

fusion equipment

GOOD REASONS FOR

PHOENIX GO SERIES
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 Line 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

ICP mode:

- Preheat and Slow Swirl
- Main Melt (Melt temperature can range between (450–1100 °C)
- Multiple heat stages
- Cooling with slow swirl
- 7 minute typical fusion time



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. (Patent Pending gas burner design).
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 Line 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 Line 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.

PHOENIX GO S
Single Station

ONGOING SUPPORT

The purchase of an XRF Scientific fusion machine is the beginning of a relationship where we provide access to a range of support and technical services to meet your fusion needs.

Whether you are new to fusion or an experi-enced user we have a range of services to increase the productivity 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 details of our repre-sentatives in your area: www.xrfscientific.com

THE COMPLETE SOLUTION

xrf flux and chemicals



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.

xrf platinum labware



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.

xrf lab equipment



Weighing

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

TECHNICAL SPECIFICATIONS
XRF, ICP AND ALKALI FUSIONS

Technical specification	4 place	1 place
Construction	External aluminium case	
Door	Cool touch glass viewing window	
Size (H x W x D)	530 x 763 x 598.2mm	540 x 480 x 475mm
Weight	75kg	50kg
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	Gas-only fan-forced burner – 1-position
Temperature measurement	Thermocouple near flame (indicative)	
Power requirement	50–60Hz, 100–240 Volt AC	50–60Hz, 100–240 Volt AC
Maximum energy consumtion	19.2 MJ/HR per burner	
Maximum gas flow*	LPG 27.5Nl/min – All burners operating	
Cradle/mould holders	Inconel, hastalloy or palladium	
Crucible	30–40g	
Mould	32/40mm, 40–100g	
Throughput	20 beads per hour	5 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.



xrf flux and chemicals



xrf platinum labware



xrf precision platinum



xrf lab equipment



xrf fusion equipment

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