

TROLEX

**LET'S GET
REAL.**



AIR XKS
SILICA MONITOR



REAL-TIME RCS DETECTION. IT'S HERE.

For the first time in history, putting an end to silicosis caused by the inhalation of silica particulates in the workplace has become a realistic possibility.

The **AIR XCS Silica Monitor**, produced by Trolex with the support of the Centre for Work Health and Safety, delivers highly accurate, continuous, real-time silica detection, giving you all the data you need to protect your workforce, improve your processes, reduce costs and ensure that you not only comply with regulations – but that you can prove it as well.

It's time for everybody to step up and protect their best assets – their people – from harm. As of now silicosis is a fully preventable disease.

So, let's get real about monitoring for harmful silica dust.

Go to www.trolex.com/product/air-xs for full details and to arrange a demonstration with your local distributor.



WE BELIEVE IN KEEPING IT SIMPLE...

Which is why the **AIR XKS** starts monitoring for respirable crystalline silica (RCS) within a few seconds of powering up and why it typically needs about a minute of maintenance time each month. No complicated start-up routines, cleaning procedures or complex calibration programmes, and no return-to-base servicing requirements or waiting on laboratory results.

Just real-time, accurate results when and where you need them.



➤ Real time, all the time.

AIR XCS gives you 24-hour, real-time information about silica levels on-screen and in greater depth through the **BreatheXS** software, allowing you to respond instantly to changing levels of dangerous particulates.



➤ Data to make a real change.

User-selectable rolling averages across 15-minute, 1, 4, 8, and 12-hour periods, as well as custom alarm levels. Instant visualisation of trends and incidents through **BreatheXS** software allowing you to clearly understand your RCS problem and how to mitigate it.



➤ Almost zero maintenance.

All you need is the Compliance Pack S from Trolex and typically a minute every month to maintain your **AIR XCS**. That's it. Real time for the real world.



➤ Held to a higher standard.


At Trolex, we like to hold ourselves and our products to a higher standard, which is why all our tests are verified by independent authorities, and our accuracy figures are stated in comparison to laboratory-grade certified-accurate benchmark materials.

Go to www.trolex.com/product/air-xs for more information.

PIONEERING TECHNOLOGY MADE SIMPLE.

AIR XKS examines multiple detection parameters for RCS in real time, including size, symmetry, and a series of optical markers unique to RCS particles.

It simultaneously deploys optical refraction technology with light-scatter photometry, analysing every particle sampled and classifying them by their identifiable optical properties. In this way, Air XS captures all forms of RCS whether alpha or beta quartz, cristobalite, tridymite, and all relevant sizes of particulate within the respiratory fraction. This information is then combined with an analysis of particle mass to give results in mg/m³ and particles per litre.



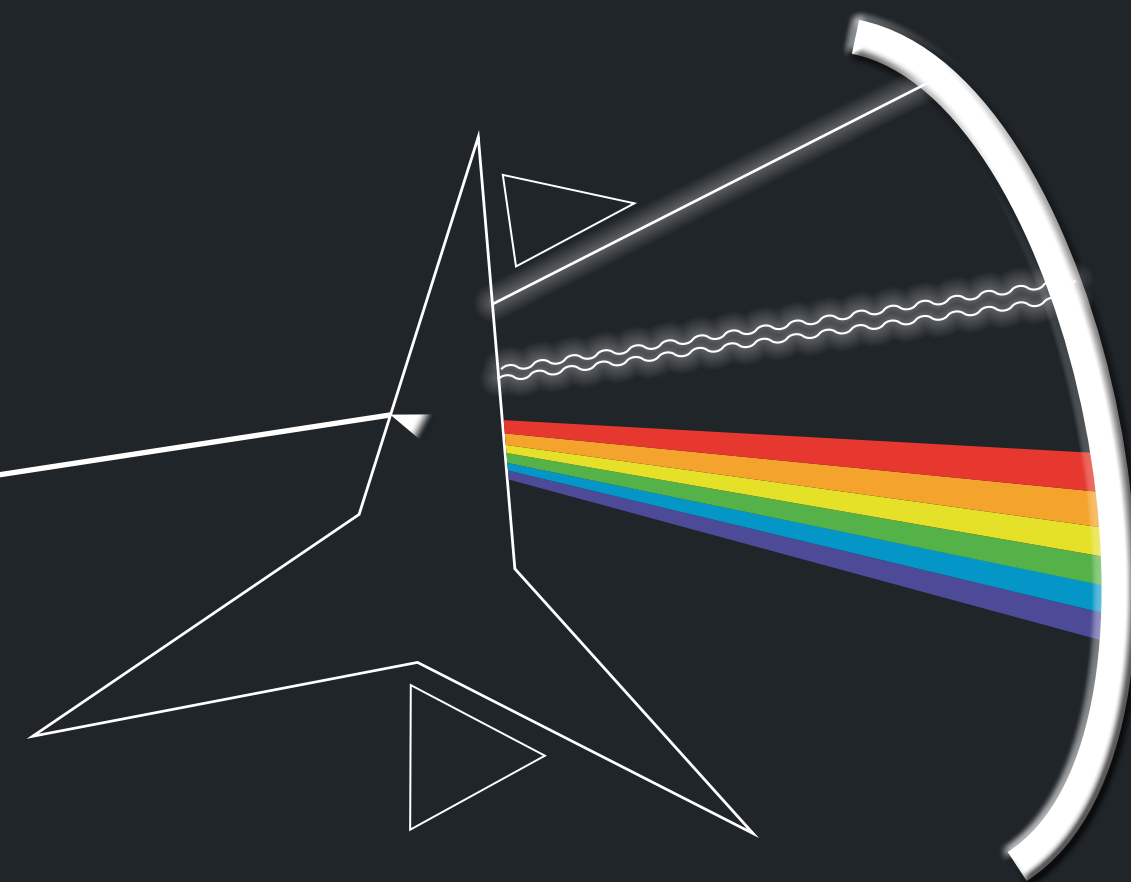
“The Trolex **AIR XKS** is simple to install and use. The mobility of the unit allows us to gather information from right across our site for various products. The flexibility of viewing data in real time next to the plant has helped with both employee and management engagement regarding RCS exposure.

The information that the Trolex **AIR XKS** produces has been invaluable in managing our air extraction system across our site. It helps us make informed decisions to ensure that we continue to decrease our employees’ exposure to RCS. It also allows the business to make instant decisions based on the data to ensure

Mike Thompson | QHSE Supervisor | Pennine Aggregates Ltd.

“The benefit of real-time RCS monitoring for us is ensuring that all our controls are working at their highest level to ensure the safety of our workers and contractors [...] and when we make capital expenditure decisions, we can ensure we target the expenditure on the things that will have the biggest effect on RCS control.”

Aurelien Colas | Unit Manager | Hanson Heidelberg Cement Group.



The intensity of reflected light indicates particle size.

Unique differentiated light-scatter patterns demonstrate the asymmetrical nature of particles.

Unique refractive light qualities indicate RCS particles are present.

Our Breathe⁺ high-speed scatter/sizing/crystallinity detection algorithm processes the results in real time and triggers a triple-voting system that positively identifies and distinguishes harmful silica content.

The result:

Accurate, robust, real-time reporting in an easy to use and easy to maintain product.

ACCESSORIES



Transportable Pack

For use in remote locations, or where power is not available, the lightweight **AIR XKS** Transportable Pack powers up your **AIR XKS** 24 hours a day without interruption. Featuring our unique twin-battery system with built-in prioritisation (the system automatically switches from depleted to charged cells), the **AIR XKS** Transportable Pack allows you to hot swap and recharge batteries quickly and easily without interruption to your work and without ever powering down.

Mounted on a robust, high-quality tripod and powered by dual lithium-ion batteries with a typical run cycle of 5 to 6 hours per battery.

The standard **AIR XKS** can be converted into transportable mode in about 5 minutes.



Compliance Audit Pack S

A single, easy-to-use pack for all your service, audit, compliance, and QA needs and to verify your **AIR XKS** in-situ. All you need is a minute, typically every month to ensure your **AIR XKS** is compliant, fully functional, and ready for use. That's it.

No complicated set-up or calibration routines, no return-to-base servicing, and no fuss.

All it takes is a Compliance Pack S and a minute of your time.

The Compliance Pack S contains the Trolex-approved Compliance Audit dust samples, along with the particulate delivery system with hood, and swap-out filters for 12 compliance audits.



BreatheXS software

Our dedicated **BreatheXS** software for **AIR XKS** is a clear, easy-to-navigate, easy-to-use platform for storing, viewing, and accessing all of your RCS data.

BreatheXS provides event logging, Approved Audit Certification and QA verification when required as well as instant alert messaging.

AIR XKS units can be controlled either in-field using the on-device buttons or using the **BreatheXS** software, giving you maximum flexibility and accessibility.

12-month warranty

All **AIR XKS** products and accessories come with a 12-month warranty.

To maintain a valid warranty, carry out a monthly compliance check with the Compliance Pack S.

SPECIFICATION

Particulate sensing parameters

Sensing technology	Optical refraction technology (ORT) Light-scatter photometer (OPC)
Particulate measurement	Target RCS identification range 1 to 10 µm
Max. typical dust loading*	150 mg/m ³
Continuous range	25 mg/m ³
Displayed data	RCS mg/m ³ Total particles/litre over the selected averaging period
Resolution	1 µg (1,000 th of a mg)
Averaging period	15 minutes, 1, 4, 8 and 12 hours
Sampling interval	1 second to 60 seconds
Particle count	> 600 particles/second
Total airflow rate	~ 1.5 L/m (nominal)
Typical RCS accuracy	± 25%

*The instrument can define particulate measurement peak trends up to the quantity specified.

Note: Sustained exposure to dust quantities above 25 mg/m³ will be logged but they may affect the operating life of the **AIR XCS** sensor.

Users should determine specific operating conditions to ensure that the unit is suitable for a particular application.

Technical specification

Operating temperature	-10 °C to 45 °C
Humidity	0% to 95% RH (non-condensing)
Housing material	PC/ABS – stainless steel
Ingress protection	Main enclosure: IP66 Particle flow path (cap open): IP22 Particulate flow path (cap closed): IPX6
Weight	8.2 kg
Cable entries	3 x M20 with removable blanks 1 x M20 breather gland 1 x M20 USB connector
Nominal power supply	100 V to 240 V ac 50/60 Hz 9 V to 18 V dc
Power consumption	15 W
Communications	RS485 data output with MODBUS RTU protocol Ethernet (MODBUS TCP/IP) – not yet implemented
External power output	2 x 15 V dc 1 A outputs (for powering external devices)
Connectivity	BreatheXS PC/Mac software
Data download	External USB interface
Instrument data storage	6 GB
User interface	128 x 64 dot matrix display with RGB backlight Navigation keypad (membrane)
Visual alarms	Custom alarm set points Latching/non-latching
Indicators	1 x green high brightness LED – sensor heartbeat 1 x blue high brightness LED – communications
Self-test routine	Sensor hardware, circuitry, and communications on ‘power on’ manual self-test during use
Certification	CE compliant

Go to www.trolex.com/air-xs for the full **AIR XKS Silica Monitor** user manual.

ORDER REFERENCE

AIR XKS Silica Monitor TX8100.00



BreatheXS software (12 months) P5633.800



Compliance Audit Pack S P5633.4000



Transportable Pack

P5628.5000



Additional battery

P5642.5000



AIR X

PARTICULATE RANGE

AIR XCD



Game-changing, life-saving particulate measurement technology.

AIR XCD has been designed with one simple purpose – to monitor particulates causing the industry’s biggest problem: diseases and deaths caused by harmful particulates.

Accurate, real-time particulate monitoring that scans for dust in even the harshest and most hazardous working environments.

Go to www.trox.com/product/air-xd to find out more about the **AIR XCD Dust Monitor**.

LEADING SAFETY TECHNOLOGY

XKD ONE



XKD One is the new lightweight, self-contained continuous personal dust monitor with no filters, no pumps, no tubes and no replaceable parts.

Simply switch it on and in 5 seconds you're ready to go.

Personal dust monitoring for every single worker at risk from respirable particulates.

Go to www.trolex.com/product/xd-one to find out more about the **XKD One Personal Dust Monitor**.

At Trolex, we save lives.

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

We aim 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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