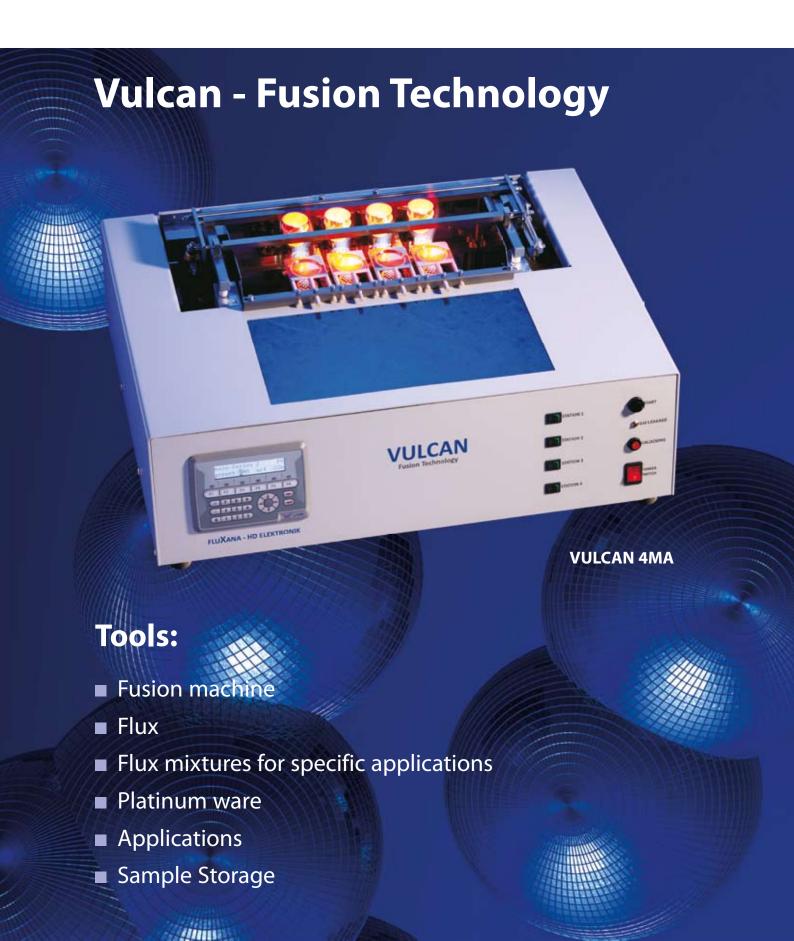


Your supplier for XRF Application Solutions





The fusion technology is used to prepare samples to be analyzed with an X-ray fluorescence machine. It is also used to improve precision over pressed powder technology.

Using your Vulcan in combination with the extractor hood will ensure that every bead is produced under the same constant conditions!

### **VULCAN MA**

- Automatic version
- No manual adjustment of the flames
- Full microprocessor control
- Applications with variable temperature setting possible
- High flexibility for all types of applications
- Storage of 10 different programs

VULCAN 2MA, 4MA, 6MA











Technical Data	Vulcan 2MA	Vulcan 4MA	Vulcan 6MA
Stations:	2	4	6
Voltage:	110V/60 Hz 230V/50 Hz	110V/60 Hz 230V/50 Hz	110V/60 Hz 230V/50 Hz
Power:	170 W	210 W	210 W
Temperatures:	0-1.600 °C	0-1.600 °C	0-1.600 °C
Permiss. air pressure:	max. 6 bar	max. 6 bar	max. 6 bar
Permiss. natural gas press.:	100 mbar	100 mbar	100 mbar
Permiss. propane gas press.:	50 mbar	50 mbar	50 mbar
Permiss. oxygen gas press.:	2 bar	2 bar	2 bar
Air consumption:	max. 1 m <sup>3</sup> /hr	max. 1 m <sup>3</sup> /hr	max. 1 m <sup>3</sup> /hr
Oxygen consumption:	max. 0,5 m <sup>3</sup> /hr at 3 bar	max. 1 m <sup>3</sup> /hr at 3 bar	max. 1 m <sup>3</sup> /hr at 3 bar
Natural gas consumption:	max. 0,66 m <sup>3</sup> /hr	max. 1,2 m <sup>3</sup> /hr	max. 1,2 m <sup>3</sup> /hr
Or LPG liquefied petroleum gas	max. 0,5 m <sup>3</sup> /hr at 3 bar	max. 0,6 m <sup>3</sup> /hr at 3 bar	max. 0,6 m <sup>3</sup> /hr at 3 bar
Length:	600 mm	600 mm	600 mm
Width:	530 mm	700 mm	700 mm
Height:	300 mm	300 mm	300 mm
Weight:	~ 40 kg	~ 40 kg	~ 40 kg
Samples per h:	5 - 7	8 - 10	16 - 20

Other versions on request. Please ask for installation requirements!

## Feed and mould control

- Easy fit and lift of the moulds
- It is not possible to forget the moulds
- No contact with the fusion chamber
- Longer durability of the moulds



# **Cover function for crucibles**

- Higher temperature in the crucible (excellent for materials that do not dissolve at low temperatures)
- Higher thermal stability in the crucible
- Lower energy consumption (gases)
- Protection against contamination of the sample



## **VULCAN M**

- Manual version
- Available with 2 or 4 stations
- Stable temperature of the flames
- Operation microprocessor controlled
- Storage of 10 different programs
- Time ramps can be programmed





Technical Data	Vulcan 2M	Vulcan 4M
Stations:	2	4
Voltage:	110V/60 Hz 230V/50 Hz	110V/60 Hz 230V/50 Hz
Power:	170 W	210 W
Temperatures:	0-1.600 °C	0-1.600 °C
Permiss. air pressure:	max. 6 bar	max. 6 bar
Presure natural gas:	60-100 mbar	60-100 mbar
or propane:	50 mbar	50 mbar
Presure oxygen:	2-6 bar	2-6 bar
Air consumption:	max. 1 m³/hr	max. 2 m <sup>3</sup> /hr
Oxygen consumption:	max. 0,5 m <sup>3</sup> /hr at 3 bar	max. 1 m <sup>3</sup> /hr at 3 bar
Natural gas consumption:	max. 0,66 m <sup>3</sup> /hr	max. 1,2 m <sup>3</sup> /hr
Or LPG liquefied petroleum gas	max. 0,5 m <sup>3</sup> /hr at 3 bar	max. 0,6 m <sup>3</sup> /hr at 3 bar
Length:	600 mm	600 mm
Width:	530 mm	530 mm
Height:	300 mm	300 mm
Weight:	~ 40 kg	~ 40 kg
Samples per h:	5 - 7	8 - 10

Other versions on request. Please ask for installation requirements!

## **VULCAN ICP/AAS**

- Automatic version
- available as pure ICP device with 4 or 6 stations
- also available as a mix of XRF and ICP stations, for e.g. 21 MA, 22 MA, 31 MA, 32 MA, 41 MA and 42 MA (first number indicates the XRF-stations, the second the ICP-stations)
- speed of the magnetic stirrer is adjustable
- for technical details please see table of Vulcan MA (Page 2)

Other versions on request.

# PTFE-Cup

- PTFE-Cup for Vulcan ICP/AAS (Item no.: VU-0007)
- capacity 500 ml
- height 120 mm, diameter 75 mm





### **ACCESSORIES**

### The extractor hood

Using your Vulcan in combination with the extractor hood will ensure that every bead is produced under the same constant conditions, like temperature, circulation of air, stability of the flames!

The extractor hood will take off all vapors and fumes, which will develop during the fusion, so that your health will be protected and the durability of your Vulcan will be extended.

- aluminium profile rack, cover and drain made off high-grade steel
- heat resistant glass
- constant circulation (no tilting of the flames)
- height 1450 mm, width 900 mm, depth 850 mm
- motor (230V/50Hz/90mA) continuously variable till 2760 r.p.m also 110V version available.

## The table

- together with the Vulcan and the hood this table forms a professional setup
- the table has an integrated drawer for all needed accessories
- manufactured of robust steel
- height 750 mm, width 910 mm, depth 760 mm



# Flux

Borate flux with guaranteed purity from own production. All fluxes are delivered with a certificate of analysis.

Anhydrous homogeneous pre-fused fluxes with a low loss on ignition and defined granulometry.

With these fluxes the sample will be disolved totally in a borate glass with a perfect surface.

- Non hygroscopic
- Dust < 1%
- Special fluxes on request
- > 99,98%





Item No.	Description	Quantity in kg
FX-X100-2	Lithium tetraborate	2
FX-X100-25N	Lithium tetraborate	25
FX-X65-2	Lithium tetraborate : Lithium metaborate 66:34	2
FX-X65-25N	Lithium tetraborate : Lithium metaborate 66:34	25
FX-X50-2	Lithium tetraborate : Lithium metaborate 50:50	2
FX-X50-25N	Lithium tetraborate : Lithium metaborate 50:50	25
FX-X20-2	Lithium tetraborate : Lithium metaborate 20:80	2
FX-X35-2	Lithium tetraborate : Lithium metaborate 35,3:64,7 1.2:2.2	2
FX-X00-2	Lithium metaborate	2

# **Special Additives**

Item No.	Description	Quantity
FX-ADD3	Single Additive Non Wetting Agence	1Pack = 50g
FX-CAT8	Single catalyst for FeTi, FeCr, FeV	1Pack = 1000g
FX-OXY6	Single oxidizer for ferroalloys and metals	1Pack = 250g
FX-OXY7	Single oxidizer for slags, ferroalloys, oxides	1Pack = 250g
FX-SUL1	Borate flux for sulfide ores	1Pack = 1000g
FX-SUL2	Borate flux for sulfide ores	1Pack = 1000g
FX-SUL3	Internal standard tungsten oxide	1Pack = 100g
FX-SUL4	Single oxidizer for sulfides	1Pack = 250g

# **Platinum ware for VULCAN**

We supply platinum ware made from platinum/gold 95/5 for fusion machines and laboratory need.

We accept old platinum ware for recycling as credit against your next order.

We offer all platinum ware also in FKS.

This surface finishing increases the lifetime of your crucibles and moulds. Please ask for a quote.

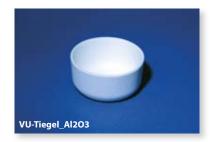


Item No.	Description	OD mm	ID mm	Height mm	Bottom mm	Weight g
FS-OT866	Crucible Vulcan	34	20	38	0,5	45
FS-OT867	Crucible Vulcan	36	22,5	38	0,5	51
FS-OA434	Mould	31	29	3,8	0,8	31
FS-OA877	Mould	34	32	3,8	0,8	31
FS-OA438	Mould	36	34	3,8	0,8	45
FS-OA439	Mould	41	39	3,8	0,8	46

For your order in platinum FKS just add 'FKS' to the part no! Other sizes on request.

## **Tools**

Item No.	Description	Quantity
FS-OZ327	Crucible tongs, shoes of platinum, length 230mm, ca. 5g Pt	1
VU-US1.9kit	Ultrasonic bath with heating, Vol. ca. 1,9I for cleaning	1
WZ-0004	Suction tool for beads and pellets	1
VU-Tiegel_Al2O3	Crucible made from Aluminiumoxide for determination of LOI (loss on ignition). Cheap and very robust alternative for platinum	1





# **Applications**

We offer ready to go calibration packages for x-ray fluorescence analysis. Please see our application flyer for further information.



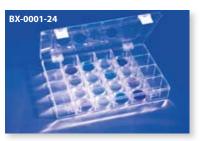
# **Sample Storage**

It is important to keep reference materials, 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.









Item No.	Description	Compartments	Qty/Set
BX-0001-18	Box 210 x 120 x 35mm with lid	18x max 32mm pellets/cups	1
BX-0001-24	Box 330 x 220 x 53mm with lid	24x max 52mm pellets/cups	1
BX-0002-5	Drawer cabinet with 5 drawers, each with 42 partitions for D max 34mm, H 17mm (ideal for pellets D max 34mm)	210x max 34mm pellets	1
BX-0003-5	Drawer cabinet with 5 drawers, each with 25 partitions for D max 42mm, H 17mm (ideal for pellets D max 42mm)	125x max 42mm pellets	1
BX-0004-39	Box for single pellet H 15mm	max 32mm pellets	1
BX-0004-46	Box for single pellet H 16mm	max 42mm pellets	1
BX-0004-46-6	Box for single pellet H 6mm	max 46mm pellets	1
BX-0004-50	Box for single pellet H 25mm	max 50mm pellets	1
BX-0006-P	Plastic tweezers for beads		1
BX-0010	Desiccator W350 x H334 x D410mm 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		1
BX-0011	Desiccator W640 x H550 x D410mm 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		1
WZ-0004	Handling tool for glass beads and pellets		1

Additional, individual drawers to add the cabinet are available in various colours. Other dimensions on request.

### For storing your beads and pellets we would recommend:

### BX-0001-18 / BX-0001-24:

Boxes to store your individual samples.

#### BX-0004-39 / BX-0004-46 / BX-0004-50 / BX-0004-46-6:

Store 32mm (40mm) samples in these transparent boxes with sealed lid.

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

Drawer cabinets suitable for direct 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.

**Tip:** Use our tool WZ-0004 to handle your pellets and beads and avoid finger contact.





















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Official agent