

FLUXANA®

XRF Application Solutions

XRF Fusion Machines

VITRIOX® GAS Gas Fusion Technology



VITRIOX® ELECTRIC Electrical Fusion Technology



**NEW
DESIGN**

- Patented -

VITRIOX® GAS

The VITRIOX® GAS is a gas operated fusion machine with cold to cold automation and up to 6 positions that can operate simultaneously. Its technology is based on many years experience in XRF fusion and analysis. It offers:

Safety: optional platinum mould sensors, customer-specific safety housing and fume hood, gas detector, safety pilot

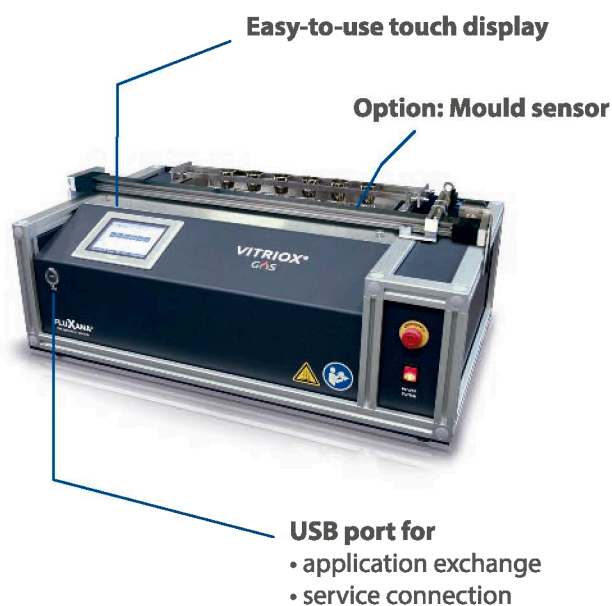
Precision: great advantages over pressed pellets preparation and good temperature control

Reliability: robust design and high quality parts ensure a long product life

Comfort: touch display for the storage of multiple application settings and fusion programs; easy-to-use software

Flexibility: upgradeable; ICP/AAS and peroxide option

Service: expert laboratory support; service team for international support; complete XRF solutions



ICP/AAS Option



Peroxide Option

VITRIOX® GAS 2, 4 and 6 stations

Technical Data	VITRIOX GAS 2XRF	VITRIOX GAS 4XRF	VITRIOX GAS 6XRF
Stations:	2 XRF	4 XRF	6 XRF
Voltage:	110 V/60 Hz 230 V/50 Hz	110 V/60 Hz 230 V/50 Hz	110V/60 Hz 230V/50 Hz
Power:	150 W	200 W	200 W
Temperatures:	0-1,450 °C	0-1,450 °C	0-1,450 °C
Permiss. air pressure:	4 bar	4 bar	4 bar
Recomm. natural gas pressure:	250 mbar	250 mbar	250 mbar
Recomm. propane gas pressure:	250 mbar	250 mbar	250 mbar
Recomm. oxygen gas pressure:	2 bar	2 bar	2 bar
Air consumption:	max. 1 m ³ /hr	max. 2 m ³ /hr	max. 3 m ³ /hr
Oxygen consumption:	max. 0.3 m ³ /hr at 3 bar	max. 0.8 m ³ /hr at 3 bar	max. 1.2 m ³ /hr at 3 bar
Natural gas consumption:	max. 0.48 m ³ /hr	max. 0.98 m ³ /hr	max. 1.44 m ³ /hr
Or LPG* liquified petroleum gas	max. 0.33 m ³ /hr	max. 0.48 m ³ /hr	max. 0.61 m ³ /hr
Length:	500 mm	500 mm	500 mm
Width:	650 mm	650 mm	705 mm
Height:	300 mm	300 mm	300 mm
Weight:	~ 35 kg	~ 40 kg	~ 45 kg
Samples per h:	5 - 7	8 - 10	16 - 20

* LPG, bottled gas

Other versions on request. Please ask for installation requirements!

VITRIOX® ELECTRIC

The VITRIOX® ELECTRIC is a fully automatic fusion machine with cold to cold operation for 1, 2, 4 or 6 samples (1 sample at a time). It has been designed to achieve the best possible results in day-to-day XRF laboratory routine. It offers:

Safety: casting dish monitoring, flux resistant **FLUXInert®** ceramics and safety housing with autolock function

Highest precision: closed oven design with lift bottom for precise temperature control; unique high speed 3D rotation

Comfort: autosampler handles samples automatically; oven room observation via mirror; touch display with easy to use software

Flexibility: modular design, ICP/AAS option; option: continuous operation with separate cooling station

Service: expert laboratory support; service team for international support; complete XRF solutions; wide range of calibrations possible

Special applications: volatile element analysis; use of quartz crucibles

EU Patent: 2 901 131 B1
US Patent: 9 651 463 B2



NEW DESIGN

VITRIOX® 1 station
- Patented -



VITRIOX® 4 stations with ICP option
- Patented -



Option:
quartz crucibles

- Patent pending -

VITRIOX® ELECTRIC 1, 2, 4 and 6 stations

Technical Data	1 Station	2 Stations	4 Stations	6 Stations
Stations:	1 XRF / ICP	2 XRF / ICP	4 XRF / ICP	6 XRF / ICP
Voltage:	230 V/50-60 Hz	230 V/50-60 Hz	230 V/50-60 Hz	230 V/50-60 Hz
Power:	3000 W	3000 W	3000 W	3000 W
Power supply:	1~ AC / 16A	1~ AC / 16A	1~ AC / 16A	1~ AC / 16 A
Temperatures:	0-1,250 °C	0-1,250 °C	0-1,250 °C	0-1,250 °C
Permiss. air pressure:	6 bar	6 bar	6 bar	6 bar
Air consumption:	max. 1.5 m ³ /hr	max. 1.5 m ³ /hr	max. 1.7 m ³ /hr	max. 1.9 m ³ /hr
Protection category:	IP20	IP20	IP20	IP20
Length:	800 mm	1107.5 mm	1307.5 mm	1507.5 mm
Depth:	760 mm	760 mm	760 mm	760 mm
Height:	862 mm	862 mm	862 mm	862 mm
Weight:	~ 120 kg	~ 120 kg	~ 135 kg	~ 150 kg
Samples per h:	3	4	5	6

Other versions on request. Please ask for installation requirements!

BORAMAT®

The BORAMAT® Material Doser is an automatic dosing machine for flux in XRF analysis. It is designed to improve day to day routine in the laboratory, allowing the user to weigh faster and monitor every weighing. Since it is compatible with all common laboratory scales, it can be installed in most laboratories without having to invest in a new scale.



Works with all common scales

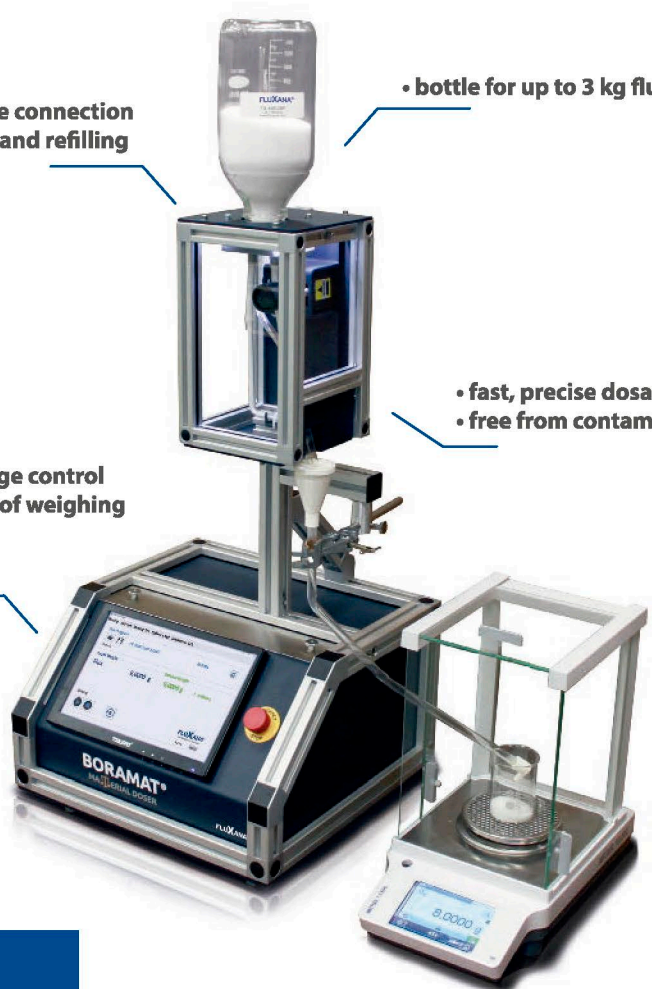
- universal bottle connection
- easy changing and refilling

• bottle for up to 3 kg flux

- fast, precise dosage
- free from contamination

- intelligent dosage control
- documentation of weighing protocols
- ready for LIMS

Multi position version with up to 18 samples coming soon!



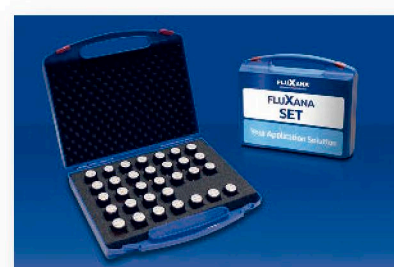
- compatible with scales from various manufacturers

Technical Data	BORAMAT®
Weight	17 kg
Power connection	100-240 V 50/60 Hz
Length	390 mm
Width	370 mm
Height (without bottle)	760 mm
Supply bottle	Thread GL45
Maximum bottle size	3 kg
Minimal balance precision	1 mg
Software	Windows 10
Scale requirements	Maximum Capacity: 220 g Readability: 0.1 mg Connection: RS232

Applications

We offer ready-to-go calibration sets for X-ray fluorescence analysis.

Please see our application flyer for further information or visit www.fluxana.com/applications



Safety Setup

Fume Hood with Ventilator

Fume hood made of high-grade steel.

- Motor (230 V/50 Hz/90 mA) continuously variable to 2760 r.p.m., 110 V version also available

- Height 300 mm, width 840 mm, depth 640 mm

Safety Housing

Recommended safety housing to prevent hot surface contact by the user.

For VITRIOX® GAS, a fume hood is attached to the safety housing.

For VITRIOX® ELECTRIC, the safety housing is part of the machine. A separate table and fume hood on top are recommended.

Table

Table with integrated drawer for all required accessories. Made of robust steel.

- Height 730 mm, width 910 mm, depth 760 mm



Example for VITRIOX® GAS

Tools

Item No.	Description
FS-OZ327	Crucible tongs, platinum shoes, length 230 mm, ca. 5 g Pt
VU-US1.9kit	Ultrasonic bath with heating, Vol. ca. 1.9 l for cleaning
WZ-0004a	Handling tool for beads and pellets
VU-Tiegel_AI2O3	Aluminium oxide crucible for determination of LOI (loss on ignition). Inexpensive and very robust alternative to platinum
VU-0020	Holder for cleaning moulds in ultra sonic bath

Quartz Crucible

Item No.	Description
VI-0540	Quartz crucible for VITRIOX® ELECTRIC
FS-VIH01	Platinum holding ring for quartz crucible, ca. 13g Pt



Ultrasonic Bath VU-US1.9kit



Handling Tool WZ-0004a



Quartz Crucible with Holder VI-0540, FS-VIH01

Lithium Borates

We deliver lithium borates with guaranteed purity from in-house production. With every delivery of flux you will receive a specification.

Anhydrous homogeneous pre-fused fluxes with a low loss on ignition and defined granulometry. With these fluxes, the sample is totally dissolved in a borate glass with a perfect surface.

Item No.	Description
FX-X00	Lithium metaborate
FX-X20	Lithium tetraborate : Lithium metaborate 20:80
FX-X35	Lithium tetraborate : Lithium metaborate 35.3:64.7 1.2 : 2.2
FX-X50	Lithium tetraborate : Lithium metaborate 50:50
FX-X65	Lithium tetraborate : Lithium metaborate 66:34
FX-X80	Lithium tetraborate : Lithium metaborate 80:20
FX-X90	Lithium tetraborate : Fluoride 90:10
FX-X100	Lithium tetraborate



- Non-hygroscopic
- Dust < 1%
- > 99.98 %



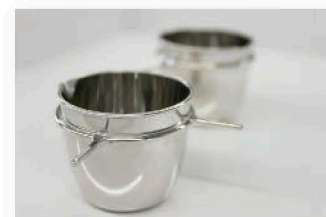
NEW: All fluxes available with a defined granulometry for BORAMAT® (FX-X100-P)

Available in different quantities. Other fluxes on request. **Included non-wetting agents (LiBr, LiI) available.**

Platinum Ware

Platinum ware made from platinum/gold 95/5 for fusion machines and laboratory needs. Old platinum ware is accepted for recycling as credit against your next order. All deliveries are insured by FLUXANA®.

We also offer all platinum ware in FKS. This surface finishing increases the lifetime of your crucibles and moulds.



Item No.	Description	Inner/Outer Diameter in mm	Height mm	Bottom mm	Weight g
FS-VIT01	Crucible VIT. E	20 / 34	38	0.5	45
FS-VIT03	Crucible VIT. E Large	22.9 / 39.1	36	0.5	55
FS-VIA4012	Mould VIT. E	29 / 31	3.8	0.8	30
FS-VIA4010	Mould VIT. E	34 / 36	3.8	0.8	46
FS-VIA4011	Mould VIT. E	32 / 34	3.8	0.8	30
FS-VIA4009	Mould VIT. E	39 / 41	3.8	0.8	46
FS-VIA4015	Mould VIT. E	39 / 41	3.8	1.4	80
FS-VID01	Lid VIT. E	-	-	-	8
FS-OT866	Crucible VIT. GAS	20 / 34	38	0.5	45
FS-OT867	Crucible VIT. GAS	22.5 / 36	38	0.5	54
FS-OA434	Mould VIT. GAS	29 / 31	3.8	0.8	31
FS-OA877	Mould VIT. GAS	32 / 34	3.8	0.8	31
FS-OA438	Mould VIT. GAS	34 / 36	3.8	0.8	45
FS-OA439	Mould VIT. GAS	39 / 41	3.8	0.8	46

For your order in FKS platinum, just add "FKS" to the part number! Other sizes and thicknesses on request. Moulds with 1.4 mm bottom available.

Sample Storage

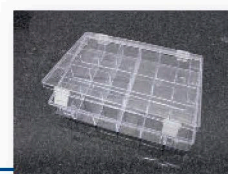
It is important to keep samples prepared as beads or pellets in a dust free and dry environment.

There is a wide range of boxes and containers for single or multiple samples and standards for XRF.

For storing your beads and pellets, we would recommend:

BX-0001-18, BX-0001-24:

Transparent boxes with lockable lid.



BX-0004-XX:

Transparent boxes for individual samples (32-50 mm). See table below.

Tip: Use our **WZ-0004a** tool to avoid finger contact with the sample.



NEW!

BX-0004-47:

Boxes with bead protection at the inner edge of the box. It prevents damage to the bead by avoiding contact of the bead surface to the box.



BX-0002-5, BX-0003-5:

Cabinets with drawers suitable for storage of non-hygroscopic samples.



BX-0010, BX-0011:

Desiccators to store your sensible calibration and monitor samples. Ideal combination with BX-0002-5, BX-0003-5 or BX-0001-24.



Item No.	Description	Compartments
BX-0001-18	Box 210x120x35 mm with lid	18x max 32 mm Ø pellets
BX-0001-24	Box 330x220x53 mm with lid	24x max 52 mm Ø pellets
BX-0002-5	Drawer cabinet with 5 drawers, each with 42 partitions for max 34mm Ø, Height 17 mm (ideal for pellets max 34 mm Ø)	210x max 34 mm Ø pellets
BX-0003-5	Drawer cabinet with 5 drawers, each with 25 partitions for max 34mm Ø, Height 17 mm (ideal for pellets max 42 mm Ø)	125x max 42 mm Ø pellets
BX-0004-39	Box for single pellet H 15 mm, set of 100 pcs.	max 34 mm pellets
BX-0004-46	Box for single pellet H 16 mm, set of 100 pcs.	max 42 mm pellets
BX-0004-47	Box for single pellet H 6 mm, set of 100 pcs.	max 46 mm pellets
BX-0004-50	Box for single pellet H 25 mm, set of 100 pcs.	max 50 mm pellets
BX-0006-P	Plastic Tweezer for beads	
BX-0010	Desiccator W350 x H334 x D410 mm incl. dry pearls, tray for dry pearls and hygrometer to combine with storage case 1x BX-0002-5 or 1x BX-0003-5 or 3x BX-0001-24	
BX-0011	Desiccator W640 x H550 x D410 mm incl. dry pearls, tray for dry pearls and hygrometer to combine with storage case 4x BX-0002-5 or 4x BX-0003-5 or 12x BX-0001-24	

Additional drawers to add to the cabinet are available in various colors. Other dimensions on request.



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