



Air quality is a critical issue for manufacturers. Fumes and particulates created by industrial manufacturing processes aren't just unpleasant—they have real health and safety consequences for employees and having dirty equipment and facilities also cuts down the useful life of your capital equipment. This is why RoboVent launched the **Clean Air Academy** to help manufacturers learn first-hand the scientific and practical lessons to improve the air quality and production processes within their plant.

***Do you have the knowledge you need to make effective decisions regarding air quality issues in your plant?***

RoboVent has developed a two-day course designed to give engineers, facility managers and maintenance staff a solid foundation in the science of air quality management. Participants will come away armed with the knowledge they need to recognize air quality problems, evaluate remedy options, make informed equipment selections, and maintain a healthy work environment.



***Become an  
Air Quality Expert***

**Who?** The academy is open to anyone interested in learning more about industrial ventilation, air filtration systems and equipment solutions. It is geared towards engineering, operations or maintenance staff who have a role in selecting, implementing or maintaining air quality solutions.

**When?** August 22 & 23, 2023

**Where?** The Clean Air Academy will be held at RoboVent's headquarters:  
37900 Mound Road • Sterling Heights, MI 48310

**Why?** RoboVent is providing these courses as a service to our loyal customers in order to help operations and engineering staff make effective decisions about air quality solutions.

**Cost:** \$995 USD per person  
Client discounts available  
[www.robovent.com/learn/clean-air-academy](http://www.robovent.com/learn/clean-air-academy)

***What you receive:***

- Industrial Ventilation Handbook (\$195 value)
- Lunches/drinks (\$50 value)
- CE Credit (16 to 24 hours of CE) — (up to \$1,200 value)  
– with a certificate of course completion
- Free On-site Engineering Evaluation (\$2,500 value)
- Binder of ALL materials instructed (\$ invaluable — life saving solutions)

***Up to a \$3,945 value!***

All travel, lodging and accommodation costs must be covered by the attendee. We suggest these hotels:

**Holiday Inn, Sterling Heights**

8515 15 Mile Road • Sterling Heights, MI 48312  
(586) 272-2300

**Detroit Marriott Troy**

200 W. Big Beaver Road • Troy, MI 48084  
877-757-7131

Contact RoboVent to receive booking links for a special rate.

To register yourself and other colleagues, please visit:

**[www.robovent.com/learn/  
clean-air-academy](http://www.robovent.com/learn/clean-air-academy)**

## What You'll Learn

The Clean Air Academy is a two-day course that teaches the fundamentals of industrial air quality, ventilation and filtration.

**Register Now!**

[www.robovent.com/learn/clean-air-academy](http://www.robovent.com/learn/clean-air-academy)



### Day 1:

#### 1.1 Introduction to Industrial Hygiene & OSHA Regulations

A basic understanding of industrial hygiene is helpful to understand why dust control systems are required. What are the important risks associated with various manufacturing processes? How do you ensure health and safety of your staff? How do we comply with regulatory bodies and stay out of trouble when we have air quality issues? Learn to recognize and understand exposure effects of dust and fumes on the human body and gain understanding of regulations, their implications and consequences.

#### 1.2 Physics of Air

Understand the constituents that make up air, conditions that affect air density, and how density affects ventilation systems.

#### 1.3 Characteristics of Weld Fumes and Other Contaminants

Airborne particulates wreak havoc on our facilities. What are these nuisances? How do we understand their characteristics so that they

can be captured and controlled? We'll take a closer look at the types of fumes and particulates generated by different processes and the risks and challenges of each.

#### 1.4 Capture and Conveying Methods

To remove dusts from the workplace environment, the dusts must be captured. What are the various capture methods? Which ones work ... and which ones don't? This session will focus on design principals of capture and conveying systems, including duct design and duct velocities. We will also discuss design for robotic welding cell enclosures.

#### 1.5 Ambient Air Filtration

Ambient Air Filtration can be an effective method for controlling airborne particulates in a large manufacturing facility—but this option is often overlooked. What is Ambient Air Filtration, how does it work, and how is this strategy implemented?

### Day 2:

#### 2.1 Fans & Fan Curves

Understand the different types of fans, how they work and how to predict their performance. We'll review fan curves and what they mean.

#### 2.2 Filtration of Dusts

This session will explore the strengths, costs and weaknesses of air filtration considerations. Participants will learn how to choose the right options to effectively remove particulate from the air stream in their facility and how to calculate energy savings for systems that return air to the facility vs. those that discharge to the outside.

#### 2.3 Spark Arrestance and Combustible Dust

Fires in an industrial ventilation system is an obvious concern in our manufacturing areas. What are sparks, how are they created, and—most importantly—how are they stopped? What are the available

options for spark arrestance and fire suppression systems? We'll take a closer look at the risks of fires and explosions, especially as related to combustible dusts, as well as compliance with the latest NFPA Combustible Dust standards.

#### 2.4 Retrofitting Existing Systems

Many times an existing dust control system can be retrofitted to either perform more effectively or be used to capture the dust from a new process. How do you go about this? How do you identify the limitations? And what factors must be considered during the design?

#### 2.5 Lab

We apply everything we learned in real world scenarios in our Lab & Testing area.



**Making a Difference One Breath at a Time**

[WWW.ROBOVENT.COM/LEARN/CLEAN-AIR-ACADEMY](http://WWW.ROBOVENT.COM/LEARN/CLEAN-AIR-ACADEMY)

#### About RoboVent

RoboVent is the leader in industrial ventilation and air filtration systems for manufacturers. We design, install & maintain dust collectors, filters and industrial ventilation systems. Whatever particulate – we can filter that.

For more information visit: [www.robovent.com](http://www.robovent.com)