



GOOD REASONS FOR

# PHOENIX VFD SERIES GAS FUSION MACHINE

# BROADEST RANGE OF SAMPLES

When you are dealing with a difficult application you need the flexibility to control process parameters.

- The Phoenix allows you to add ammonium iodide at just the right time in the process in a repeatable and controllable manner. (Alumina)
- It has the ability to vary the cooling rate to find that delicate balance between cracking and crystallisation. (Copper)
- It ensures all preoxidation has occurred with a two stage heating process.

In addition to the above, there are also a range of custom modifications that can be made for your individual requirements.

## Established Technology

Phoenix gas fusion machines have been at the forefront of XRF sample preparation for over twenty years.

In that time our products have built a reputation for fusing the most difficult samples in a repeatable and reliable manner.

The Phoenix machine is in operation all over the world from Mongolia to Saudi Arabia and beyond.

# KEY FEATURES



## Visibility

You can see all stages of the fusion process unfold in the crucible, this is crucial when trying to understand the complexities of each reaction. **With the P2 VFD you can see through the glass.**



## Safe Operation

Cold-to-cold, fully automated – requiring no manual intervention. Sophisticated electrical and gas safety systems make the Phoenix one of the safest machines on the market.



### Flexible Programming

Up to 7 user-customizable fusion programs can be stored in the microprocessor memory, each involving up to 4 different steps; Pre-heating (oxidation), fusion, fusion with swirling, casting and cooling.

### Reliability

Our machines are built to last, we have installations where the same machine has run continuously for 15 years.

# 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

**Please see our website for 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.

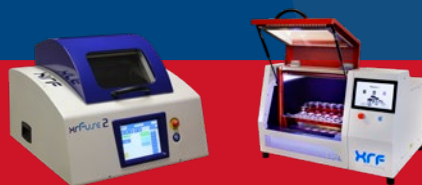
# TECHNICAL SPECIFICATIONS

## XRF, ICP AND ALKALI FUSIONS

| Technical specification                 | Phoenix M VFD   | Phoenix P2 VFD |
|---|---|----------------|
| Construction                            | Single external aluminium case  |                |
| Door                                    | Cool touch glass viewing window   |                |
| Size (HxWxD)                            | 310 x 880 x 630mm   |                |
| Weight                                  | 90kg  | 110kg          |
| Maximum temperature                     | 1250°C (1600°C flame temperature)   |                |
| Number of beads produced simultaneously | 3–6   | 3–6            |
| Fully automatic                         | ✓   | ✓              |
| VFD blue screen with touch buttons      | ✓   | ✓              |
| Recipe database                         | ✓   | ✓              |
| Pre-melting                             | ✓   | ✓              |
| Variable speed swirling and frequency   | ✓   | ✓              |
| Separate mould preheating               | ✓   | ✓              |
| Adjustable speed pouring and angle      | ✓   | ✓              |
| Two stage fully regulated cooling       | ✓   | ✓              |
| Separate oxygen injector                | optional  | –              |
| Ammonium iodide injector                | optional  | –              |
| ICP fusion mode                         | optional  | optional       |
| Crucible / mould holders                | Inconel / autolocking crucible holders  |                |
| Crucible                                | 30–40g  |                |
| Mould                                   | 32/40mm, 40–100g  |                |
| Safety                                  | Emergency stop button<br>Active burner monitoring / Automatic gas cut-off safety system<br>Cold-to-cold operation |                |

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.





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