

# RN CHAMBER RADON CALIBRATION CHAMBER



RN CHAMBER is a hermetically sealed radon calibration chamber for radon applied research.

## Benefits

- Polished stainless steel, minimising internal contamination
- Insulating material between the walls to limit the heat transfer between the container and the outside air and thus the radon volume activity (RVA) fluctuations inside the radon chamber
- Operates under normal atmospheric conditions (pressure, relative humidity and temperature)
- Adjustable and homogeneous RVA values

## Key figures

**1m<sup>3</sup>** → Internal volume

**± 10hPa** → Pressure resistance

**550 kg** → Approx. weight of the chamber

## Product Description

The chamber itself is firmly connected to the base. Below the chamber is an electric switchboard to control the entire mechanism associated with the use of the chamber.

On the side of the chamber, measuring circuits allow the user to set RVA value.

The chamber is fitted with 2 sliding shelves in order to install detection devices. Air circulation inside the chamber is ensured by two fans so that radon concentration inside the chamber is uniform.

The chamber is also equipped with a device for temperature, humidity and atmospheric pressure monitoring.

A filtering system optimises cleaning of the chamber's internal volume of accumulated radon ( $^{222}\text{Rn}$ ) and short-term conversion products, before use to avoid overexpression of the RVA.

The chamber's inner walls are made of a smooth material (polished stainless steel), that doesn't corrode and is a good electrical conductor. These characteristics facilitate decontamination and most importantly reduce trapping of aerosols and radon decay products on the chamber's inner walls.



## Product Specifications

- At the inlet/outlet to/from the radon chamber, an activated carbon filter (10 l) is connected - filters purify atmospheric air from radon ( $^{222}\text{Rn}$ ) and its short-term subsidiary conversion products
- Quantities can be continuously monitored and recorded in the chamber volume (RVA, equivalent radon volume activity (ERVA), temperature, humidity, air change rate)
- RVA can be maintained stable in the chamber volume, changed by air exchange and radon feed rate which is given by the certified dry radon source used
- Continuous RVA monitoring is provided by the AlphaGuard\* or RAD7\* reference instrument

## Product Applications

- Applied research in the field of radon dynamics and its products in the air
- Routine check of the reliability of the measuring technique used
- Standardisation of RVA and ERVA

