



THE FUTURE  
in fusion units



# FX Electric Fluxers

*The new generation in fusion units is modular.*

*You can start by purchasing a single station unit (FX1) and then have the possibility of extending the capacities of the fluxer at any time by acquiring a new unit and connecting it to the initial one.*

*That way one working station (FX1) can become a two station unit (FX2) or a three station unit (FX3).*

*If to this feature we add the fact that the FX Fluxers are high productivity units, we have an unrivalled equipment.*



The **FX** fluxers represent a great step forward from the well know **F1** and **F2** models, and have been especially designed to prepare glass disks (beads) for analysis by XRF, and dissolutions for AA/ICP. They produce, quickly and accurately, beads (with Lithium Borates) and acid dissolutions.

Efficient both in high and low temperatures, you can customize your fluxer to up to three modules controlled by a single PC, keeping however the capacity of each module to work independently.

## Features

The **FX Series** units are a step ahead from other units of their generation as they heat by electric induction in an homogeneous, quick and efficient way.

These are highly automated units able to control and monitor in real time each step of the fusion process from one (**FX1**) to three (**FX3**) samples, maintaining the operative Independence of each module.

The **FX Series** include an optical pyrometer oriented to the base of the crucible and with which you can check the fusion temperature at all times.

A powerful interactive software gathers and displays all the information. The result is a unit able to thoroughly control and modify the fusion process of each sample in real time.

Together with its innovative heating system by induction you may find a constant temperature check up system, and a great software. The result is a unit that can control and modify comprehensively and at all times the fusion process of each of the samples, in real time.

## Operation

In the **FX Series** units the heating is achieved by a high frequency electromagnetic field generated in the inside of a coil – no flame nor direct contact –, efficiently heating up the crucible in a short time.

## Quicker

The heating by induction is noticeably quicker, more accurate, cleaner, and more dependable than any other system.

It allows you to reach very high temperatures (1200°C) in seconds and to control them easily. Any changes are so swiftly applied that it makes it possible to have a detailed control of the fusion in real time. The only parts of the unit that actually heat up are the ceramic holders – this allowing to reduce the times between fusion cycles, as it is not necessary to cool down large heated up surfaces –.

## Flexibility

Each of the modules can work synchronized with the others or independently, with different programs each, for example to prepare samples of varied nature.

This freedom enables the user to to prepare new samples and process them the moment each working module finishes the current execution, making a continuous cycle that increases production noticeably.



FX1



FX2



FX3



### Better features

- The programmable crucible stirring mechanism allows you to obtain a higher homogenization of the samples during the heating process.
- An optical pyrometer pointing to the base of the crucible carries out a constant check up of the fusion temperature.
- A programmable cooling system for crucibles and molds speeds up the cooling of crucible and mold most effectively.
- An exclusive gas extraction system allows for the unit to be installed without exhaust hoods.

- As safety measure, the door is blocked during the time when the temperature inside may represent a risk for the user.
- The coil is cooled down via a closed water circuit with a small cooling system – no water consumption or refrigerant fluids -.

### Low consumption

The induction system speeds up the heating process with a very moderate electrical consumption.

Maximum consumption 9000W, tested with the simultaneous heating up of three crucibles and three molds

### Technical specifications:

|                        |                                                                                                                                                                                               |
|------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Method:                | fusion, stirring, mixing and homogenization                                                                                                                                                   |
| Applications:          | geological samples, cements, minerals, slags, ceramics, oxides, glass, metals, ferroalloys, sulphides, fluorides, alloys, etc.                                                                |
| Produces:              | <ul style="list-style-type: none"><li>• Glass disks/beads for XRF</li><li>• Dissolutions for AAs and ICP</li><li>• Peroxide or Pyrosulphate solutions</li></ul>                               |
| Programs:              | 50 modifiable independent programs                                                                                                                                                            |
| Maximum consumption:   | 9000 W (when heating 3 crucibles and 3 molds)                                                                                                                                                 |
| Power:                 | 230V - 16A                                                                                                                                                                                    |
| Control:               | PC control with touch screen                                                                                                                                                                  |
| Cooling system:        | <p>a - Closed circuit</p> <ul style="list-style-type: none"><li>• minichiller 300W (FX and FX2)</li><li>• minichiller 500W (FX3)</li></ul> <p>b - Open circuit / External circuit 1,5 LPM</p> |
| Working frequency:     | 130..160 KHz                                                                                                                                                                                  |
| Programmable features: | crucible stirring system / crucible stirring angle / pouring speed and angle / solutions stirring system / crucible and mold cooling down system by ventilation                               |
| Temperature control:   | 50 to 1200°C limited by software                                                                                                                                                              |
| Software:              | intuitive, with graphics. Screens for diagnosis and settings                                                                                                                                  |
| Accessories:           | admits crucibles and molds of platinum, zirconium and nickel alloys                                                                                                                           |
| <b>FX1</b>             |                                                                                                                                                                                               |
| Dimensions:            | 45cm (height) x 32cm (width) x 58cm (deep)                                                                                                                                                    |
| Approx weight:         | 26kg                                                                                                                                                                                          |
| <b>FX2</b>             |                                                                                                                                                                                               |
| Dimensions:            | 45cm (height) x 63cm (width) x 58cm (deep)                                                                                                                                                    |
| Approx weight:         | 52kg                                                                                                                                                                                          |
| <b>FX3</b>             |                                                                                                                                                                                               |
| Dimensions:            | 45cm (height) x 94cm (width) x 58cm (deep)                                                                                                                                                    |
| Approx weight:         | 78kg                                                                                                                                                                                          |

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