

➔ FOR CONTINUOUS MEASUREMENT OF RADON ACTIVITY CONCENTRATION AND ENVIRONMENTAL PARAMETERS IN BUILDINGS.

## Applications :

- Air quality monitoring in buildings and public places,
- Monitoring of radon activity concentration vs time,
- Expertise.



- High sensitivity radon measurement obtained by the association of an optimized measurement chamber and an electric field.
- Passive measurement, no disturbance of the environment.
- Continuous measurement with programmable cycle.
- Protected access by PIN code entry.
- Compliant with the requirements of ISO 11665-5 standard.

- Display on high resolution OLED screen of:
  - instant activity concentration,
  - mean activity concentration,
  - temperature,
  - humidity,
  - operating parameters.
- Settings and data readout with *RnView3* software.

## RnView3 Software

PC Software operating under Windows XP, Windows Vista, Windows 7.

### Monitoring :

- Radhome HR3 initialisation,
- Complete data readout of the memory contents,
- display of radon measurement, temperature, and relative humidity vs time,
- display of mean radon activity concentration over a selected time period,
- Data transfer towards MS Excel, printout.



## RADON MEASUREMENT:

Radon penetrates the detection volume through a filter collecting all solid decay products.

Radon activity is determined by measuring the  $\alpha$ -activity of  $^{218}\text{Po}$ , collected by an electric field on the surface of a silicon based detector.

Radon activity concentration is calculated with the calibration factor.

**Measurement sensitivity:**

**2 Bq.m<sup>-3</sup> per pulse.h<sup>-1</sup> (typical).**

**Detection limit: 13 Bq.m<sup>-3</sup> for 1 hour of data acquisition.**

**Maximum activity concentration > 1 MBq.m<sup>-3</sup>**

*The radon chamber used for calibration is linked to LNHB, the French national metrology lab for ionizing radiations.*



### References to order :

Radhome HR3	P-563-112
Infre red reader	P-590-111
RnView3 Software	P-519-103



### Specifications :

#### Environmental parameters:

**Temperature:** 0.1°C accuracy (absolute)

**Humidity:** 10 to 95 %,  $\pm 3$  %, accuracy allowing adjustment of the radon result.

#### Additional sensors:

**Shock sensor:** detection of impacts on the instrument

**Battery voltage:** 0.1 V (resolution)

#### Measuring cycle:

Intervals of 15 min (recommended), 20, 30, 60, 120, 180 or 240 min.

#### Functions available locally via 2 buttons pad:

PIN code entry

Measure/clock/settings/informations

#### Screen :

OLED technology 256 \* 64

#### Memory capacity:

16 000 measures (5 months @ 15min)

#### Power supply:

230V AC mains power supply

Li ion battery, 3.7V / 6.8 Ah,

Autonomy: 1 month with screen powered down,  
1 week with screen active.

#### Housing:

AlMgSi painted alloy

H\*L\*w = 120\*232\*241 mm.

3.5 kg.

#### Operating conditions:

5°C to +40°C

10-90% of relative humidity

#### Parameters setting and data download:

USB port

#### Radhome HR3 is delivered with:

- RnView3 software
- USB drivers
- Carrying case
- Power and USB cables
- Calibration certificate indicating the calibration factor of the radon sensor
- User guide