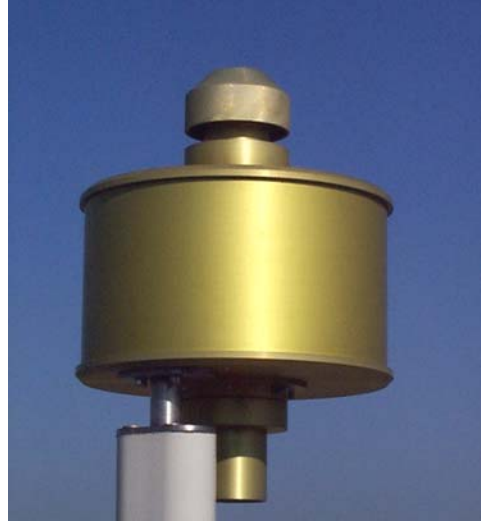


## 6 CARAT & 12 CARAT High sensitivity radon sen-

○ FOR THE CONTINUOUS MEASUREMENT OF THE VOLUMIC ACTIVITY OF RADON 222 IN THE ATMOSPHERE.

### □ APPLICATIONS

- Monitoring the variations in the level of radon in the environment,
- Survey of atmospheres in confined spaces,
- Integration to environmental air quality monitoring network.



#### **Radon measurement:**

The radon enters a detection chamber through a cellulose filter that traps all the solid daughter products.

The measuring unit is composed of 6 to 12 silicon detectors. This technology is insensitive to atmospheric moisture and enables the counting by spectrometry of atoms of  $^{222}\text{Rn}$  and its daughter products created in the detection volume.

The sensitivity of this sensor is determined using a radon calibration chamber.

#### **Detectors :**

Implanted silicon diodes.  
Depleted zone : 100  $\mu\text{m}$ .  
Active area : 400  $\text{mm}^2$ .

#### **Sensitivity of the measurement:**

5  $\text{Bq}\cdot\text{m}^{-3}$  per  $\text{imp}\cdot\text{h}^{-1}$  (for 6 detectors version).  
2,5  $\text{Bq}\cdot\text{m}^{-3}$  per  $\text{imp}\cdot\text{h}^{-1}$  (for 12 detectors version).

#### **Critical level (4 hours integration time) :**

17  $\text{Bq}\cdot\text{m}^{-3}$  (for 6 detectors version).  
8  $\text{Bq}\cdot\text{m}^{-3}$  (for 12 detectors version).

#### **Single channel analyser settings :**

Low level : 1,5 MeV.  
High level : 6 MeV.

#### **Output signal :**

Logical pulses for connection to any acquisition card or logger (counter input).  
Width size : 10  $\mu\text{s}$  typical (adjustable).

#### **Power supply :**

5 V - 4 mA (for 6 detectors version).  
5 V - 7,5 mA (for 12 detectors version).

#### **Operating temperature range :**

-30  $^{\circ}\text{C}$  to +70  $^{\circ}\text{C}$ .

#### **Casing :**

Measuring head made of aluminium.  
Protection index: IP 66.

#### **Size :**

diameter : 260 mm.  
high : 360 mm.

**Weight :** 10 kg.

#### **The measuring head is delivered with :**

- a calibration sheet for radon sensitivity and detectors background,
- filters,
- mounting accessories.