Indoor Air Quality

Build healthier spaces with Polygon ExactAire® monitoring, ventilation, and filtration equipment

Always By Your Side.

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Indoor air quality starts before occupancy

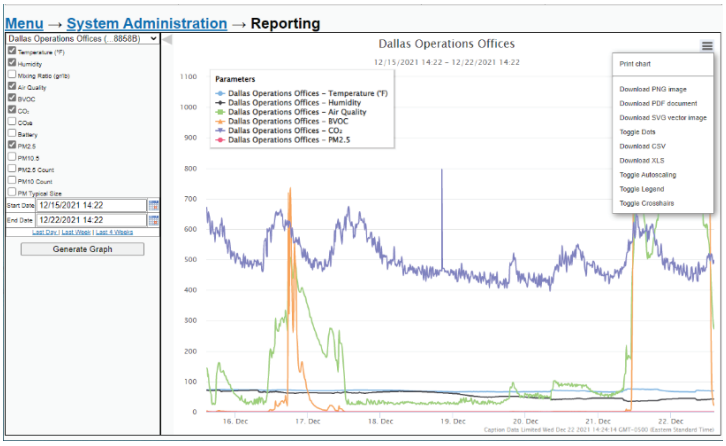
Monitoring and controlling indoor air quality (IAQ) during construction is crucial to ensuring a healthy building before and after occupancy. The right environmental monitoring, climate control, ventilation and filtration equipment can help you remain compliant with HSE regulations regarding crystalline Silica dust. It allows you to preserve manufacture warranties, and protect employees from airborne fumes, dust and mould during construction and well into the future.

Polygon's solution combines **ExactAire®** remote monitoring with state-of-the-art temporary climate control equipment to deliver economical and reliable results. The ExactAire® sensors collect and transmit data in real-time to user dashboards and equipment like desiccant dehumidifiers, air-conditioning, direct or indirect heating, air scrubbers, blowers (high static) and axial/vortex fans.

Throughout our expertise and technology, we are able to help site managers be more proactive in achieving and maintaining conditions. Whereas handheld devices provide readings at one point in time, our solution provides continuous monitoring for real-time information and trend analysis.

Sensing Options

- Relative humidity
- Temperature
- Dewpoint
- Barometric pressure
- Volatile organic compounds (VOCs)
- MCERTS Certified Particulate Matter - PM1, 2.5, 4, 10
- Carbon dioxide (CO2)
- Leak detection
- Toxic Gas (PAA)



Monitoring and controlling for IAQ

Polygon's ExactAire® sensors continuously measure several indicators of indoor air quality. When data are combined it can facilitate a true IAQ Score. The sensors immediately respond to changing environments, log data locally and send data and reports to users.

When conditions approach or hit thresholds, Polygon climate control equipment can be adjusted over a wireless cellular connection to correct for any issues.

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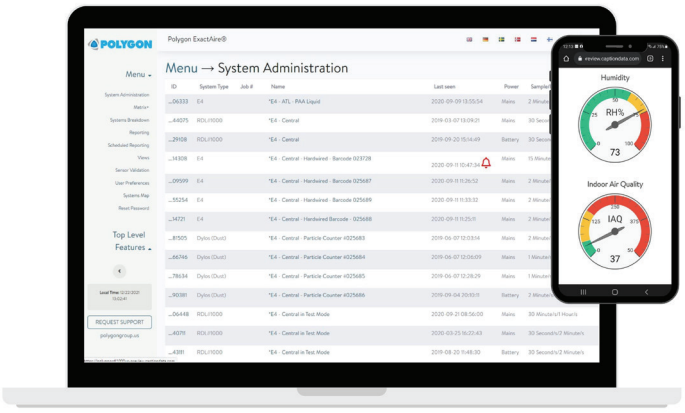
Setting up ExactAire for IAQ insight

Straightforward set up

Setting up the ExactAire® equipment is simple. Sensors and the long-range base station are either battery-powered or plug into 110V. Sensors can be mounted vertically on walls, columns or stand a lone. Additionally, horizontal mounting is possible on ceilings, ducting or anywhere air quality is a concern. Turn the base station on and IAQ sensors will configure themselves automatically.



Instant insight

For ongoing operations or greater awareness, sensor data can be visualized on user-friendly dashboards, 3D building status views, and used to trigger alerts so conditions can be known to multiple stakeholders at anytime, anywhere.

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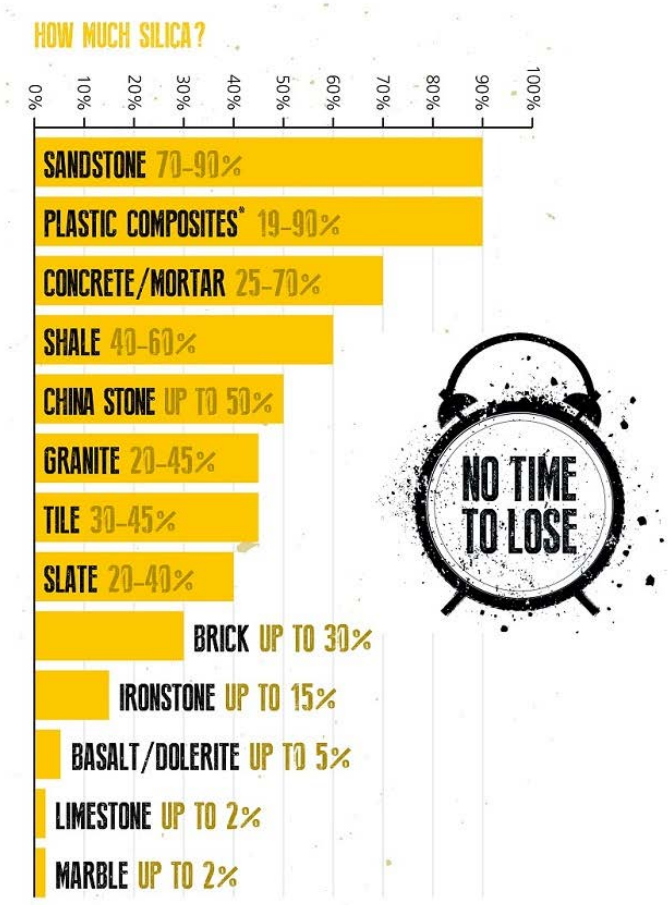
What does the HSE say about Indoor Air Quality?

HSE Regulations state, Silica dust has a workplace exposure limit (WEL) of 0.1 mg/m3, expressed as an 8-hour time-weighted average (TWA). Exposure should be reduced as low a reasonably practicable, and at least below the WEL. Because the WEL for RCS is an 8-hour WEL, you can exceed it but only for a short amount of time.

Silica dust kills around 800 people every year in the UK. Because silica dust is found in a lot of building materials, it's difficult to avoid.

Indoor air quality can be affected by many factors including the air exchange rate, outdoor climate, weather conditions, and occupant behavior. Indoor concentrations of some pollutants have increased in recent decades due to such factors as energy-efficient building construction (when it lacks sufficient mechanical ventilation to ensure adequate air exchange) and increased use of synthetic building materials, furnishings, personal care products, pesticides, and household cleaners.

Actively monitoring and controlling the impacts of these sources is the first step in building a healthy and productive workspace.



The approximate ranges for the amount of crystalline silica found in materials (based on Health and Safety Executive data)
*Silica is used in products like fillers or composite panels

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