

AIR XKS SILICA MONITOR: MORE THAN JUST A PARTICLE COUNTER.

If you've been in the Health and Safety space, it's likely you'll know about Optical Particle Counter (OPC), also known as "light-scattering".

The technology has been around for quite a while after all.

We launched **AIR XKS Silica Monitor** in 2022; but, our patented design isn't just another OPC.

AIR XKS is ORT... that's Optical Refraction Technology, so if you think it's just another "clever guess", then think again.

To understand the simple difference between OPC's (or light-scattering) and ORT: an OPC shines a laser and counts the interruptions in the beam, from this it can deduce size and quantity.

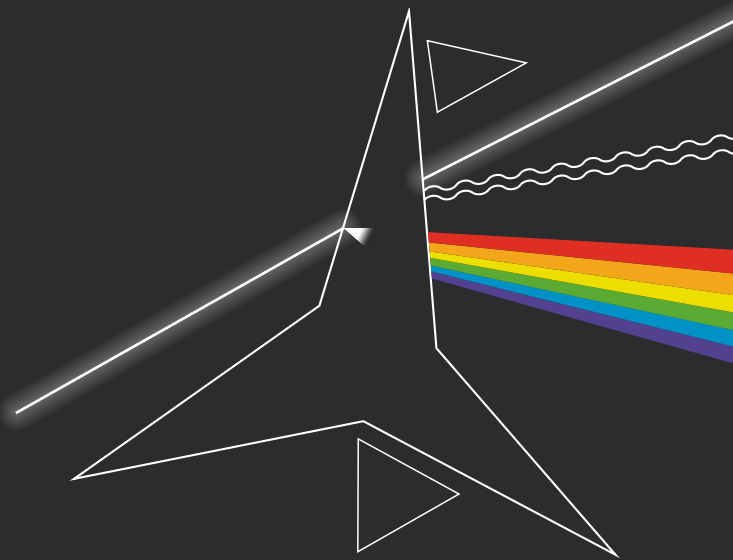


PATENTED TECHNOLOGY.

Our patented design that uses **ORT**, however, shines a laser *through* each particle causing a refraction of the light. This refraction is captured on several sensors.

Using the principle of birefringence, the refraction pattern is collected to differentiate an asymmetric, crystalline particle from normal particles. This is all qualified by a number of characteristics giving a reliable, real-time particle analysis.

We reference Pink Floyd's 1973 album *Dark Side of the Moon*; it's not exact by any means but the refraction of the light coming out of the prism shows an example of how light refracts, similar to a crystalline particle.



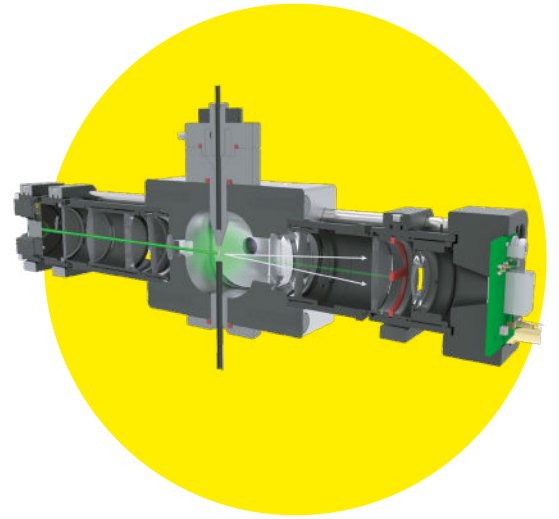
- The intensity of reflected light indicates particle size.
- Unique differentiated light-scatter patterns demonstrate the asymmetrical nature of particles.
- Unique refractive light qualities indicate RCS particles are present.

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Both ORT and OPC systems then apply calculations to convert the particle size to the current mass measurements, typically mg/m^3 , for the current expressed exposure limits.

This means unlike other particle monitors on the market, the Trolex **AIR XKS SILICA MONITOR** doesn't just count particles in your workplace. In fact, **AIR XKS** is able to detect and distinguish RCS particles accurately and reliably, and all in real time.

AIR XKS captures all forms of RCS, whether alpha or beta quartz, cristobalite, tridymite, or any relevant sizes of particulate within the respiratory fraction – can be distinguished and differentiated.



For the first time in history, ORT promises the ability to allow users to detect and distinguish RCS in real-world settings continuously and reliably. ORT is an entirely new development in the particulates field; by reliably detecting and reporting on RCS exposure in real time, workers have the possibility to be further protected in the workplace.

GET IN TOUCH

If you'd like a more in-depth look at how real-time data can contribute to reducing instances of occupational silicosis, then be sure to check out check out our [white paper](#).

And if you operate in challenging environments where you know RCS is present, and want to protect your workforce, then you can get in touch to [request a demonstration](#) with one of our experts or find a [local approved distributor](#).



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