



# SAMPLE PREPARATION EQUIPMENT



"For truly representative and repeatable results in any analytical process, the first step, preparing the sample, is the most important. Excellence in the treatment of the sample can only come from high quality units".

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### **EQP-1** Manual Pellet Press

Obtaining truly representative results in RX or LIBS depends very much on the previous step, the manufacturing of the pellet. The Hydraulic Manual Pellet Press EQP-1 has been specially designed to achieve high quality

> pellets, homogeneous and stable. Able to apply pressure up to 20 tons, it is simple and safe to manage, and it occupies very little room in the laboratory.

The sample is placed in the chamber, specially designed for this purpose, then you lower the spindle and exert pressure progressively on the hydraulic lever until reaching the desired pressure – which you can control visually at all times with the analog gauge -. Once the level you wanted has been reached, the pressure is released through the pressure relief device, the plunger goes up and you can remove the pellet.

#### **Applications:**

Glass, cement, plaster, ceramics, minerals, silicates, slags

- Fast manufacturing of quality pellets
- Does not need
   electrical power
- Compact and autonomous unit

# Technical Specifications:

Method: pressure

Prospect: cement industry, metallurgical industry, material recovery companies, Geology and Mineralogy, ceramics

Maximum pressure: 20 t

Sample diameter: Ø 32 / 40 mm. (other sizes and shapes on demand)

Consumables: aluminium

aluminium cups Ø 32 - 40 mm.

Dimensions: 50cm (height) x 22cm (width) x 23cm (depth) Approximate weight: 20kg

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### **F Series Induction Fluxers**

The new F1 and F2 induction fusion units have been specially developed to speed up and facilitate the process of preparation of glass disks for their analysis by XR, and AA solutions for ICP. They can produce, fast and accurately, beads and dissolutions with classical fluxes (Borates) as well as undertake high quality oxidations of non oxidized elements using peroxide. They are effective both in high and low temperatures. The F2 model has got two working stations completely independent from one another, it is literally like having two fluxes within a single unit.

Following the trend of removing combustion gas from laboratories, the **F Series** represents a technological breakthrough in the fusion units, as it heats up the samples by induction homogeneously, quickly and efficiently. These are highly automated units with capacity to control and monitor in real time the fusion process of one or two samples separately. To this innovative heating system we add a constant temperature check up device and a good work of software. The result is a unit able to exhaustively control and change the fusion process of each of the samples, in real time.

#### Working System

The **F Series** induces electrical power through a coil – no flames and no contact -, which, producing an electromagnetic field, can heat up the crucible efficiently and very quickly, causing the fusion of the sample mixed with the flux in very short time and homogeneously. When the heating time we allocated for this step finishes, the sample is poured automatically to the left, in the solutions beaker, or to the right, in the mould heated previously.

#### Quicker

The heating process by induction is noticeably a faster operation, cleaner, and more accurate and reliable than any other system. It enables the user to reach high temperatures (1200°C) in just a few seconds and to control them effectively. The changes in the temperature of the sample are applied right away, so you can truly have the control of the fusion process in real time. The only parts of the unit that do actually become hot are the crucibles and the moulds: this allows the unit to reduce the time between fusion cycles, as it does not need to cool large surfaces.

#### **Better features**

- An optical pyrometer focused to the base of the crucible carries out a check up of the fusion temperature all the time.
- The programmable stirring system ensures an excellent homogenization of the samples during the heating up process.



- You can also adjust the refrigeration system for the crucibles and the moulds, thus accelerating noticeably the cooling down of the same.
- Flexible process for stirring dissolutions.
- Includes an exclusive system to remove gases that enables the unit to be placed anywhere, not needing extractor hoods.
- As a safety measure, the door is locked automatically if the temperature inside supposes a risk for the user.
- The coil is cooled down using a closed water circuit with a small refrigeration device (300W) – no water or coolers needed – able to maintain up to 2 modules / 4 coils working simultaneously (2 crucibles and 2 moulds).

#### Flexible

Each of the fusion modules can work synchronized with the rest or independently with different programs, for example, if undertaking samples of varied nature. This freedom lets the user prepare new samples as the others finish their cycle, increasing thus the productivity in the laboratory.

#### Low consumption

The induction system is a fast heating method with a very moderate electricity consumption.

Maximum consumption 4000W (F2 unit), tested with the simultaneous heating of two crucibles and two plates.

#### **Great productivity**

- Beads: up to 6 / 8 per hour with each module
- Dissolutions: up to 16 per hour with each module
- Fusions/oxidations (peroxide): up to 16 per hour and module

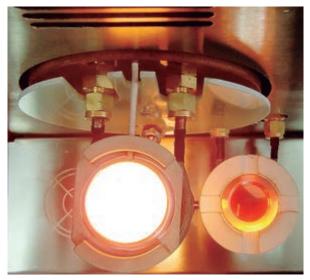
#### **Technical specifications:**

Method:	Fusion, shaking, blend and homogenization
Applications:	Geological samples, cements, minerals, slag, ceramics, oxides, glass, metals, ferroalloys, sulphide, fluoride, alloys, etc.
Manufactures	<ul> <li>e glass beads for XRF</li> <li>solutions of peroxide or pyrosulphate</li> <li>samples for AA and ICP</li> </ul>
Programs:	50 independent modifiable programs
Maximum consumption:	4000W (heating two crucibles and two moulds)
Power:	230V - 18A
Control:	PC Control or Tablet PC 10,1" Custom Control
Cooling:	a - Closed circuit / minichiller 300W b - Open circuit / external circuit 1.5 LPM
Work frequency:	130160 KHz (self-adjusting)
Programmable	
elements:	crucible shaking system / crucible shaking angle / pouring of the crucible solution stirring speed / crucible and mould cooling system
Temperature control:	400 to 1200°C limited by software
Software: Accesories:	graphic and intuitive. Diagnosis and parameterization screens platinum alloys, zirconium and nickel crucibles and moulds
F1	
Dimensions: Approx weight	42cm (height) x 35,5cm (width) x 50cm (depth) t: 20kg
F2 Dimensions: Approx weight	42cm (height) x 60cm (width) x 51cm (depth) t: 35kg

#### **Applications:**

Glass, cements, plaster, slag, coal, clinker, coke, metal oxides, ferroalloys, ceramic materials, mineral and mineralogical samples.

- Beads for XRF
- Solutions for AA and ICP
- Peroxide oxidations
- Electric all over
- Exhaustive control of the fusion temperature
- User-friendly software, intuitive, with graphics



Sample Preparation • Equilab • 5

### EQP-100 & EQP-200 Pellet Press

To obtain truly representative results in XR or LIBS, the samples request a fine finish – very flat surfaces, regular and without cracks -. Therefore, the manufacture of the pellets must guarantee a high degree of cohesion and stability. The **EQP-100** and **EQP-200** units have been especially developed for getting the best result in the manufacture of tablets. With a robust and durable design, they are easy to manage and very effective. These are the only ones in the market to offer up to five working programs in single or double cycle.

> The double cycle option allows the user to program the **EQP-100** and **EQP-200** units to apply pressure two times during the same process, letting you digitally adjust the time and the strength, and the time elapsed between each cycle. That time is necessary, in many of the cases, to allow the release of gas trapped within the sample – this gas is generally the reason for irregularities or fissures in the pellets.- This capacity makes of them the best alternative to treat difficult samples.

Both the **EQP-100** and the **EQP-200** press have been specifically designed to prepare dust samples (pellets), the objective of the tablets is to be analyzed by XR.

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pellet pr

The preparation of samples is a common technique that will allow us to manipulate and store the samples easily, as well as ensuring analytical repeatable results.

This technique consists in compressing the particles of the dust sample (by themselves or mixed with a binding agent)

until obtaining a perfectly homogeneous pellet with a flat surface, mechanically robust and free of cracks or dust.

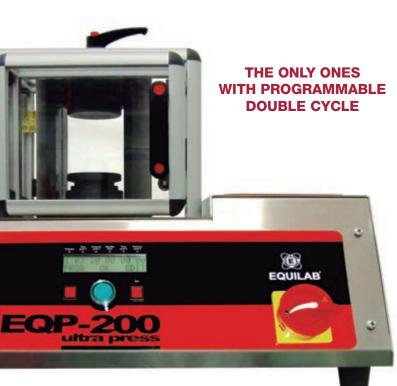
- The EQP-100 manufactures pellets of a single size, 40 mm.
- Thanks to a comfortable replaceable tool, the EQP-200 Pellet Press can prepare pellets of 32 and 40 mm. Other diameters under request. Its versatility allows it to work as well with different types of mould, such as square, rectangular, etc.



AB

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#### EQP-100 & EQP-200 Pellet Press



built-in security cabinet

#### **Technical specifications:**

Method: pressure

Applications: cement industry, metallurgical industry, Thermal Stations, Environmental Laboratories, material recovery companies, recycling plants, Geology and Mineralogy, ceramics

Speed control: frequency converter 25/75 Hz

Sample diameter: EQP-100 / 40 mm EQP-200 / 32 & 40 mm. (other sizes and moulds under request)

Maximum pressure: 40 t / 50 t

Engine power: 750W

Power source: 220V

Consumables: aluminium cups 40 mm diam. / Binding Agent

Dimensions: 40 cm (height) x 51 cm (width) x 42 cm (depth) Approximate weight: 75 kg.



#### **Applications:**

Glasses, earths, cements, plaster, ceramic materials, minerals, silicates, geological and mineralogical samples.

- High quality pellets in no time
- Simple handling
- 5 working modes
- Double press cycle
- User friendly English/Spanish display
- Compact design
- Great value
- Obtain pellets of different diameters and facilitate the cleaning of the unit choosing the EQP-200 model



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### EQJ-100 Jaw Crusher



The EQJ-100 Jaw Crusher is a grinding unit specially designed for the primary size reduction of semi-hard, hard, brittle and tough materials. Able to quickly and efficiently crush glass, earth, slags, metallic oxides. cements construction materials. and ferroalloys, ceramic materials, minerals and rocks. It is a very robust and simple equipment, that can take and reduce samples for years practically maintenance free.

Samples of very different sizes may appear during the sample preparation step. If the initial size of the sample is very big – over 10 mm -, it is necessary to undertake a pre-crushing step, named primary size reduction.

The wide variety of samples (semi-hard, hard, brittle and tough) and the ample crushing range of the EQJ-100 Jaw Crusher (<50mm to <1mm) makes of it the ideal unit to undertake this primary reduction process.

After this primary reduction, we can resort to other units such as vibratory disc mills or ball mixer mills, which will allow us to reach the requested final analytical granulometry.

**Working process.** The sample is fed via a "anti rebound" hopper and falls directly to the crushing chamber. Here a powerful grinding process starts, due to the energetic acction of a mobile jaw against a fixed one, the sample being crushed between both. The gap between the jaws is adjustable. When the sample reaches an equal or inferior size than the one sought

after, it fells in a removable container. An adjusting analog system allows the user to select the required sample size, via an analog signal in the control window located in the left side of the unit.

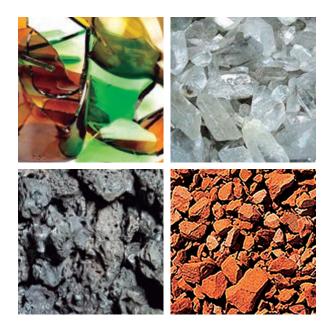
**Safe.** With the "anti-rebound" hopper, it is possible to safely feed the unit even when operative. It has also got an electrical protection against overload. All the moving parts of the unit are protected to ensure the safety of the user.

**Fast.** The power of the 1.5 CV engine reaches the moving jaw via an eccentric shaft, causing an eliptical movement of the part, extending thus the crushing and friction area.

**Method.** The breaking of the sample takes place in the inside of the crushing chamber with the high pressure level exerted between the moving and the fixed jaw, and the interaction with the other pieces of sample.

#### **Technical specifications:**

Method:	by pressure
laborato	industry, metallurgy, power plants, environmental ries, recovery plants, recycling plants, geology and ogy, ceramics
Initial feeding size:	< 50 mm
Final size:	< 1 mm
Milling speed:	230 rpm
Engine power:	1100W
Power:	3 x 380V + earth
Jaw crushers:	manganese steel
Dimensions: Approximate weight:	122,5 cm (height) x 50cm (width) x 42cm (depth) $\sim\!\!185~kg$



#### **Applications:**

Glass, cement, plaster, slags, coal, clincker, bones, coke, metallic oxides, ferroalloys, ceramic materials, minerals, silicates, chemical products, geological and mineralogical samples.

- Quick primary reduction of samples
- Ample range of samples
- Great crushing power
- Simple and safe
- Comfortable to collect the ground samples



### EQR-200 Vibratory Disc Mill

The EQR-200 Vibratory Disc Mill is a grinding mill specially designed to obtain analytical grain sizes in a wide variety of samples, such as glass, earth, slags, metallic oxides, ferroalloys, cements, and ceramic materials amongst others. It can quickly grind a wide range of different materials, from semi-soft to the hardest, fragile or fibrous. All the processes can be controlled via a full color digital display. Its ease of handling and the robustness of all its components make of this mill a unit practically maintenance free.

Once we put the sample in the milling jar, we just need to select one of its five programs and set the milling time and the desired speed using the comfortable 3.5" full color screen.

When the milling cycle starts, the screen will show the countdown to the end of the program. It is a very stable and silent unit, as it is especially adapted to avoid vibrations and acoustically insulated to reduce the noise level to a minimum.

#### Simple

Controlled by a microprocessor, it has got five programs, where you can fix the different times and speeds for the milling process. When you place the jar and close the door, just choose one of the programs and push the Start key. The unit will start automatically and, after the selected time has elapsed, the mill will stop, moment when you can open the door again and take the jar out with the milled sample.

#### Safe

The fixing system of the milling jars, as well as the interlocking system of the door, preventing it from opening until the engine is completely still, make of this mill a highly safe unit.

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#### EQR-200 Vibratory Disc Mill

Full color digital screen • Current program in use • Timer • Countdown



#### Stable

The frequency converter integrated in the mill, apart from letting you adjust the speed of the engine to the most appropriate for each type of sample, enables the unit to reach the working speed and then pass to zero by an acceleration or deceleration ramp, avoiding vibrations in the start and when stopping.

#### Quick

The grinding of the sample is made inside the jar with the hitting of the blocks with one another and then the friction between them and the jar. The milling times are really short.

#### Nominal milling time approximately 1 minute.

#### **Technical specifications:**

Method:	Friction, mixing and grinding
Environ Recycli	t and Metallurgical Industry, Thermal Power Plants, mental Laboratories, Material Recovery Industries, ng Plants, Geology and Mineral related Industries, c Industry.
Initial granulometry*:	< 15mm
Final granulometry*:	< 50 µm
Grinding speed:	Regulable / 700 a 1500 rpm
Motor power:	1100W
Power:	2 x 220V + earth
Milling jars:	Steel 100ml     Steel 200ml     Steel 250ml     Tungsten carbide 100ml     Tungsten carbide 200ml
Dimensions:	108 5cm (height) x 65cm (width) x 64cm (depth)

Dimensions: 108.5cm (height) x 65cm (width) x 64cm (depth) Approximate weight: 226kg

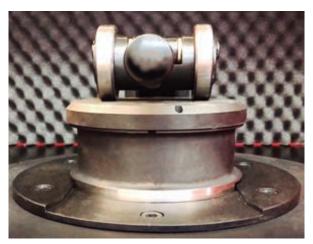
\* Depending on the sample material and the milling program



#### **Applications:**

Glasses, soils, dregs, coal, clinker, coke, metallic oxides, ferro-alloys, cements, ceramics, minerals, silicates, geological and mineralogical samples.

- Obtain an analytic grain size in seconds.
- Easy to use
- Control the parameters from a full color 3.5" digital screen
- 5 working programs
- · Grinds a wide range of materials
- Quick and easy replacement of the milling jars.
- Silenced and anti-vibration system
- The best quality/price ratio in the market



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### EQM-402 Ball Mixer Mill

The **EQM-402** Ball Mixer Mill is a specially helpful milling device as it can crush, mix and homogenize, quickly and easily, small volumes of a wide range of samples. Designed for the final preparation of small amounts of hard, semi-hard and fragile samples – up to 50 ml – it is the right unit to reduce two samples simultaneously from a grain size of 0.8 to 1.5 mm. to sizes of less than 10µ speedily and effectively – in 1 to 4 minutes -.

The excellent efficiency/time ratio of this mill appoints it as the ideal unit for the final reduction in the preparation of samples by fusion - using 10µ grain sizes accelerates the homogenization of the sample and the fluxer, shortening the fusion times noticeably.

It is also specially recommended for preparing and mixing samples with binding agents to produce tablets/pellets by pressure, to be later analyzed by X-Ray.

The EQM-402 Mixer Mill allows us to reduce samples in dry to a final size of 10µ in really short milling times – from 1 to 4 minutes -, in a compact desktop unit. Operation is very simple thanks to its touchscreen and appealing visual software, from where you control a microprocessor with 5 working programs. The milling speed and time are completely configurable in each of the programs. This unit is also designed to reduce noise and vibration to a minimum.

The unit is composed of two sample receptacles that are easily fitted in place and very safe to manage: both containers are connected to a powerful engine. The milling jars have been specially designed to make the cleaning tasks easier and guicker.



#### EQM-402 Ball Mixer Mill

A series of joints transfer the power of the engine to the milling jars, in order to produce an intense agitation. Inside the jars, the sample collides energically against the milling balls, which can be of different diameters, reducing thus the size of the particles.

Easy to operate: the sample is introduced in the milling jars together with one or several balls, depending on the type and initial size of the sample and the final size sought. Then one of the five programs can be selected and the start button pushed. The rocking motion of the jars has the balls colliding with the sample within, crusing, milling and mixing anything inside. The combination of balls in the jars can help us to achieve different final grain sizes depending on the milling needs.



#### **Technical specifications:**

Method:	crushing, milling, friction, mixing and homogenizing
Applications:	hard, semi-hard and fragile materials such as coal, coke, glass, slags, minerals, earths, ceramics, silicates, bones, plastic, wood, electronical waste, cereals, chemical products, tobacco, etc.
Programs:	5 independent working programs Speed %: 5 to 100 Minutes: 0 to 59 Seconds: 0 to 59 Engine temperature °C: maximum 60°C
Power:	150W
Engine:	220V - 150W
Power supply:	220V - 150W
Safety system:	instant stop system connected to the door
Accesories:	50 ml stainless steel milling jars Tungsten Carbide balls: Ø10 mm/Ø15 mm/Ø20 mm/Ø25 mm

Dimensions: 31cm (high) x 36,5cm (length) x 47cm (width) Approx weight: 25kg



#### **Applications:**

glass, earths, slags, coal, clinker, bones, coke, metallic oxides, ferroalloys, plastics, cements, ceramic materials, wood, minerals, silicates, electronic waste, chemical products, tobacco, cereals, geological and mineralogical samples.

- Obtain different analytical grain sizes in seconds
- Simple, easy operation
- 5 working programs
- Accepts a wide range of materials
- Exchanging jars is quick and safe
- User friendly visual software controlled with a touchscreen



### EQH-3.0 Induction Heater

The preparation of metallic samples is currently made in many and various ways – depending on the hardness of the metal. More times than not you need to heat the sample previously in order to soften the metal and thus allow its further processing, whether by cutting, crushing or punching. The Induction Heater EQH-3.0 has been specially developed for the red hot heating of lollipops and bars for their quick softening.

The Induction Heater EQH-3.0 has got 5 preset programs to cater for the requests of the routine preparation of samples in steel mills and foundries. These programs can be modified according to the type of sample and the needs of each particular client.

The EQH-3.0 only needs a 50x50 cm space and a plug of 220V/15A, and it is able to heat a piece of metal to red hot in barely 30 seconds - depending on the program chosen. The use of the heater is very simple. Once the program is selected, you put the sample for heating inside the coil and push the "START" button: the heater is immediately working - the lamp in unit 2 shows that the coil is heating up, and shall remain in that state until the programmed time for the heating up has expired. When that moment is reached, the unit warns with a high pitch beep that the power of the coil is being withdrawn so that the sample can be taken out, ready for processing. As a safety measure, the lamp and the cooling system will continue on for 30 more seconds. It has got an internal closed water circuit, constituting the cooling system.

The EQH-3.0 is a simple and fast unit which allows the heating up of a lollipop or a metal bar in just 30 seconds.



40cm (height) x 51cm (width) x 42cm (depth)

EQH-3.0 EQUILAB

#### Fusion unit.

Dimensions: Approximate weight:

Especially designed to melt soft metal samples - for example, copper - in a quick manner. Most of the clients do use it to group several small pieces such as wires, threads or granules, and melt them in a single coin. This small coin is normally used to undertake analysis by spark.

12Kg

Applications: Copper

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#### EQH-3.0 Induction Heater





#### **Applications:**

Steel, iron and alloy samples.

- Heat your metal samples very fast
- Simple handling
- 5 adjustable working programs
- User friendly display with instructions in English and Spanish
- Compact design
- The best value in the market



## MultiEQP-100 Processing System for Metallic Samples

The versatility of the new MultiEQP-100 makes of this unit and essential instrument for the treatment and manufacturing of metallic samples. Effective for cutting, crushing and punching metallic samples, you can also include the capacity for pressing pellets that will be analyzed afterwards by RX. The objective of punching the samples is the obtention of pins for their analysis in Elemental Analyzers. With a touchscreen and intuitive software, the multiple possibilities available in the MultiEQP-100 are easily controlled. The addition of two magnetic sensors on the left hand side of the pistons allow the automation of the working cycles.



The special adaptability conditions of the **MultiEQP-100** make it immediately ready for undertaking different tasks. This unit has got a specially designed system for the fast and safe changeover of tools fitted for different purposes.

The need of the clients for the immediate readiness of different tools for processing metallic samples led us to transform the **MultiEQP-100** in a samples processing system,

as it is able to hold up to three working pistons with capacity to assume, each of them, multiple types of tools. In fact, we can manufacture the tools according to the specifications of use.

Each of these working stations can be controlled directly from a single control unit – by a user friendly software and a touchscreen-, from which we can adjust the parameters such as the desired time, the stroke of the piston and the pressure: up to 50 tons.

To select a working unit you can do it through the touchscreen, or directly at the unit.

# Complementary operation with the Induction Heater

Due to the hardness that some samples can reach (for example C >0.2), they can't be processed directly and must be preheated to soften the metal; the combined use of the EQH3.0 Induction Heater with this unit make possible the quick and convenient processing of these kind of samples. 16 • Equilab • Sample Preparation

#### **Technical Specifications:**

Method:	pressure, cutting, crushing, punching
Applications:	metallurgical industry
Speed control:	frequency converter 25/75Hz
Power source:	2 x 220V
Consumables:	aluminium cups 40 mm diam.

#### Dimensions

Control unit: 40 cm (height) x 51 cm (width) x 42 cm (depth) Control unit weight: 40 kg Piston weight: 60 kg

#### MultiEQP-100 Processing System for Metallic Samples



Safety housing

#### Pellet Press Piston:

Maximum stroke:53 mmDiameter:120 mmFlow:1.17 l/minMaximum pressure:450 kg/cm²Maximum strength:50 T

#### **Cutting Tool piston:**

Pressure control
 Time control
 Cutting diameter: bars up to 30 mm Ø
Maximum strength: 50 T

#### Punching Tool piston:

Pressure control
 Time control
 Amount of pins: 3
 Pins' diameter: 6 mm (other diameters
 under request)
 Maximum strength: 25 T (limited by
 software)

#### Crushing Tool piston:

• Time control Contact surface: 53 mm Ø Maximum strength: 50 T











#### **Applications:**

Steel and ferroalloys

- Process all kinds of metallic samples with just one unit
- The best quality/price ratio in the market
- Special tools under request
- Simple to operate
- Fast change of tooling
- Customized configuration
- User friendly digital display
- Programs specially adapted to your needs



EQUILAR

## **EQ-PUL** Polishing Kit

The status of the platinumware when preparing beads has got a great influence in the final result of the analisys by XRF. Apart from improving and facilitating the timings for sample preparation. Equilab presents their EQ-PUL Polishing Unit, specially designed to firmly hold the different pieces for grinding and polishing. This unit can apply up to 8 selectable turning speeds. It is a small device, easy to use and very versatile.

The proper care and maintenance of the platinumware in the fusion process is of utmost importance, first because the high cost of these pieces and also because of their influence in the analytical results. From an analytical point of view, it is important to know that the small scratches and lines – deriving from the wear and tear – in the molds can increase the possibility of misreadings by the XRF unit, as these imperfections are imprinted in the surface of the bead. From an operative point of view, the proper maintenance of our pieces does affect directly the sample preparation times, also facilitating the removal of the beads and the complete discharge of the molten sample within the crucible. From a financial point of view, to take good care of the platinumware may extend the useful life of the pieces to double or even treble the time.

Until now, the polishing techniques resulted too arduous and requested specialized staff. The EQ-PUL is specially designed to maintain the planiumware in the best conditions without the need of highly qualified technicians. This polishing unit is compact and easy to manage. It includes a holding device to secure it firmly to any working station. The EQ-PUL is controlled by a microprocessor and has got up to 8 working speeds. This feature enables operations when it is necessary to apply a stronger abrasion as well as those where the process is very delicate.

The unit comprises two modules. From the lower one the features of the units are controlled. The upper module is independent and is fixed onto an axis, therefore it can be moved to work in an horizontal position, maintain it upright, or hold it in intermediate positions. This option allows for changing the position of the working area to access each piece comfortably.

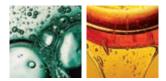
#### **Technical Specifications:**

Application:	platinumware users
Speeds: 400 / 600	/ 800 / 1200 / 1500 / 2000 / 2500 / 3000 rpm
Consumables: (includes)	10 abrasive discs P500 10 abrasive discs P1000 10 abrasive discs P1500 10 abrasive discs P2500 500 ml polishing liquid 3 μm 500 ml polishing liquid 6 μm 500 ml polishing liquid 14 μm 3 polishing cloths 400 x 300 mm
Engine power:	150W
Power supply:	220V/100W
Dimensions:	550 mm (height) x 220 mm (width) x 255 mm (depth)

The unit is handed over with an initial kit including all the accessories to start working with the unit immediately. The versatility and low cost of the **EQ-PUL** Polishing Kit make of this device an essential tool to maintain the platinuware in the best condition.

Approximate weight: 11 kg

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# **EQHP** Hot Plate and Magnetic Stirrer



This unit has been specially designed to mix and/or heat liquids in laboratories. Its ceramic cover grants an excelent resistance to chemical and technical attacks, as well as to general corrosion. Able to heat fluids up to a temperatura of 550°C and to stir liquids within a range of 0 to 1500 rpm simultaneously or alternatively. During the time when the unit may maintain some residual heat (>50°C) the word HEAT will show in the display as safety sign.

# **EQUILAB Flux Range**

Flux with a borate base for the obtention of glass discs for analysis by XRF.

EQF-TL-100 Lithium Tetraborate EQF-TML-6634 Lithium Tetraborate 66% + Lithium Metaborate 34% EQF-TML-5050 Lithium Tetraborate 50% + Lithium Metaborate 50% EQF-TML-3466 Lithium Tetraborate 34% + Lithium Metaborate 66% EQF-TL-100-5 Lithium Tetraborate 99,5% + Lithium Bromide 0,5% EQF-TL-100-5 Lithium Tetraborate 99,5% + Lithium Bromide 0,5% EQF-TML-6634-5 Lithium Tetraborate 66% + Lithium Metaborate 34% + Lithium Bromide 0,5% EQF-TML-5050-5 Lithium Tetraborate 50% + Lithium Metaborate 50% + Lithium Bromide 0,5% EQF-TML-3466-5 Lithium Tetraborate 99,5% + Lithium Metaborate 66% + Lithium Bromide 0,5% EQF-TML-3466-5 Lithium Tetraborate 99,5% + Lithium Metaborate 66% + Lithium Bromide 0,5% EQF-TL-100-510 Lithium Tetraborate 99,5% + Lithium Iodide 0,5% EQF-TML-6634-510 Lithium Tetraborate 66% + Lithium Metaborate 34% + Lithium Iodide 0,5% EQF-TML-5050-510 Lithium Tetraborate 50% + Lithium Metaborate 34% + Lithium Iodide 0,5% EQF-TML-5050-510 Lithium Tetraborate 30% + Lithium Metaborate 34% + Lithium Iodide 0,5%

### Platinumware

Equilab supplies a variety of pieces for heating up processes by muffle type furnaces. Crucibles and molds compatible with the main fusion unit brands in the market

Electrodes and special instruments on demand.

# Reshaping units for Pt crucibles and molds

Special tools to reshape your crucibles and molds to their original state.

#### **Technical Specifications:**

liquids in general
gradual increase of the temperature gradual increase of the stirring speed
1030/30W
1000W
0 to 550°
0 to 1500rpm

Protection classification: IP21

Dimensions: 112mm (height) x 215mm (wide) x 360mm (depth) Approximate weight: 4.5 kg



Our fluxers are manufactured following the most strict quality normatives to ensure the highest purity grade.





## **Pressing tools**

EQP-13P Pressing tool Ø13mm EQP-30 Pressing tool Ø30mm EQP-32P Pressing tool Ø32mm EQP-40P Pressing tool Ø40mm

PD-40_32	Ring pressing tool OD40mm / ID32mm
PD-40_32-04	Steel ring OD40mm / ID32mm
PD-40_35	Ring pressing tool OD40mm / ID35mm
PD-40_35-04	Steel ring OD40mm / ID35mm
PD-51.5_35	Ring pressing tool OD51,5mm / ID35mm
PD-51.5_35-04	Steel ring OD51,5mm / ID35mm

### **Consumables for preparing pellets**

Binding agents and aluminium cups to prepare pellets for XRF

EQP-WAX Wax C for pellets RX - 1kg **EQP-BORA** Boric acid 5kg EQP-CAS Aluminium cups Ø40mm x 12mm - 1000un

### **Milling jars EQR-200 Vibratory Disc Mill**

- EQR-A-100 Steel milling jar 100 ml
- EQR-A-200 Steel milling jar 200 ml
- EQR-W-100 Tungsten Carbide milling jar 100 ml
- EQR-W-200 Tungsten Carbide milling jar 200 ml

### Jars and balls EQM-402 Ball Mixer Mill

- EQM-J-50 Steel milling jar 50ml
- EQM-B-25 Tungsten Carbide ball Ø25mm
- EQM-B-20 Tungsten Carbide ball Ø20mm
- EQM-B-10 Tungsten Carbide ball Ø10mm

### Tools **MultiEQP-100 Metallic samples** processing system

- MEQP-100-P Punching tool
- MEQP-100-C Cutting tool
- MEQP-100-CR Crushing tool
- MEQP-FLAT Pellet press tool
- Other tools on demand



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