



AirTox Solutions

The TOFWERK AirTox Monitor enables continuous, real-time detection of trace VOCs, supporting both mobile and stationary measurements for use in environmental and industrial monitoring.

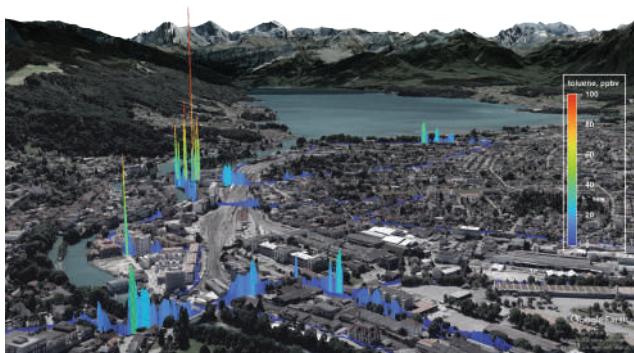


**Monitor the air we breath,
in real time**

Designed for both experts and non-specialists, TOFWERK AirTox Solutions delivers unmatched speed, stability, and analytical flexibility for air quality monitoring.

Technology

The AirTox Monitor utilizes the TOFWERK VUV PTR Reactor, enabling broad detection of volatile organic compounds (VOCs) with high sensitivity. This plasma-free PTR technology offers simplified operation and maintenance, while delivering exceptional reliability and wide compound coverage. Combined with TOFWERK time-of-flight (TOF) technology, it provides real-time, full-spectrum analysis, supporting both mobile and stationary measurements of trace VOCs for continuous environmental monitoring.



Features

- Real-time environmental monitoring suitable for stationary and mobile applications
- Ultra-sensitive detection with ppt-level quantification for accurate trace VOC detection
- Instant data reporting for rapid decision making
- High mass resolving power and extensive compound library for broad pollutant coverage
- Automated operation with minimal user intervention and maintenance
- Direct sampling with no preparation
- Compact, rugged design delivering laboratory-grade performance in challenging conditions



Related Applications

Ultra-sensitive, real-time detection of VOCs and airborne pollutants for diverse air quality applications including fenceline and mobile monitoring as well as source apportionment for air toxics and emerging contaminants such as ethylene oxide (EtO).



Compound Coverage

The AirTox Monitor detects a wide range of VOCs, including those in U.S. EPA methods (TO-15, PAMS, TO-11A, HON Rule) and international standards (i.e., China's HJ759, HJ683 and RCER-2015). Unlike traditional canister methods, the AirTox Monitor provides quantitative results in real time, reducing workload and enabling advanced applications such as emissions monitoring and mobile source detection.

Competencies

- Air quality assessments and compliance monitoring for both industries and municipalities through short or long-term deployments
- Industrial monitoring such as fencline and stack emission, leak detection, emission control and workplace safety
- Mobile monitoring capabilities and the use of the TOFWERK manifold sampling system for large, complex areas as well as emergency response and incident management

Class	Compound	LOD (1 min, ppt)
HON Rule Compounds	Acetaldehyde	12
	Acrolein	5
	Acrylonitrile	2
	Benzene	5
	Bromoform	5
	Chloromethane	10
	Chloroprene	100
	Ethylene Dichloride	10
	Tetrachloroethylene	40
	Trichloroethylene	20
	Trichloromethane	7
	Vinyl chloride	2.5
Small Oxygenated Compounds	Acetic acid	50
	Acetone	5
	Ethanol	80
	Formaldehyde	5,000
	Methanol	130
	Methyl ethyl ketone	12
	Methyl methacrylate	8
	Propanol	100
	Tetrahydrofuran	0.5
Halogenated Compounds	Chloroethane	10
Aromatics Compounds	Ethylbenzene (Xylene)	2
	Styrene (Vinylbenzene)	10
	Toluene	2
	Trimethylbenzene	2
Others Compounds	Acetonitrile	10
	Ammonia	5,000
	Butadiene	20
	Dimethylsulfide / Ethanethiol	2
	Ethylene Oxide	90
	Hydrogen Sulfide	5,000
	Isoprene	5
	Methanethiol	3



Why choose the TOFWERK AirTox Solutions?

- Instant, actionable data providing real-time insights
- Automated data reporting, low maintenance, minimal consumables
- Broad compound coverage due to multiple reagent ions

Specifications

Size & Weight	< 0.30 m ³ 422 mm x 630 mm x 840 mm; < 95 kg
Power (Max/Typical)	1,100 W/600 W 100-240 VAC, 50/60 Hz
Time Response	< 100 ms
Data Acquisition Rate	5 Hz
Sensitivity (cps/ppb, Xylene)	> 2,000
Mass Resolving Power	3,000 Th/Th at m/Q 106
Mass Range	Up to 4,000 Th



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