



Case study

# Great air quality – great savings too



**Client**

Airxchange



**Location**

Rockland, MA  
(USA)



**Sector**

Energy recovery



**Dust reduction**

Up to 65 %



## At a glance

*“The improvement brought about by the air purifiers from Zehnder Clean Air Solutions has been enormous. Our dust meters indicated an immediate dust reduction of 55 % on average and 65 % at peak times”.*

David Kirk, Vice President and COO

### Challenges

Airxchange manufactures ventilation and energy recovery products used in heating and air conditioning systems.

Maintaining good air quality when you are working with metal can be demanding. Airxchange was no exception, with “natural” dust posing a major challenge. In the parts of the factory where energy recovery systems are built, dust was generated by the machines and the general production process, as well as coming into the building with deliveries and through open doors. This translated into costly maintenance of the precision machinery, frequent filter replacements for the heating and air conditioning, and additional labour for cleaning.

### Benefits

After installing air cleaning systems from Zehnder Clean Air Solutions, Airxchange saw an immediate return on its investment. It was possible to cut dust by up to 65 %, reducing the amount of cleaning by 90 %, and also the time spent maintaining machinery. Significantly fewer filter replacements are now needed for the heating and air conditioning equipment, as well as for the existing dust collection systems. This is saving the company approximately \$5,000 US per year. In addition, the employees say they are delighted by the noticeable improvement in air quality.

### About Airxchange

Since it was founded in 1982, Airxchange has manufactured energy recovery ventilation (ERV) products that are known for outstanding performance and reliability. ERVs provide all the health and productivity benefits of natural air ventilation while also reducing energy consumption and indoor humidity. Airxchange, whose headquarters are in Rockland, MA, helped develop standards and third-party performance certification for energy recovery wheels, which are a major component in ERV systems. The company’s technology is used in the

manufacture of products by many in the HVAC (heating, ventilation and air conditioning) sector, resulting in more than 250,000 installations.



“For public health reasons, building codes require a minimum amount of outdoor air in commercial buildings,” says David Kirk, Vice President and Chief Operating Officer at Airxchange. “We believe more outdoor air is better for staff health and productivity, and numerous studies have shown this to be true. At Airxchange, we exceed the minimum requirement of outdoor air by 30 %, and are always looking for ways to create a better work environment for our employees.”

“Our ventilation and dust pick-up systems kept the air quality acceptable,” says Kirk. “But frequent filter changes in the HVAC rooftop units told us there was room for improvement.”

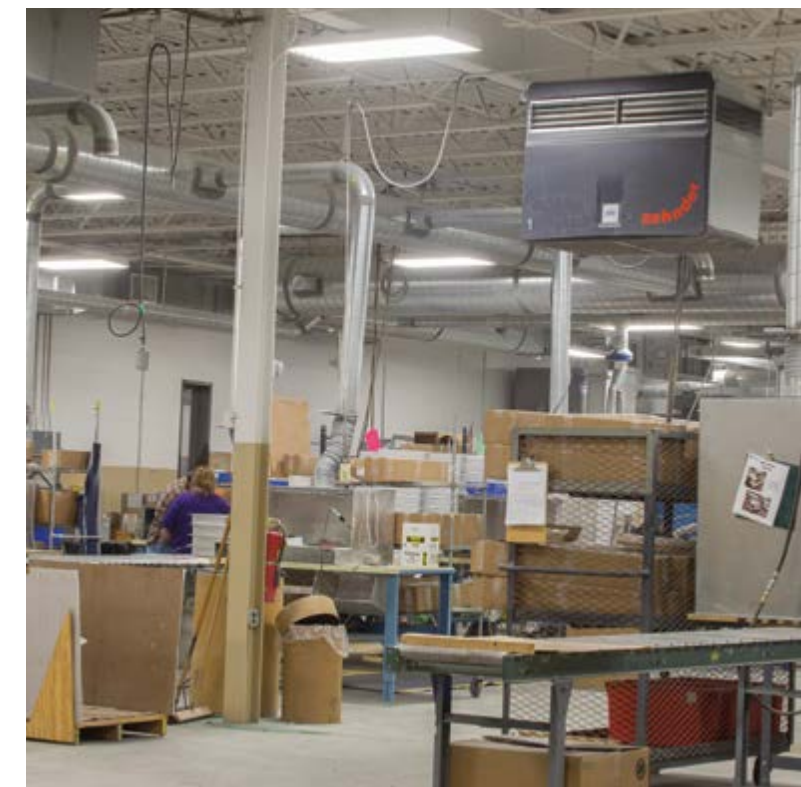
Airxchange, was therefore looking for an efficient, cost-effective way to further improve the indoor environment in its manufacturing area.

### The challenge: how to improve air quality?

In the Airxchange factory, “natural” dust would come in through open doors and on deliveries. It was also being created by the manufacturing process.

#### Of particular concern was:

- the amount of time spent on maintenance of precision equipment
- the need for frequent filter changes in the HVAC and existing dust collection systems
- the need to do more cleaning up, thus reducing production time.



## The answer: Zehnder Clean Air Solutions

Airxchange was already familiar with Europe-based Zehnder Clean Air Solutions, so contacted a local representative in the US.

After monitoring dust levels in Airxchange's manufacturing area for 12 days, Zehnder determined it could significantly improve the company's indoor air quality.

Soon, Zehnder was installing its CleanAir 6 units to cover approximately 400,000 cubic feet of air in the manufacturing area. The system is easy to mount on the wall or ceiling, and is self-contained so requires no duct work. You simply plug in the units and go. The entire installation took less than one day, with no interruptions to production.

## The result: cleaner air and savings in time and costs.

"We had been looking for ways to improve the working environment, and we found it with the Zehnder system," says Kirk. "The results were significant. Our dust trackers showed an immediate 55 % improvement on average, and 65 % at peak times."

As well as the reduced residual dust and a cleaner working environment, **Airxchange has enjoyed other benefits from the Zehnder units. These include:**

- a 90 % reduction in time needed for cleaning up
- fewer hours spent on machinery maintenance
- a significant reduction in filter changes in the HVAC and existing dust collection equipment, resulting in approximately \$5,000 US in annual savings
- staff reporting a noticeable uplift in air quality.



"Our employees have definitely noticed the improvement," says Steve Kennedy, Manager of Manufacturing at Airxchange. "They comment on the better conditions all the time."