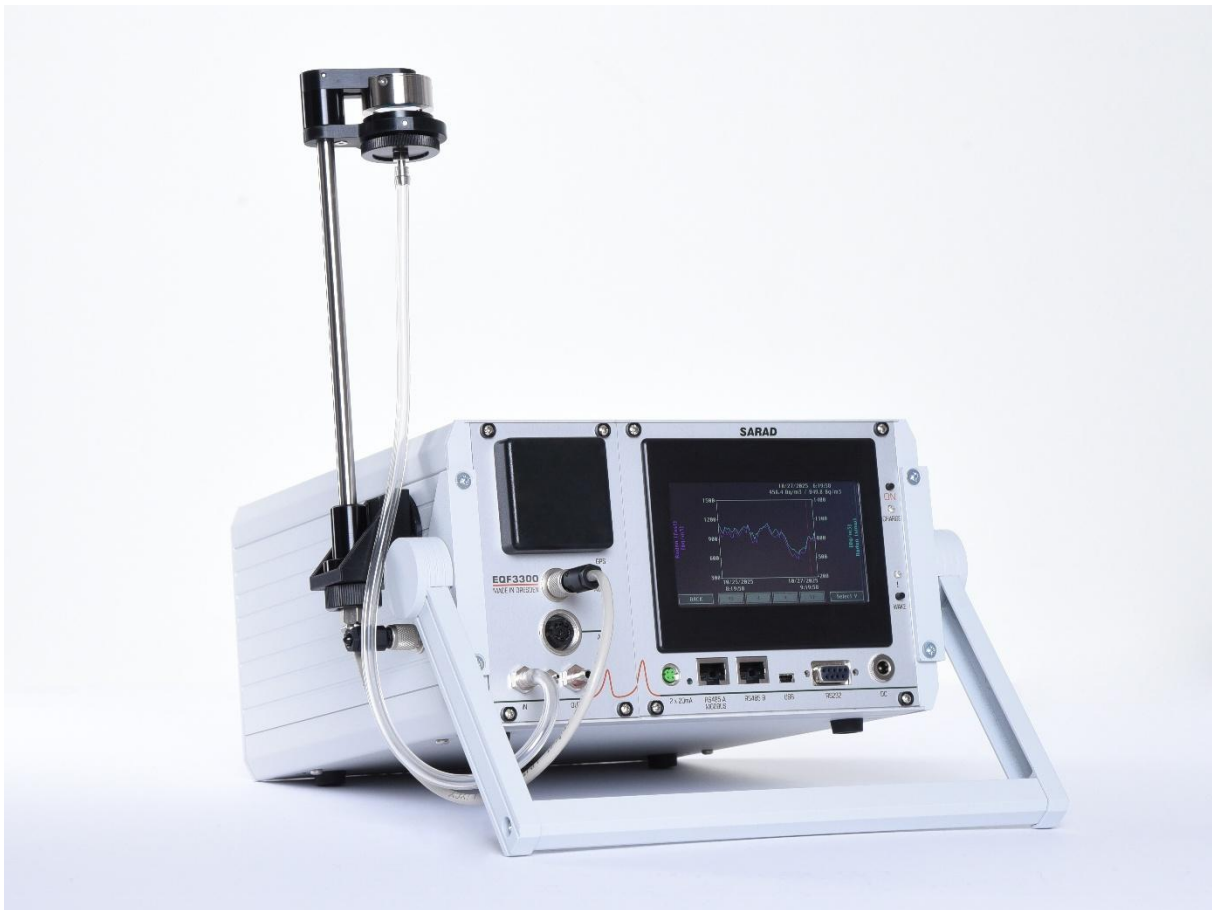


EQF 3300

Radon & radon decay product monitor



Applications:

- Radon and thoron measurements in indoor air, soil air, and water samples
- Correct dose determination of radon or/and thoron daughter product exposure
- Derivation of location-specific equilibrium factors for dose estimation using radon dosimeters
- Radiological assessment of interiors in clay houses

Features:

- Continuous spectrometric measurement of radon and thoron and their decay products from the same air sample
- High sensitivity, no contamination from Po-210
- Offset measuring head with minimized surface area to prevent the deposition of unattached decay products before they reach the measuring arrangement

Closer to your application

- Tool-free and easy filter replacement
- Handy, portable design – measuring case with external mounting of the measuring head available
- Precisely controlled flow with integrated robust, durable, and quiet pump
- Battery operation for more than 30 hours* (depending on the nominal flow rate)
- Color touch screen with graphical display of spectra and measurement series
- Outstanding connectivity for system integration and connection of accessories
- Flexible, user-customizable alert & warning system
- High data security thanks to proprietary controller architecture (no integrated PC solution with operating system)
- DAkkS calibration certificate for radon, factory calibration in accordance with DIN/ISO/IEC 17025 for decay products

Technical data:
Radon measurement chamber

Measurement principle	Measuring chamber with high-voltage deposition on silicon detector and alpha spectroscopy
Detector	4 x 200 mm ² Si detector with HV chambers
Intrinsic background	< 0.2 Bq/m ³
Nominal flow rate	0.5 l/min (> 72 hours continuously)
Internal volume	250 ml (total volume of the air circuit)
Measuring range	1 ... 10 000 000 Bq/m ³
Intrinsic accuracy	<= ±2,5 %
Sensitivity	4.2 or 8.5 cpm/(kBq/m ³) for fast or slow mode, respectively
Response time	15 or 120 minutes for fast or slow mode
Measurement/Analysis	Radon activity concentration fast (excluding Po-214) and slow (including Po-214) Thoron activity concentration

Decay product measuring head	<i>Removable, attaches to accessory adapter</i>
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Measurement principle	Separation of radon decay products on a filter and alpha spectroscopy
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Closer to your application

Dimensions	Width 43 mm, length 64 mm, height 38 mm
Detector	400 mm ² ion-implanted silicon detector
Filter	Membrane filter, opening 22 mm Monitoring for filter breakage, contamination No tools required for filter replacement
Nominal flow rate	1.5 l/min (> 30 hours continuously)
Measuring range	1 ... 100 000 Bq/m ³ (EEC) (attached)
Sensitivity	approx. 1 800 cpm/(kBq/m ³) (EEC)
Response time	120 min
Measurement/Analysis	EEC, PAEC for radon and thoron progeny products, respectively

Internal sensors

Standard	Relative humidity 0 ... 100 %, accuracy ± 2 % Temperature -20 ... 40 °C, accuracy ± 0.5 °C Barometric pressure 800 ... 1 200 mbar, accuracy 0.5 % MW Flow rate 0 ... 4 l/min, accuracy ± 5 % Humidity/temperature sensors in the air circuit
Optional	Additional sensors with analog or pulse signals can be connected to the AUX1 and AUX2 sockets, e.g., local dose rate probe, weather station, and much more.

General information

Measurement	Simultaneous measurement with all detectors/sensors according to the selected measurement program
Measurement programs	Storage of up to 16 different measurement programs with up to 32 steps (defined or unlimited repetition) Time interval 1 second to weeks
Data storage	Micro-SD, 32 GB
Operation/Display	4,7" Color Touch-Screen

Interfaces	2 independent digital communication channels Channel 1: USB, RS 232, RS 485 B Channel 2: RS 485 A with MODBUS RTU, WLAN (optional) 2 analog outputs, assignable to any measured value and measuring range
Power supply	12 V NiMH rechargeable battery Plug-in power supply 100 - 240 V ~50/60 Hz, 18 VDC / 1.8 A
Dimensions/Weight	235 mm x 140 mm x 255 mm / 6 kg (without progeny head)
Software	dVISION
GPS	Highly sensitive GPS receiver usually provides position even indoors; coordinates are stored simultaneously with the measured values. Map view in dVISION, export of GIS-compatible KML files.
Environmental conditions	0 ... 40 °C 0 ... 95 % rH, non-condensing 800 ... 1 100 mbar
Scope of delivery	Charging power supply adapter USB cable Dust filter (spare) Aerosol filters (10 units) Hose 6.35 mm x 3.18 mm (1.5 m) Fuse (spare) Transport case Manual & software (on https://sarad.de) DAkkS-compliant calibration certificate according to DIN EN ISO/IEC 17025:2018 for radon Factory calibration with certificate according to DIN for radon decay products
Optional accessories	Water ingress protection, soil test set (impact probe and/or packer probe), exhalation bonnet, aqua kit for DACM32 for measuring radon in water probes, measuring case for field applications with external mounting of the measuring head