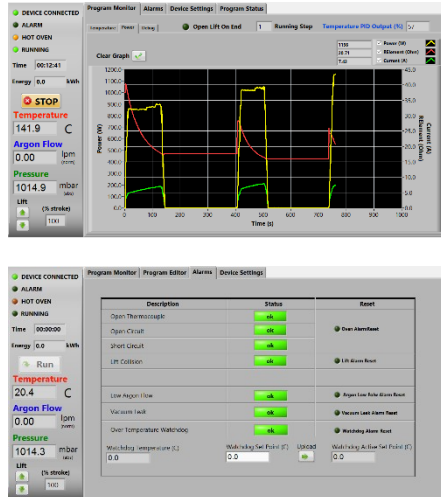
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Thermansys® is reserving the right to make modifications as a result of design improvements.

# PYROLOGISM control and monitoring software.



- Quick setting of a single ramp rate to a set point -run on timer function.
- Set-point programming with up to 15 ramp and constant temperature programming steps – graphical inspection of programming.
- Storage and reload of unlimited number of distinct programs.
- Graphical inspection of programming.
- Real time chart illustrating control temperature and running set point with dynamic zoom.
- Events and alerts messaging.
- Real time true-RMS Current (A), Voltage (V) and Power (W) measurements.
- Real time actual Power (W) and totalized Energy (kWh) chart.
- Saves all data on local memory.
- Tools for manual PID tuning and auto-tuning.
- Virtual keyboard, alarm and event message tab.
- Watchdog over temperature limiter monitor/configuration.

## Specifications and Ordering Information.

### Standard features:

- Maximum continuous temperature 1100 °C.
- Operating Power: 240VAC – 50/60Hz.
- Two in depended K type embedded thermocouples for controller and over-temperature limiter feedback.
- Temperature control accuracy  $\pm 0.5$  °C.
- Embedded resistors type.
- Safety thermostat
- Two compression fitting ports to serve as gas inlets.
- Two thermocouple probe ports at the rear side.

### Optional features:

- Remote, touch screen temperature controller, running the specially designed PYROLOGISM 2.0 software on a 10.0in Windows Tablet PC  
**Add suffix \_TSC**
- Programmable stand-alone over-temperature limiter (Watchdog) with manual reset in accordance with EN 60519-2 to protect heater & load,  
**Add suffix \_WD**
- UPS (Uninterrupted Power Supply) that will keep system alive for short periods of power failure and restore program after power recovery  
**Add suffix \_UPS**
- Flow controllers: Number of lines: 1 or 2  
Flow range: 0.01-20 std L/min - Accuracy:  $\pm 2\%$  of reading for Air ,  $\pm 3\%$  of reading for N<sub>2</sub> - Typical Control stability:  $\pm 0.1$  std L/min.  
**Add suffix \_Line 1**, for gas type calibration: Air,  
**Add suffix \_Line 2**, for gas type calibration: Nitrogen (N<sub>2</sub>)

CE Certified. 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. BOX-CW10-1100 Family Models**

Model Part Number	Max. Cont. Temp. °C x Heat up time* min	Furnace internal dim. WxHxD mm	Heated Volume liters	Furnace external dim. WxH**xD mm	Nominal Max. Power (W)
BOX_CW10... _V8.5-1100	1100 x 300	210x146x280	8.5	540x680x600	3400
_V10-1100	1100 x 300	210x146x320	10.0	540x680x640	4000

\* Furnace working with no load.

\*\* Plus 65 mm for chimney

### Ordering Examples:

- BOX-CW10\_V8.5-1100: This Part Number includes one BOX-CW10-1100 family furnace having 210x146x280mm internal chamber dimensions including all standard features.
- BOX-CW10\_V8.5-1100-TSC-WD. This Part Number includes one BOX-CW10-1100 family furnace having 210x146x280mm internal chamber dimensions including all standard features plus a Tablet PC running the PYROLOGISM 2.0 software and a programmable over-temperature limiter.
- To order the furnace with one flow controller add at the end of the part number the suffix “LINE X”,  
e.g: BOX-CW10\_V8.5-1100\_LINE1 for air calibration or BOX-CW10\_V8.5-1100\_LINE2 for Nitrogen calibration
- To order the furnace with two flow controllers add at the end of the part number the suffix “LINE 1/2”,  
e.g: BOX-CW10\_V8.5-1100\_LINE1/2.

 HELLENIC PRODUCT.

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