

QAir

Air Activity Concentration measuring system



QAir system allows accurate quantification of air activity concentration in nuclear facilities where a continuous monitoring is required.

The system can be easily installed in the air exhaust stack and is composed by the following devices:

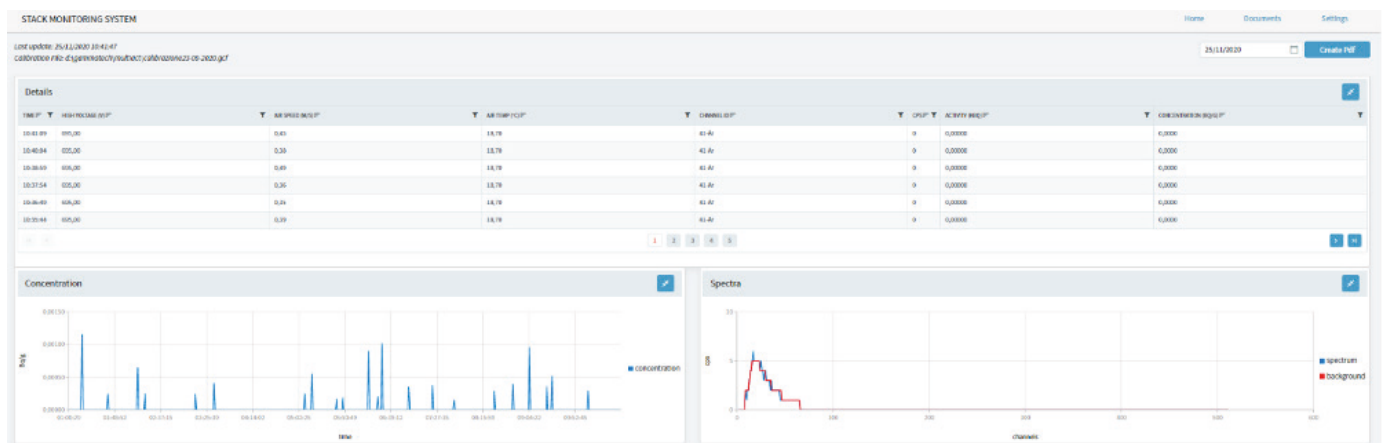
- Sodium Iodide probe with integrated Multi Channel Analyzer(MCA)
- Flowmeter for air speed measurement
- Web-based control software

The quantitative software permits both energy and efficiency probe calibration. Once calibrations are executed, the system can run in continuous data acquisition modality, in order to calculate both related activity (in a particular time frame) and the corresponding total air volume or weight.

Measurement results, together with generated reports, are clearly shown on a modern web-based interface, via graphical representation of acquired spectra, data tables and report online viewer.

All measurement data and spectra are permanently stored in order to facilitate backup or data recovery for offline analysis.

Furthermore, the detection system has been validated with Monte Carlo simulation, in order to facilitate efficiency calibration factor calculation for several installation layouts.



Component	Specifications	Installation	Communication
Activity probe	<ul style="list-style-type: none"> • NaI(Tl) crystal • Standard crystal 2"x2" and 3"x3" upon request • Integrated MCA • Integrated high-voltage generator • RS485 or ETHERNET (OPTIONAL) output • Integrated gain stabilizer (OPTIONAL) • Energy resolution <7% per Cs-137 • Typical sensitivity (cps/Bq/cm³) in Marinelli configuration: <ul style="list-style-type: none"> - Approx 10.00 for 2"x2" probe - Approx 39.00 for 3"x3" probe 	Inside stack duct with dedicated mounting flange (included)	<ul style="list-style-type: none"> • RS485 • ETHERNET (OPTIONAL)
Flowmeter	Measurement range: 0-20m/s		<ul style="list-style-type: none"> • RS-485
Control software	<ul style="list-style-type: none"> • Software service for data acquisition from probe and flow meter • Software service for web data presentation • Automatic E-mail alarm notification For Windows OS 	In control zone, up to 1 km from probe and flowmeter	<ul style="list-style-type: none"> • Serial and ETHERNET communication routines