

➔ DETERMINATION OF ATMOSPHERIC  
CONTAMINATION FOLLOWING A RADIOLOGICAL  
ACCIDENT.

### Applications :

- Radiological intervention units
- Environmental monitoring
- Expertise



*PA1000Gamma with sampling head, elevating kit and stabilisers*



- Sampling is initiated when gamma dose rate exceeds a preset threshold,
- In situ sampling on filters and activated carbon cartridge, followed by laboratory analysis,
- Designed and equipped for outdoor use,
- Battery powered, 4 hours autonomy in sampling mode,
- Efficient pump with a  $1.5 \text{ m}^3 \cdot \text{h}^{-1}$  nominal flow rate, compatible with high pressure drop filters,
- Regulation of the sampling flow on a nominal value preset by the user,
- Display of the sampled volume and the instant flow rate values,
- 3 additional operating modes: continuous, timer, programmed,
- Protected Access by confidential code, no ON/OFF switch accessible,
- Data reading and parameter setting via keyboard or *PaView* software,
- Compliant with French standard M 60-760, IEC 61172 and IEC 60846.

### ALGADE INSTRUMENTATION



# AEROSOL AND IODINE SAMPLER

## PA 1000 Gamma

### Gamma detector :

Geiger Müller counter with onboard data processing

Sensor sensitivity  $0.75 \text{ c.s}^{-1} \cdot \mu\text{Sv.h}^{-1}$

Measuring range  $0 \text{ nSv.h}^{-1}$  à  $1 \text{ mSv.h}^{-1} \text{ H}^*(10)$

Spectral response  $\pm 40\%$  from 33keV to 1.2 MeV centered on Cs137 energy.

Device based on the Dolphy Gamma, accredited by CTHIR (DSU/SERAC/BIREN/08-17) in compliance with IEC 60846 standard.



### Reference to order :

1- Instrument type	Reference
PA 1000 Gamma	P-531-103
2- Filter media	
Filter dia 51/47 mm *	P-531-110
Filter dia 78/70 mm *	P-531-130
Filter dia 90/80 mm *	P-531-111
Filter dia 140/125 mm *	P-531-112
Cartridge	P-531-113
Sampling head	P-531-138
<i>Include 1 door-filter and 2 door-cartridge diameter 51mm</i>	
3- Accessories	
Elevating Kit (1m50 filter holder)	P-531-131
Stabilisers	P-531-132

Other accessories on application.



The PA 1000 Gamma is supplied with :

- Battery charger ,
- Serial link cable,
- Verification certificate.
- PaView Software



### Specifications :

#### Sampling media :

« pink », « yellow » or « blue » paper filter, fiberglass, membrane, Absorbent activated carbon cartridges 51mm diam.

#### Sampling head :

Combines: 51 mm filter holder and 2 activated carbon cartridges Secured by clips

#### Sampling :

Diaphragm vibrating pump 12V DC  
Nominal flow adjustable from 30% to 100% of the maximum value via the **PaView** monitoring software, available from [www.algade.com](http://www.algade.com)  
Adjustment to  $\pm 0.5\%$  of the nominal flow  
Data reading every 36 seconds.  
Tolerance on the measurement of the sampled volume ( $\Delta V/V$ )  $< 0.8\%$

#### Sampling modes :

**Gamma :** Alarm threshold adjustable from 250  $\text{nSv.h}^{-1}$  to  $1 \text{ mSv.h}^{-1}$   
Factory setting  $1 \mu\text{Sv.h}^{-1}$   
Triggered by statistical precision better than  $\pm 20\%$   
Response time 2 mn  
Setting in situ or via **PaView**

**Continuous :** Sampling in manual mode

**Timer :** Sampling during a given time period

**Program :** Weekly scheduling with a daily operational time range

#### Parameters monitored :

**Temperature:** accuracy  $0.5^\circ\text{C}$  (absolute)  
**Power voltage :** 0.1 V (resolution)  
**Power consumption**

#### Monitoring :

14 bits RISC Microcontroller  
Back-lit 4\*20 LCD screen  
Control via a 2 push-button key pad.  
**Protected Access** by a 4 digit confidential code  
Data back-up in the event of power failure (volume sampled and parameters).

#### Memory capacity :

1Mb Flash memory (Data back-up in the event of power failure).

#### Environment :

$-15^\circ\text{C}$  to  $+45^\circ\text{C}$  / 10-90 % relative humidity.  
Protection rating: IP54.  
Noise level:  $< 52 \text{ dBA}$   
Compliant with CEM EN 55022 and CEI 61000-4 standards

#### Housing :

Polycarbonate.  
Dim L\*l\*h = 340\*190x300 mm.  
Weight 10 Kg

#### Power supply :

Lead battery. 4 hours autonomy  
External battery charger

#### Configuration and data download :

Data transfer via RS232C cable serial link (Rs232, 19200 Bauds, 8bits, 1 stop).

## ALGADE INSTRUMENTATION

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