

# FLUXANA®

XRF Application Solutions

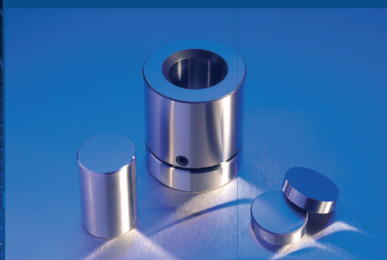
## VANEOX® Pressing Technology

### Tools:

- Press
- Die
- XRF - Mixer
- Filling Tool for BOREOX
- Milling and Accessories
- Alu Cups
- Pellet Films
- Binder
- Sample Storage



**NEW:** Touch Display



## NEW: VANEOX - 15t manual

|                                      |                    |
|--------------------------------------|--------------------|
| Max pressure                         | 15 t*              |
| Pressure display                     | 0-20 t             |
| Piston                               | 100 mm             |
| Stroke                               | 16 mm              |
| Bolster screw diameter               | 40 mm              |
| Bolster screw travel                 | 200 mm             |
| Min. distance between pressing faces | 95 mm              |
| Max. distance between pressing faces | 165 mm             |
| Dimensions (W x H x D)               | 310 x 560 x 400 mm |
| Weight                               | 55 kg              |

\* There are two lever positions that can be used to exert the pressure in two different ways.



## VANEOX - 25t manual

|                                      |                    |
|--------------------------------------|--------------------|
| Max pressure                         | 25 t               |
| Pressure display                     | 0-25 t             |
| Piston                               | 115 mm             |
| Stroke                               | 30 mm              |
| Bolster screw diameter               | 40 mm              |
| Bolster screw travel                 | 200 mm             |
| Min. distance between pressing faces | 70 mm              |
| Max. distance between pressing faces | 170 mm             |
| Dimensions (W x H x D)               | 340 x 840 x 475 mm |
| Weight                               | 110 kg             |



## VANEOX - 25t automatic

|                                      |                        |
|--------------------------------------|------------------------|
| Max pressure                         | 25 t                   |
| Pressure display                     | 0-25 t                 |
| Piston                               | 115 mm                 |
| Stroke                               | 30 mm                  |
| Bolster screw diameter               | 40 mm                  |
| Bolster screw travel                 | 200 mm                 |
| Min. distance between pressing faces | 70 mm                  |
| Max. distance between pressing faces | 170 mm                 |
| Voltage                              | 110 - 240 V ; 50/60 Hz |
| Dimensions (W x H x D)               | 340 x 840 x 475 mm     |
| Weight                               | 115 kg                 |



# VANEOX - 40 t automatic

- **NEW:** Touch display with webserver connection (multilingual)
- Die for all common preparation techniques e.g. 32 mm, 40 mm, 40/32 mm rings, 51.5/35 mm rings
- Customer specific diameters with or without ring possible
- 10 different application programs
- 3 ramping steps programmable

|                        |                        |
|------------------------|------------------------|
| Max pressure           | 40 t                   |
| Pressure display       | Touch Display          |
| Piston                 | 100 mm                 |
| Stroke                 | 60 mm                  |
| Voltage                | 110 - 240 V ; 50/60 Hz |
| Dimensions (W x H x D) | 340 x 490 x 550 mm     |
| Weight                 | 120 kg                 |



## The Table

- Every VANEOX can be mounted to the table
- The table has an integrated drawer for all needed accessories
- Manufactured of robust steel
- Height 730 mm, width 910 mm, depth 760 mm



## The Die

The dies are designed for use with our hydraulic presses. Halide disks for infrared analysis are usually produced with 13 mm sized dies.



The larger sized dies with 32 and 40 mm are commonly used in pressing samples for XRF and XRD analysis and many other industrial applications. Nevertheless, FLUXANA can produce dies with diameters between 8 and 55 mm. All of the dies are equipped with nitrile O-ring seals and 2 pellets between which the sample is pressed.



| Item No.             | Description   |
|----------------------|---|
| <b>PR-L33000</b>     | Evacuatable pellet die, 13 mm for IR  |
| <b>PR-CD-60XX*</b>   | Die with 2 pellets and piston, XX=diameter in mm  |
| <b>PR-CD-6032R</b>   | Die with 2 pellets and piston and stamp tool.<br>Pressed samples of 32 mm in a ring with an OD of 40 mm |
| <b>PR-CD-6035R_a</b> | Die for use with ring WZ-0002 (see below) 51.5 mm OD and 35 mm ID                                       |
| <b>PR-CD-6035R_b</b> | Die for use with ring PR-CD-6035 RingM (see below) 40 mm OD and 35 mm ID                                |

\* 8-55 mm diameter available

Other diameters on request.

## XRF – Mixer and Accessories

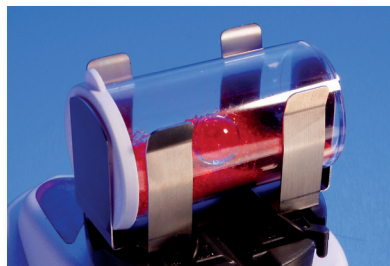
- Variable speed control between 0-3000 rpm
- Powerful 46 watt motor
- Continuous or touch activation
- Shock-absorber feet
- Includes rubber platform cover
- 145 x 175 x 140 mm (W x D x H)
- Weight 1.9 kg
- Power AC 230 V/50 Hz or 110 V/60 Hz



| Item No.                 | Description  | Quantity         |
|--------------------------|--|------------------|
| <b>MU-K-Mixer-50Hz</b>   | Mixer to mix powder with wax<br>(does not include holding clip for mixing containers)*   | 1                |
| <b>MU-K-Holder</b>       | Holding clip for mixing container for use with XRF-Mixer   | 1                |
| <b>MU-Scontainer</b>     | Mixing container 40 ml   | 1 Set (100 pcs.) |
| <b>MU-MB-380-1</b>       | Mixing balls, 9 mm**   | 1 Set (100 pcs.) |
| <b>BM-0002-1</b>         | CEREOX (Licowax C Micropowder) wax binder for XRF  | 250 g            |
| <b>MU-K-Ring</b>         | O-ring to fix the holding clip on the XRF-Mixer  | 1 pack (5 pcs.)  |
| <b>MU-K-Mat</b>          | Anti-slip mat  | 1                |
| <b>BX-0006-P</b>         | Plastic forceps for mixing balls   | 1                |
| <b>MU-XRF-Mixing Set</b> | XRF Mixing Starter Kit<br>(XRF-Mixer, Holding clip, 5 O-rings, 100 containers, 100 balls,<br>1 bottle wax (250 g), 1 anti-slip mat, 1 plastic forceps) | 1                |

\* also available with 60 Hz (MU-K-Mixer\_60Hz)

\*\* also available in 5 mm and 12.7 mm, please ask for a quote



## Filling Tool for Backing with BOREOX

Especially for low sample quantities, a BOREOX backing might be the right solution.

To place the sample in the center, we offer a special tool to pour the sample into the die.

A piston helps to press before filling the BOREOX on top.



| Item No.          | Description                               |
|-------------------|---|
| <b>PR-CD-BA32</b> | Filling tool BOREOX backing for die 32 mm |
| <b>PR-CD-BA40</b> | Filling tool BOREOX backing for die 40 mm |

# Mills and Grinding

- Quick, efficient pulverization and homogenization
- High sample throughput due to short grinding times and two grinding stations
- Reproducible results with digital pre-selection of grinding time and vibrational frequency
- Large range of grinding jars



| Item No.          | Description                              | Quantity |
|-------------------|--|----------|
| MU-RMM400         | Mixer Mill MM400 for 100-240 V, 50/60 Hz | 1        |
| MU-RMM400-MZr35   | Zirconia grinding jar 35 ml              | 1        |
| MU-RMM400-MK25ZRO | Zirconia grinding ball 25 mm             | 1        |
| MU-RMM400-MWC25   | Tungsten carbide grinding jar 25 ml      | 1        |
| MU-RMM400-KWC15   | Tungsten carbide grinding ball 15 mm     | 1        |

Other mills with accessories on request.

# Alu Cups

Alu cups are used to stabilize your sample from 2 sides. However, for successful use, the sample must show at least some binding properties. Other advantages of this method include the possibilities for labeling and intake with autosamplers.



| Item No. | Description   | Quantity  |
|----------|---|-----------|
| AC-530-1 | Alu cups straight wall 30 mm x 8 mm for 32 mm pellets     | 1,000 pcs |
| AC-538-6 | Alu cups straight wall 38.5 mm x 9.5 mm for 40 mm pellets | 600 pcs   |
| AC-550-6 | Alu cups straight wall 39.8 mm x 7.5 mm for 40 mm pellets | 600 pcs   |
| AC-532-1 | Alu cups taper wall 31 mm x 7.9 mm for 32 mm pellets      | 1,000 pcs |
| AC-540-6 | Alu cups taper wall 39.8 mm x 9.2mm for 40 mm pellets     | 600 pcs   |

# Pellet Films

Pellet films are used to allow polymers to be pressed using a standard die and press. Additionally, the pellet film makes extra cleaning of the die unnecessary and prevents contamination of your sample. Please ask for more details.



| Item No.    | Description            | Diameter / mm |
|-------------|------------------------|---------------|
| TF-PF-32500 | Pellet film 500 pieces | 32            |
| TF-PF-40500 | Pellet film 500 pieces | 40            |

## Binder

In most cases, a binder is required for the preparation of pressed pellets for XRF. Boric acid is one of the traditional materials used as a binder or backing material. However, this is now classified by REACH as being toxic. Based on this health issue, boric acid is no longer considered to be an appropriate material for this application. FLUXANA now offers **BOREOX**; a direct replacement. This is a harmless organic material that shows excellent binding properties and high resistance to x-rays. It is particularly good when used as a backing material. Also available as grinding aid tablets.

Alternatively, **CEREOX** can be used. CEREOX is comprised of a wax, previously known as Hoechst wax. This material is clean and very resistant to x-rays. Mixed with a sample (1 part wax to 4 parts sample), CEREOX forms a perfect pellet with any material.

**CELLEOX** is a cellulose based binder. The binding properties are not as good as BOREOX and CEREOX. Therefore, it is mainly used as a grinding aid. A particular property is the adsorption of liquids so it can be used, mixed with aggressive liquids, for analysis in a sample cup.

**MULTIMIX** is a grinding aid which is harder than CELLEOX and especially good for hard sample materials, such as cement or sand. Typically, 2 to 3 0.25 gram tablets would be added to 30 grams of sample in the mill.

Sample and binder must be mixed homogeneously.  
FLUXANA recommends their automatic mixer (MU-K-Mixer)



### Customer feedback for the use of the new BOREOX backing material:

"...it gives very good pressed pellets. Earlier with Boric acid, we used Al-cups, but that is not needed anymore due to the very good and strong pellet that we get with Boreox. I can also inform you that the Boreox is much better as a background for our XRD samples than boric acid. As you may know, boric acid results big peaks using XRD and as we run XRD in vacuum, we must use a pressed sample for powders."

DEGERFORS LABORATORIUM AB,  
Ingvar Bernhardsson, Suède

| Item No. | Description | Quantity |
|----------|-------------|----------|
|----------|-------------|----------|

### Binders

|             |   |       |
|-------------|---|-------|
| BM-0008     | BOREOX (replacement for boric acid) for XRF | 250 g |
| BM-0002-1   | CEREOX* (Licowax C, Hoechst wax) for XRF    | 250 g |
| BM-0002-1b  | CEREOX* (Licowax C, Hoechst wax) for XRF    | 20 kg |
| BM-0003-250 | CELLEOX Cellulose powder for XRF            | 250 g |
| BM-0003-20  | CELLEOX Cellulose powder for XRF            | 20 kg |

### Grinding aid tablets

|               |   |       |
|---------------|---|-------|
| BM-0008-1K    | BOREOX grinding aid tablets 0.33 g each   | 1 kg  |
| BM-0008-5K    | BOREOX grinding aid tablets 0.33 g each   | 5 kg  |
| BM-0008-20K   | BOREOX grinding aid tablets 0.33 g each   | 20 kg |
| BM-PXR-225    | Multimix grinding aid tablets 0.25 g each | 125 g |
| BM-PXR-225-1k | Multimix grinding aid tablets 0.25 g each | 1 kg  |

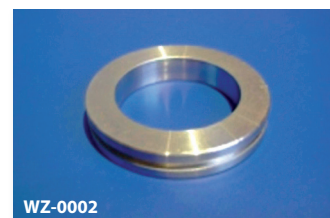
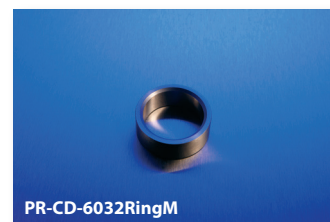
\* CEREOX is a binder which forms very stable pellets.



## Rings for Pellets

Used for manual and automatic sample handling. Robust design.

| Item No.                 | Description   | Quantity |
|--------------------------|---|----------|
| <b>PR-CD-6032RingM*</b>  | Outer diameter 40 mm, inner diameter 32 mm, height 14 mm                            | 1        |
| <b>PR-CD-6035RingM**</b> | Outer diameter 40 mm, inner diameter 35 mm, height 14 mm                            | 1        |
| <b>WZ-0002***</b>        | Outer diameter 51.5 mm, inner diameter 35 mm, height 8.6 mm, external 2.5 mm groove | 1        |



\* Suitable for PR-CD-6032R (see Die table)

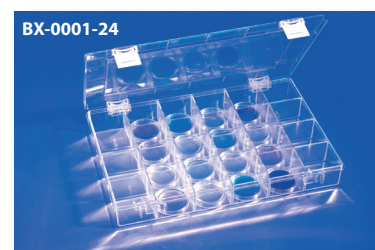
\*\* Suitable for PR-CD-6035R\_a (see Die table)

\*\*\* Suitable for PR-CD-6035R\_b (see Die table)

## Sample Storage

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

We have a wide range of boxes and containers for single or multiple samples and standards for XRF.

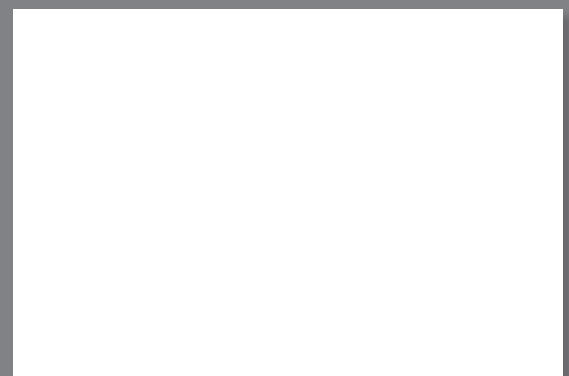


| Item No.            | Description  | Compartments                | Qty/Set |
|---------------------|--|-----------------------------|---------|
| <b>BX-0001-18</b>   | Box 210 x 120 x 35 mm with lid   | 18 x max 32 mm pellets/cups | 1       |
| <b>BX-0001-24</b>   | Box 330 x 220 x 53 mm with lid   | 24 x max 52 mm pellets/cups | 1       |
| <b>BX-0002-5</b>    | Drawer cabinet with 5 drawers, each with 42 partitions for D max 34 mm, H 17 mm (ideal for pellets D max 34 mm)  | 210 x max 34 mm pellets     | 1       |
| <b>BX-0003-5</b>    | Drawer cabinet with 5 drawers, each with 25 partitions for D max 42 mm, H 17 mm (ideal for pellets D max 42 mm)  | 125 x max 42 mm pellets     | 1       |
| <b>BX-0004-39</b>   | Box for single pellet H 15 mm  | max 32 mm pellets           | 1       |
| <b>BX-0004-46</b>   | Box for single pellet H 16 mm  | max 42 mm pellets           | 1       |
| <b>BX-0004-46-6</b> | Box for single pellet H 6 mm   | max 46 mm pellets           | 1       |
| <b>BX-0004-50</b>   | Box for single pellet H 25 mm  | max 50 mm pellets           | 1       |
| <b>BX-0006-P</b>    | Plastic tweezers for beads   |                             | 1       |
| <b>BX-0010</b>      | Desiccator W 350 x H 334 x D 410 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  |                             | 1       |
| <b>BX-0011</b>      | Desiccator W 640 x H 550 x D 410 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 |                             | 1       |
| <b>WZ-0004</b>      | Handling tool for glass beads and pellets  |                             | 1       |

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



**FLUXANA® GmbH & Co. KG**  
Borschelstr. 3, 47551 Bedburg-Hau, Germany  
Tel.: +49 (0) 2821 997 32-0  
Fax: +49 (0) 2821 997 32 29  
E-mail: [info@fluxana.de](mailto:info@fluxana.de)  
Web: [www.fluxana.com](http://www.fluxana.com)  
Amtsgericht Kleve: HR-A 2935, HR-B 8211  
Ust-IdNr.: DE 814692564, Steuer-Nr. 116/5755/0442  
Finanzamt Kleve



Official agent