

Indoor Air Quality

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



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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 OSHA's Crystalline Silica rule, support UL Certification, preserve manufacture warranties, and protect employees from airborne fumes, dust and mold during construction and well into the future.

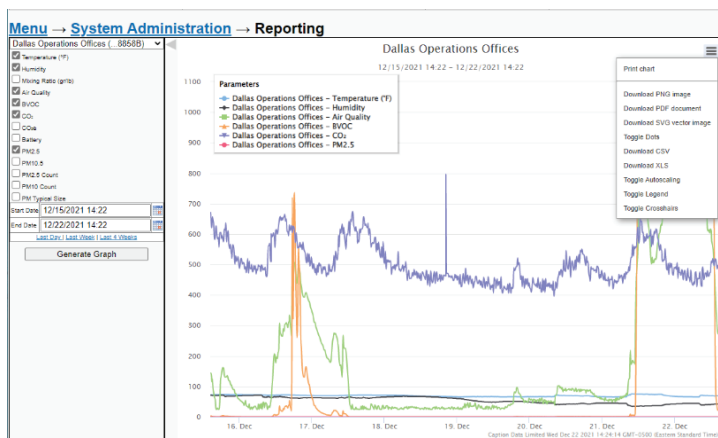
Polygon's solution combines **ExactAire®** remote monitoring with state-of-the-art temporary climate control equipment to deliver economical and reliable results. The ExactAire® sensors collect and transmit data in real-time to user dashboards and equipment like desiccant dehumidifiers, air-conditioning, 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

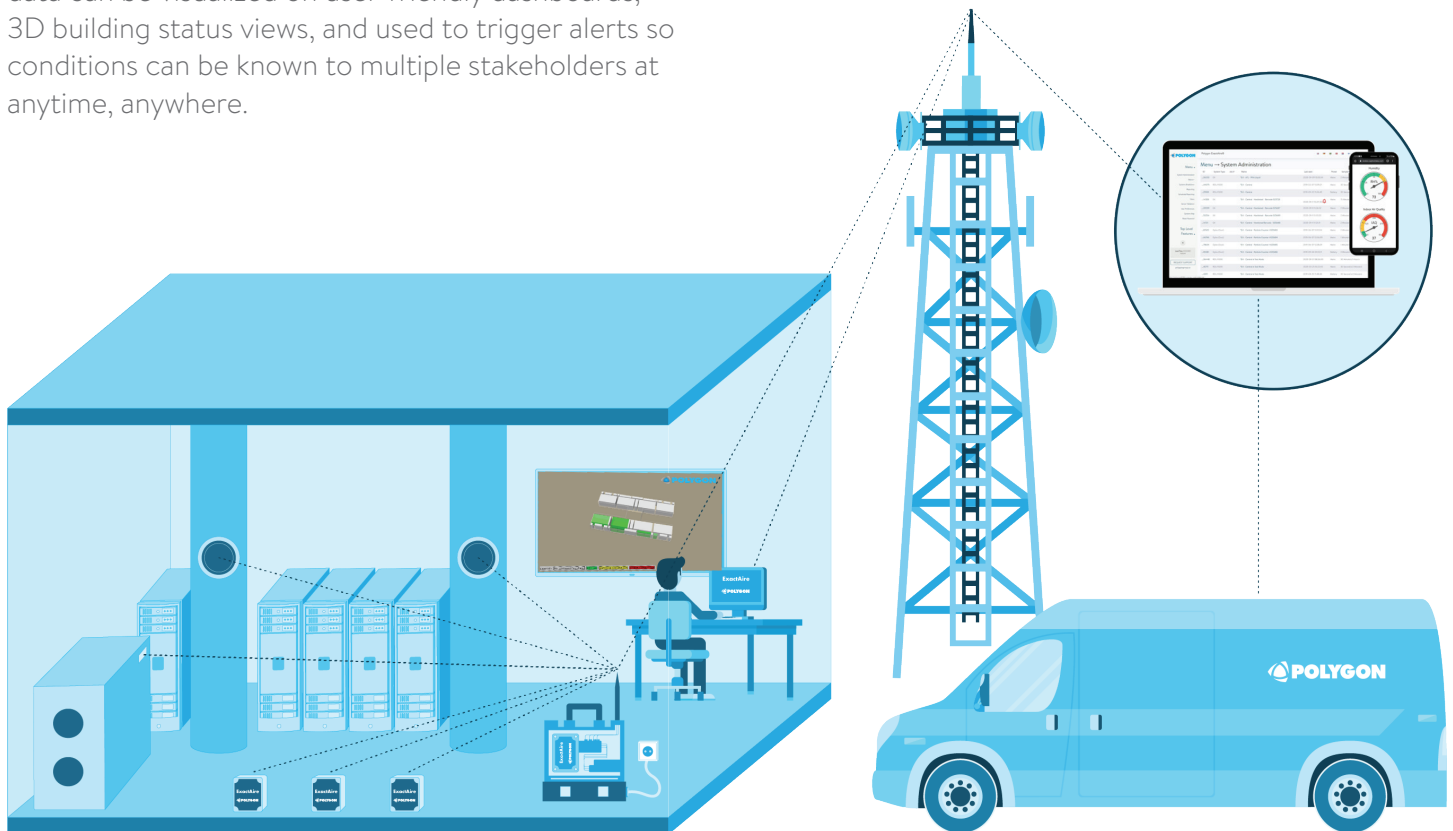
Straightforward set up

Setting up the ExactAire® equipment is simple. Sensors and the long-range base station are either battery-powered or plug into 120V. 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 EPA say about Indoor Air Quality?

The Environment Protection Agency in the United States is aimed at regulating industry to protect human and environmental health. Their research shows that **Americans, on average, spend approximately 90 percent of their time indoors**, where the concentrations of some pollutants are often 2 to 5 times higher than typical outdoor concentrations.

There is much research on how indoor and outdoor conditions effect health and the world is growing more aware of the potential dangers of the air they breathe. In fact, the EPA published a uniform index to help the public categorize air quality levels and mitigate the risks associated with each.

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.

Air Quality	Air Quality Index	Health Advisory
Good	0-50	None.
Moderate	51-100	Unusually sensitive people should consider reducing prolonged or heavy exertion.
Unhealthy for Sensitive Groups	101-150	People with heart or lung disease, older adults, and children should reduce prolonged or heavy exertion.
Unhealthy	151-200	People with heart or lung disease, older adults, and children should avoid prolonged or heavy exertion. Everyone else should reduce prolonged or heavy exertion.
Very Unhealthy	201-300	People with heart or lung disease, older adults, and children should avoid all physical activity outdoors. Everyone else should avoid prolonged or heavy exertion.

Figure 1 The Air Quality Guide for Particle Pollution includes cautionary statements and actions people can take to reduce their risk from exposure to air pollution at different levels of health concern. www.epa.gov



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