



Induction Fluxers

Our Induction Fluxers

The new induction fluxers F1 and F2 have been specially created to speed up and facilitate the process of preparation of glass discs for their analysis via XRF, and solutions of AA for ICP. They can produce, accurately and fast, beads and solutions with classical flux (Borates) as well as undertaking high quality fusions of non oxidized elements with peroxide. It is effective both in high and in low temperatures. They

can easily adapt to your production needs, as it is designed to accept up to ten fusion modules using the same control unit, becoming that way a real Production and Control System of discs and solutions. Also, both equipment admit crucibles of different materials, such as platinum, zirconium, nickel, etc.



Avoid the disadvantages derived from the use of gas:

- **Temperature:** ineffective control of the temperature
- **Atmosphere:** it is not the right atmosphere for the oxidation of samples.
- **Pressure:** gas pressure problems in high places.
- **Safety:** presence of flames with risk of intoxication or explosion.
- **Extraction systems:** provide your laboratory with more powerful extraction systems.

According to the trend to eliminate the combustible gases from laboratories, the **F Series** represents a major technological progress in the fusion units, as it heats via electric induction homogeneously, quickly and efficiently. It is a highly automated unit with capacity to control and visualize in real time, and in an independent way, the fusion process of two samples simultaneously - in the **F2** model-

Despite the high temperatures it can reach in just a few seconds, the only parts heating up in the unit are the ceramic holders, thus allowing to reduce the periods between fusion cycles, as no cooling of heated up areas is needed.

To its innovative induction heating system we must add a continuous temperature check up and a great software work. The result is a unit able to exhaustively control and

modify at all times the fusion process of each of the samples, in real time.

The heating up using induction technology is noticeably faster, more precise, cleaner and more reliable than any other system, enabling the reaching up of very high temperatures (1200°C) in seconds and effectively control the temperature. The machines features also a shaking system to improve and speed up a superior homogeneization of the samples during the heating up. They include as well one or two infrared pyrometers, for the continuous check up of the temperature of the sample, one or two cooling systems, one system to stir the solutions and a gas removal system. The units got 50 fusion and oxidation programs completely customizable, for samples such as iron minerals, cements, refractory elements, alloys, etc. The beads can be of a diameter from 20 to 40, solutions and oxidations.

Working process

The **F Series** induce an electric current through a coil – no flames and no contact, which generates an electromagnetic field that quickly and effectively heats up the crucible, provoking the fast fusion of the sample and the flux homogeneously. The coil is cooled down with a closed circuit with a small cooling system (300W) – no water or coolers needed, able to maintain up to two modules – 4 coils – working simultaneously. The **F Series** include a shaking system for solutions and a cooling system – programmable – of plate and crucible.

The upper lock of the **F Series** and the gas removal system allows the free installation of the unit in a laboratory - it does not need to be placed under a gas suction hood -.

As a safety measure, the **F Series** units have got an automatic locking system of the protective housing, thus preventing any contact with hot areas during the heating process.

Flexible

Each one of the fusion modules can work synchronized with the others or in a completely independent manner, with different programs. This freedom of use enables the

unit to make the samples as they are prepared, without having to wait to have all the samples ready. We can make samples of different nature – even with different programs - at the same time, in different modules, increasing that way the productivity of the unit.

Energy-efficient

The heating by induction system allows for the heating to be very fast, with a very moderate



electricity consumption (maximum consumption 3000W, this maximum consumption is made with the simultaneous heating up of two crucibles and two plates). The speed at which the temperature changes are applied in the sample enables us to have, for the first time, an intensive control of the fusion in real time.

High productivity rate

- Glass discs: up to 12 per hour for each module
- Solutions: up to 16 per hour for each module
- Fusions-oxidations (peroxide): up to 16 per hour and module

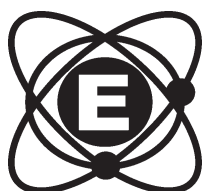


Technical specifications:

Method:	Fusion, shaking, blend and homogeneization
Applications:	Geological samples, cements, minerals, slag, ceramics, oxides, glass, metals, ferroalloys, sulphide, fluoride, alloys, etc.
Manufactures:	• glass discs for XRF • solutions of peroxide or pyrosulphate • samples for AA and ICP
Programs:	50 independent programs, adjustable
Maximum consumption:	3000W (in heating conditions of two crucibles and two molds)
Power:	230V - 15A
Control:	PC Control or Touch Screen 7,5" Custom Control
Cooling:	a - Closed circuit / minichiller 300W b - Open circuit / external circuit 1,5 LPM
Work frequency:	130..160 KHz
Programable elements:	Crucible shaking system / Degree of the crucible shaking / Solution shaking system / Cooling system by fans
Temperature control:	400 to 1200°C limited by software
Software:	intuitive, with graphics. Diagnosis and parameterization screens
Accesories:	accepts crucibles and molds of platinum, zirconium and nickel alloys
F1	
Dimensions:	42cm (height) x 35,5cm (long) x 50cm (width)
Approx weight:	20kg
F2	
Dimensions:	33cm (height) x 60cm (long) x 51cm (width)
Approx weight:	43kg
Safety systems against overheating and overcharge	

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