PLYMOVENT®
clean air at work

VEHICLE EXHAUST EXTRACTION SYSTEMS

Creating a healthier work environment in your facility

EVER WONDER ABOUT THE VALUE OF CLEAN AIR?

We do. Exposure to hazardous vehicle exhaust emissions can cause serious health problems for you and your employees. The most efficient way to combat that exposure is to capture the exhaust fumes at the source and eliminate contact with harmful pollutants. With over 35 years of experience, Plymovent source capture systems remove the hazardous emissions at the source, providing a healthy and safe working environment.

High-quality exhaust removal systems are recommended to make sure that legal exposure limits are not exceeded. Plymovent offers various systems that capture, extract and remove gas and diesel exhaust emissions, creating a cleaner and healthier work environment for your personnel.

From existing, to new facilities, our range of products and system solutions covers it all. Contact us to find out what a genuine commitment to customers really means.

MEETING THE STANDARDS

At Plymovent, we know the dangers of exposure to hazardous exhaust fumes. We continuously review safety management guidelines and listen to what the experts have to say:

- OSHA – Occupational Safety & Health Administration has set a permissible exposure limit of 1 part of Benzene per million parts of air (1 ppm) in the workplace during an 8-hour workday, 40-hour workweek. The Environmental Protection Agency (EPA) has classified benzene as a Group A carcinogen.
  www.osha.gov/SLTC/dieselexhaust

- CDC – Centers for Disease Control & Prevention reports that exhaust from any improperly maintained vehicle can pose serious hazards. The most common source of carbon monoxide is automobile exhaust vented in confined spaces. Proper ventilation and prevention must be assured.
  www.cdc.gov

- NIOSH – National Institute for Occupational Safety & Health states that there can be no safe level of exposure to a carcinogen; therefore the NIOSH Threshold Limit Value is "lowest feasible level".
  www.cdc.gov/niosh

- WHO – World Health Organization and the IARC (International Agency for Research on Cancer), classified diesel engine exhaust as carcinogenic to humans (Group 1), based on sufficient evidence that exposure is associated with an increased risk for lung cancer.
  www.iarc.fr

Plymovent systems are designed to meet or exceed these standards.[1]

- ISO 9001:2008, UL, CE, AMCA International.

[1] Plymovent systems are code compliant when they are properly designed, operated, serviced and maintained.

KNOW THE DIFFERENCE

We have provided over 50,000 installations for source capture and ventilation systems in various industries including:

- Military Facilities
- Automobile Plants
- Department of Transportation Facilities
- Motorcycle/ATV Garages
- Emergency Service Stations
- Fleet Service & Repair Bays
- Agricultural Equipment Facilities
- Bus Depots

DESIGNED TO PROTECT YOUR PERSONNEL AND FACILITY

As a proven industry leader, Plymovent provides solutions to properly ventilate your facility[2]. Our energy management solutions minimize the energy required to operate the air handling and ventilation systems in your facility.

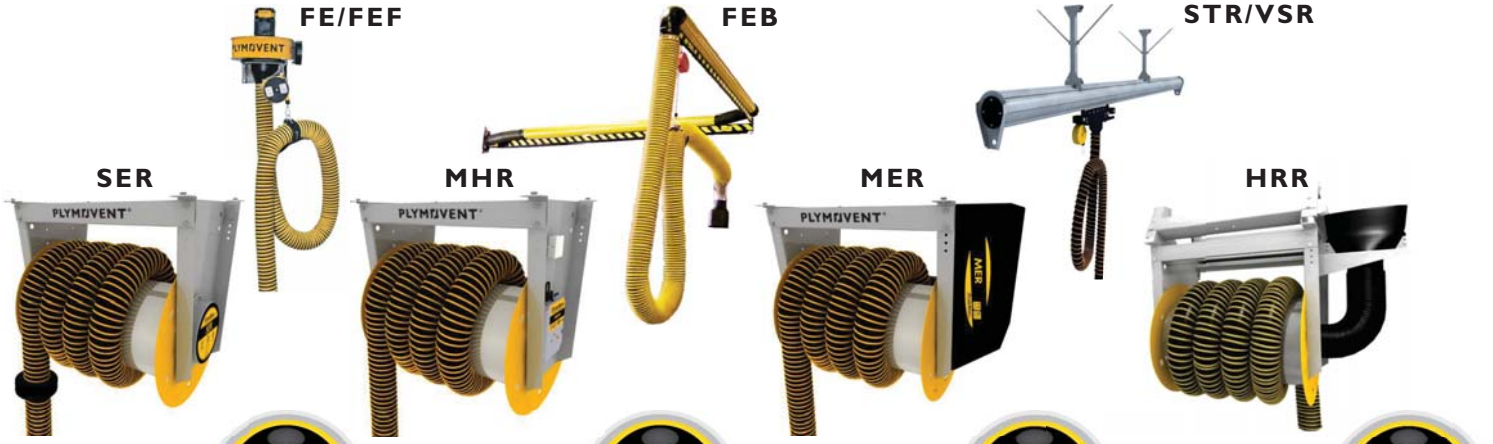
Plymovent knows one system doesn't fit all. Whether installing a system into an existing facility or building a new one, our experienced staff is ready to develop a custom-tailored system that meets process and building requirements specific to your facility. Our team will work one-on-one with your designers and construction managers to ensure the right system is in place and the safety codes have been followed. This is a cost-effective approach that ensures clean air in your working environment.

- **We investigate.** To meet specific requirements it is vital to conduct a thorough investigation of your facility.
- **We plan.** With the information from the investigation process, we will choose products from our broad product range, to provide a durable and optimal solution to ensure ease of operation and clean air at work.
- **We design.** In the design phase fine tuning will be made to details such as pressure drops, controls, etc.
- **We install.** Upon completion of the design phase, our distributors will install your products and systems.
- **We commission.** Our constant strive for perfection and customer satisfaction leads to providing you with an air cleaning system that will successfully operate for years to come.
- **We train.** We are always happy to share our professional knowledge and provide the option for hands-on training to get the most out of the systems installed.
- **We service and maintain.** From installation support to service and maintenance, our engineers ensure your products and systems remain in optimal condition.

[2] The operation of exhaust extraction systems can be affected by various factors including proper design of the system, operating procedures, service and maintenance. Exposure levels should be checked upon installation and periodically thereafter to ensure that they fall within applicable NIOSH and OSHA exposure limit values.

WHAT IS THE BEST SOLUTION FOR YOU?

We can provide an exhaust removal system specifically tailored to your needs.



SMALL WORKING AREA

- General working radius 5' to 15'
- **SER**-Spring operated Exhaust Reels for 4" to 8" hose diameter
  - 40-75lbs lifting capacity
  - Up to 33' of spring return length with various temperatures and grades of hose available
- **FE**-Fixed Exhaust extractor
  - 4" to 8" hose diameter
  - Max. 2,000°F exhaust temperatures
  - Special fan required for high temperatures
- **FEF**-Fixed Exhaust extractor with direct-mount fan
  - 16' of hose retraction with balancer

Spring Return hose systems are recommended for smaller working areas.

Service technician pulls down exhaust hose and attaches nozzle to vehicle. When finished, pull on hose again and it smoothly retracts the hose.

MEDIUM WORKING AREA

- General working radius 5' to 20'
- HRB-Hose Reel on Boom allows boom length up to 15' with hose reel on end
- **MHR**-Motorized Hose Reels (light duty) preferred for long hose lengths and heavy hoses
  - 4" to 6" hose diameter
  - 30-50lbs lifting capacity
- MSHR-Motorized Spring Hose Reels
  - Lifting capacity up to 62 lbs

When your workshop has a high ceiling, in order to facilitate larger vehicles, you will need a hose reel that can wind the hose all the way back on the reel.

With no hoses hanging down you can also operate other appliances in the workshop such as cranes or lifts.

LARGE WORKING AREA

- General working radius 10' to 30'
- **FEB**-Fixed Exhaust on Boom is a retractable hose dropper on swing arm
  - 4" to 8" hose diameter
  - 10' to 26' boom lengths
- **MER**-Motorized Exhaust Reels (heavy duty) for long and heavy hose lengths in large areas
  - 4" to 8" hose diameter
  - 75-110lbs lifting capacity

Proper installation and placement will position the hose drop directly over the point of source capture.

In many cases (for the most demanding vehicle applications), systems can be set up to service multiple bays for heavy, off-road vehicles.

UNLIMITED WORKING AREA

- **HRR**-Hose Reel on Rail working length determined by length of exhaust rail
- **STR**-Vehicle Exhaust Straight Rail system
  - Allows for ventilation of moving vehicles
  - 4" to 6" hose diameter
  - Automatic or manual release options
  - Unlimited length
- **VSR**-Modular Exhaust Rail system for vehicles with vertical exhaust stacks
  - System can also accommodate a hose reel or trolley with hose drop

These systems provide maximum flexibility. Rails allow for easy future expansion by adding trolleys or additional hose reels.

A single capture drop can service many areas by sliding across rail above vehicles. Designed for vehicles moving along an assembly line or traveling lane.

COMPLETE ENGINEERING AND TECHNICAL DATA BINDER AVAILABLE UPON REQUEST

SAVE

AUTOSTART MECHANISMS

MICRO SWITCH

- Micro Switch-connects to the hose reel or balancer
- Pressure Switch-senses the vehicle engine starting

Plymovent controls can start and stop exhaust ventilation systems automatically. Customers save energy and gain operator efficiency.

Improved air quality keeps operators alert, productive and safe from toxic fumes. Reliable source capture systems streamline operations; making working conditions safer and healthier.

AUTOMATED DAMPERS

ICE/LC

- Automated Dampers-various diameters available
  - Heavy duty construction for high static pressure
  - Low voltage 24-volt control with ICE-LC unit
  - Easy installation; built-in seal
- ICE-LC Controls-includes built-in step-down transformer and timer

Automated dampers and autostart controls engage the source capture systems as needed. Automated systems maximize effectiveness of operation; minimize operator errors; and save energy.

VARIABLE FREQUENCY DRIVES

DCV CONTROLLER

- VFD-for 1.5HP to 50HP; 240-575 volt systems
  - Built-in set-up provides for manual control
  - Automated control using a pressure transmitter
  - Remote start and stop
- Pressure Transmitter-for automated control

VFD-linked systems include pressure transmitter; automated dampers; and damper controls.

Fully-automated controls will regulate a Plymovent source capture system to provide the correct amount of CFM at each specific location only when in use.

OTHER CONTROLS

PRESSURE TRANSMITTER

SA-24

- SA-24 and ES-90 are recommended when a magnetic motor starter is required to control the fan for multiple exhaust reels or drops
  - Ordered to match the fan motor KW/HP, voltage and phase
  - Control box comes complete with a step-down transformer that reduces the control voltage to 24-volts

UL listed control boxes in NEMA 12 enclosure.

Allows remote start of fan from hose reel or hose drops located throughout the facility.

"SMART" SYSTEMS PROVIDE THE RIGHT AMOUNT OF VENTILATION WHEN AND WHERE NEEDED

SAVING UP TO 90% OF ENERGY

NOZZLES

Our nozzle range is designed to deal with the characteristics of exhaust gases, with the single purpose of keeping these harmful gases out of the human breathing zone.

The nozzles can be used on moving or stationary vehicles, and for a wide number of exhaust pipes, which can be horizontally or vertically positioned. Our wide range of nozzles fit to all commonly used exhaust pipes.

FEATURES

- All nozzles are easy and quick to connect or disconnect
- The metal nozzles are capable of handling high exhaust temperatures
- Special outlets in the rubber nozzles for emission testing
- Available for a range of different hose diameters
- Various ways to connect to the vehicle
- Quick disconnect fittings available to allow rapid/easy nozzle swap out

Our extensive line of nozzles include but are not limited to the following:

- **MAGNETIC GRABBER®**
- **PNEUMATIC GRABBER®**
- **RUBBER NOZZLES**
- **METAL NOZZLES**
- **AU NOZZLES**

Please contact us for a complete overview and advice on which nozzle is most suitable for your workshop.

IMPORTANT FACTS

...ABOUT DIESEL EXHAUST

- The World Health Organization (WHO) classified diesel engine exhaust as carcinogenic to humans, based on sufficient evidence that exposure is associated with an increased risk for lung cancer.*
- The EPA has determined that the size of the average diesel exhaust particle size is 0.2 microns. These particles are typically not visible to the human eye.
- Diesel exhaust particles are often too small to be captured by onboard filters. **Toxic gases are not captured by particulate filters**, and only partially by activated carbon filters. The Plymovent source capture system captures these particles and gases before they enter a facility, and expels them to the outside.
- Diesel exhaust particles and gases are suspended in the air, so exposure to this pollutant occurs whenever a person breathes air that contains these substances. This also occurs when an individual touches a surface where these particles have settled into.
- Like all fuel-burning equipment, diesel exhaust contains nitrogen oxides. Nitrogen oxides can damage lung tissue, lower the body's resistance to respiratory infection and worsen chronic lung diseases, such as asthma.
- Plymovent source capture systems have been proven successful in over 50,000 installations over the past 35 years.**

WHY CONTROL EQUIPMENT?

- **Financial reasons**

A fully automatic controlled system will enable you to substantially lower your use of electricity and overall energy consumption. This creates a solid and viable investment for your station.

- **Environmental reasons**

The control equipment which we have in our product range enables an on-demand use of the system. The result of installing our control equipment is a reduction of electricity consumption and lower heating cost due to the fact that the system is only used when needed. Obviously lower energy consumption will also have a positive effect on the global environment.

* Based on the International Agency for Research on Cancer (IARC) and World Health Organization (WHO) June 12, 2012 press release.
applicable regulations and exposure limit values.

** Plymovent systems are made code compliant, please ensure the system is properly designed, operated, serviced and maintained.

PLYMOVENT®
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PLYMOVENT OFFER TOTAL SOLUTIONS FOR AIR CLEANING

For over 35 years, Plymovent has gained experience in the field of air cleaning. We not only have extensive knowledge of the removal of vehicle exhaust emissions, we are also specialized in the extraction and filtration of welding fumes, grinding dust and oil mist in the metalworking industry. Besides this, we offer solutions for the removal of tobacco smoke and air cleaners to optimize indoor air quality.

Over 50,000 of our source capture systems have been installed to reduce hazardous vehicle exhaust emissions worldwide. Plymovent continuously works with its suppliers as well as local, state and federal agencies to design and engineer products that meet or exceed our customers' expectations and needs.

Plymovent Corp. is ISO 9001:2008 Certified

Plymovent cares about the air you breathe. We offer products, systems and services which ensure clean air at work, anywhere in the world.

We respect the environment and we deliver high-quality products. Our expertise gained over many years and our genuine commitment to customer requirements enable us to provide precisely the solutions you need.

Plymovent reserves the right to make design changes.

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