CEM Phoenix Microwave Furnace

Sorry, this machine is no longer available

We might be able to meet your requirements with other Tool Room & Bench Top Furnaces machines.

Stock No	OX1837
Model	905410
Year of Manufacture	2014
Serial	PS6854
Condition	Good Condition
Internal Size (WxDxH mm)	120 x 120 x 75
Max Temp	1000°C
Other Info	Laboratory Sample Test Furnace
External Dimensions (WxDxH mm)	460 x 700 x 500

Description

The Phoenix Microwave Muffle Furnace

Much Faster than Traditional Muffle Furnaces

The Phoenix Microwave Muffle Furnace performs many high temperature applications up to 97% faster than traditional Muffle Furnaces. This provides more time to make adjustments to processes and reduce out of specification products

The determination of ash content is an important test procedure, performed in thousands of laboratory each day, for process and quality control purposes. The Phoenix Test Furnace is an advanced microwave muffle furnace is a highly efficient alternative to conventional muffle furnaces suitable for many applications including ashing, sulphated ashing, large scale ashing, loss on ignition (LOI), residue on ignition (ROI), and fusion .

Features.

- High sample throughput through reduced ashing times – minutes instead of hours
- Odours/corrosive fumes eliminated through built-in exhaust system
- All crucible types can be used – quartz fibre, metal, and porcelain
- Reduced operating costs compared to conventional muffle ovens
- Identical ashing results compared to conventional techniques
- Optimum temperature homogeneity through microwave stirrer
- Highest standards of safety with long operating life
- Easy to program terminal with touch screen user interface
- All ASTM, USP, and ISO methods preloaded in control terminal
- ASTM, USP, SEMI, and ISO compliance

Time saving up to 95%

While ashing is a relatively simple procedure, it is time consuming and often requires hours to be completed. Microwave assisted ashing offers dramatically reduced ashing times coupled with reduced operating costs whilst using identical ashing conditions to conventional muffle furnaces.

Overview

Ash samples with unmatched speed, safety, ease-of use, and energy savings with the Phoenix™ Microwave Muffle Furnace. This system will help improve your process control, allow for rapid adjustments, and reduce out-of-specification products. This system can perform many high temperature applications up to 97% faster than traditional muffle furnaces.

Features

- Up to 10 times faster than conventional muffle furnaces
- Ash up to 15 samples at one time
- Use any type of crucible normally used in conventional ashing systems, even platinum
- Meets requirements of electrical and microwave muffle furnaces

Safety

- Place samples into the furnace at room temperature due to the Phoenix's unique ability to rapidly heat and cool the furnace (protection from rapid sample decomposition and dangerous flames / heat).
- Closed exhaust air system which minimizes contact with toxic or corrosive exhaust gases.
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No external hot surfaces prevents risk of injury.
- CEM's rapid cooling crucibles prevent potential for injury upon furnace removal.
- Integrated safety switches which monitor and prevent overheating.

Benefits of the Phoenix Microwave Furnace,

Ease of Use

Conventional muffle furnaces are kept hot and therefore often require an initial "pre-burn" step to avoid excessive initial burning of the sample. This is typically done with the use of a Bunsen burner which requires extra effort and time. With the Phoenix, the sample can be inserted at room temperature with a rapid temperature ramping that eliminates the need for a "pre-burn" step. This significantly simplifies the work flow.

Energy Savings

Due to the unique temperature ramping capabilities of the Phoenix system, it can be left idle in a non-heated state. This results in significant energy savings versus conventional muffle furnaces that are kept constantly in a high temperature state.

Phoenix Meets the Requirements of "electrically heated" and "microwave heated" Muffle Furnaces

- ASTM D874-92 - Sulfated Ash content of Lubricating Oils
- ASTM D482-91 - Dry Ashing Petroleum Samples
- ASTM D5630-94 - Ash content of Thermoplastics
- ASTM D1506-94b - Ash content of Carbon black
- IP 501 - Fuel oil sample prep by Ashing
- USP 281 - Residue on Ignition (ROI)/Sulfated Ash
- USP 733 - Loss on Ignition (LOI)

Photographs taken prior refurbishment. Our refurbishment service is not available on all machines.