



FLOW SORT FLUORESCENT PARTICLE ANALYSER MODEL FPA-1

The Flow Sort Fluorescent Particle Analyser, FPA , is designed to allow quick and accurate X-Ray fluorescence analyses of individual or groups of particles.

The unit is specifically designed and set up to show the fluorescence level that can be expected from the same particle(s) when passed through a Flow Sort X-ray Diamond Recovery Machine.

This is achieved by utilising the same basic components in the Flow Sort FPA-1 that are used in Flow Sort X-ray diamond recovery machines such as the XR 2/19W, etc. Note that this concept also allows for FSA components to be used as spare parts for our XR machines and visa versa.

The main components of the FPA are:

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| 1. X-Ray Tube (SEIFERT) | FS Part # | 3222 |
| 2. PM Tube | FS Part # | 2070 |
| 3. PM tube P/S | FS Part # | 2090 |
| 4. PM tube Signal Amplifier | FS Part # | 2100 |
| 5. Highly stabilised, computer-controlled SEIFERT X-Ray High Voltage Generator | FS Part # | 3035 |
| 6. Sample Presentation Carousel (Unit) | | |
| 7. Control and Interlocking Electronics | | |
| 8. Signal (Fluorescence Signal) Analysing Software and Hardware (PICO SCOPE Registered Trade Mark) | | |
| 9. Signal Display and storage Note Book PC | | |
| 10. Stainless Steel FPA Stand and FPA Enclosure | | |

The basic functionality of the FPA is as follows:

- Power-Up Unit
- Boot-Up Monitor PC (this unit is linked to the Pico Scope Data Analyser of the FPA)
- Load the sample to be analysed

Flow electronics

- Lock the Sample into place
- Press the Exposure Button
- Take the Fluorescence Signature of the sample from the Monitor Screen
- Release the current Sample and lock the next Sample into place

The analyser's sample presentation carousel can hold up to 6 individual samples. By selecting the appropriate sample holder insert, it is possible to preset (centre) particles from sizes of 0.5 mm up to 30 mm in diameter.

The Optic Unit of the FPA is fitted with an Optic Filter Holder that can be remotely moved in and out of the Optic Unit, thus allowing fluorescent analysis with or without spectral light filtering. Note that in many applications Flow Sort X-Ray Diamond Recovery Machines make use of Optical Filters (typically a 450nm narrow band pass filter).

For a general layout of our FPA-1 refer to the General Arrangement drawing: FPA_GA_01.DWG .

The introduction-selling price of the FPA-1 is ZAR 220 000.00 . This price is net ex factory and excluding VAT)

Current delivery is approximately 10 weeks from date of order.

Peter Wolf 2001-08-20