



Product Catalogue

SAMPLE PREPARATION

www.xrfscientific.com

JANUARY 2018



About us

XRF Scientific – Experts for High End Sample Preparation

XRF Scientific Limited is an Australian listed company (ASX: XRF) based in Perth, Western Australia.

XRF manufactures equipment and chemicals, which are distributed to production mines, material companies and commercial analytical laboratories, in Australia and overseas, and used in the preparation of samples for analysis.

XRF has manufacturing, sales and support facilities located in Perth, Melbourne, Europe and Canada, plus a global network of distributors. The Company has representation in the United States, South America, Africa, the Middle East and Asia.

XRF's technology is used to measure the composition and purity of materials and is mainly applied in industrial quality control and in process control for manufacturing processes in industries such as metals and mining, construction materials, chemicals and petrochemicals.

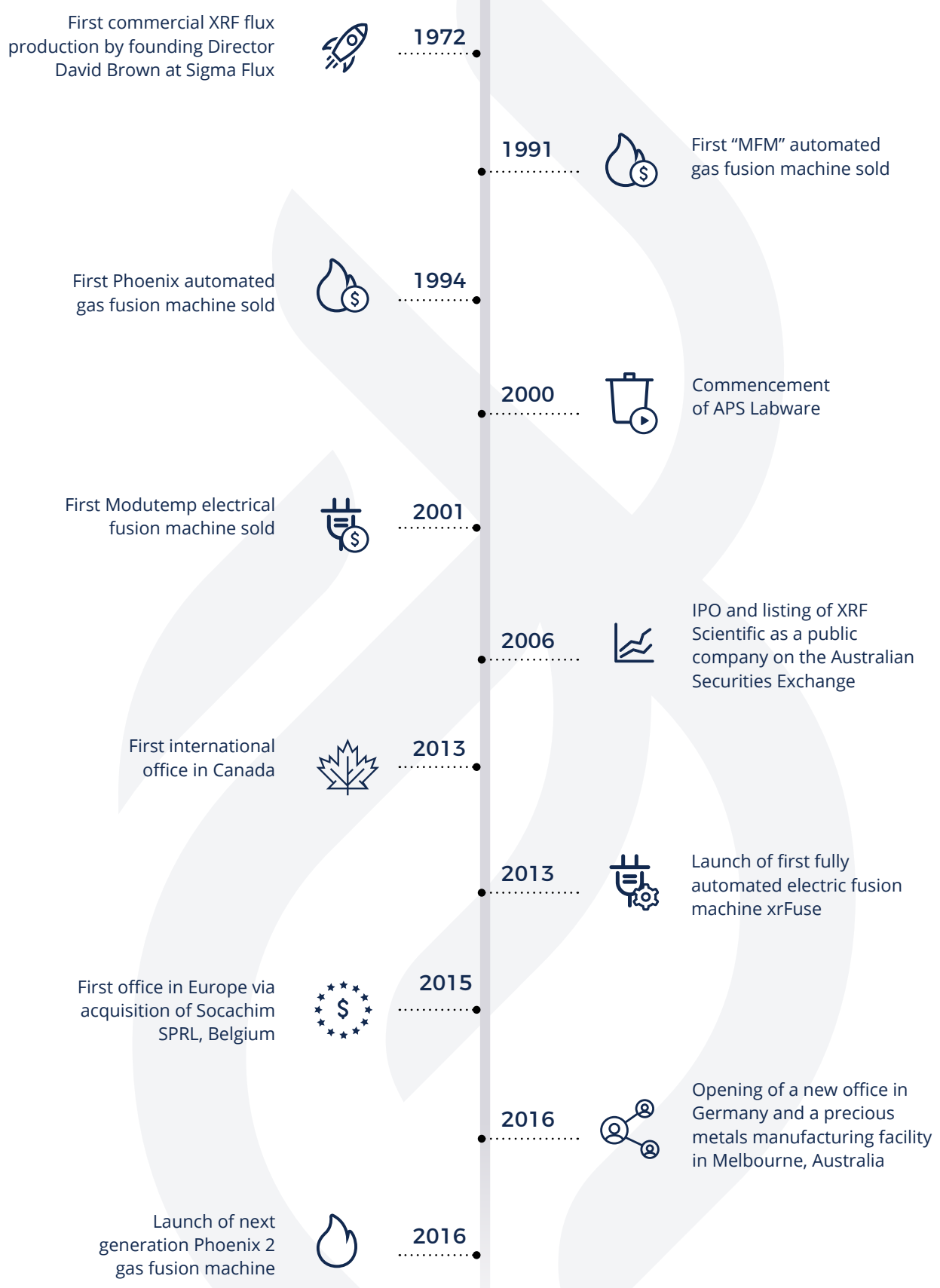
XRF's products help customers

to improve product quality and performance, increase productivity and yield and reduce downtime and waste. Its businesses have established positions in their specialised markets.



CORPORATE OFFICE

86 Guthrie Street, Osborne park
WA 6017, Australia
t.: +61 (0)8 9244 0600
e: sales@xrfscientific.com





Content



5

Service and support

Applications and service support; workshops and training; Installation, training & validation; preventive maintenance & repair.



9

Crushing, Grinding, Dividing

Hydraulic crusher; fine jaws crushers (BOYD); rotating sample dividers; bench-top, standard & large scale ring mills; but also combination systems allowing multiple sample steps to be combined into one process.



25

Fusion

xrFuse2&6 electric fusion instrument; Phoenix gaz powered machines; manual fusion furnaces, automatic flux weighing, borate fluxes and additives (NH4I tablets, LiBr sol., oxidising agents, .); platinum labware, fusion accessoires.



39

Platinum labware

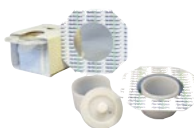
Platinum and Platinum Alloy products. Crucibles, Dishes, Beakers, Fusion labware (Perl'X, Eagon2, K1 & K2, X-300, Vulcan, TheOx..), Boats, tongs, spatulas, electrodes and specialised items. Platinum care products (polishing system, reshapers, .).



61

Pressing

Manual & power presses; evacuable pellet dies; pressing accessoires; protective precut films; binding & grinding additives (Licowax®, cellulose, MIX55, .); aluminium cups.



69

Liquid analysis

Liquid sample cells/cups; x-ray films/foils (Mylar®, Polypropylene, Kapton®, Teflon®, Polyester); Pre-assembled sample cells/cups.



75

Reference Material & XRF Drift Monitor

Set of calibration standards, XRF Drift monitors & customized fused glass disks. Method development for XRF & ICP analysis.

This comprehensive XRF Scientific catalogue indicates our full range of products. Not all products are available in all regions. Please do not hesitate to contact our local office for further information or referrals.

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
scientific



Service and Support





Applications and service Support

Our applications Scientists set up customized methods and works with you using your materials to establish the best approach to sample preparation.

- Development of analytical methods
- Improvement of your sample preparation performance with new chemicals or sample preparation equipment.
- On-site training
- On-site calibration assistance
- Seminars and workshops

Methods Developments for Sample Preparation

From sampling up to beads and pellets preparation (on site and/or in our application lab).

Selection of the most appropriate tools and devices, optimization of the operating conditions with selection of the chemicals and additives,

A large range of applications available: Alumina; Catalyser; Cement, raw materials and clinker; Calcite and calcium carbonate; Ferro Alloy; Glass and silica; Ores; Polymers; Refractory materials,

Support for Calibration of XRF Spectrometer

On site with validation procedure including stability test of the spectrometer, repeatability test of the sample preparation method, calibration curve, daily control with reference material and Statistical Quality Control Charts and Inter-Laboratory Alignment Check and Alignment Procedure (if more than 1 lab or instrument is implied).

Fused Calibration Beads

Single and multi-element standards of fused borate beads, customised for your calibration.

Manufactured from Certified Reference Materials (CRM) or customised for your analytical requirements.

The Fused Calibration Beads are 40mm or 32mm diameter. Thickness of approximately 4mm and perfectly flat.

Workshops & Training

On Site and/or in our Applications Lab:

Sample Preparation for XRF (Starter):

Sample preparation lecture and demonstration on the use of grinders, mixers, presses and fusion machines. In this workshop we introduce practical methods, with sufficient theory of the 'how's' and 'why's' of sample preparation for XRF analysis.

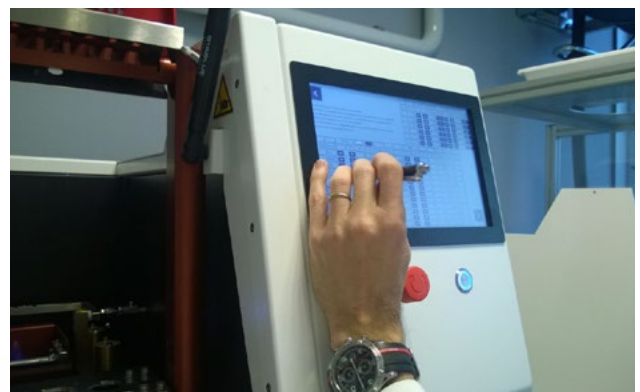
Sample Preparation by Fusion (Expert):

Revitalise your sample preparation with our workshop. Participants may bring their own samples or they can use supplied samples, such as iron ore, alumina, cement, ferroalloy etc.

Care & Maintenance of Platinum Labware:

The workshop will cover: the raw materials and alloys used and why, causes of failure in the laboratory, general care, cleaning and handling, reshaping and polishing techniques – hands on demonstrations.

Machine maintenance training or specific topics or applications on request





We are committed to providing you ...with the best available support.

XRF Scientific is committed to assisting you in achieving excellent analytical results and, like you, we recognise, that excellent results start with an uncompromising approach to sample preparation.

Installation, training & validation

When you buy a machine/instrument from XRF Scientific we take charge of the full installation to ensure that your machine is perfectly set up and configured to your user-specific applications.

During installation we also take the time to explain the new operator(s) all the relevant aspects of instrument operation, safety procedures, and also how to maintain operating conditions for accurate results and trouble-free performance.

Finally, we finish the installation by the validation of method(s) using your samples, and complete by carrying out repeatability tests.

Preventive maintenance & repair

XRF Scientific offers you several maintenance options to ensure your instrument/machine is in prime operating condition.

Contract type 1: Scheduled Preventive Maintenance + hotline + email assistance

Contract type 2: Type 1 + Emergency visit

Contract type 3: Type 2 + Unlimited Emergency visit + Loan of a replacement machine in case of long period of break down.

Spares and consumable

XRF Scientific keeps in stocks an extensive range of spare parts and accessories for all their machines.

For fusion fluxes and other chemicals, XRF Scientific also maintains large amount of product in stock for rapid deliveries. The company also has a special program to allow their customer to choose multi-drop shipments on a global basis.












Get started with one of our Kits or complete applications packages

XRF Scientific provides a number of sample preparation and applications kits for XRF & ICP spectroscopy. These customised kits are composed of different combinations of sample preparation equipment, accessories, consumables, sets of calibration standards and drift monitors, to equip your laboratory with all the necessary tools for specific or varied sample analysis.

Fusion Basic Starter Kit

			
xrFuse1	1 x crucible (DC1) 1 x mould (32 or 40mm)	Flux and additives starter kit	Application Notes
			
Phoenix S	1 x crucible (AC2) 1 x mould (32 or 40mm)	Flux and additives starter kit	Application Notes


Pelletising Basic Starter Kit

			
xrPress	Evacuatable Pellet Die Complete	Binding additives, Aluminium Cups	Application Notes

Pulveriser + Fusion Basic Starter Kit

		
Bench Top Ring Mill	Grinding head in Chrome Steel or Tungsten Carbide	Fusion Basic Starter Kit

Application Packages

	<ul style="list-style-type: none"> → Starter Kit Basic + set of calibration beads/pellets + drift correction monitors → Starter Kit Basic + set of calibration beads/pellets + drift correction monitors + installation/validation onsite
---	---



Hydraulic Crusher



10 \ Hydraulic crusher

Jaw Crushers



12 \ Jaw crusher

Vibratory Disc Mill



13 \ Jaw crusher and rotating sample divider combo

18 \ Laboratory ring/disc Mills

19 \ Range of heads

21 \ Auto Batch Mill

Sample Divider



22 \ Laboratory rotating sample dividers

24 \ Mechanised and automated systems

Crushing & Grinding the Sample



LABORATORY CRUSHERS

HYDRAULIC CRUSHER - TRIMMING/BREAKING/CRUSHING



The Hydraulic Crusher trims excess material from rock samples and drills cores prior to pulverising.

The Hydraulic Crusher prepares trace metal samples prior to pulverising in a Rocklabs Ring Mill or similar piece of equipment. It is designed to be easy to use, simple to maintain and cost-efficient to operate. The Hydraulic Crusher can trim and break rock samples or split drill cores up to 150mm in diameter. Rock samples for up to 50mm can be crushed to minus 5mm or less.

Key features

- Single-person operation
- Tungsten quality componentry used throughout
- Minimal maintenance
- Industry-standard Enerpac Hydraulics

Technical specifications

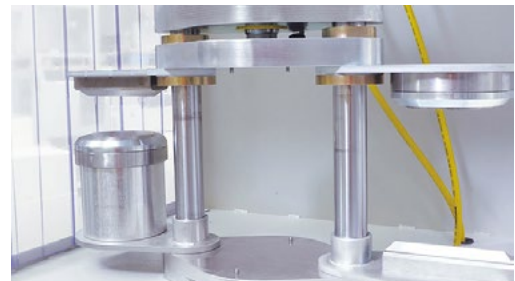
- Motor power (1 or 3 phase): 1.2 kW.
- Dimensions: 700mm(D) x 900mm(W) x 1850mm(H)
- Weight: 500kg

Ordering information

- **HYD:** Hydraulic Crusher

Shipping dimensions

- Dimensions: 700mm(D) x 900mm(W) x 1850mm(H)
- Weight: 500kg

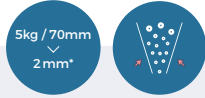


* depending of the material



LABORATORY CRUSHERS

BOYD ELITE - DOUBLE ACTING FINE JAW CRUSHER



The Boyd Crusher is the worlds first double acting, fine jaw crusher. Its patented design includes two moving jaws. One jaw is top driven, one jaw is bottom driven to crush many times before the material falls from the bottom of the jaws.

Featuring top and bottom moving jaws, the patented design of the BOYD Elite delivers the maximum amount of crushing, reducing samples by 35 times the original size. Characterized by ease of maintenance and cleaning and equipped with stringent safety mechanisms as standard, the BOYD Elite reduces the time and cost associated with the crushing process.

- Initial size: < 70 mm
- Final fineness: < 2 mm or even finer

Key features

- Jaws can hold up to 5kg of sample
- Jaws can be rotated top to bottom for longer life
- Quick jaw adjustment with horizontal steel rollers
- Safety switch stops operation on cover opening
- Easy to clean and maintain

Health & safety improvements

The Boyd Elite makes no compromise when it comes to H&S, it incorporates improved dust and chip control, full electrical and mechanical safety and improved ergonomics

Patents

The Boyd Elite has Trademark and Design Mark Certification

Ordering information

- **BOYD:** BOYD Crusher, double acting fine jaw crusher

Options available

- Raiser Platform, Mechanical bin lifter, RSD, Smart RSD and Smart LSD

Shipping dimensions

- Dimensions: 1275mm(D) x 825mm(W) x 1500mm(H)
- Weight: 750kg

Technical specifications

- Motor power (3 phase): 5.5 kW.
- Jaw width: 300mm
- Dust extraction: Superior dust removal (2 ports) and containment
- Dimensions: 1070mm(D) x 694mm(W) x 1326mm(H)
- Weight: 520kg



QUALITY OF PROCESSING

The Boyd Elite allows the lab to get up to a 90% pass. No other crusher can consistently achieve this pass rate. The Boyd Elite accept lump sizes up to 70mm, an increase in input size of 40% which allows the lab to process larger samples through the crusher.



* depending of the material



LABORATORY CRUSHERS

BOYD RSD - DOUBLE ACTING FINE JAW CRUSHER WITH RSD SAMPLE DIVIDER



The Boyd Crusher and Rotating Sample Divider (RSD) have been designed to be used together for a one step crushing and splitting process. The sample is loaded into the Boyd Crusher then in one operation, it is crushed, conveyed to the RSD and then split into preset proportions of your choice.

Featuring top and bottom moving jaws, the patented design of the BOYD Elite delivers the maximum amount of crushing, reducing samples by 35 times the original size. Characterized by ease of maintenance and cleaning and equipped with stringent safety mechanisms as standard, the BOYD Elite reduces the time and cost associated with the crushing process.

- Initial size: < 70 mm
- Final fineness: < 2 mm or even finer

Key features

- Two split options available
- Easy adjustment of the variable split
- Crushing and splitting in one step
- Jaws can hold up to 5kg of sample
- Jaws can be rotated top to bottom for longer life
- Quick jaw adjustment with horizontal steel rollers
- Safety switch stops operation on cover opening
- Easy to clean and maintain

Technical specifications

- Motor power (3 phase): 5.5 kW.
- Jaw width: 300mm
- Dust extraction: 3 extraction ports available
- Installed dimensions: 1050mm(D) x 1500mm(W) x 1350mm(H)
- Weight: 840kg

Ordering information

- **BOYD-RSD-1S:** Combo Boyd crusher+RSD (1 split)
- **BOYD-RSD-2S:** Combo Boyd crusher+RSD (2 split)
- **SMART BOYD-RSD-1S:** Smart Boyd crusher+RSD (1 split)
- **SMART BOYD-RSD-2S:** Smart Boyd crusher+RSD (2 split)

Shipping dimensions

- Dimensions: 950mm(D) x 1800mm(W) x 1500mm(H)
- Weight: 950kg



Smart BOYD® Rotating Sample Divider SBRSD

The Smart BOYD RSD combo integrates the BOYD RSD combo with a balance and a Programmable Logic Controller (PLC), to control the splitting of the sample. This provides an accurate and consistent split weight regardless of the sample input weight and ensures that the pulveriser receives the optimum weight of the sample.

* depending of the material



LABORATORY CRUSHERS

SBLSD - SMART BOYD® LINEAR SAMPLE DIVIDER



The ROCKLABS Smart BOYD LSD combo combines the BOYD Crusher with a Linear Sample Divider (LSD) controlled by a Programmable Logic System (PLC) allowing an operator to pre-weigh samples and select the suitable split weights. It is capable of variable splits in one pass.

The Smart BOYD LSD achieves a higher degree of splitting accuracy and is able to split smaller samples with the same accuracy as larger samples. The operator can select two splits of different weights as well as a retained waste sample. The combo can be equipped with a barcode scanner, have pre-set splitting programs and retain data/sample logging details.

Key features

- No manual split adjustment
- Less operator input
- Optional waste feeder
- Safety switch stops operation on cover opening
- Easy to clean and maintain

Ordering information

- **SMART BOYD-LSD:** Boyd crusher + LSD

Options available

- Raiser Platform & Stairs, Manual Sample Lifting Arm, Automated Dumpmaster Lifter & Large Capacity Hopper, Waste feeders or conveyor interface, Waste Sample Bagger, Data Logging Software, Keyboard & Barcode Scanner, Bypass bin for single splitting, Waste Bin (or bypass bin for waste feeder/conveyor options), Split configuration & weight or % selection are adjustable in software.

Technical specifications

	BOYD Crusher	Linear Sample Divider (LSD)
• Motor power (3 phase)	5.5 kW	0.09 kW
• Max. input lump size	70mm	10mm
• Product size	< 2 mm	n/a
• Jaw width	300mm	n/a
• Dust extraction	2 extractions ports	1 extraction ports
• Dimensions	1070mm(D) x 694mm(W) x 1440mm(H)	792mm(D) x 380mm(W) x 816mm(H)
• Weight	610Kg	110Kg



* depending of the material



LABORATORY RING/DISC MILLS

BTRM - BENCH TOP RING MILL



Used for pulverising rocks, soil, coal, cement, glass, limestone, bricks, wood, plant material, slags, concrete, etc. for subsequent analysis by instrumental methods or wet chemistry.

- Initial size: < 10 mm
- Final fineness: < 75 µm or even finer

Head Options: A wide range of sample containers (heads) are available for samples from 1 to 100 grams. These are made from carbon steel, chrome steel, tungsten carbide and zirconia.

Key features

- Small and compact to fit on a work bench.
- Very low contamination of samples
- Noise level less than 80 dBa
- Easy to clean and maintain

Technical specifications

- Motor power (1 or 3 phase): 1.1 kW.
- Dimensions: 410mm(D) x 410mm(W) x 510mm(H)
- Weight: 67kg

Ordering information

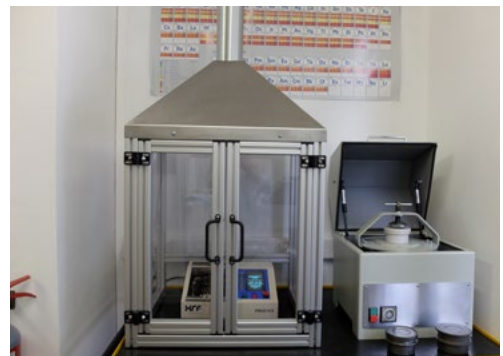
- **BTRM:** Bench Top ring mill, Rotoclamp

Shipping dimensions

- Dimensions: 610mm(D) x 685mm(W) x 610mm(H)
- Weight: 80kg



Range of Heads and composition of materials – page 19 -21



* depending of the material



LABORATORY RING/DISC MILLS

RM1000 - STANDARD RING MILL



The Standard Ring Mill: RM1000 comes complete with powder coated metal cabinet, soundproofing, timer starter and safety "cut out" switch. There are two options of clamps available: Pneumatic clamp and the Rotoclamp.

Used for pulverising rocks, soil, coal, cement, glass, limestone, bricks, wood, plant material, slags, concrete, etc. for subsequent analysis by instrumental methods or wet chemistry.

- Initial size: < 12 mm
- Final fineness: < 75 µm or even finer

Head Options: A wide range of sample containers (heads) are available for samples from 1 to 1000 grams. These are made from agate, carbon steel, chrome steel, tungsten carbide and zirconia

Key features

- Two handed head clamping operation
- New pneumatic control valve
- Safety rated lid switch
- Improved lid & cabinet ergonomics
- Easy to clean and maintain

Technical specifications

- Motor power (1 or 3 phase): 1.1 kW.
- Dust extraction: Built-in air extraction fan & dust extraction pickup
- Dimensions: 700mm(D) x 1210mm(W) x 1800mm(H)
- Weight: 340kg

Ordering information

- **RM1000-1:** Standard ring mill, Rotoclamp
- **RM1000-2:** Standard ring mill, Pneumatic clamp

Options available

- Ergonomic Pneumatic Lifting device

Shipping dimensions

- Dimensions: 930mm(D) x 1115mm(W) x 1460mm(H)
- Weight: 390kg



Range of Heads and composition of materials – page 19 -21

* depending of the material



LABORATORY RING/DISC MILLS

RM2000 - HIGH CAPACITY RING MILL



The RM2000 is designed to process large samples with a maximum sample weight of 1500g and a final particle size of -75microns. Fully constructed with metal for long lasting and powder coated finish for ease of cleaning.

Used for pulverising rocks, soil, coal, cement, glass, limestone, bricks, wood, plant material, slags, concrete, etc. for subsequent analysis by instrumental methods or wet chemistry.

- Initial size: < 12 mm
- Final fineness: < 75 µm or even finer

Head Options: A wide range of sample containers (heads) are available for samples from 200 to 1500 grams. These are made from carbon steel, chrome steel, tungsten carbide and zirconia.

Key features

- New pneumatic control valve
- Safety rated lid switch
- Improved lid & cabinet ergonomics
- Easy to clean and maintain

Technical specifications

- Motor power (1 or 3 phase): 2.2 kW.
- Dust extraction: Built-in air extraction fan & dust extraction pickup
- Dimensions: 700mm(D) x 1210mm(W) x 1800mm(H)
- Weight: 390kg

Ordering information

- **RM2000:** High capacity ring mill, Pneumatic clamp

Options available

- Ergonomic Pneumatic Lifting device

Shipping dimensions

- Dimensions: 930mm(D) x 1115mm(W) x 1460mm(H)
- Weight: 420kg



i Range of Heads and composition of materials – page 19-21



* depending of the material



LABORATORY RING/DISC MILLS

CRM - CONTINUOUS FLOW RING MILL



The Continuous Flow Ring Mill is suitable for pulverising large samples from 1kg to 10kg. Coarse pulverising of large samples for mineral separation such as Zircon dating, preparing samples for on-stream analysis, dry or slurries.

- Initial size: < 8 mm
- Final fineness:
- Single-tier: < 300µm (+80%)
- Double tier: < 100µm (+95%)

Continuous Flow Ring Mill with built in Rotating Sample Divider. Split Segments options: 5%, 10%, 15%, 20%, 25%, 30% and other % on request.

Key features

- Continuous flow through operation
- Built in ducting of cyclone with external vent for connection to dust extraction systems, for cleaning Head
- Sample bin holds up to 10kg
- Grinding Head in High Chrome Steel
- Low maintenance, Easy to clean
- Quiet operation - less than 85dB

Technical specifications

- Motor power (1 or 3 phase): CRM – 1.1kW / RSD – 0.18kW
- Dust extraction: Built-in air extraction fan & dust extraction pickup
- Dimensions: 931mm(D) x 859mm(W) x 1391mm(H)
- Weight: 475kg

Ordering information

- **CRM-RSD option1:** Standard CRM-RSD combo – single tier head (throughput 60kg/h)
- **CRM-RSD option2:** Standard CRM-RSD combo – double tier head (throughput 30kg/h)

Shipping dimensions

- Dimensions: 1010mm(D) x 1170mm(W) x 1550mm(H)
- Weight: 420kg



* depending of the material



LABORATORY RING/DISC MILLS

ABM - AUTO BATCH MILL



Rocklabs™ ABM3000 Auto Batch Mill is an efficient and cost effective mill for running a large batch of samples. This mill can be run in batches up to 30 samples at a maximum of 1500g per sample with a fineness of 95% < 75µm.

An auto sand wash cleaning system is built-in to clean out the mill in between samples. The ABM3000 is fully programmable through the use of a PLC controller. The PLC allows the Operator to have full control over the milling time and clean out cycles as well as all other mill functions. Safety interlocks are situated on all doors to prevent Operators from opening any doors while the machine is in operation.

- Maximum input weight: up to 1500g
- Production rate: up to 15 samples per hour: average 4 – 5 minutes per sample
- Initial size: < 5 mm
- Final fineness: < 75µm

Main features, at a glance.

- LCD touch screen panel with flashing buttons for clear indication of process
- PLC control over milling and clean out cycle. Operator can change the parameters on the LCD touch screen panel to suit different samples
- Processes up to 30 samples per batch
- Auto sand wash programmed to clean out the mill between samples. Number of sand washes can be changed to suit.
- Can be integrated with Rocklabs Automated Systems
- Two chromium Head sizes to choose from; with easy changeover of the milling Head
- Runs below 85dB to meet the working safety standards
- Safety interlocks fitted on all doors
- Low maintenance
- Full compressed air blow down and vacuum clean between samples

System dimensions

- Dimensions: 1100mm(D) x 2400mm(W) x 2300mm(H)



* depending of the material



LABORATORY RING/DISC MILLS

RANGE OF HEADS AND COMPOSITION OF MATERIALS

We offer a wide range of Heads to be used on the Bench Top Ring Mill (BTRM), the Standard Ring Mill (RM1000) and the Large Ring Mill (RM2000). The range of Heads includes: Agate, Carbon Steel, Chrome Steel, Tungsten Carbide and Zirconia. The choice of Head type is determined by the size and type of sample being pulverised.



Specifications for CARBON STEEL Heads

Machine	Complete head	Nominal Volume	Rec Sample Weight	Bowl Outer Ø
BTRM / RM1000	CARB-40-BLP	80ml	Min 1g / Max 40g	102mm
BTRM / RM1000	CARB-100-BLSPD	150ml	Min 20g / Max 100g	110mm
RM1000	CARB-200-BLRP	300ml	Min 5g / Max 200g	164mm
RM1000	CARB-250-BLSPD	375ml	Min 20g / Max 250g	164mm
RM1000 & 2000	CARB-350-BLRRP	525ml	Min 20g / Max 350g	218mm
RM1000 & 2000	CARB-500-BLRPPP	750ml	Min 20g / Max 500g	218mm
RM1000 & 2000	CARB-600-BLSPD	900ml	Min 100g / Max 600g	218mm
RM1000 & 2000	CARB-800-BLD	1200ml	Min 200g / Max 800g	254mm
RM1000 & 2000	CARB-1000-BLSPD	1500ml	Min 200g / Max 1000g	254mm
RM2000	CARB-1500-BLSPD	2000ml	Min 200g / Max 1500g	287mm

Specifications for CHROME STEEL Heads

Machine	Complete head	Nominal Volume	Rec Sample Weight	Bowl Outer Ø
BTRM / RM1000	CHRO-40-BLP	80ml	Min 1g / Max 40g	102mm
BTRM / RM1000	CHRO-100-BLSPD	150ml	Min 20g / Max 100g	110mm
RM1000	CHRO-200-BLRP	300ml	Min 5g / Max 200g	164mm
RM1000	CHRO-250-BLSPD	375ml	Min 20g / Max 250g	164mm
RM1000 & 2000	CHRO-350-BLRRP	525ml	Min 20g / Max 350g	218mm
RM1000 & 2000	CHRO-500-BLRPPP	750ml	Min 20g / Max 500g	218mm
RM1000 & 2000	CHRO-600-BLSDP	900ml	Min 100g / Max 600g	218mm
RM1000 & 2000	CHRO-800-BLD	1200ml	Min 200g / Max 800g	254mm
RM1000 & 2000	CHRO-1000-BLSPD	1500ml	Min 200g / Max 1000g	254mm
RM2000	CHRO-1500-BLSPD	2000ml	Min 200g / Max 1500g	287mm



LABORATORY RING/DISC MILLS

RANGE OF HEADS AND COMPOSITION OF MATERIALS



Specifications for TUNGSTEN CARBIDE, ZIRCONIA and AGATE Heads

Machine	Complete head	Nominal Volume	Rec Sample Weight	Bowl Outer Ø
Machine	TC-40-BLP	65ml	Min 1g / Max 40g	102mm
BTRM / RM1000	TC-200-BLRP	250ml	Min 10g / Max 200g	170mm
RM1000	ZIRC-40-BLP	80ml	Min 1g / Max 40g	102mm
BTRM / RM1000	ZIRC-200-BLRP	300ml	Min 10g / Max 200g	157mm
RM1000	AGAT-50-BLP	100ml	Min 10g / Max 50g	150mm
RM1000	AGAT-200-BLRP	300ml	Min 40g / Max 200g	190mm

Composition of Materials (1/2)

All figures are presented in ppm, except where noted and are typical to maximum values.

Symbol	Element	Agate	Carbon Steel	Chrome Steel	Tungsten Carbide	Zirconia
Ag	Silver		0.3			<0.2
Al	Aluminium	Trace	300	300	30	70
As	Arsenic			<100	<10	<1
Au	Gold		<0.2			0.04
B	Boron				<10	
Ba	Barium				<10	160
Br	Bromine					1
C	Carbon		0.48%	2%	5.50%	
Ca	Calcium		40		50	150
Cl	Chlorine					<10
Co	Cobalt		30	200	10%	3
Cr	Chromium		1200	12%	50	<10
Cs	Cesium					<1
Cu	Copper		250	200	30	<10
Fe	Iron	Trace	98%	86%	100	70
Ga	Gallium					1
Hf	Hafnium					1.30%



LABORATORY RING/DISC MILLS

RANGE OF HEADS AND COMPOSITION OF MATERIALS

Symbol	Element	Agate	Carbon Steel	Chrome Steel	Tungsten Carbide	Zirconia
In	Indium					0.01
K	Potassium	Trace			30	<20
La	Lanthanum					7
Mg	Magnesium					2%
Mn	Manganese	Trace	7000	3500	50	3
Mo	Molybdenum		100	100	50	<10
N	Nitrogen				100	40
Na	Sodium	Trace		<500	30	
Nb	Niobium		2	50	100	<10
Ni	Nickel		200	800	50	
P	Phosphorus		<100	140	30	
Pb	Lead		5	<100	30	<10
Rb	Rubidium					<10
Re	Rhenium					<0.05
S	Sulphur		<350	100	50	
Sb	Antimony		10		10	3
Sc	Scandium					1
Se	Selenium					<10
Si	Silicon		2500	4500	50	220
Sn	Tin		20	<100		
Sr	Strontium		0.3			1000
Ta	Tantalum		0.4		30	<1
Th	Thorium		0.4			4
Ti	Titanium			<100	30	450
U	Uranium		<1			0.6
V	Vanadium		<100	200	30	0.1
W	Tungsten		7	200	84.50%	<2
Zn	Zinc		10	<100	30	<10
Zr	Zirconium		<1	<100	<10	70.30%
Ce	Cerium					<10
Eu	Europium					0.5
Gd	Gadolinium					<0.5
Lu	Lutetium					0.3
Nd	Neodymium					<1
Sm	Samarium					<0.1
Tb	Terbium					<0.3
Y	Yttrium					0.1
Yb	Ytterbium					1



LABORATORY ROTATING SAMPLE DIVIDER

BTRSD - BENCH TOP RSD



The Bench Top Rotating Sample Divider is designed to split out a representative portion of the sample.

Key features

- A representative split of any proportion from 2 -50%
- Feed rate 0 -5 kg /minute
- Small enough to be placed on a work bench
- Sealed bearings

Technical specifications

- Motor power (1 phase): 0.1 kW.
- Maximum input particle size: 10mm
- Dimensions: 496mm(D) x 600mm(W) x 557mm(H)
- Weight: 85kg

Ordering information

- **BTRSD:** Bench top rotating sample divider

Shipping dimensions

- Dimensions: 605mm(D) x 825mm(W) x 730mm(H)
- Weight: 100kg



Comments on taking a representative split

Taking a representative split from a large sample is not as simple as many people believe. Rolling on a mat, multiple grabs or riffle splitting do not produce accurate results. A classic study* conducted at Bradford University demonstrated that a rotating sample divider provided the best results.

*"Critical evaluation of powder sample procedures". Allen T& Khan A.A " The chemical Engineer"

Dividing Methods	Standard deviation of samples %
Cone and quartering	6.810
Scoop sampling	5.140
Riffle splitting	1.010
Table sampling	2.090
Rotating splitting	0.125
Random variation	0.076





LABORATORY ROTATING SAMPLE DIVIDER

SARSD - STAND ALONE RSD



The Stand Alone Rotating Sample Divider is designed to split out a representative portion of the sample.

Key features

- It takes a single representative split of any proportion from 0- 50% from any size of sample, up to 25kg
- Duplicate split option available – 2 sample splits and remainder
- Feed rate: 0 – 15kg per minute
- Feed size: less than 10mm recommended
- Stainless steel hopper with 25kg capacity
- Vibratory Feeder control

Technical specifications

- Motor power (1 or 3 phase): 0.18 kW.
- Dust extraction: 1 extraction port available
- Dimensions: 800mm(D) x 1000mm(W) x 960mm(H)
- Weight: 135kg

Ordering information

- **SARSD option1:** Stand alone rotating sample divider – Single split + Remainder
- **SARSD option2:** Stand alone rotating sample divider – Duplicate split + Remainder

Shipping dimensions

- Dimensions: 920mm(D) x 1570mm(W) x 1160mm(H)
- Weight: 250kg

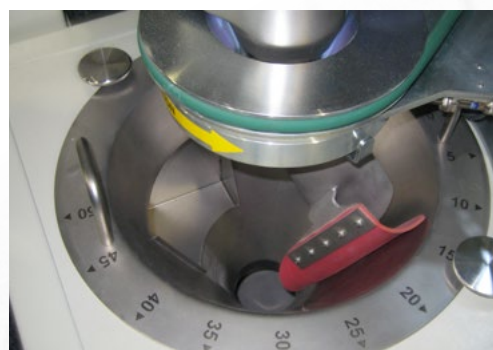


Comments on taking a representative split

Taking a representative split from a large sample is not as simple as many people believe. Rolling on a mat, multiple grabs or riffle splitting do not produce accurate results. A classic study* conducted at Bradford University demonstrated that a rotating sample divider provided the best results.

*"Critical evaluation of powder sample procedures" . Allen T& Khan A.A " The chemical Engineer"

Dividing Methods	Standard deviation of samples %
Cone and quartering	6.810
Scoop sampling	5.140
Riffle splitting	1.010
Table sampling	2.090
Rotating splitting	0.125
Random variation	0.076





MECHANISED & AUTOMATED SYSTEMS

AUTOMATED SYSTEMS

Rocklabs produces site-specific designed and built automated systems for users, which enable multiple samples or batches to be loaded at the same time. Such automation ensures minimal operator intervention in sample processing, which reduces handling errors and travel times between processing stages. The factory acceptance testing process, ensures these automated systems work within the customers' own environment and can be operated and maintained by their existing workforce.



MECHANISED SYSTEMS

Rocklabs produce mechanised systems which include combinations of built-in machines, suitable for customers who have access to a skilled workforce, requiring minimal supervision. Operation is simple but only a single sample can be processed at a time. Mechanised systems are built in a tower layout, the sample travelling downwards from one machine to another. There is no automation so any setting changes need to be done manually. Such systems are designed to reduce operator handling and lifting to a minimum.

PARTNERSHIP WITH USERS

Custom designed and built to meet the requirements of the users. Mechanised Systems have a combination of two or more mechanised built-in with minimal operator action. Automation allows for samples to be loaded as batches with minimal or no operator involvement





XRF

scientific

Only electric power
is required for this
instrument



Gas is required for
this instrument



External USB
communication link



LIMS ready



SWIRLING
The best homogenization system
Clockwise & counterclockwise



26 \ Electric fusion machine

29 \ Gas fusion machine

32 \ Automatic weighing machine

34 \ High purity molten fluxes

36 \ Fusion additives

37 \ Fusion accessories

Sample Preparation by Fusion



ELECTRIC FUSION MACHINE

XRFUSE1: 1 STATION



Rugged electric fusion machine designed for the preparation of 1 glass disk for XRF analysis or acid solution for analysis by AA or ICP.

Key features

PERFORMANCE

- Fully automatic & reproducible sample preparation
- One of the most efficient heating profiles available
- Speciality Ceramic holders/cradle – Zero Contamination
- Maximum Temperature: 1200°C

PRODUCTIVITY

- One (1) samples per loading; up to 4 samples per hour

SIMPLICITY

- Easy select menu with constant clear display of machine status
- Simple operation but advanced technology, self-checking to avoid errors

- Touch-screen interface, PLC control
- Ready to fuse with pre-defined fusion methods (12 programmable recipes)
- Programmable pre-heat/oxidation step

SAFETY

- Fully enclosed, lab staff are separated from hot material and from all moving parts
- Cool touch glass viewing window and all contact surfaces
- Fully automatic ‘cold → cold’ operation, even the crucibles are returned cold
- Fitted with over temperature protection, Stop button,...

Technical specifications

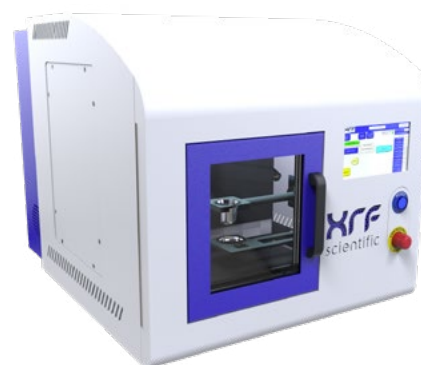
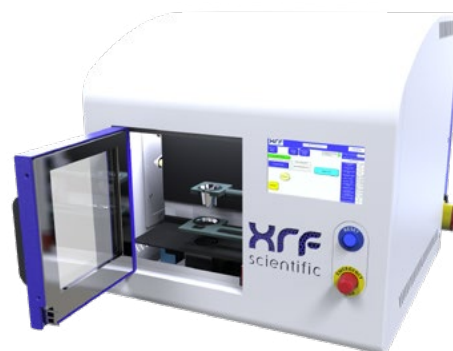
- Temperature: Max continuous 1200°C
- Heating: Silicon Carbide Elements
- Lining: High quality Ceramic Fibre.
- Thermocouple: 2 x type “R”
- Temperature Control: PLC Controlled, Over temperature protection
- Cooling: 2 stages mould and crucible cooling
- Electrical: 208-240 V; 50/60Hz; 20A, 1P.
- Dimensions: 550mm(L) x 700mm(D) x 520mm(H) - Weight: 40kg

Ordering information

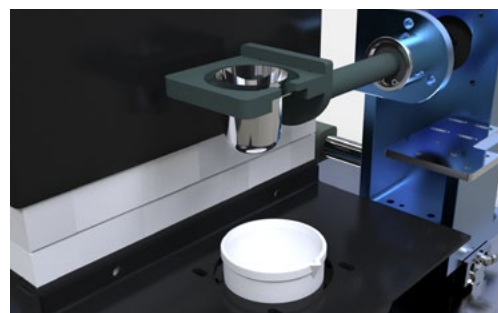
- **xrFuse1:** Produces 1 sample XRF or ICP

Shipping dimensions

- Dimensions: 700mm(L) x 1010mm(W) x 650mm(H)
- Weight: 75kg



i Suitable crucibles & moulds – page 47





ELECTRIC FUSION MACHINE

XRFUSE2: 2 STATION



Rugged electric fusion machine designed for the preparation of 1 to 2 glass disks for XRF analysis or acid solutions for analysis by AA or ICP.

Key features

PERFORMANCE

- Fully automatic & reproducible sample preparation
- One of the most efficient heating profiles available
- Speciality Ceramic holders/cradle – Zero Contamination
- Maximum Temperature: 1250°C

PRODUCTIVITY

- One (1) or Two (2) samples per loading; up to 8 samples per hour

SIMPLICITY

- Easy select menu with constant clear display of machine status
- Simple operation but advanced technology, self-checking to avoid errors

- Touch-screen interface, PLC control
- Ready to fuse with pre-defined fusion methods (12 programmable recipes)
- Programmable pre-heat/oxidation step

SAFETY

- Fully enclosed, lab staff are separated from hot material and from all moving parts
- Cool touch glass viewing window and all contact surfaces
- Fully automatic 'cold → cold' operation, even the crucibles are returned cold
- Fitted with over temperature protection, Stop button,...

Technical specifications

- Temperature: Max continuous 1250°C
- Heating: Silicon Carbide Elements
- Lining: High quality Ceramic Fibre.
- Thermocouple: 2 x type "R"
- Temperature Control: PLC Controlled, Over temperature protection
- Cooling: 2 stages mould and crucible cooling
- Electrical: 208-240 V; 50/60Hz; 20A, 1P.
- Dimensions: 700mm(L) x 550mm(D) x 480mm(H) - Weight: 70kg

Ordering information

- **xrFuse2:** Produces 2 samples simultaneously XRF
- **xrFuse2 ICP:** Produces 2 samples simultaneously ICP (with magnetic stirrer)

Options Available

- ICP module with magnetic stirring (for xrFuse2); Ammonium iodide injection

Shipping dimensions

- Dimensions: 1010mm(L) x 1010mm(W) x 810mm(H)
- Weight: 165kg



Suitable crucibles & moulds – page 47





ELECTRIC FUSION MACHINE

XRFUSE6: 6 STATION



Rugged electric fusion machine designed for the preparation of 1 to 6 glass disks for XRF analysis or acid solutions for analysis by AA or ICP.

Key features

PERFORMANCE

- Fully automatic & reproducible sample preparation
- One of the most efficient heating profiles available
- Speciality Ceramic holders/cradle – Zero Contamination
- Maximum Temperature: 1250°C

PRODUCTIVITY

- One (1) or Two (6) samples per loading; up to 30 samples per hour

SIMPLICITY

- Easy select menu with constant clear display of machine status
- Simple operation but advanced technology, self-checking to avoid errors

- Touch-screen interface, PLC control
- Ready to fuse with pre-defined fusion methods (12 programmable recipes)
- Programmable pre-heat/oxidation step

SAFETY

- Fully enclosed, lab staff are separated from hot material and from all moving parts
- Cool touch glass viewing window and all contact surfaces
- Fully automatic 'cold → cold' operation, even the crucibles are returned cold
- Fitted with over temperature protection, Stop button,...

Technical specifications

- Temperature: Max continuous 1250°C
- Heating: Silicon Carbide Elements
- Lining: High quality Ceramic Fibre.
- Thermocouple: 2 x type "R"
- Temperature Control: PLC Controlled, Over temperature protection
- Cooling: 2 stages mould and crucible cooling
- Electrical: 380 - 415 VAC or 208 - 220 VAC 50/60 Hz; 3 phase.
- Dimensions: 1110mm(L) x 800mm(D) x 580mm(H) - Weight: 100kg

Ordering information

- **xrFuse6:** Produces 6 samples simultaneously XRF
- **xrFuse6 ICP:** Produces 6 samples simultaneously ICP (with magnetic stirrer)

Options Available

- ICP module with magnetic stirring (for xrFuse6); Ammonium iodide injection

Shipping dimensions

- Dimensions: 1340mm(L) x 1010mm(W) x 810mm(H)
- Weight: 220kg



i Suitable crucibles & moulds – page 47





GAS FUSION MACHINE

PHOENIX S: 1 STATION



Compact design gas fusion machine designed for the preparation of 1 glass disks for XRF analysis or acid solutions for analysis by AA or ICP.

Key features

- 1 fusion station
- Fully Automatic: MELTING, SWIRLING, POURING and COOLING
- Maximum Temperature 1250°C (1600°C flame temperature)
- VFD Blue Screen with Touch Buttons
- Up to 6 user-defined recipes
- Homogenization by Swirling, variable frequency and speed
- Separate mould preheating
- Mould cooled in-situ above the burner
- Crucible/mould holders: Inconel
- Emergency stop button; Automatic gas cut-off safety system
- Cold-to-cold operation
- USB communication link

Technical specifications

- Electrical: 110 or 240 VAC 50/60 Hz
- Dimensions: 350mm(L) x 290mm(D) x 200mm(H) - Weight: 15kg
- Gas : propane/LPG :30mbar or alternative natural gaz:80mbar;
Air: 4bar, Oxygen: 3bar

Ordering information

- **PHOENIX S:** Produces 1 sample (XRF or ICP)

Shipping dimensions

- Dimensions: 450mm(L) x 450mm(W) x 350mm(H)
- Weight: 20kg



Suitable crucibles & moulds – page 45





GAS FUSION MACHINE

PHOENIX GO: 4 STATION



This new Phoenix machine 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 economic format.

This gas fusion machine designed for the preparation 1 to 4 glass disks for XRF analysis or acid solutions for analysis by AA or ICP.



Key features

- 4 fusion stations
- Gas Only fan forced burner – new technology
- Fully Automatic: PREMELTING, MELTING, SWIRLING, POURING and COOLING
- Maximum Flame Temperature 1300°C
- Temperature measurement: Thermocouple near flame (indicative)
- Touch screen user interface
- Up to 100 user-defined recipes with naming flexibility
- Homogenization by Swirling, variable frequency and speed
- Separate mould preheating
- Mould cooled in-situ above the burner
- Crucible/mould holders: Inconel, hastalloy or palladium
- Emergency stop button; Automatic gas cut-off safety system
- Cold-to-cold operation
- USB communication link

Technical specifications

- Electrical: 110 or 240 VAC 50/60 Hz
- Dimensions: 763mm(L) x 598mm(D) x 530mm(H) - Weight: 75kg
- Maximum Gas flow: propane/LPG: 50mbar

Ordering information

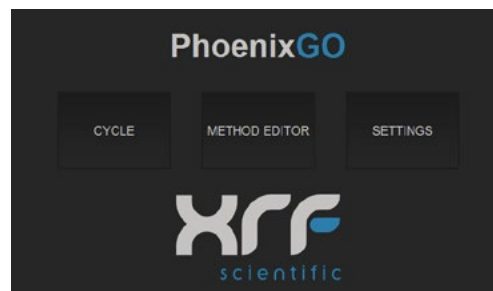
- **PHOENIX GO:** Produces 4 sample (XRF or ICP)

Shipping dimensions

- Dimensions: 900mm(L) x 550mm(W) x 880mm(H)
- Weight: 120kg



Suitable crucibles & moulds – page 45





GAS FUSION MACHINE

PHOENIX II: 4 OR 6 STATION



Rugged gas fusion machine designed for the preparation of 1 to 6 glass disks for XRF analysis or acid solutions for analysis by AA or ICP.

Key features

- 4 or 6 fusion stations
- Fully Automatic: PREMELTING, MELTING, SWIRLING, POURING and Bi-Level COOLING
- Individual station selection
- Maximum Temperature 1250°C (1600°C flame temperature)
- VFD Blue Screen with Touch Buttons
- Up to 6 user-defined recipes
- Homogenization by Swirling, variable frequency and speed
- Adjustable speed pouring and angle
- Separate mould preheating
- Mould retraction for precise control of cooling
- Cooling: 2 stages mould cooling
- Safe enclosed, cold to cold operation
- Cool touch glass viewing window
- Emergency stop button; Automatic gas cut-off safety system
- USB communication link

Technical specifications

- Electrical: 110 or 240 VAC 50/60 Hz
- Dimensions: 900mm(L) x 550mm(D) x 600mm(H) - Weight: 110kg
- Gas : propane/LPG :30mbar or alternative natural gaz:80mbar;
Air: 5bar, Oxygen: 4bar

Ordering information

- **PHOENIX P2/VFD 4000**: Produces 4 samples simultaneously (XRF or ICP)
- **PHOENIX P2/VFD 6000**: Produces 6 samples simultaneously (XRF or ICP)

Shipping dimensions

- Dimensions: 1160mm(L) x 950mm(W) x 880mm(H)
- Weight: 180kg



i Suitable crucibles & moulds – page 45





AUTOMATIC WEIGHING: FLUX

XRWEIGH

LIMS



The xrWeigh takes the hard work out of flux weighing, removing a repetitive task from your laboratory while improving accuracy and traceability.

Simple Operation – “One touch” operation, just turn it on! Attach flux bottle, set your target and let the xrWeigh do the rest

Easy Clean – Simple flux bottle replacement, easy access for cleaning, low maintenance

Reliable – Based on the existing single system architecture, simple modular design, extensively tested

Key features

- In built stability checking system
- Adjustable load receptor with overload detection
- Internal calibration weight for improved accuracy and repeatability
- Force compensation technology weighing system
- Simple touch screen operation for selection of target weight and range

Technical specifications

- Capacity: 1 Vial or 1 crucible
- Readability: 0.1 mg
- Accuracy ≤ 1 mg (speed dependent)
- Linearity: $\pm .2$ mg
- Speed > 90 vials per hour
- Dimensions: 420mm(W) x 450mm(D) x max. 350mm(H)
- Weight: 20kg

Ordering information

- **xrweigh**: Automatic weighing flux
- **3064130**: xrWC Vial & Deep Blue Cap - 250 vials

Shipping dimensions

- Dimensions: 500mm(L) x 500mm(W) x 450mm(H)
- Weight: 50kg





AUTOMATIC WEIGHING: FLUX

XRWEIGH CAROUSEL



The xrWeigh takes the hard work out of flux weighing, removing a repetitive task from your laboratory while improving accuracy and traceability.

Simple Operation – “One touch” operation, just turn it on! Attach flux bottle, set your target and let the Carousel do the rest

Fast – Weigh 30 vials of flux in less than 20 minutes

Easy Clean – Simple flux bottle replacement, easy access for cleaning, low maintenance

Reliable – Based on the existing single system architecture, simple modular design, extensively tested

Key features

- In built stability checking system
- Adjustable load receptor with overload detection
- Internal calibration weight for improved accuracy and repeatability
- Force compensation technology weighing system
- Simple touch screen operation for selection of target weight and range

Technical specifications

- Capacity 30 Vials or 18 crucibles
- Readability: 0.1mg
- Accuracy ≤ 1 mg (speed dependent)
- Linearity: $\pm .2$ mg
- Speed > 90 vials per hour
- Dimensions: 750mm(W) x 600mm(D) x max. 420mm(H)
- Weight: 35kg

Ordering information

- **xrweigh carousel:** Automatic weighing flux with carousel – Capacity 30 vials or 18 crucibles
- **3064130:** xrWC Vial & Deep Blue Cap - 250 vials

Shipping dimensions

- Dimensions: 950mm(L) x 750mm(W) x 450mm(H)
- Weight: 110kg





HIGH PURITY MOLTEN FLUXES



Full Range of Fusion Fluxes

We offer a full range of premium fusion fluxes. No matter what is your fusion method, we have the flux to suit your application.

Homogenous Composition

Thanks to our proprietary manufacturing process, our chemicals show a precise and stable composition over time.

Customs Blends

We offer custom-tailored fluxes for your application. We can vary the Li:B ratio, the granulometry and non-wetting agent or oxidizer content.

Fused & Homogeneous

Our borate fluxes are produced as pre-fused, high density, granular particles.

Outstanding Purity

We have two grades available: 99.99+% and 99.998+% purity. We also offer custom grades on request.

GRANULAR FLUXES WITHOUT ADDITIVE

We offer a full range of fluxes with different Li:B ratio to suit your application. All products are available in 2 grades: **standard (99.99+%)** and **high purity (99.998+%)**.

FLUX NAME	Description	Melting P. (°C)	Quantity
FLUX ST100	Sodium Tetraborate	740°	1 or 2 kg
FLUX LT100	Lithium Tetraborate	920°	1 or 2 kg
FLUX LM100	Lithium Metaborate	845°	1 or 2 kg
FLUX LT80:LM20	80% Lithium Tetraborate/20% Lithium Metaborate	900°	1 or 2 kg
FLUX LT70:LM30	70% Lithium Tetraborate/30% Lithium Metaborate	890°	1 or 2 kg
FLUX LT66:LM34	66% Lithium Tetraborate/34% Lithium Metaborate	875°	1 or 2 kg
FLUX LT50:LM50	50% Lithium Tetraborate/50% Lithium Metaborate	870°	1 or 2 kg
FLUX 12:22	35.3% Lithium Tetraborate/64.7% Lithium Metaborate.	845°	1 or 2 kg



HIGH PURITY MOLTEN FLUXES

GRANULAR FLUXES WITH ADDITIVES

We offer a full range of fluxes with integrated additives. Our standard catalog includes various flux compositions with different LiBr or LiI contents. All products are available in 2 grades: **standard (99.99+%)** and **high purity (99.998+%)**.

We also offer fluxes with embedded oxidizers such as LiNO_3 and NaNO_3 . If you can't find what you need in the list, just contact us, we'll make your very own product to your request.



Granular fluxes with Lithium Bromide

FLUX NAME	Description	Melting P. (°C)	Quantity
FLUX LT100+02LiBr	99.8% Lithium Tetraborate/0.2% Lithium Bromide	920°	1 or 2 kg
FLUX LT100+05LiBr	99.5% Lithium Tetraborate/0.5% Lithium Bromide	920°	1 or 2 kg
FLUX LT66:LM34+02LiBr	99.8% Flux LT66:LM34/0.2% Lithium Bromide	875°	1 or 2 kg
FLUX LT66:LM34+05LiBr	99.5% Flux LT66:LM34/0.5% Lithium Bromide	875°	1 or 2 kg
FLUX LT50:LM50+02LiBr	99.8% Flux LT50:LM50/0.2% Lithium Bromide	870°	1 or 2 kg
FLUX LT50:LM50+05LiBr	99.8% Flux LT50:LM50/0.5% Lithium Bromide	870°	1 or 2 kg

Granular fluxes with Lithium Iodide

FLUX NAME	Description	Melting P. (°C)	Quantity
FLUX LT100+05LiI	99.5% Lithium Tetraborate/0.5% Lithium Iodide	920°	1 or 2 kg
FLUX LT66:LM34+05LiI	99.5% Flux LT66:LM34/0.5% Lithium Iodide	875°	1 or 2 kg
FLUX LT50:LM50+05LiI	99.5% Flux LT50:LM50/0.5% Lithium Iodide	870°	1 or 2 kg

Granular fluxes with Oxidizers

All fluxes are available with addition of various % of lithium nitrate or sodium nitrate. The oxidizing agent is embedded in the flux and will not separate during handling.

FLUX NAME	Description	Melting P. (°C)	Quantity
FLUX LT100+5LN	95% Lithium Tetraborate/5% Lithium nitrate	-	1 or 2 kg
FLUX LT66:LM34+10LN	89.5% Flux LT66:LM34/10% Lithium nitrate	-	1 or 2 kg
FLUX 12:22+20SN	80% Flux 12:22/20% Sodium nitrate	-	1 or 2 kg

Granular fluxes with Oxidizers & Lithium Bromide

FLUX NAME	Description	Melting P. (°C)	Quantity
FLUX LT66:LM34+10LN+05LiBr	89.5% Flux LT66:LM34/10% Lithium nitrate /0.5% Lithium Bromide	875°	1 or 2 kg



HIGH PURITY MOLTEN FLUXES

Granular fluxes with Internal Standard

FLUX NAME	Description	Melting P. (°C)	Quantity
FLUX Ni+	Thulium doped flux for High Accuracy Nickel Analysis	-	1 kg
FLUX Fe+	Terbium doped flux for High Accuracy Iron Analysis	-	1 kg
FLUX Al+	Rubidium doped flux for High Accuracy Al & Si Analysis	-	1 kg

Technique using flux with Internal Standard

- Precision significantly better than either conventional XRF or other analysis
- The technique is fast
- X-ray technique independent of conventional α -correction, relying only on the ratio of the analyte to IS peaks.

ADDITIVES: TO IMPROVE

A full range of additive is available, from the non-wetting agents to oxidizers.

A fusion procedure relies on the dissolution of a properly oxidized sample in the molten flux. During the procedure, a sub-oxidized sample can be oxidized with a nitrate-based compound. When heated, such oxidizer will promote the full oxidation of your sample in order to ensure a complete dissolution in the flux.

The non-wetting (nwa) agents will avoid the melt sticking on both the crucibles and the molds. Too little nwa could result in dirty crucibles and cracked beads.

Our fluxes are available with the additives integrated at the factory. But for method development, an inventory of various additives are convenient tools in any fusion lab.

Oxidising Agent

	Description	Melting P. (°C)	Quantity
LiNO ₃	Lithium nitrate, crystal powder	264	1 kg
NaNO ₃	Sodium nitrate, crystal powder	308	1 kg
Sr(NO ₃) ₂	Strontium nitrate, crystal powder	570	1 kg
FerroOX1	Oxidizer mix for Fusion of ferro-alloys	-	1 kg



HIGH PURITY MOLTEN FLUXES

Non Wetting Agent (NWA)

	Description	Melting P. (°C)	Quantity
LiBr	Lithium bromide, crystal powder	552	1 kg
LiBr-sol	Lithium bromide, solutions (250g/l) Non-wetting agent in solution ready for dispensing.	-	1 l
LiBr15	Lithium bromide, solutions (250g/l) – dropper Non-wetting agent in solution ready for dispensing.	-	15 ml
LiI	Lithium iodide, crystal powder	469	100 g
LiI50	Lithium iodide, crystal powder	469	50 g
LiI-sol	Lithium Iodide, solutions (250g/l) Non-wetting agent in solution ready for dispensing.		
NH₄I	Ammonium Iodide, Tablets (21.4mg - 66.6% NH ₄ I)	551	1500 tablets/ bottle

Other Additives

	Description	Melting P. (°C)	Quantity
Li₂CO₃	Lithium carbonate, powder, High-Purity 99.99+%	723	1 kg
Na₂CO₃	Sodium carbonate, powder, High-Purity 99.99+%	720	1 kg

i

XRF SCIENTIFIC

maintains large amount of product in stock for rapid deliveries. The company has also a special program to allow their customer to choose multi-drop shipments on a global basis

FUSION ACCESSORIES

Glass Disk Remover

The Glass Disk Remover is a vacuum pick-up tool for picking up and placing the fused glass disk.

Item Code	Description
SO-462-3125	Handling tool for glass disk.

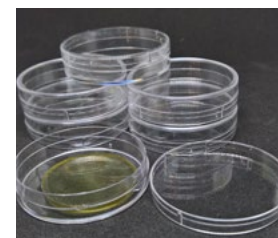




FUSION ACCESSORIES

Clear Plastic Boxes

Store your fused beads and press tablets in good condition. Transparent boxes with sealed lid



Item Code	Description
SO-TB001	Transparent boxes with sealed lid Ext. : Ø45 x 12mm - 100 pcs
SO-TB002	Transparent boxes with sealed lid Ext. : Ø45 x 12mm - 1000 pcs

TONGS

Platinum tip stainless steel tong

Item Code	ESTIMATED WEIGHT (g)
TGS250	250mm long with 5 or 10g per tong
TGS300	300mm long with 5 or 10g per tong



Platinum tip stainless steel tong with radiation shield

Item Code	ESTIMATED WEIGHT (g)
TGF420	420mm long with 12g per tong
TGF620	620mm long with 12g per tong



ZIRCONIUM CRUCIBLES

Zirconium is effective crucible material for fusions using:
Sodium carbonate: Decomposes most silicates of chromium, nickel, calcium, aluminum, also sulfates of barium and lead; halides of silver.

Sodium peroxide: Fusion for very refractory or high-silica materials such as chromite, magnetite, ilmenite, rutile, silicon, silicon carbide and certain alloys and steel.

Crucible for automatic fusion equipment

Phoenix crucible

CODE NUMBER	TOP DIAMETER (mm)	BOTTOM DIAMETER (mm)	DEPTH (mm)	RING/RIM DIAMETER (mm)
ZFX200	40	36	44	49

Standard thickness: 1.14mm

Flanged Rim: A formed rim, integral to the crucible (no welded on), at the crucible's top edge.

xrFuse crucible

CODE NUMBER	TOP DIAMETER (mm)	BOTTOM DIAMETER (mm)	DEPTH (mm)	RING/RIM DIAMETER (mm)
ZXS25	38	27	36	-

Standard thickness: 1.14mm



XRF
scientific



41 \ Crucibles

43 \ Dishes

44 \ Capsules, beakers

45 \ Fusion labware

58 \ Speciality products

59 \ Refining service

59 \ Platinum care products

Platinum Labware



XRF Scientific Platinum Labware

XRF Scientific provides an extensive range of Platinum Crucibles, Dishes and Moulds. Our Platinum Labware comes in standard configurations or we can assist in the design and manufacture of specialised platinum products. We take great pride in the fact that it can meet your laboratory needs from the most basic platinum utensils through to the most intricate individual designs.

- Perfect analytical surface
- Produced seamless to avoid weak spots
- Accurate flatness for correct and reproducible analytic results
- Inspected high purity materials

Materials

Metals used for laboratory apparatus must have the following properties:

- High temperature strength
- High melting point
- Ductility
- Corrosion resistance
- Oxidation resistance



Platinum and its alloys possess these qualities and is therefore the most widely used metal for analytical laboratory apparatus. Properties of platinum and some common platinum alloys are briefly discussed here. All platinum from XRF Scientific conforms to International Metal Standards.

Platinum

Platinum is the best known and least rare of the platinum group metals. Its high melting point, 1773 °C, ductility and excellent resistance to chemical attack by acids and fusion mixtures makes it very suitable for laboratory ware.

Platinum 5% Gold

Universally accepted material of choice for crucible and casting moulds for spectrographic analysis by x-ray fluorescence (XRF). The alloy has higher temperature strength than pure platinum and has a “non-wetting” property, which results in easy removal of the sample after fusion and allows for many reproducible assays.

Platinum 3.5% Rhodium

The rhodium alloys have higher hardness and high temperature strength making it suitable for more aggressive conditions.

Platinum 10% Rhodium

This alloy has melting point of 1850 °C, it has greater hardness and higher strength than other platinum alloy. It is capable of maintaining its shape under the hottest furnace conditions.

Auralloy

This alloy combines the “non-wetting” property of the Pt/Au alloy and the extra strength and durability of Pt/Rh alloys.

Fusion Alloy

Platinum/Gold 5% alloy with added dopants for enhanced grain structure and increased strength at fusion temperatures. Better suited to harsh fusion conditions such as fusion lines.



CRUCIBLES

STANDARD FORM CRUCIBLES

Code Number	Capacity (cc)	Diameter (mm)	Depth (mm)	Estimated weight (g)				
				Standard Form	RIM only	Base only	RIM & BASE	Standard LID only
GCS2.5	2.5	12	15	3	4	4	5	2
GCS5	5	20	22	4	5	5	6	2
GCS8	8	25	24	6	7	7	8	2
GCS10	10	25	28	7	7.5	8	9	3
GCS15	15	30	31	11	12	13	14	4
GCS20	20	33	35	15	16	17	18	5
GCS25	25	36	34	19	20	21	23	5
GCS30	30	40	36	22	24	26	27	7
GCS35	35	41	38	25	26	27	32	7
GCS40	40	42	42	30	32	34	36	7
GCS50	50	45	44	38	40	42	45	8
GCS60	60	45	47	46	48	50	54	9
GSC70	70	49	53	50	52	54	63	12
GCS80	80	51	53	51	54	63	72	14
GCS90	90	54	57	52	59	71	81	15
GCS100	100	56	57	59	68	73	90	17
GCS110	110	56	60	68	71	81	95	19
GCS120	120	64	66	84	88	90	98	22
GCS150	150	65	69	100	104	107	114	27
GCS200	200	80	65	150	159	165	180	30
GCS250	250	81	73	175	179	183	190	32
GCS700	700	107	105	300	305	315	320	50



Available Capacity
2.5-700ml (larger sizes made to order)

Options
Lids, reinforced rims and/or bases.

**Reinforcing with a rigid rim**

Reinforcing of the rim gives the crucible a more robust character enabling regular handling with tongs, and reducing rim deformation.

i

All are offered in: Pure platinum - Pt/Au alloy 95/5 - Pt/Rh alloy 97/3 - Pt/Rh alloy 90/10 - Fusion Alloy



CRUCIBLES

LOW PROFILE CRUCIBLE

Code Number	Capacity (cc)	Diameter (mm)	Depth (mm)	Estimated weight (g)				
				Standard Form	RIM only	Base only	RIM & BASE	Standard LID only
GCL8	8	25	21	6	7	7	8	2
GCL10	10	27	23	7	7.5	8	9	3
GCL15	15	30	27	11	12	13	14	4
GCL20	20	33	28	15	16	17	18	5
GCL25	25	36	30	19	20	21	23	5
GCL30	30	40	32	22	24	26	27	7
GCL35	35	42	33	25	26	27	32	7
GCL40	40	43	34	30	32	34	36	7
GCL50	50	46	37	38	40	42	45	8
GCL60	60	48	39	46	48	50	54	9
GCL70	70	52	41	50	52	54	63	12
GCL75	75	52	44	50	53	58	67	13
GCL80	80	52	47	51	54	63	72	14
GCL90	90	57	48	52	59	71	81	15
GCL100	100	57	51	59	68	73	90	17
GCL110	110	57	54	68	71	81	95	19
GCL120	120	57	57	84	88	90	98	22
GCL125	125	58	59	97	101	105	114	25
GCL150	150	60	60	122	126	110	124	26



Available Capacity
8-125ml (larger sizes
made to order)

Options
Lids, reinforced rims
and/or bases

VOLATILE MATTER CRUCIBLE

Code Number	Capacity (cc)	Diameter (mm)	Depth (mm)	Estimated weight (g)	
				Crucible	Flanged cover
GVM10	10	25	28	7	6
GVM15	15	31	31	11	8
GVM20	20	33	35	15	9
GVM25	25	36	35	19	10
GVM30	30	40	36	22	11
GVM40	40	42	42	30	13
GVM50	50	45	44	38	14





DISHES

Evaporating dishes may be ordered also with reinforced rim and heavy base. The additional cost for reinforcement is far outweighed by longer life and ease of handling. If covers are required, please specify.

FLAT BOTTOM DISH

Code Number	Capacity (cc)	Diameter (mm)	Depth (mm)	Estimated weight (g)				
				Standard Form	RIM only	Base only	RIM & BASE	Standard LID only
GD20	20	41	20	6	7	8	9	6
GD25	25	42	23	8	9	10	12	10
GD35	35	49	25	12	13	14	16	13
GD40	40	51	26	15	17	18	20	14
GD50	50	53	29	17	19	21	25	15
GD60	60	58	30	20	21	23	27	19
GD75	75	65	30	25	27	30	33	22
GD100	100	70	33	33	35	37	40	25
GD125	125	74	34	42	44	45	48	28
GD150	150	77	41	50	53	55	60	33
GD175	175	84	40	55	59	64	68	41
GD200	200	90	43	67	71	75	80	44
GD250	250	94	42	80	82	83	88	51
GD300	300	110	45	94	98	100	105	55
GD400	400	115	48	133	137	140	148	58
GD500	500	124	50	170	179	185	200	61
GD750	750	124	75	270	290	310	350	61



EVAPORATION DISH

Code Number	Capacity (cc)	Diameter (mm)	Depth (mm)	Estimated weight (g)
GED55	55	59	22	28
GED80	80	59	30	32
GED100	100	67	28	40
GED125	125	69	32	42
GED150	150	69	40	50



i

Couldn't find the perfect match?

Just contact us and we find the matching product together. We manufacture custom made products exactly to your specification. Or our application engineers will help you design and implement the needed solution.



DISHES

MILK ANALYSIS DISH

Code Number	Capacity (cc)	Top diameter (mm)	Bottom diameter (mm)	Depth (mm)	Estimated weight (g)
GMD13	13	42	32	12	12
GMD30	30	50	40	17	16
GMD45	45	55	40	25	22



CAPSULES & BREAKERS

CAPSULE-KAWIN CRUCIBLE

Code Number	Capacity (cc)	Top diameter (mm)	Bottom diameter (mm)	Depth (mm)	Estimated weight (g)
GCK8	8	28	20	15	9
GCK16	16	33	20	30	23
GCK19	19	34	20	35	25



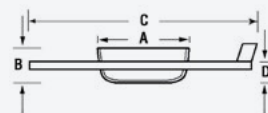
BEAKER

Code Number	Capacity (cc)	Top diameter (mm)	Bottom diameter (mm)	Estimated weight (g)
GB110	110	45	70	170
GB220A	220	68	60	200
GB220B	220	59	80	230



Loss on Ignition (LOI)

Code Number	Dimensions (mm)				Estimated weight (g)
	A	B	C	D	
AC8	32	10	50	4.5	70 (Includes Lid)



i

All are offered in: Pure platinum - Pt/Au alloy 95/5 - Pt/Rh alloy 97/3 - Pt/Rh alloy 90/10 - Fusion Alloy



FUSION LABWARE

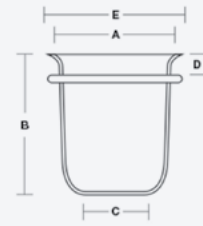
XRF Scientific manufactures a range of products for most automatic fusion equipment available. Non-standard or special items can be manufactured on request. Ongoing developments in analytical processes results in constant changes to laboratory equipment. If a product is not shown contact us for more detailed information or quotation.



FUSION LABWARE SUITABLE FOR PHOENIX

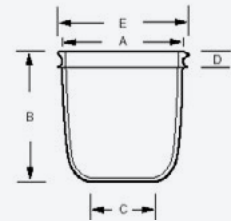
Ring Crucible

Code Number	Dimensions (mm)					Estimated weight (g)
	A	B	C	D	E	
AC1	34	36	20	8	37.5	40
AC2	34	43	20	12	37.5	40
AC3	34	36.5	20	9	40	40



Rolled Lip Crucible

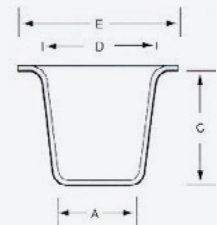
Code Number	Dimensions (mm)					Estimated weight (g)
	A	B	C	D	E	
AC4	33	38	21	7	39	40
AC5	33	30	20	7	38	30
AC6	40	35	22	4	50	36
AC7	33	41	21	9	39	40



Autolock Crucible Holders Available in Platinum/Gold

Solution (ICP-AES)

Code Number	Dimensions (mm)					Estimated weight (g)
	A	B	C	D	E	
AC10	17	-	18	27	34	15
AC11	35	-	45	50	55	50
AC12	13	-	30	31	42	20



i

Couldn't find the perfect match?

Just contact us and we find the matching product together. We manufacture custom made products exactly to your specification. Or our application engineers will help you design and implement the needed solution.



FUSION LABWARE

FUSION LABWARE SUITABLE FOR PHOENIX

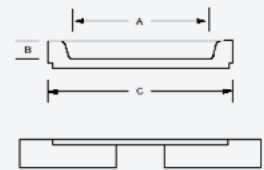
Mould

Code Number	Dimensions (mm)			Estimated weight (g)
	A	B	C	
AM1	29/31	3	42	60-100
AM2	30/32	3	42	60-100
AM3	30/32	4	42	60-100
AM4	30/32	3	46	60-100
AM5	32/34	3	46	60-100
AM5-5	32/34	5	46	60-100
AM6	33/35	3	46	60-100
AM6.4	33/35	4	46	60-100
AM7	39/41	4	52	60-100
AM7.5	39/41	5	52	60-100
AM7.6	39/41	6	52	60-100
AM8	39/41	3	56	60-100
AM12	34/36	4	55	60-100
AM13	38/40	4	52	60-100
Mould Holders Available in Platinum/Gold				



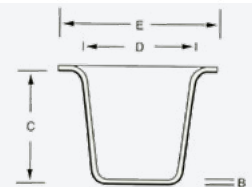
Mould Furnace Type and Plate

Code Number	Dimensions (mm)			Estimated weight (g)
	A	B	C	
AM9	39/41	35	44	93
AMH10	41.5	-	54	27



Mouldable

Code Number	Dimensions (mm)					Estimated weight (g)
	A	B	C	D	E	
AM11	29/31	3	25	44	56	80-150
AM10	39/41	3	25	44	56	80-150



i

All are offered in: Pure platinum - Pt/Au alloy 95/5 - Pt/Rh alloy 97/3 - Pt/Rh alloy 90/10 - Fusion Alloy



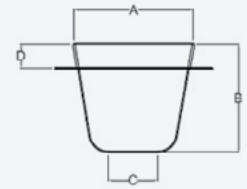
FUSION LABWARE

FUSION LABWARE SUITABLE FOR XRFUSE



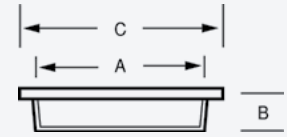
Crucible

Code Number	Dimensions (mm)					Estimated weight (g)
	A	B	C	D	E	
DC1	36	38	19	6	44	30
DC2	36	38	19	6	44	40



Mould

Code Number	Dimensions (mm)			Estimated weight (g)
	A	B	C	
DM1	39/41	4	50	60-100
DM2	37/39	4	50	60-100
DM5	32/34	4	42	60-100
DM6	30/32	4	42	60-100

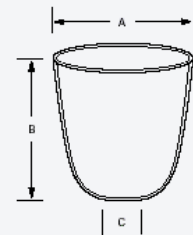


FUSION LABWARE SUITABLE FOR MODUTEMP



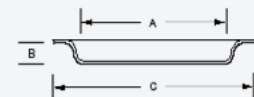
Crucible

Code Number	Dimensions (mm)			Estimated weight (g)
	A	B	C	
TC1	36	35	18	30
TC2	36	40	18	30



Mould

Code Number	Dimensions (mm)			Estimated weight (g)
	A	B	C	
TM1	39/41	3	50	60-100
TM2	30/32	3	42	60-100



i

Fusion Alloy & Auralloy: alloy with added dopants for enhanced grain structure

- Extended service life - cost reduction
- Higher deformation resistance - increased functionality
- Preservation of the moulds flatness - more accurate and reproducible analysis results

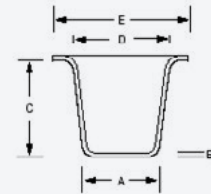


FUSION LABWARE

FUSION LABWARE SUITABLE FOR MODUTEMP

Mouldable

Code Number	Dimensions (mm)					Estimated weight (g)
	A	B	C	D	E	
TG1	39/41	3	30	45	56	130

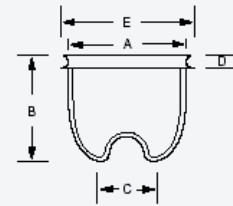


FUSION LABWARE SUITABLE FOR CLAISSE®



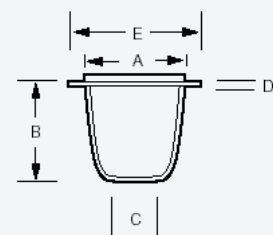
Dimple Crucible

Code Number	Dimensions (mm)					Estimated weight (g)
	A	B	C	D	E	
CC1	37	32	20	5	43	26
CC2	37	32	20	5	43	30
CC8	35	35	21	3	43	60
CC21	36.5	32	20	5.5	43	26
CC22	36.5	32	20	5.5	43	31



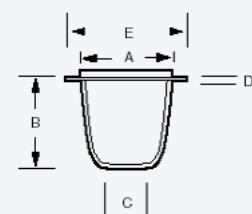
Flat Base Crucible

Code Number	Dimensions (mm)					Estimated weight (g)
	A	B	C	D	E	
CC3	35	35	17	3.5	40	21
CC4	35	35	21	3.5	44	26
CC24	36.5	32	20	5.5	43	26
CC25	36.5	32	20	5.5	43	30



Flat Base Side Dimple Crucible

Code Number	Dimensions (mm)					Estimated weight (g)
	A	B	C	D	E	
CC5	37	32	26	5	43	30
CC26	36.5	32	20	5.5	43	26
CC27	36.5	32	20	5.5	43	30



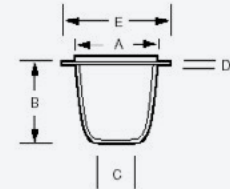


FUSION LABWARE

FUSION LABWARE SUITABLE FOR CLAISSE®

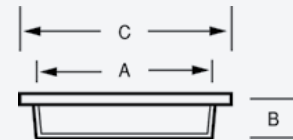
Flat Base NO Side Dimple Crucible

Code Number	Dimensions (mm)					Estimated weight (g)
	A	B	C	D	E	
CC5-N	37	32	26	5	43	30
CC23	31.6	35	15	3.9	43	24



Mould

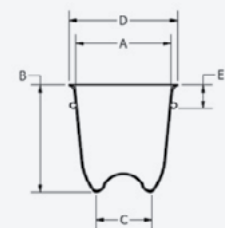
Code Number	Dimensions (mm)			Estimated weight (g)
	A	B	C	
CM1	30/31	6	39	18 or 30
CM9	30/32	6	39	21 or 27
CM2	31/33	6	41	19 or 32
CM21	31.5/32.6	6	41	31
CM3	32/34	6	41	21 or 36
CM13	32/36	6	45	40 or 50
CM4	32/38	6	45	22 or 36
CM22	34.5/35.6	3.5	44	44
CM5	35/37	6	44	25 or 48
CM8	37/40	6	49	28 or 48
CM6	38/41	6	49	29 or 48
CM10	38/40	6	48	34 or 43
CM23	39.5/40.6	3.5	49	49
CM7	40/42	6	49	34 or 48



FUSION LABWARE SUITABLE FOR EAGON 2

Dimple Crucible

Code Number	Dimensions (mm)					Estimated weight (g)
	A	B	C	D	E	
EC2	32.5	37	20	37.5	6	40
EC4	33.8	36.5	18.7	37.5	8	40
EC6	33.2	36.5	16	38.5	6	40



i

All are offered in: Pure platinum - Pt/Au alloy 95/5 - Pt/Rh alloy 97/3 - Pt/Rh alloy 90/10 - Fusion Alloy

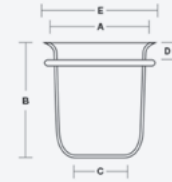


FUSION LABWARE

FUSION LABWARE SUITABLE FOR EAGON 2

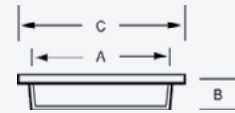
Flat Base Crucible

Code Number	Dimensions (mm)					Estimated weight (g)
	A	B	C	D	E	
EC3	32.5	37	20	6	37.5	40
EC5	33.8	36.5	18.7	8	37.5	40



Mould

Code Number	Dimensions (mm)			Estimated weight (g)
	A	B	C	
EM3	31/32.5	3.5	50	40 or 80
EM11	39/40.5	3.5	56	60 or 100

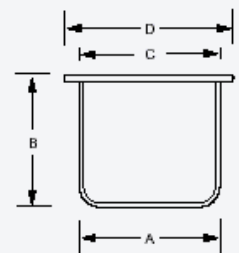


FUSION LABWARE SUITABLE FOR PERL'X®



Crucible

Code Number	Dimensions (mm)				Estimated weight (g)
	A	B	C	D	
PC1	41	40	41	49	116
PC2	41	40	41	49	80
PC3	44	40	44	52	90
PC4	38	40	42	50	75
PC5	28	40	38	50	70
PC6	28	40	40	50	75
PC7	34	22	46	54	80
PC9	42	41	40	50	90
PC10	32.7	40	40.40	50	78



i

Couldn't find the perfect match?

Just contact us and we find the matching product together. We manufacture custom made products exactly to your specification. Or our application engineers will help you design and implement the needed solution.

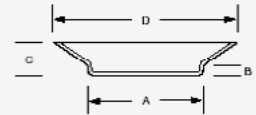


FUSION LABWARE

FUSION LABWARE SUITABLE FOR PERL'X®

Mould

Code Number	Dimensions (mm)				Estimated weight (g)
	A	B	C	D	
PM2	30/32	3	5	55	40
PM3	30/32	3.5	11.5	65	50
PM8	32/33.5	3.5	11.5	65	50
PM10	33.5/35.5	3.5	11.5	65	50
PM6	35.5/36.5	3	5	55	50
PM5	35.5/36.5	3.5	11.5	65	50
PM7	39.5/40.5	3	11.5	65	58
PM4	39.5/40.5	3.5	11.5	65	58
PM9	39.5/40.5	4	11.5	65	58
PM11	30/32	3.6	10.2	65	70

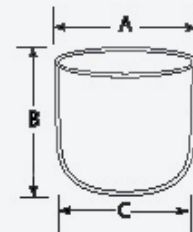


FUSION LABWARE SUITABLE FOR KATANAX®



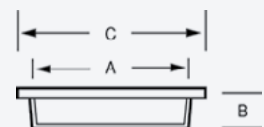
Crucible

Code Number	Dimensions (mm)			Estimated weight (g)
	A	B	C	
KC1	40	32	58	26
KC2	40	32	58	30
KC4 Flared	44	32	58	43



Mould

Code Number	Dimensions (mm)			Estimated weight (g)
	A	B	C	
KM1	30/31	6	39	18 or 30
KM2	31/33	6	41	19 or 32
KM3	32/34	6	41	21 or 36
KM4	32/38	6	45	22 or 36
KM5	35/37	6	44	25 or 48
KM8	37/40	6	49	28 or 48
KM6	38/41	6	49	29 or 48
KM7	40/42	6	49	34 or 48
KM9	30/32	6	39	18 or 30





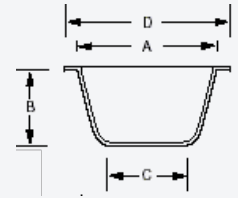
FUSION LABWARE

FUSION LABWARE SUITABLE FOR HERZOG

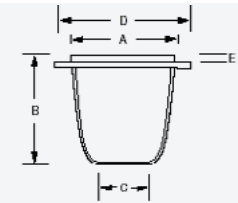


Crucible

Code Number	Dimensions (mm)					Estimated weight (g)
	A	B	C	D	E	
HC1	49	30	37	-	-	90
HC2	49	30	37	56	-	110

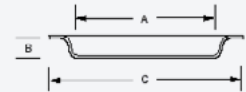


Code Number	Dimensions (mm)					Estimated weight (g)
	A	B	C	D	E	
HC3	36	36.5	22	44	5	40
HC4	36	38.5	22	44	5	40



Mould

Code Number	Dimensions (mm)			Estimated weight (g)	
	A	B	C		
HM1	29/31	3	44	40	
HM5	32/34	3.5	44	60	
HM2	38/41	3	52	50	
HM3	39/41	4	50	30-100	
HM4	39/41	4	50	SQ	120

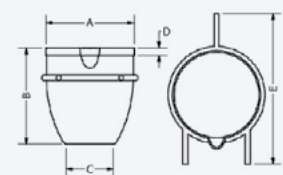


FUSION LABWARE SUITABLE FOR VULCAN / AUTOFLUXER / VITRIOX MACHINES



Three Pin Crucible

Code Number	Dimensions (mm)						Estimated weight (g)
	A	B	C	D	E	F	
SC1	35	38	20	5	60	8	31
SC2	44	38	26	5	60	8	50
SC3	39	43	22	5	60	8	38



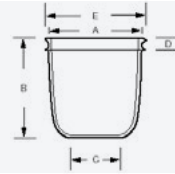


FUSION LABWARE

FUSION LABWARE SUITABLE FOR VULCAN /
AUTOFLUXER / VITRIOX MACHINES

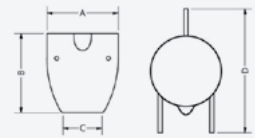
Rolled Lip Crucible

Code Number	Dimensions (mm)					Estimated weight (g)
	A	B	C	D	E	
SC4	33	38	22	7	39	40



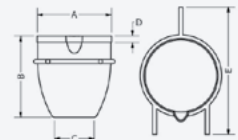
Three Pin Crucible

Code Number	Dimensions (mm)					Estimated weight (g)
	A	B	C	D	E	
SC5	34	38	20	60	13	25
SC10	34	38	20	60	13	38



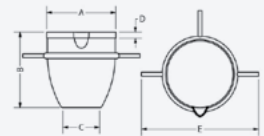
Three Pin Crucible with Ring and Reinforced Rim

Code Number	Dimensions (mm)						Estimated weight (g)
	A	B	C	D	E	F	
SC6	34	38	20	3	60	13	44
SC7	36	38	22	3	60	13	51
SC9	36	38	22	3	60	13	33



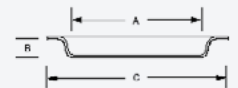
Offset Three Pin Crucible with Ring and Reinforced Rim

Code Number	Dimensions (mm)						Estimated weight (g)
	A	B	C	D	E	F	
SC8	34	38	20	3	60	13	44



Mould (Square Flange)

Code Number	Dimensions (mm)			Estimated weight (g)
	A	B	C	
SM1	29/31	3	41	27
SM2	30/32	3	41	29
SM3	32/34	3	41	31
SM4	34/36	3	51	45
SM5	39/41	3	51	45





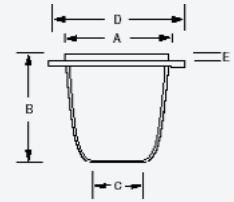
FUSION LABWARE

FUSION LABWARE SUITABLE FOR EQUILAB



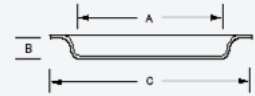
Crucible

Code Number	Dimensions (mm)					Estimated weight (g)
	A	B	C	D	E	
EQC1	36	28	34.52	6	46.5	50



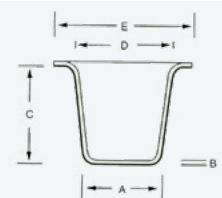
Mould

Code Number	Dimensions (mm)			Estimated weight (g)
	A	B	C	
EQM1	29/31	5	49	40
EQM3	31/33	5	49	40
EQM5	34/36	5	49	50
EQM7	39/41	5	49	50



Mouldable

Code Number	Dimensions (mm)					Estimated weight (g)
	A	B	C	D	E	
EQM11	31/34	3	30	37.8	46	80

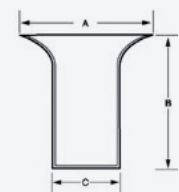


FUSION LABWARE SUITABLE FOR LINN



Crucible

Code Number	Dimensions (mm)			Estimated weight (g)
	A	B	C	
MC1	41	49.5	20	38
MC2	35	48	20	35



i

All are offered in: Pure platinum - Pt/Au alloy 95/5 - Pt/Rh alloy 97/3 - Pt/Rh alloy 90/10 - Fusion Alloy

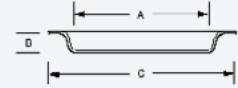


FUSION LABWARE

FUSION LABWARE SUITABLE FOR LINN

Mould

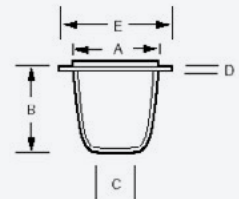
Code Number	Dimensions (mm)			Estimated weight (g)
	A	B	C	
MM1	31/33	3	41	30
MM2	39/41	3	51	45



FUSION LABWARE SUITABLE FOR NIEKA

Crucible

Code Number	Dimensions (mm)					Estimated weight (g)
	A	B	C	D	E	
NC1	36	32	20	5	43.0	25



Mould

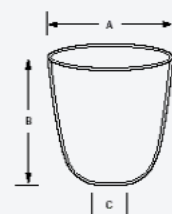
Code Number	Dimensions (mm)			Estimated weight (g)
	A	B	C	
NM1	30/31	6	40	28
NM3	32/34	6	42	29
NM5	35/37	6	45	30
NM7	40/42	6	50	34



FUSION LABWARE INITIATIVE SCIENTIFIC

Crucible

Code Number	Dimensions (mm)			Estimated weight (g)
	A	B	C	
BC4	33	34	18	35
BC2	34.5	36	26	30
BC3	40	39	26	35



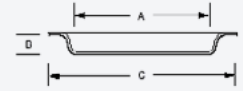


FUSION LABWARE

FUSION LABWARE INITIATIVE SCIENTIFIC

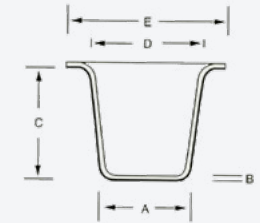
Mould

Code Number	Dimensions (mm)			Estimated weight (g)
	A	B	C	
BM1	32/34	3	49	60-100
BM2	38/40	3	54	60-100
BM3	39/41	3	54	60-100



Mouldable

Code Number	Dimensions (mm)					Estimated weight (g)
	A	B	C	D	E	
BM8	32/34	3	30	40	49	100
BM7	32/34	6	30	40	49	100
BM5	39/41	3	30	45	55	150
BM6	40/42	3	30	45	55	150

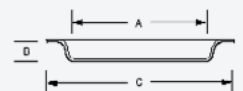


FUSION LABWARE MULTI PURPOSE



Multi-Purpose Spun Type Mould

Code Number	Dimensions (mm)			Estimated weight (g)
	A	B	C	
XM1	29/31	5	42	20-40
XM36	29/31	4	49	20-40
XM2	30/31	6	37	20-40
XM35	35/40	8	44	40
XM34	30/35	5	50	40
XM28	36/38	3	55	30-50
XM3	38/40	3.5	52	30-50
XM4	38/40	8	48	30-50



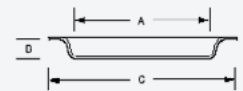


FUSION LABWARE

FUSION LABWARE MUTLI PURPOSE

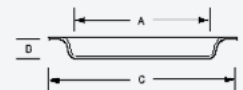
Multi-Purpose Spun Type Mould

Code Number	Dimentions (mm)			Estimated weight (g)
	A	B	C	
XM5	39/41	5	52	30-50
XMD1	29/31	6	42	40
XMD3	30/32	6	42	40
XMD4	31/33	6	52	50
XMD5	32/34	6	46	40
XMD7	35/37	6	48	50
XMD9	38/40	5	52	60
XMD10	39/41	5	52	60
XMD11	39/41	6	52	60
XMD12	40/42	6	52	60



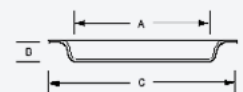
Multi-Purpose Spun Type Mould (Square or Round Flange)

Code Number	Dimentions (mm)			Estimated weight (g)
	A	B	C	
XM29	29/31	4	41	30
XM30	30/32	4	41	30
XM31	32/34	4	41	30
XM32	34/36	4	51	50
XM33	39/41	4	51	50



Multi-Purpose Pressed Type Mould

Code Number	Dimentions (mm)			Estimated weight (g)
	A	B	C	
XM6	29/31	3	42	45-100
XM7	30/32	2.4	42	45-100
XM8	30/32	3	42	45-100
XM9	30/32	4	42	50-100
XM10	32/34	3	46	50-100
XM11	33/34	2.4	46	50-100



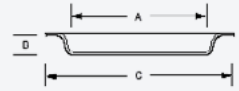


FUSION LABWARE

FUSION LABWARE MUTLI PURPOSE

Multi-Purpose Pressed Type Mould - Continued

Code Number	Dimentions (mm)			Estimated weight (g)
	A	B	C	
XM27	36/38	3	55	60-100
XM12	38/40	3	52	60-100
XM13	38/40	4.5	52	60-100
XM14	39/41	3	52	60-100
XM15	39/41	4	52	80-100



SPECIALITY PRODUCTS

TONGS

Platinum tip stainless steel tong

Code Number	Weight (g)
TGS250	250mm long with 5 or 10g per tong
TGS300	300mm long with 5 or 10g per tong



Platinum tip stainless steel tong with radiation shield

Code Number	Weight (g)
TGF420	420mm long with 12g per tong
TGF620	620mm long with 12g per tong



Titanium tong

Code Number	Weight (g)
TGF250	250mm long
TGF350	350mm long



i

Couldn't find the perfect match?

Just contact us and we find the matching product together. We manufacture custom made products exactly to your specification. Or our application engineers will help you design and implement the needed solution.



SPECIALITY PRODUCTS

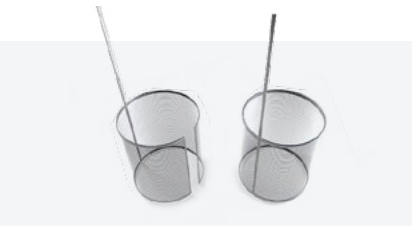
CUSTOM FABRICATIONS

XRF Scientific can supply a wide range of speciality products to supplement their standard range of labware. Contact us to discuss your particular requirements.

> Tweezers > Spatulas > Stirring Rods > Inoculating Loops > Electrodes > Cathodes > Foils > Tubes > Wire > Rods

Custom fabrications

Code Number	Dimensions (mm)	Weight (g)
Custom Fabrications	Please provide shape, dimensions, alloy and the general purpose. (with drawing, if possible)	Based on your specs



REFINING SERVICE



We offer refining services that can help you reclaim value from used products at the end of their life cycle. Our terms for refining used laboratory ware are among the most competitive in the industry. Additionally, we can set up a weight metal account for the remanufacturing of all precious metals products or offer payouts at competitive rates.

Refining

Our refining team is dedicated to help customers get the most out of their precious metals. Damaged laboratory ware, like crucibles, moulds, thermocouple wires, foil, etc.; can be sent to us for refining. Choose from a range of convenient payment options: Credit of funds to your account, credit of metal to your weight metal account (for use against future orders).



PLATINIUM CARE PRODUCTS

RESHAPERS FOR MOULDS & CRUCIBLES

Keeps your crucibles and moulds in good condition. Mould flatness is important for repeatable analytical results.

Code Number	Description
XGS-M + mould code	Reshaper – Steel – to suit mould
XGS-C + crucible code	Reshaper – Steel – to suit crucible
XG + crucible code	Reshaper –Plastic – to suit crucible





PLATINIUM CARE PRODUCTS

MOULD & CRUCIBLE CLEANING HOLDERS (IN PTFE)

Mould cleaning holder helps to protect casting surface during cleaning.
Acid resistant – T° range: - 250°C to 290°C

Code Number	Description
3039860	5 crucibles Dimensions: Ø Base 110mm (140mm with crucibles) x (H) 280mm
3039850	12 moulds Dimensions: Ø Base 110mm x (H) 280mm



ECONOMICAL POLISHING SYSTEM

Crucibles and moulds should be polished when they lose their sheen, are scratched or have performed approximately 1000 fusions.

The platinum polishing system includes:

- Polishing Rotary Tool (Variable Speed, 125W; 240V AC/50Hz)
- Polishing Paste (3 & 8 Diamond Paste)
- Polishing Oil
- Felt Pads



Code Number	Description
SO MINI-POL	Polishing complete system: Rotary Tool + polishing kit
3059130	Polishing kit: Polishing Paste + Polishing Oil + Felt Pads

PROFESSIONAL POLISHING SYSTEM

Crucibles and moulds should be polished when they lose their sheen, are scratched or have performed approximately 1000 fusions.

The platinum polishing system includes:

- Polishing Lathe (Variable Speed, 650mm length; 23.5kg) 240V AC/50Hz or 120V AC/60Hz
- Crucible and Mould Polishing Jigs (Phoenix, Claisse, Katanax, Perl'X,..)
- Polishing Paste (3 & 8 Diamond Paste)
- Polishing Oil & Pump Pack
- 1000 Grit Paper
- Soft & Hard Felt Pads



Code Number	Description
3013020	Polishing complete system: Polishing lathe + crucible & mould jigs + polishing kit
3059130	Polishing kit: Polishing Paste + Polishing Oil + Felt Pads + Grit paper



Electric power is
required for this instrument



62 \ Hydraulic presses

65 \ Pressing accessories

67 \ Binding & grinding additives

68 \ Powder mixing and accessories

Sample preparation by pelletizing



HYDRAULIC PRESSES

MANUAL HYDRAULIC PRESSES

A manually operated hand press designed for preparing powder samples for IR and X-Ray Fluorescence Analysis. It features an accurate pressure gauge, tough housing with polycarbonate safety door.

Key features

- Polycarbonate safety guards
- Adjustable upper bolster
- Adjustable pressure control valve
- Vacuum Ports
- Pressure release valve
- Optional digital pressure display for precise pressure applications (0.01 Ton increments)

Technical specifications

- Max. Load on Ram (Piston) T25: 25 Tons
- MT25: Load Range (0.5Ton increments) T25: 2 – 25 Ton
- MT25D : Load Range (0.01 Ton increments) : 2 – 25 Ton
- Top Bolster Diameter: 45mm
- Top Lead Screw Vertical travel: 112mm
- Ram (Piston) Bolster Diameter: 105mm
- Ram (Piston) Stroke: 25mm
- Min/max Dist. between Pressing Faces: 73 / 185mm
- Dimensions (H min/max x W x D): 497/609 x 370 x 300 mm
- Weight: 49kg

Ordering information

- **XRPRESSMT25:** Manual Hydraulic Press - 25 Ton
- **XRPRESSMT25D:** Manual Hydraulic Press with digital display - 25 Ton

Shipping dimensions

- Dimensions: 800mm(L) x 600mm(W) x 670mm(H)
- Weight: 85kg





HYDRAULIC PRESSES

MOTORIZED HYDRAULIC PRESS T25



The MotorT25, is a power assisted hydraulic press operating to 25 Tons. The press has been designed to handle a wide variety of pressing applications, including XRF and IR sample preparation.

The pressure can be directly set at the manometer. A safety switch prevents pressing with an open door. An illuminated emergency pushdown button is also mounted at the front plate.

Pushing the green button starts the pressing process and it stops with reaching the predefined pressure. The blue button releases the pressure gently until the position is back in his normal position.

The MotorT25 is durable, easy to use and ideal for repetitive pressing operations at higher loads when used in conjunction with Lightweight Dies for x-ray fluorescence sample preparation.



Key features

- Large working distance between pressing surfaces
- Low noise operation
- Integral high clarity PETG safety Guards

Technical specifications

- Max. Load on Ram (Piston) T25: 25 Tons
- Load Range (0.5Ton increments) T25: 2 – 25 Ton
- Top Bolster Diameter: 45mm
- Top Lead Screw Vertical travel: 112mm
- Ram (Piston) Bolster Diameter: 100mm
- Ram (Piston) Stroke: 25mm
- Max/Min Dist. between Pressing Faces: 185mm - 73mm
- Dimensions (H x B x T): 620 x 290 x 420mm - Weight: 68kg

Ordering information

- **XRPRESS^{ET}25**: Motorized Hydraulic Press - 25 Tons (230v, 50Hz)

Shipping dimensions

- Dimensions: 800mm(L) x 600mm(W) x 670mm(H)
- Weight: 85kg





HYDRAULIC PRESSES

AUTO HYDRAULIC PRESSES



The Auto Presses are programmable, microprocessor controlled, power assisted hydraulic presses, with 8, 15 25 and 40 Tons load capability, designed for a wide variety of pressing applications.

The microprocessor control allows up to 6 user defined operation cycles each with up to 10 segments. Programming is carried out using the high contrast LCD screen which graphically displays each program segment in turn via intuitive symbols and prompts.

Key features

- Microprocessor controlled
- Intuitive user interface
- Large high contrast display
- Multi-sequence programming
- 6 user defined operation cycles
- Standard safety features

Technical specifications

- Max. Load on Ram (Piston) T8: 1-8 Tons (0.2 Ton increments)
- Max. Load on Ram (Piston) T15: 2-15 Tons (0.2 Ton increments)
- Max. Load on Ram (Piston) T25: 3-25 Tons (0.5 Ton increments)
- Max. Load on Ram (Piston) T40:4-40 Tons (0.5 Ton increments)
- Electrical: 240 VAC 50/60 Hz .
- Base Footprint 425mm(W) x 405mm(D)
- Height (without lead screw): 545-640mm
- Sample Area: 220mm(Dia) x 155mm(H) - Weight: 95 - 135kg

Ordering information

- **AUTO T8**: Auto Hydraulic Press / Digital Display - 8 Tons (230v, 50Hz)
- **AUTO T15** : Auto Hydraulic Press / Digital Display - 15 Tons (230v, 50Hz)
- **AUTO T25**: Auto Hydraulic Press / Digital Display - 25 Tons (230v, 50Hz)
- **AUTO T40** : Auto Hydraulic Press / Digital Display - 40 Tons (230v, 50Hz)

Shipping dimensions

- Dimensions (**AUTO T8; 15; 25**) : 1070mm(L) x 610mm(W) x 670mm(H)
- Weight (**AUTO T8; 15; 25**): 124kg





PRESSING ACCESSORIES & ADDITIVES

EVACUABLE PELLETT

Hardened stainless steel Evacuatable Pellet Dies, used for compacting powdered samples into disks or briquettes.

Simplified handling for the 13...50mm: only the sliding part has to be removed.

All of the dies are equipped with nitrile O-ring seals and an evacuation port to allow for the removal of moisture, if desired, during the pressing process.

Key features

- Hardened Stainless Steel
- Highly polished pellets
- Unique simplified handling

Evacuatable Pellet Die complete

Code Number	DIMENSIONS (mm)
MA-E03-H	3mm evacuatable pellet die; Max load 1.5 Tons
MA-E05-H	5mm evacuatable pellet die; Max load 4.0 Tons
MA-E08-H	8mm evacuatable pellet die; Max load 6.0 Tons
MA-E10	10mm evacuatable pellet die complete; Stainless Steel, Max load 7.0 Tons
MA-E13	13mm evacuatable pellet die complete; Stainless Steel, Max load 10.0 Tons
MA-E20	20mm evacuatable pellet die complete; Stainless Steel, Max load 20.0 Tons
MA-E25	25mm evacuatable pellet die complete; Stainless Steel, Max load 30.0 Tons
MA-E32	32mm evacuatable pellet die (2.9kg); Max load 40.0 Tons - Lightweight dies
MA-E40	40mm evacuatable pellet die (2.9kg); Max load 40.0 Tons - Lightweight dies
MA-E50	50mm evacuatable pellet die; Max load 40.0 Tons



Unique simplified handling

Fill the Die Set, put the plunger on top and start pressing with your lab press. At the end of the pressing, instead of taking out and dismantling the Die Set, just simply pull out the bottom slider and with some smooth pressure, the pellet will be released.



PRESSING ACCESSORIES & ADDITIVES

EVACUABLE PELLETT

Hardened stainless steel Evacuatable Pellet Dies for pressing into steel rings for compacting powdered samples into press tablets. Used as backup tool for the automated system combining pulverizing mill and pellet press. Fitted to accept standard dimensions of steel rings.

All of the dies are equipped with nitrile O-ring seals and an evacuation port.

Steel ring dimensions

- Outside diameter : 51.5 mm
- Inside diameter : 35 mm
- Height : 8.6 mm



Code Number	DIMENSIONS (mm)
SP-GS535-040	Evacuatable Pellet Die Complete - ringed sample die - 35mm plunger (2.9kg); Max load 40.0 Tons - Lightweight dies

FILLING TOOL

Press Pellet Filling Tool / Preparing Firm Backing with Boric acid or MIX55 for small quantity of sample.

Code Number	Description
SO-FL032	32mm filling tool
SO-FL040	40mm filling tool



ALUMINUM CUPS

Code Number	Pellet produced	Description	Package
SO-S32	32mm	Straight Walled Aluminum cups 30 x 8mm	1000pcs/box
SO-S40	40mm	Straight Walled Aluminum cups 38.5 x 9.5mm	600pcs/box
SO-S40H	40mm	Straight Walled Aluminum cups 39.8 x 7.5mm	600pcs/box
SO-T40	40mm	Tapered Aluminum cups 39.8 x 9.5mm	600pcs/box
SO-T32	32mm	Tapered Aluminum cups 31.8 x 9mm	1000pcs/box





PRESSING ACCESSORIES & ADDITIVES

BINDING & GRINDING ADDITIVES

MIX55: UNIVERSAL - grinding & binding additive. Can be blended with sample at 10 – 25% by weight. Excellent self-binding properties with adequate grinding abrasiveness during normal grinding cycle. May be used undiluted as sample matrix.

Code Number	Description	Package
SO-press005	MIX55 powder (grinding & binding)	0.8kg
SO-press00550	MIX55 tablets; 500mg (grinding & binding)	500pcs/bottle
SO-press00550K	MIX55 tablets; 500mg (grinding & binding)	5000pcs/bottle

LICOWAX: UNIVERSAL - binding additive. Can be blended with sample at 10 – 25% by weight. Excellent self-binding properties.

Code Number	Description	Package
SO-press004	Licowax® C micropowder	0.75kg
SO-press0041	Licowax® C micropowder	5kg
SO-press005	Licowax® C micropowder	20kg

CELLULOSE: Grinding & binding additive. Can be blended with sample at 10 – 20% by weight. Good self-binding properties with adequate grinding abrasiveness during high grinding cycle.

Code Number	Description	Package
SO-press002	Cellulose powder	0.8kg
SO-press00333H	Cellulose tablets; 330mg	1000pcs/bottle

BORIC ACID: Used undiluted as sample matrix.

Code Number	Description	Package
SO-press001	Boric acid powder	1.5kg
SO-press00150	Boric acid tablets; 500mg	1500pcs/bottle

FREEBORE: Used undiluted as sample matrix.

Code Number	Description	Package
SO-press0011	FreeBORE powder	0.8kg

PRECUT PELLET FILM

Protective Die Pellet Film: Perfect method to protect surface of die pellets and to avoid cross contamination.

Code Number	Description	Package
SO-PF32	Precut Pellet Film – 32mm	500pcs/box
SO-PF40	Precut Pellet Film – 40mm	500pcs/box





PRESSING ACCESSORIES & ADDITIVES

BINDING POWDER MIXER - VORTEX

This Powder Mix accessory is designed to mix and homogenize a powder sample with a binding additive prior to compression into pellets for XRF analysis. Homogenizing, milling and mixing with aid of balls.

Key features

- Compact and Ergonomic Design
- Fitted with a "roller" clamp to hold many type of vials sizes and diameter
- Simplified handling
- Variable Speed
- Two working mode : continue or touch

Technical specifications

- Motor: 0 to 3000 rpm
- Dimensions: 175mm(D) x 145mm(W) x 140mm(H) - Weight: 2kg



CODE NUMBER	Description
SO-PM01KIT	Powder Mix - Vortex (35 W, 230V, 50HZ) – Complete XRF Kit INC. 100 Vials and Mixing Balls

MIXING VIALS

The polystyrene vials are suitable to mix and homogenize a powder sample with a binding additive prior to compression into pellets for XRF analysis. Homogenizing, milling and mixing with aid of balls.



Code Number	Description
SO-PM03	Mixing vials (with snap caps) - 100 vials

MIXING BALLS

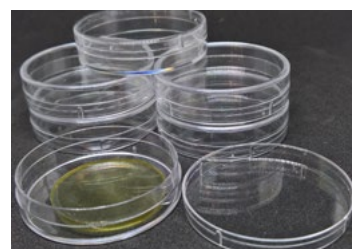
Methyl methacrylate ball to help the mixing and homogenization of a powder sample with a binding additive prior to compression into pellets for XRF analysis.



Code Number	Description
SO-PM05	Methyl methacrylate ball - 9mm; 100/bag

CLEAR PLASTIC BOXES

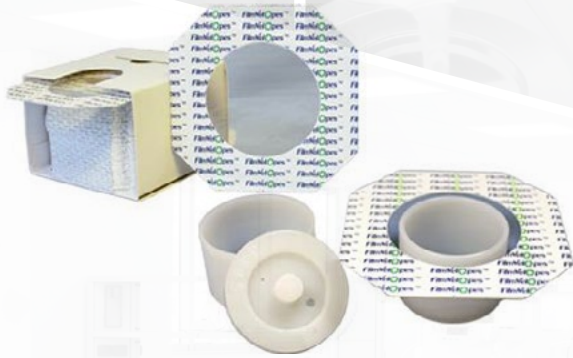
Store your fused beads and press tablets in good condition. Transparent boxes with sealed lid



Code Number	Description
SO-TB001	Transparent boxes with sealed lid Ext.: Ø45 x 12mm - 100 pcs (fused glass disk and press pellets)
SO-TB002	Transparent boxes with sealed lid Ext.: Ø45 x 12mm - 1000 pcs (fused glass disk and press pellets)



XRF
scientific



70 \ XRF sample cups

71 \ XRF thin films

XRF Sample Cup & Film



XRF SAMPLE CUPS

XRF Scientific offers a comprehensive selection of XRF sample cups to fit many different spectrometers. Manufactured from a select blend of contaminant-free polyethylene, these disposable cups are offered in standard universal sizes of 32, 35, 40, 45 and 47mm.

i

Couldn't find the perfect match?
Just contact us and we find the matching product together.

	Code Number	Description (Packaging: 100/pack)	OD (mm)	ID (mm)	H (mm)	VOL. (mm)
	CUP-SO-32	Universal: Single Open Ended Cup/Ring/Collar	32	25	24	10
	CUP-SO-40	Universal: Single Open Ended Cup/Ring/Collar	40	32	24	18
	CUP-SO-47	Thermo®: Single Open Ended Cup/Ring/Collar	47	38	18.5	15
	CUP-BRU1-40	Bruker® & Thermo®: Double Open Ended with Lid	40	34	21	14
	CUP-BRU2-40	Bruker®: Double Open Ended with Lid	40	35	30	18
	CUP-PAN1-35	Panalytical®: Double Open Ended with Lid	35	28	30	14
	CUP-UN1-45	Universal: Double Open Ended with Lid	45	39	34	20
	CUP-SPEC1-32	Spectro®: Double Open Ended with Lid	32	25	23	10
	CUP-UN3-32	Universal: Double Open Ended - Cup/Ring/Cap	32	26	26	14
	CUP-PAN2-35	Panalytical®: Double Open Ended - Cup/Ring/Cap	35	28	32	18
	CUP-PAN3-45	Panalytical®: Double Open Ended - Cup/Ring/Cap	45	40	32	36
	CUP-DOU-32	Universal: Double Open Ended - Cup/2 Rings	32	26	24	12
	CUP-UN4-35	Universal: Double Open Ended - Cup/Ring/Cap	35	28	30	16
	CUP-DOU-40	Universal: Double Open Ended - Cup/2 Rings	40	32	24	18
	CUP-DOU-45	Universal: Double Open Ended - Cup/2 Rings	45	40	30	32
	CUP-OX1-32	Universal: Double Open Ended - Cup/2 Rings	32	30	38.5	18
No photo	CUP-MC1-31	Universal: Double Open Ended - Cup/2 Rings	31	17	21	10
No photo	CUP-UN2-32	Niton®: Double Open Ended - Cup/Ring/Cap	32	26	24	12



XRF THIN FILMS

MYLAR®, POLYPROPYLENE, KAPTON®, TEFLON®, POLYESTER & HOSTAPHAN®.

XRF Scientific x-ray films are carefully selected because of their minimal impurity trace levels and their thickness uniformity that ensures reproducibility from one lot to the next.

MYLAR®

	Code Number	Description	Package
2.5μ	MYL-2.5Roll	MYLAR®, 2.5μ, Continuous Roll - 7.6cm x 91.4 m	1 roll/box
	MYL-2.5Circ05	MYLAR®, 2.5μ, Pre-cut Circle – Ø63.5mm	500pcs/box
	MYL-2.5sheet05	MYLAR®, 2.5μ, Pre-cut sheet – 7.6cm x 7.6cm	500pcs/box
3.0μ	MYL-3.0Circ05	MYLAR®, 3.0μ, Pre-cut Circle – Ø89.0mm	500pcs/box
	FV-130-112	MYLAR®, 3.0μ; <i>FILMVELOPES CIRCLES</i> Ø38.1mm	100pcs/box
	FV-130-212	MYLAR®, 3.0μ; <i>FILMVELOPES CIRCLES</i> Ø50.8mm	100pcs/box
3.5μ	MYL-3.5Roll	MYLAR®, 3.5μ, Continuous Roll - 7.6cm x 91.4 m	1 roll/box
	MYL-3.5Circ05	MYLAR®, 3.5μ, Pre-cut Circle – Ø63.5mm	500pcs/box
	MYL-3.5Circ055	MYLAR®, 3.5μ, Pre-cut Circle – Ø89.0mm	500pcs/box
	MYL-3.5Circ051	MYLAR®, 3.5μ, Pre-cut Circle – Ø76.0mm	100pcs/box
	MYL-3.5sheet05	MYLAR®, 3.5μ, Pre-cut sheet – 7.6cm x 7.6cm	500pcs/box
	MYLS-3.5Circ001	MYLAR® Low sulfur , 3.5μ, Pre-cut Circle – Ø76mm	100pcs/box
	MYLS-3.5Circ05	MYLAR® Low sulfur , 3.5μ, Pre-cut Circle – Ø63.5mm	500pcs/box
	MYLS-3.5Circ10	MYLAR® Low sulfur , 3.5μ, Pre-cut Circle – Ø89mm	1000pcs/box
	FV-135-112	MYLAR®, 3.5μ; <i>FILMVELOPES CIRCLES</i> Ø38.1mm	100pcs/box
FV-135-212	MYLAR®, 3.5μ; <i>FILMVELOPES CIRCLES</i> Ø50.8mm	100pcs/box	
6.0μ	MYL-6.0Roll	MYLAR®, 6.0μ, Continuous Roll - 7.6cm x 91.4 m	1 roll/box
	MYL-6.0Circ05	MYLAR®, 6.0μ, Pre-cut Circle – Ø63.5mm	500pcs/box
	MYL-6.0Circ055	MYLAR®, 6.0μ, Pre-cut Circle – Ø89.0mm	500pcs/box
	MYL-6.0Circ051	MYLAR®, 6.0μ, Pre-cut Circle – Ø76.0mm	100pcs/box
	MYL-6.0sheet05	MYLAR®, 6.0μ, Pre-cut sheet – 7.6cm x 7.6cm	500pcs/box
	MYLS-6Circ001	MYLAR® Low sulfur , 6.0μ, Pre-cut Circle – Ø76mm	100pcs/box
	MYLS-6Circ05	MYLAR® Low sulfur , 6.0μ, Pre-cut Circle – Ø63.5mm	500pcs/box
	MYLS-6Circ055	MYLAR® Low sulfur , 6.0μ, Pre-cut Circle – Ø89mm	500pcs/box
	FV-160-112	MYLAR®, 6.0μ; <i>FILMVELOPES CIRCLES</i> Ø38.1mm	100pcs/box
FV-160-212	MYLAR®, 6.0μ; <i>FILMVELOPES CIRCLES</i> Ø50.8mm	100pcs/box	
12.0μ	MYL-12.0Roll	MYLAR®, 12.0μ, Continuous Roll - 7.6cm x 91.4 m	1 roll/box
	MYL-12.0sheet05	MYLAR®, 12.0μ, Pre-cut sheet – 7.6cm x 7.6cm	500pcs/box



XRF THIN FILMS

POLYPROPYLENE

	Code Number	Description	Package
4.0μ	POLYP-4.0Roll	POLYPROPYLENE, 4.0μ, Continuous Roll - 7.6cm x 91.4 m	1 roll/box
	POLYP-4.0Circ05	POLYPROPYLENE, 4.0μ, Pre-cut Circle - Ø63.5mm	500pcs/box
	POLYP-4.0Circ055	POLYPROPYLENE, 4.0μ, Pre-cut Circle - Ø89.0mm	500pcs/box
	POLYP-4.0Circ051	POLYPROPYLENE, 4.0μ, Pre-cut Circle - Ø76.0mm	100pcs/box
	POLYP-4.0sheet05	POLYPROPYLENE, 4.0μ, Pre-cut sheet - 7.6cm x 7.6cm	500pcs/box
	POLYPS-4.0Circ001	POLYPROPYLENE, Low sulfur 4.0μ, Pre-cut Circle - Ø76mm	100pcs/box
	POLYPS-4.0Circ05	POLYPROPYLENE, Low sulfur 4.0μ Pre-cut Circle - Ø63.5mm	500pcs/box
	POLYPS-4.0Circ055	POLYPROPYLENE, Low sulfur 4.0μ, Pre-cut Circle - Ø89mm	100pcs/box
	FV-240-112	POLYPROPYLENE ,6.0μ; <i>FILMVELOPES CIRCLES</i> Ø38.1mm	100pcs/box
	FV-240-212	POLYPROPYLENE ,6.0μ; <i>FILMVELOPES CIRCLES</i> Ø50.8mm	100pcs/box
5.0μ	POLYP-5.0Roll	POLYPROPYLENE, 5.0μ, Continuous Roll - 7.6cm x 91.4 m	1 roll/box
	POLYP-5.0Circ05	POLYPROPYLENE, 5.0μ, Pre-cut Circle - Ø63.5mm	500pcs/box
	POLYP -5.0sheet05	POLYPROPYLENE, 5.0μ, Pre-cut sheet - 7.6cm x 7.6cm	500pcs/box
6.0μ	POLYP-6.0Roll	POLYPROPYLENE, 6.0μ, Continuous Roll - 7.6cm x 91.4 m	1 roll/box
	POLYP-6.0Circ05	POLYPROPYLENE, 6.0μ, Pre-cut Circle - Ø63.5mm	500pcs/box
	POLYP-6.0Circ055	POLYPROPYLENE, 6.0μ, Pre-cut Circle - Ø89.0mm	500pcs/box
	POLYP-6.0Circ051	POLYPROPYLENE, 6.0μ, Pre-cut Circle - Ø76.0mm	100pcs/box
	POLYP -6.0sheet05	POLYPROPYLENE, 6.0μ, Pre-cut sheet - 7.6cm x 7.6cm	500pcs/box
	POLYPS-6.0Circ055	POLYPROPYLENE, Low sulfur 6.0μ, Pre-cut Circle - Ø89mm	500pcs/box
12.0μ	POLYP-12.0Roll	POLYPROPYLENE, 12.0μ, Continuous Roll - 7.6cm x 91.4 m	1 roll/box
	POLYP -12.0sheet05	POLYPROPYLENE, 12.0μ, Pre-cut sheet - 7.6cm x 7.6cm	500pcs/box
25.40μ	POLYP-25.4Roll	POLYPROPYLENE, 25.4μ, Continuous Roll - 7.6cm x 15.2 m	1 roll/box
	POLYP-25.4Roll01	POLYPROPYLENE, 25.4μ, Continuous Roll -10.2cm x 15.2m	1 roll/box
	KAP-25.4sheet	KAPTON®, 25.4μ, Pre-cut sheet - 7.6cm x 7.6cm	500pcs/box



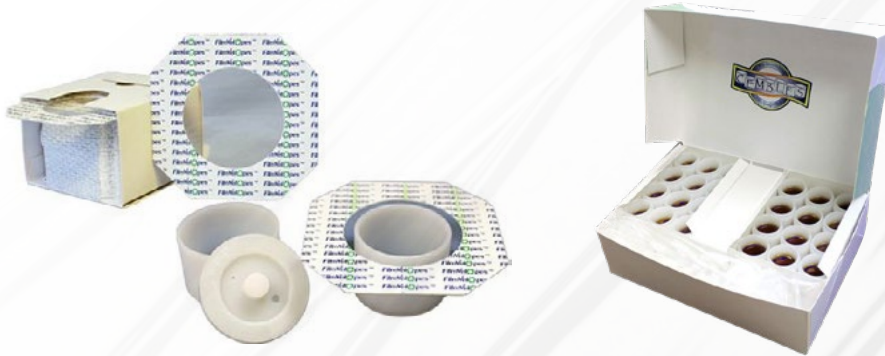
XRF THIN FILMS

KAPTON®

	Code Number	Description	Package
7.5μ	KAP-7.5Roll	KAPTON®, 7.5μ, Continuous Roll - 7.6cm x 15.2m	1 roll/box
	KAP-7.5Roll05	KAPTON®, 7.5μ, Continuous Roll - 7.6cm x 91.4m	1 roll/box
	KAP-7.5sheet	KAPTON®, 7.5μ, Pre-cut sheet – 7.6cm x 7.6cm	500pcs/box
12.7μ	KAP-12.7Roll	KAPTON®, 12.7μ, Continuous Roll - 7.6cm x 15.2m	1 roll/box
	KAP-12.7Roll05	KAPTON®, 12.7μ, Continuous Roll - 7.6cm x 91.4m	1 roll/box
	KAP-12.7sheet	KAPTON®, 12.7μ, Pre-cut sheet – 7.6cm x 7.6cm	500pcs/box
25.4μ	KAP-25.4Roll	KAPTON®, 25.4μ, Continuous Roll - 7.6cm x 15.2m	1 roll/box

HOSTAPHAN®

	Code Number	Description	Package
2.0μ	HOST-2.0Roll	HOSTOPHAN®, 2.0μ, Continuous Roll - 7.6cm x 91.4 m	1 roll/box
	HOST-2.0sheet05	HOSTOPHAN®, 2.0μ, Pre-cut sheet – 7.6cm x 7.6cm	500pcs/box
3.0μ	HOST-3.0Roll	HOSTOPHAN®, 3.0μ, Continuous Roll - 7.6cm x 91.4 m	1 roll/box
	HOST-3.0sheet05	HOSTOPHAN®, 3.0μ, Pre-cut sheet – 7.6cm x 7.6cm	500pcs/box
3.5μ	HOST-3.5Roll	HOSTOPHAN®, 3.5μ, Continuous Roll - 7.6cm x 91.4 m	1 roll/box
	HOST-3.5sheet05	HOSTOPHAN®, 3.5μ, Pre-cut sheet – 7.6cm x 7.6cm	500pcs/box







76 \ XRF Drift monitors

78 \ Reference materials

Reference Material & XRF Drift Monitor



XRF DRIFT MONITORS

The main use of an XRF monitor sample is to correct for instrumental drift over time. It is not necessarily a certified Reference Material (CRM) or calibration standard but can be used to correct for any changes in the calibration due to variation in instrument performance. The monitor should have good long term stability so that XRF instrument programs can be used for long periods without recalibration.

The prime requirement of a monitor is that the count rates for the elements it contains do not change over time. It is not necessary that the count rates of the elements be near those of the samples being analysed, but certain potential errors are reduced if there is an order of magnitude correspondence between the count rates from the monitor and the samples being analysed. Apart from other considerations this minimizes counting times.



AUSMON monitors

manufactured by XRF Scientific, have excellent long term stability and this enables them to be used to monitor instrument performance and count rates over extensive periods. Where very low concentrations are being determined, the count rate of the monitor is set not to match the analytes, but it is set to obtain a counting error smaller than required for analysis in a short counting time. Where major elements are being determined, and where the spectrometer has a high sensitivity to those elements, the count rate from the monitor has been adjusted not to exceed count rates that cannot be accurately handled by modern measuring equipment.

Instrument Maintenance

The data obtained from regular analysis of the monitor can also be used to evaluate instrument performance and the laboratory environment. Because these drift monitors do not change with time, intensity changes are indicative of some change in the instrument. A decrease in intensities may indicate instrument maintenance is required. For example, it is common for scintillation counters to decrease in efficiency due to moisture reacting with the NaI crystal. When this happens, the shorter wavelengths (eg SnK α) are minimally affected while there is a large decrease in intensity for longer wavelengths, (eg FeK α).

Checking Instrument Performance

Since the monitors vary very little, different laboratories can compare intensities from the monitor to check that the instruments are giving acceptable performance.

AUSMON – “Silicates & General” contains 53 elements, so it is possible to make a comparison using all the selectable parameters, ie changing crystals, detectors and collimators, etc.

Composition

This monitor contains the following elements as majors:





Fe ₂ O ₃	MnO	TiO ₂	CaO	K ₂ O	SO ₃
2.7%	1.0%	1.0%	1.5%	1.9%	1.7%
P ₂ O ₅	SiO ₂	Al ₂ O ₃	MgO	Na ₂ O	F
1.5%	24%	11.7%	10.3%	5.7%	5.7%

Additionally the sample contains approximately 0.2 – 0.5% of each of the following:

Sc, V, Cr, Co, Cu, Ni, Zn, Ga, Gd, Ge, Se, As, Rb, Sr, Br, Cl, Y, Zr, Nb, Mo, Ag, Cd, Sn, Sb, Te, Cs, Ba, La, Ce, Nd, Pr, Sm, Yb, Hf, Ta, W, Bi, Pb, Tl, Th & U.



XRF DRIFT MONITORS

	Standard types*	No. of Elements	Stock Code
	Silicates & General Majors: Si, Al, Mg, Na, Fe, Mn, Ti, Ca, K, F, S, P. Minors: Sc, V, Cr, Co, Cu, Ni, Zn, Ga, Gd, Ge, Se, As, Rb, Sr, Br, Cl, Y, Zr, Nb, Mo, Ag, Cd, Sn, Sb, Te, Cs, Ba, La, Ce, Nd, Pr, Yb, Sm, Hf, Ta, W, Bi, Pb, Tl, Th, U.	53	1201010
	Iron Ores Majors: Fe, Si, Al, Ca, F, Na, Mg. Minors: P, S, Cl, K, Ti, V, Cr, Mn, Co, Ni, Cu, Zn, As, Br, Sn, Ba, Pb, Mo, Cd, Sb, Bi.	28	1201020
	Bauxite Majors: Al, Fe, Si, Ca, F, Na, Mg, Ti. Minors: P, S, Cl, K, Ti, V, Cr, Mn, Co, Ni, Cu, Zn, As, Br, Sn, Ba, Pb, Mo, Cd, Sb, Bi, Ga.	29	1201030
	Mineral Sands Majors: Ti, Fe, Zr, Si, Y, La, Nd, F, Mg, Al, Na. Minors: Pr, Yb, P, F, Na, Mg, Al, S, Cl, K, Ca, Sc, V, Mn, Cr, Co, Ni, Cu, Zn, Br, As, Sr, Nb, Mo, Sn, Ba, Hf, Pb, Th, U, Cd.	39	1201040
	Cement Majors: Ca, Si, Al, Mg, Fe, Na, Cl, S, F. Minors: P, K, Ti, Cr, Mn, Zn, Sr, Br, Ba, Pb, As, Ni, Ti, Pb.	19	1201050
	Manganese Ores Majors: Mn, Fe, Si, Na, Mg, Al, Ti, Ba, V. Minors: P, K, Ca, Ti, Sr, Br, Ba, V, Pb.	15	1201070
	High Nickel Products Majors: Ni, Fe, S, Si, F, Na, Mg, Al. Minors: P, Cl, K, Ca, Ti, Mn, Cr, Co, Cu, Zn, As, Se, Br, Mo, Ag, Pb, Bi.	25	1201080
	Rare Earths Majors: La, Ce, Nd, Y, Al, Mg, Si, P, Na, Fe. Minors: Pr, Sm, Eu, Tb, Gd, Dy, Ho, Er, Tm, Yb, Lu, F, S, Cl, K, Ca, Sc, Ti, Mn, Ni, Br, Sr, Zr, Nb, Ba, Hf, Pb, Th, U.	39	1201090
	Sulphides - Lead, Zinc, Iron & Copper Ores Majors: Pb, Zn, Fe, Cu, Ni, S, Na, Mg, Al, Si, P, Ca, As, Sb, Bi. Minors: Cl, K, Ti, Co, Cr, Mn, Se, Ag, Cd, Sn, Ba, U, Mo, Te, Tl, F, Sr.	32	1201100

*Available in both 40mm & 32mm diameter size. Additional types & sizes available upon request



REFERENCE MATERIALS

REFERENCE MATERIALS CERTIFIED FOR PT, PD, AU, AG



Quality internationally accepted Reference Materials affordable for use on an every batch basis.

- Quality reference materials: Accepted by the International Association of Geoanalysts
- Used by laboratories, miners and explorers: For QA/QC management
- Formal certificate of analysis for each RM: Comply with the ASTM E1831-96
- Guaranteed homogeneity: Confirmed by independent formal testing.
- Affordable: For use on an every batch basis.
- Broad range of gold values: Blank (<0.002ppm) and 0.0798 to 30.49ppm.
- Oxide and sulphide matrices: With low moisture absorption.
- Technical support: For choosing RMs and statistically analysing results.
- Available in 2.5kg jars, 50g and 30g sachets.

CERTIFIED REFERENCE MATERIALS

We give access to an unique database with more than 30000 products. It enables you to find your required reference material simple and fast.

- Certified Reference Materials (CRM)
- Proficiency testing (PT's)
- Setting-Up-Samples (SUS) Metals
- Preparation of Powder Sample Sets
- XRF samples



Please contact us for more detailed information

FUSED CALIBRATION BEADS

Single and multi-element standards of fused borate beads, customised for your calibration. Manufactured from Certified Reference Materials (CRM) or customised for your analytical requirements. The Fused Calibration Beads are 40mm or 32mm diameter. Thickness of approximately 4mm and perfectly flat.



Our applications Scientists will help you design and implement the needed solution.



A series of horizontal dotted lines spanning the width of the page, providing a template for writing.



XRF

scientific



XRF SCIENTIFIC EUROPE

282 Av. de Roodebeek,
1030 Brussels, Belgium

t.: +32 (0)2 762 77 12
e: sales@xrfscientific.com

XRF SCIENTIFIC EUROPE

Seligenstädter Str. 100,
63791 Karlstein, Germany

t.: +49 (0)6188 954-2761
e: sales@xrfscientific.com

XRF SCIENTIFIC AMERICAS

620 Cathcart #259, Montreal,
Quebec, Canada, H3B 1M1

t.: +1 (514) 871 4997
e: sales@xrfscientific.com

XRF SCIENTIFIC AUSTRALIA

86 Guthrie Street, Osborne park
WA 6017, Australia

t.: +61 (0)8 9244 0600
e: sales@xrfscientific.com