



# rapidox

## Rapidox SF<sub>6</sub> 6100 Pump Back Automatic Multigas Analyser

### Description

The Rapidox SF<sub>6</sub> 6100 Pump Back is the latest in fully-automatic gas analysers, and is designed for controlling and monitoring the quality of SF<sub>6</sub> in MV & HV gas insulated electrical equipment. Housed within a heavy duty IP66 Peli case; inclusive of wheels and handle, this portable field instrument weighs a total of 17kg (without accessories). A lithium battery provides up to eight hours of operation and a large gas storage bag allows up to five measurements to be taken before pump back is required.

Exceptional accuracy and stability are provided when measuring the purity of SF<sub>6</sub> gas, through specially selected sensors. Other measurable gases can include H<sub>2</sub>O (dew point), SO<sub>2</sub>, HF, O<sub>2</sub> & CF<sub>4</sub>. Due to the modular design, a number of configurations are available in order to suit a variety of application requirements.

Once connected, the Rapidox SF<sub>6</sub> 6100 Pump Back samples gas from the electrical equipment automatically, allowing the operator to stand at a safe distance. A vacuum purge cycle and gas storage system ensures that no air can contaminate the gas sample and that no SF<sub>6</sub> gas is able to escape during the testing period.

SF<sub>6</sub> gas pressure in the internal sample compartment is recorded and logged by the analyser. All measured gases are analysed and data-logged simultaneously with only a few minutes required to achieve a stable reading.

A powerful 10 bar compressor, with a separate lithium battery power supply, then returns the gas to the electrical equipment at high pressure. Alternatively, the gas can be stored internally within the analyser for recycling at a later time.

The analyser is pre-programmed with all current IEC and CIGRE test configurations, and also offers the facility to create customised tests that can be saved on the system for future use. Measurement data is viewed in real time on the display and is saved to the analyser memory. Data is available for download via a USB memory stick in an MS Excel compatible format.

Easy to operate and configure, the Rapidox SF<sub>6</sub> 6100 Pump Back features a 7" (18cm) full colour touch screen interface with soft menu key controls, alongside an alphanumeric keypad that enables the user to edit test locations and user names. An integrated thermal printer also allows the user the option of printing on-site test results that include details such as gas measurements, date, operator and site details.

DN8 and DN20 couplings, as well as a range of stainless steel braided sampling hoses, are available for use with SF<sub>6</sub> gas insulated electrical equipment.

### Features

- Portable field instrument housed in a heavy duty IP66 Peli transport case. Total weight: 17kg
- No waste or emissions emitted during the testing of SF<sub>6</sub> purity
- Powerful 10 bar compressor returns SF<sub>6</sub> gas to the electrical equipment at a high pressure
- Up to five separate tests can be performed, with the gas sample stored internally
- Lithium battery power allows for up to 8 hours of operation
- Measurable gases can include SF<sub>6</sub>, H<sub>2</sub>O (dew point), SO<sub>2</sub>, HF, O<sub>2</sub> & CF<sub>4</sub>
- Integrated thermal printer to provide on-site printed test results
- 7" (18cm) full colour LCD display with touch screen operation
- Pre-programmed with IEC & CIGRE test standards for fast operation
- Full data-logging and MS Excel compatible data download onto USB memory stick
- Multi-Language (English, French, German, Spanish, Portuguese, Mandarin)
- Password protection feature



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### Applications

- Controlling SF<sub>6</sub> quality in MV & HV gas insulated electrical equipment, such as circuit breakers
- Checking for the build up of corrosive decomposition products present in SF<sub>6</sub> gas
- Applying a condition based maintenance program (CBM) in order to extend the life cycle of the SF<sub>6</sub> gas
- Detecting the presence of leaks and SF<sub>6</sub> discharge

#### Technical Data: Analyser

Operating temperature	-20°C to 55°C
Warm up time	3-4 minutes at 20°C
Voltage (charging)	90-260VAC, 50/60Hz
Data output	Excel compatible data via USB memory stick. 4GB internal data storage allowing for approximately 1 year of continuous monitoring
Sample connections	Rectus fitting
Gas sampling	Up to 5 samples taken before internal reservoir is full
Compressor	Up to 10 bar with up to 25 cycles per battery charge
Pressure range	3-10 bar; displayed on-screen
Display	7" (18cm) full colour LCD display with touch screen operation
Analyser dimensions	L:560mm x W:450mm x D:270mm
Weight	17 kg (Total instrument and case without accessories)
Battery	2 Li-ion batteries in excess of 8 hours with 4-6 hour charge time
Printer	Integrated thermal printer

#### Technical Data: Gas Analysis

SF <sub>6</sub> - Sulphur Hexafluoride	0-100% ±0.5% full scale accuracy
H <sub>2</sub> O - Dew Point	-60°C to +20°Cdp ±2°Cdp accuracy of reading
SO <sub>2</sub> - Sulphur Dioxide	0-100ppm or 0-500ppm ±2% full scale reading
HF - Hydrogen Fluoride	0-10ppm 1ppm accuracy
CF <sub>4</sub> - Tetrafluoromethane	0-60% ±1% full scale reading
O <sub>2</sub> - Oxygen	0-100% ±1% full scale reading
Measurement time	3-5 minutes fully automatic

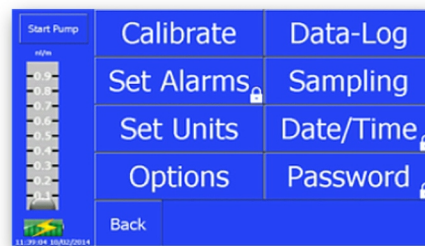
Rapidox SF<sub>6</sub> 6100 Pump Back analyser



Integrated printer



Main menu screen



#### KESİR Mühendislik

Şerifali Mah. Hendem Cad.  
No:38 34775  
Ümraniye/Istanbul

