

TROLEX

CONSTRUCTION SOLUTIONS



**Industry proven technology
designed to ensure safety during
construction operations worldwide.**



A leading name in safety technology.

For over 60 years, we've been a leading global supplier of gas, dust and environmental monitoring systems to the construction industry.

Our products are deployed in over 35 countries by some of the world's leading corporations to protect their people and assets, in turn maximising efficiency and output.

We offer the latest in gas detection systems, particulate monitoring technology and environmental monitoring solutions to meet the diverse needs of our customers.

What are we trying to achieve?

We're a unique company with a distinctive culture and we aim to be the best in everything that we do.

We're serious about remaining independent and being different, and are committed to achieving the very highest standards of business practice and

delivering the best in quality and value for our customers.

We regularly review our performance against our own charter commitments and develop action-plans to ensure that we constantly improve and develop – bringing benefits to our customers, our employees, our partners, our community and those whose lives and livelihoods are entrusted to our products and services.

Our Innovations

We're a company that has innovation at heart. We innovate to save lives, save money and to make life better for our customers and the people they employ. This brochure highlights a few examples of our world-class innovations, and the benefits they bring.

Don't risk exposure to hazardous substances when working on a construction site. Real-time dust monitoring and gas detection could prevent a lifetime of ill health.

With our cutting-edge real-time gas and dust monitoring technology, we're consistently analysing your risk and alerting you to any possible over-exposure of dangerous substances, so you can continue do your job hassle free.

Designed to function in the harshest and most hazardous industrial environments, we've made it our mission to protect all construction workers from respirable dust and gas exposure, no matter if you're exposed to dust, silica, or potential flammable or toxic gas

exposure.

Whether working in highly dusty, heavy duty environments, or in cabs and construction vehicles for long periods during your shift, our various dust and silica monitors and gas detection technology suits whatever situation or job you're working on.

With real-time reporting live on screen, you're regularly updated on what levels of dust or gas you are exposed to, meaning you can continue to work throughout your shift, knowing you'll be alerted to any dangerous levels of hazardous substances.

With our real-time monitoring, you can work without stress, knowing you're always protected on any construction site.





ONE LIFE. PROTECT IT.

Due to the nature of construction, with projects commonly in open-area, outdoor spaces, using various natural materials which are regularly disturbed for construction works, we know exposure to construction dust and silica can be common.

Whilst an essential part of construction operations, activities such as cutting, drilling and demolition of construction materials do generate fine dust and particulates as a by-product. Natural materials like concrete, wood and sand are regularly disturbed, increasing the risk of lung diseases and respirable health issues.

Whilst this is a well-known risk to workers, exposure to hazardous gases can also present a problem to construction sites and workers.

Use of certain equipment such as generators, machinery and vehicles can produce Methane, Carbon Dioxide and volatile compounds and vapours (VOC's) as a by-product of the materials being used on construction sites.

Without knowing the true level of hazard you're exposed to and without effective control measures to reduce these hazards on site, excess dust and gas can pose a serious threat to worker's health across entire construction sites.

The solution is simple. Real-time detection of hazards for construction.





PARTICULATE MONITORING >

AIR XS SILICA MONITOR

It's estimated between 40 to 50 million workers worldwide are exposed to harmful silica dust in the workplace. We're here to do something about that.

AIR XS provides real-time silica monitoring for all construction workers at risk of excess RCS, deploying audio and visual alarms and live RCS readings on screen, so workers can make quick, informed decisions to reduce their risk.

Deploying 2 x user-configurable alarms, AIR XS has the capability to warn you and your workers of a specific particulate threshold breach based on your chosen

limit or value.

AIR XS deploys Optical Refraction Technology (ORT) alongside an Optical Particulate Counter (OPC) sensor which allows it to detect and distinguish RCS from total dust loads, giving data on large target RCS identification ranges.

ORT shines a laser through each particle causing a refraction of the light, giving AIR XS its accuracy and reliability when detecting RCS particulates, informing you when to act.



Why choose AIR XS to monitor for silica in **construction** environments?

Heavy-duty industrial applications which use materials such as concrete and stone are at risk of silica exposure.

That's why AIR XS is essential for construction sites.

- › Alerts you in real-time to breaches of personalised STEL and TWA silica levels across outdoor environments and construction activities, so you can work freely whilst knowing specifically how much silica dust you're exposed to.
- › Audio alarm of 85 dB when thresholds are breached, to alert entire workplaces of dangerous silica levels, even during noisy activities such as transportation, excavation and drilling.
- › PC/ABS stainless steel housing material, ingress protected to IP66 from dust, water, and all outdoor environmental contaminants ensuring optimal operation performance to reduce additional costs for maintenance and fixing.
- › Target RCS identification range from +1 μ m to +28 μ m ensures that all silica dust generated on site is being reliably monitored for in total dust loading mixes, for deducing what's generating silica dust as opposed to just standard dust.
- › Intuitive and easy-to-use device menu structure, coupled with industrial-grade keypad, makes reading and navigating silica levels on screen simple and easy in situations affected by sun, or high silica dust in wet and windy conditions.
- › Weighing only 8.2 kg and set up on an AIR X tripod, AIR XS becomes easily transportable around site, making it possible to monitor for dust near activities like pouring concrete, excavation and welding, protecting all workers on shift.
- › Connectivity to BreatheXS gives all relevant workers access to live and historical data, to deduce which activities cause higher levels of RCS from remote locations and subsequently implement effective control measures.



PARTICULATE MONITORING >

AIR XD DUST MONITOR

The biggest problem with dust monitors on the market today? They don't work very well when there's lots of dust around.

AIR XD (available in General Purpose and Grp I) provides fixed, real-time, total area dust monitoring, suitable for use in all construction sites and environments.

Deploying 2 x user-configurable alarms, AIR XD has the capability to warn you and your workers of a specific particulate threshold breach based on your chosen limit or value, proving information on dust levels which support business decision

making when it comes to introducing control measures.

The OPC sensor in AIR XD offers a PM measurement range of 0.35 μm to +40 μm , combining adaptive particle flowrate with advanced sensing technology to ensure a high level of measurement accuracy when you need it the most.

The size of each particle picked up by the sensor in AIR XD is instantaneously measured and classified in large dust loading volumes to allow detailed real-time reporting on a construction site.



Why choose AIR XD to monitor for dust in construction environments?

In outdoor construction environments, you need to ensure your dust monitor is suitable for all scenarios.

That's why you should choose AIR XD for construction.

- ▶ Alerts you in real-time to breaches of personalised STEL and TWA dust levels across outdoor environments and nearby construction activities, so you can work freely whilst knowing how much dust you're exposed to.
- ▶ Audio alarm of 85 dB when thresholds are breached, to alert the entire construction site of dangerous dust levels, even during noisy activities such as transportation, excavation and drilling.
- ▶ Stainless steel casing with IP66-rated enclosure, protects AIR XD main housing from dust, water, and all outdoor environmental contaminants ensuring optimal operation performance to reduce additional costs for maintenance and fixing.
- ▶ Particle count of up to 10,000 particles per second, with $\pm 5\%$ accuracy for dust readings, to ensure that all dust generated on site is being reliably monitored for, regardless of conditions on a construction site.
- ▶ Intuitive and easy-to-use device menu structure, coupled with industrial-grade keypad, makes reading and navigating dust levels on screen simple and easy in situations affected by sun, or high dust levels in wet and windy conditions.
- ▶ Weighing only 8.2 kg and set up on an AIR X tripod, AIR XD becomes easily transportable around site, making it possible to monitor for dust near activities like pouring concrete, cutting and welding, protecting all workers on shift.
- ▶ Connection to Breathe software gives relevant workers access to live and historical data, to deduce which activities cause more dust for implementing effective control measures, whether on-site or in a nearby office cabin.



PARTICULATE MONITORING >

XD1+ PERSONAL DUST MONITOR

We believe simple, accurate, real-time dust monitoring should be available to every worker who needs it. No exception.

XD1+ provides truly wearable, real-time personal dust monitoring for every worker at risk from harmful respirable dust.

Custom alarm set points for both personalised, pre-set STEL and TWA alarm thresholds as well as on-device audio and visual alarms allows you to know exactly when you're exposed to hazardous dust levels when on a construction site.

XD1+ deploys an OPC light-scatter photometer, with a particulate measurement range of 0.1 μm to +10 μm for dust sizes ranging from PM1, PM2.5, PM4.25 and PM10 and a $\pm 10\%$ sensing accuracy, perfect for supporting use alongside your safety control measures.

Whilst deploying incredibly accurate sensing technology for monitoring dust, XD1+ unique size and weight allows workers to personally monitor dust levels in their surrounding environment, making controlling dust exposure specific for all individual workers on a construction site.



Why choose XD1+ to monitor for dust in **construction** environments?

Health and safety protocols across large worksites can be a long-drawn-out effort, involving setting-up processes and man power.

Not with XD1+ Personal Dust Monitor.

- › Weighing only 170 g, including a protective boot, XD1+ is easily transportable and wearable around a worksite, picking up all dust levels for the job you're completing, whether drilling, cutting or building structure.
- › Only 112 mm x 64 mm x 25 mm, meaning XD1+ can be fitted in any area of the workplace or on clothing without restricting your ability to complete your job, all whilst still accurately monitoring for all airborne dust.
- › XD1+ can be fitted on walls, poles or in cabs, thanks to various mounting options, whether outdoor, indoor, or in vehicles, accounting for dust across the entire workplace, which alternative monitoring methods can't account for.
- › Visual icon illumination for pre-set STEL and TWA breaches, as well as battery health indication alongside vibration alerts to let you know if you're exposed to hazardous dust levels without the need for regular checks of the unit.
- › OPC light-scatter photometer sensor, with particle flow path ingress protected to IP4X, to specifically monitor for all respirable dust particles, particularly beneficial when monitoring in and around your breathing zone.
- › Battery run time of 16 hours (full health at ambient) allows for XD1+ to run without any power source or battery pack for 2 standard 8-hour shifts, meaning all dust generated is accounted for, whether settled or airborne.
- › Compatible BreatheMOBILE application allows all relevant personnel to view live and historical data, whether on-site or in a nearby office to deduce which activities cause higher dust levels and introduce necessary control measures.



GAS DETECTION >

SENTRO X GAS DETECTOR

Gas detection which is faster and simpler to install without compromising on efficiency and accuracy.

The General Purpose SENTRO X, provides a new dimension to the way you monitor for toxic, flammable and oxygen gases in heavy duty construction environments.

At only 775 g, the SENTRO X Controller is small and lightweight enough to be transported across entire construction sites, but strong and durable enough to withstand all hazardous and heavy-duty situations.

And thanks to compatible Remote Head sensor, gases can be detected for up to 10 metres away from main SENTRO X Controller, in hard-to-reach or high up locations, when you're detecting for gases in open spaces and outdoor areas.

The heart of SENTRO X is the gBloc: a pre-calibrated toxic, oxygen or flammable gas Bloc, built on practical hot-swappability and convenient installation, depending on your gas sensing needs. Requiring no specialist equipment or complicated set-up, simply plug-in a gBloc to the gBloc bay and you're ready to start detecting for hazardous gases.



Why choose SENTRO X to monitor for gas in construction environments?

The last thing you want when detecting for gas is an awkward, cumbersome and clunky gas detector getting in the way.

That's not the case with SENTRO X.

- Hot-swappable gBlocs for pre-calibrated gas sensing allows for multiple gases to be detected throughout a shift without the need to purchase multiple gas detectors, saving time and money whilst protecting you from various risks.
- gBlocs are easily accessible and securely located in the gBloc bay, reducing de-lodging when nearby work like drilling or building is occurring, avoiding hassle and stress when focusing on completing important tasks.
- Remote Sensor, ingress protected to IP65, with up to 10 metres connectivity with main Controller allows for accurate gas detection in hard-to-reach and arduous locations across entire construction sites.
- Requiring just a set of fixing screws which can be fixed to the 2 x M8 fixing holes, SENTRO X can be installed anywhere, along with Unistrut compatibility, allowing for easy installation nearby any construction activity as required.
- Main Controller deploys unit reinforced PC/ABS polymer, ingress protected to IP65, and EMC protected, with proof against surface electrostatic discharge for installation in various hazardous areas of a construction site.
- Easy-to-navigate dynamic menu, with just 3 accessible buttons, ensures straightforward navigation and reading of gas levels, even in bright sun, poor visibility, or wet and windy industrial conditions on a construction site.
- Power-over-Ethernet (PoE), RS485 and MODBUS connectivity and communications allows data to be accessed and viewed on your personal SCADA devices, with remote viewing for all relevant personnel to support the implementation of control measures.



Want to know more about our construction solutions?

Trusted by industry for over 65 years, we've made it our mission to equip workers in hazardous environments with robust, highly accurate safety instrumentation that will protect your reputation, your equipment and more importantly, your people.

Want to speak to us about integrating Trolex safety technology to your construction operations?

Contact a one of our sales experts who'll be able to support you with Trolex safety solutions that suit your operational needs.

Got a Trolex product already?

Speak to us about our servicing and upgrade options at service@trolex.com



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At Trolex, we save lives.

We believe that no person should risk their life to earn a living.

Our aim is to become the world's leading name in health and safety technology, through pioneering products that provide real-world benefits to our customers, whenever workers operate in hazardous environments.

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