



GOOD REASONS FOR

# PHOENIX GO GAS FUSION MACHINE

# A NEW ERA IN GAS FUSION TECHNOLOGY

Advances in our R&D program have allowed us to bring to market this new Phoenix machine that uses gas only, without the need for oxygen and compressed air. You can now experience all of the great features of our Phoenix fusion machine, in a compact and more economical format.

## Flexibility

Phoenix GO is designed for the preparation of fused glass disks (XRF) and solutions (ICP). It's also used for fusions with carbonates or peroxides.

## Applications for a Wide Range of Industry:

- Iron Ore & Steel Manufacturers
- Bauxite – Alumina & Aluminium
- Mineral Sands including Rutile, Ilmenite, Zircon
- Glass & Ceramics
- Cement
- Industrial minerals – Lime, Limestone, Dolomite, Magnesite and Magnesia
- Geological materials such as Aluminosilicates
- Base Metal (Pb, Zn, Cu, Ni) including Sulphides, Sinters, Silicate, Slags, Mattes
- Ferro Alloys

## Programmable Fusion Parameters

- Preheating temperature and duration
- Main heating temperature and duration
- Temperature ramping and set points
- Swirling duration, speed and frequency – multiple speeds in one cycle
- Pouring angle and speed
- Multiple stage cooling
- “Fusion complete” alarm
- XRF or ICP Mode

# KEY FEATURES



## Simplicity at its best

This machine will allow you to plug, play and Phoenix GO. It requires Gas Only to reach the super high temperatures required for even difficult sample fusions.

The design is extremely robust, as is the case with all Phoenix fusion machines.

The perfect flame of a Phoenix is unrivalled and will give your laboratory complete control over the fusion process.



## Safe Operation

The gas burners and all high temperature items are enclosed behind a glass door.

All external surfaces are safe to touch.

Burner safety includes fan detection, airflow detection, flame detection on every burner (via thermocouple), standard pilot safety, plus double redundancy on the valve train.



### Established Reliability

The Phoenix GO takes all of the great features established by Phoenix fusion machines through millions of hours of operation across the world. If you have ever owned a Phoenix machine before, you will know how low the cost of ownership is and how easy they are to maintain. Just ask us about one of the many customer reference points where a Phoenix has been operating for over 20 years!



### Advanced User Interface

The Phoenix GO user interface has the look and feel of a modern laboratory instrument. This simple touch screen interface is easy to use and allows the programming of recipes, visual tracking of the status of the machine and easy access to higher functionality and service.

# TECHNICAL SPECIFICATIONS

## PHOENIX GO

Technical specification	
Construction	External aluminium case
Door	Cool touch glass viewing window
Size (HxWxD)	530 x 763 x 598.2mm
Weight	75kg
User interface	Touch screen user interface
Programmable recipes	Up to 100 user-defined recipes with naming flexibility
Maximum temperature	1100+ °C (typical process temperature)
Burner	Gas-only fan-forced burner – 4-positions
Temperature measurement	Thermocouple near flame (indicative)
Power requirement	50–60Hz, 100–240 Volt AC
Maximum energy consumption	19.2 MJ/HR per burner
Maximum gas flow*	LPG 27.5NI/min – All burners operating
Cradle/ mould holders	Inconel, hastalloy or palladium
Crucible	30–40g
Mould	32/40mm, 40–100g
Throughput	20 beads per hour
Safety	Emergency stop button, Active burner monitoring Cold-to-cold operation
Noise	<70db

\* regarding gas consumption

We reserve the right to change the design or specification of our products without notice. Some of the information contained in this brochure is general in nature and customers should check that it is applicable to their individual circumstances.

# ONGOING SUPPORT

The purchase of any XRF Scientific fusion machine, gas or electric, is the beginning of an ongoing relationship where we and our distributors provide you with access to a broad range of support and technical services to meet your fusion needs.

Whether you are new to fusion or a seasoned professional, we have a range of services to increase the accuracy and throughput of your application.

- Advice on appropriate selection of flux and standards
- Organization of platinum remake processes
- Technical advice on difficult fusion issues
- On-site support and preventative maintenance programs

**Please see our website for more details of our representatives in your area:**  
[www.xrfscientific.com](http://www.xrfscientific.com)

# THE COMPLETE SOLUTION



## Flux

We are the world's pre-eminent manufacturer of flux. We can provide standard borate fluxes or custom solutions to meet your specific needs.



## Labware

We manufacture labware for all our fusion instruments in house. We can also provide a remake service for the transfer from other labware designs.



## Weighing

The XrWeigh allows the rapid and accurate measurement of flux. Increasing laboratory throughput and process repeatability.



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