

BOX TYPE FURNACES

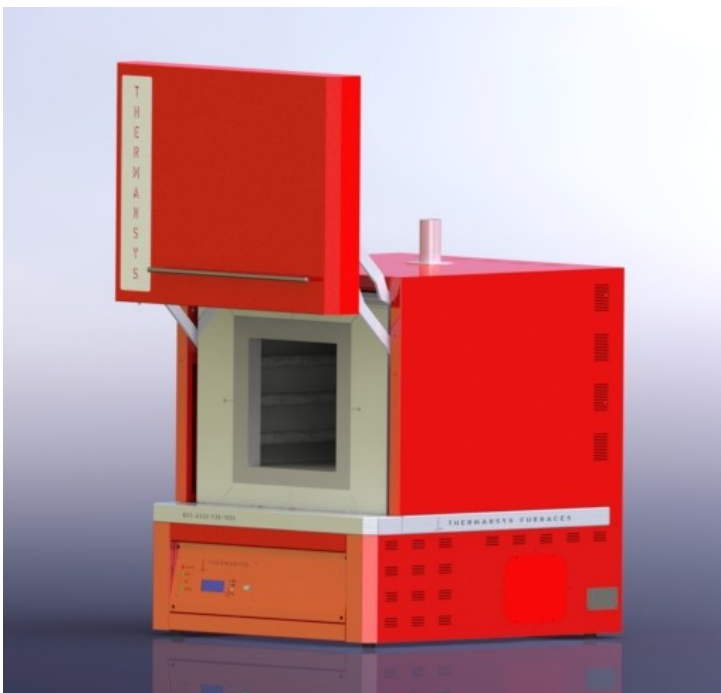
1400 °C Max. Temperature – Large Volume - SiC resistors

Model family: **BOX-AS20-1400**

Description.

BOX-AS20-1400 model family designed to give repeatable and reliable results in the most aggressive high temperature processes up to **1400 °C continuously**. Utilizing the unique high density Kanthal SiC resistors this furnace have superior performance in terms or resistance to oxidation and chemical attack, highly extending the workable life of your investment.

All SiC heating resistors will increase in resistance over time at elevated temperatures. Due to the unique nature of the high density Kanthal SiC resistors this effect is severally suppressed. Moreover, **Thermansys PPC** (Power Consistent Control) platform automatically compensate this effect enabling direct power control, instead of conventional control. Having as major priority the economical operation this furnace was designed with double wall ceramic insulation. Constructed using the highest quality fibrous low mass density thermal insulation leads to important energy savings. With adjustable air opening in the back side and an 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

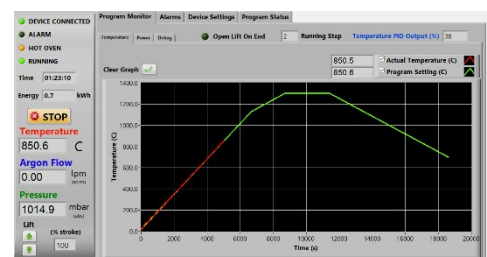


Ergonomic design with no protruding edges, bolts or other features combines stainless steel parts with painted finish parts for an improved aesthetic result.

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



Optionally equipped with s remote, touch screen, computer 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.

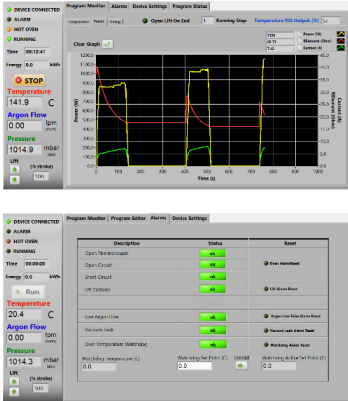
- Control strategy based on Thermansys® PCC (Power Consistent Control) platform insures silent operation and compliance with EMC standards.
- Power and true RMS Current measuring circuits.
- Heater failure, open thermocouple detection, door open alarms and interlocks.
- KANTHAL® Globar SiC heating elements.
- Optional Touch screen computer running the user friendly, PYROLOGISM 2.0 software.
- Modern double wall construction keeps external surfaces temperature low.
- Internal skin is exclusively made from stainless steel to enhance durability.
- Lift up door keep hot surfaces away from operator

Contact details

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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.
- 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 1400 °C.
- Operating Power: 240 /400VAC – 50/60Hz.
- Digital LCD temperature controller with 15 step programming and I program storage.
- S type embedded thermocouples for main controller and (optionally) for over-temperature limiter feedback.
- Temperature control accuracy ± 1 °C.
- Exposed resistors type. **Kanthal Globar Silicon Carbide SiC**.
- Safety thermostat
- Thermocouple inputs: 3 chan. - B, K, R, S, T Software configurable (optional)

Optional features:

- Remote, touch screen computer running the specially designed PYROLOGISM 2.0 software on a 10.0in Tablet PC.
Add suffix _TSC.
- Programmable stand-alone over-temperature limiter (Watchdog) with manual reset in accordance with EN 60519-2 to protect the heater and load,
Add suffix _WD.
- UPS (Uninterrupted Power Supply). 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 N₂ - Typical Control stability: ± 0.1 std L/min.
Add suffix_Line 1, for gas type calibration: Air,
Add suffix_Line 2, for gas type calibration: Nitrogen (N₂)

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-AS20-1400 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-AS20... _V18-1400	1400 x 60	200x260x340	17.7	640x940x700	7000
_V24-1400	1400 x 60	300x200x400	24.0	740x880x760	7500
_V26-1400	1400 x 60	270x290x340	26.6	720x1000x700	8000
_V30-1400	1400 x 60	270x260x420	30.5	700x940x780	10000
_V38-1400	1400 x 60	300x300x420	37.8	740x980x780	11000
_V55-1400	1400 x 60	350x350x450	55	790x1030x810	12000
_V80-1400	1400 x 60	400x400x500	80	840x1080x860	14000

* Furnace working with no load.

** Plus 100 mm for chimney

IMPORTANT ORDERING NOTES:

- Models Part Number listed in Table 1 concern complete turn-key systems including all standard features.

Ordering Examples:

- BOX-AS20_V18-1400: This Part Number includes one BOX-AS20-1400 family furnace having 200x260x340 mm internal chamber dimensions including all standard features.

- To order the furnace with one flow controller add at the end of the part number the suffix “LINE X”,

e.g: BOX-AS20_V18-1400-LINE1 for air calibration or BOX-AS20_18-1400_LINE2 for Nitrogen calibration

- BOX-AS20_V18-1400-TSC-WD. This Part Number includes one BOX-AS20-1400 family furnace having 200x260x340 internal chamber dimensions including all standard features plus a Tablet PC running the PYROLOGISM 2.0 software and a programmable over-temperature limiter.

 **HELLENIC PRODUCT.**

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