

Indoor Air Quality Delivery and Monitoring: Case Study

Oxygen8 and Turntide: A Full-Stack IAQ Solution



With the high performance of Oxygen8's ERV systems alongside the 24/7 visibility of the Turntide Building App, Daikin VRV reps can provide customers with a holistic solution for end-to-end IAQ management of buildings. Working in tandem, Oxygen8 delivers fresh air into building spaces, while the Turntide Building App continuously monitors IAQ levels and other critical HVAC information to ensure a safe, healthy environment.



O X Y G E N 8



 **TURNTIDE®**

- **Fresh Air That Fits:** low-profile solutions that easily fit on the floor, wall, or into a ceiling. Oxygen8 solutions are ideal for ventilation retrofits of schools, offices, and senior care facilities.
 - **100% Outside Air:** With high-efficiency H/ERV cores and ECM fans, Oxygen8's solutions provide 100% outside air with low fan power at comfortable temperatures and humidity levels.
 - **All Electric:** Oxygen8 ERVs feature factory-brazed DX coils and integrate with Daikin VRV Heat Pumps for fresh air at neutral air temperatures.
 - **Healthy Air:** Polymer membrane cores are AHRI certified, mold and bacteria resistant, water washable and have no virus cross-over tested to ASTM-F1671.
 - **Intelligent Solutions:** Integrated controls come with standard pre-programmed algorithms allowing for remote monitoring and control strategies.
- Cloud-based monitoring, control, and automation of Daikin VRV systems
 - Web application and mobile app available for remote management
 - Simplified serviceability with the ability to check, record, and troubleshoot status of Daikin VRV systems remotely in the cloud
 - Set up mobile notifications for specific trends or other potential issues

Success Story

Innovative Fitness West Vancouver



Client:

Innovative Fitness West Vancouver
Fitness Studio
West Vancouver, BC

Solution:

Oxygen8 Ventum H15 ERV System
Turntide Building App for Daikin VRV Monitoring

| METRIC | BEFORE | | AFTER |
|-----------------------------|---------------|---|-------------|
| Average CO2 Concentrations | 1100-1200 ppm | ✓ | 700 ppm |
| Peak CO2 Concentrations | 2000-2400 ppm | ✓ | 800-950 ppm |
| Peak Air Change Hours (ACH) | <2 ACH | ✓ | 6 ACH |
| Remote IAQ Monitoring | No | ✓ | Yes |

Fitness studios experienced a major disruption during the peaks of the COVID-19 pandemic. Proper ventilation became a major topic of conversation as multiple gym outbreaks spread across British Columbia, forcing fitness studios to either drastically reduce capacity or suspend operations.

To instill more confidence in their business operations, Innovative Fitness West Vancouver sought a safer, healthier space for clients and employees through an upgrade to their outdated ventilation system. In collaboration with the National Research Council of Canada, Innovative Fitness West Vancouver went with the Oxygen8 Ventum H15 ERV system to improve IAQ levels, paired with the Turntide Building App for real-time remote IAQ monitoring.

To enable remote IAQ monitoring, air quality sensors were connected alongside Turntide's cloud-based monitoring system, providing Innovative Fitness West with a real-time IAQ dashboard. The results demonstrated Oxygen8's system capabilities to significantly improve ventilation and occupant comfort. Compared to baseline, the Oxygen8 ERV solution reduced average CO2 concentrations in the facility by 40%.

fig 1. CO2 Average Before and After Ventum Installation

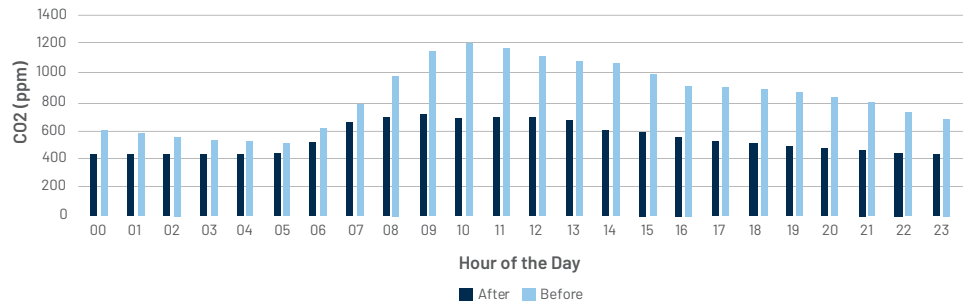
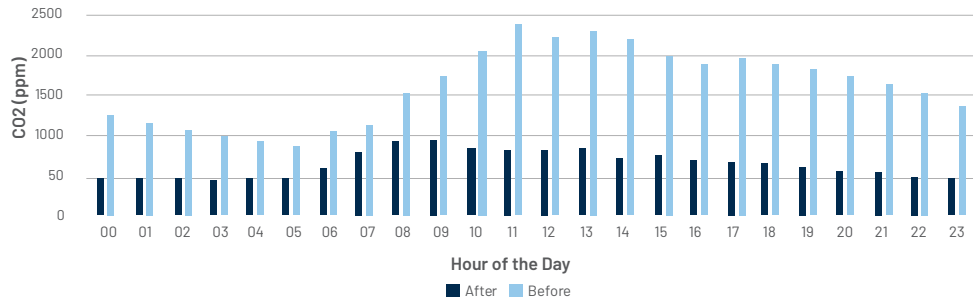


fig 2. CO2 Peaks Before and After Ventum Installation



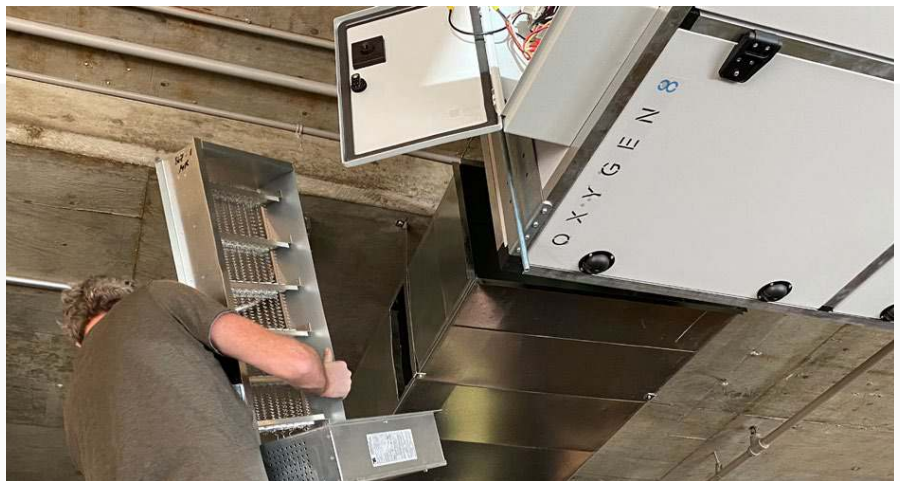
Since commissioning Oxygen8 and Turntide, Innovative Fitness West has resumed business operations to pre-pandemic capacity, with zero viral outbreaks. Providing a tangible “freshness” to the indoor air that clients can breathe in and feel, the new ventilation system allows Innovative Fitness West to deliver a more comfortable, healthy, and safe workout experience.

More information about the project: [White Paper](#) | [Case Study](#)

O X Y G E N 8

Oxygen8: High Efficiency DOAS

Founded in 2019 in Vancouver, British Columbia, Oxygen8 has quickly gained recognition as a leading ventilation system innovator, bringing 100% fresh, filtered air into buildings through all-electric energy recovery ventilation (ERV) systems, in an energy-efficient, low-profile, and modular design.



Oxygen8’s solutions are designed to deliver optimal indoor air quality (IAQ) to spaces to allow occupants to live, work, and play in an energy efficient way. With Daikin VRV integration capabilities, temperature and humidity can be accurately controlled.

Oxygen8 works closely with each of its partners and customers to deliver a personal touch with top-notch sales and after-sales support, ensuring customer success and satisfaction. With a focus on delivering a superior customer experience, Oxygen8 has expanded its partner network to over 50 Daikin rep firms across North America, quickly becoming a must-have ERV system to include in Daikin VRV projects.



Turntide Building App: Cloud-Based Monitoring for Daikin VRV Systems

Turntide has focused on amplifying the value of Daikin VRV to customers connecting building controls to the cloud. The Turntide Building App is a cloud-based web and mobile application that integrates Daikin VRV and associated HVAC systems into a single pane of glass view that is intuitive, easy-to-use, and accessible anywhere 24/7.

The Turntide Building App interface provides a high level of user customization and functionality that is applicable to all types of building configurations, thanks to its open-platform approach that unlocks proprietary protocols and puts data into the hands of end users. It vastly improves the serviceability of Daikin VRV systems for reps, partners, and manufacturers, while unlocking additional services revenue potential. By enabling a better user experience and cloud-based controls, the Turntide Building App is a must-have VRV monitoring and controls solution for Daikin rep firms seeking to provide a modern, cloud-based controls approach.



Learn More About Oxygen8 and Turntide →

To ensure you have a full-stack IAQ solution for your next Daikin VRV project, contact sales@turntide.com and applications@oxygen8.ca today.

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TURNTIDE TECHNOLOGY FOR SUSTAINABLE OPERATIONS

Our breakthrough technologies accelerate electrification and sustainable operations for energy-intensive industries.

