

The background of the slide features a grayscale image of industrial machinery. On the left is a large vertical cylindrical unit with a circular access panel at the base. In the center is a smaller vertical unit labeled 'EUROW III'. On the right is a tall, complex machine with a vertical column and a horizontal arm extending from it, also labeled 'EUROW'.

AN INTRODUCTION TO

# **CLEAN AIR TECHNOLOGIES:**

## **Transit Cleaning and Dust Extraction Specialists**

**CLEAN AIR  
TECHNOLOGIES**

# COMPANY OVERVIEW

- Leading manufacturer of both portable and central dust/fume extraction systems and vehicle/transit cleaning systems
- Founded in 1984
- 50,000 sq. ft. facility in Toronto, ON
- Two additional facilities located in Windsor, ON and Cleveland, OH
- Employees include in-house specialists such as:



Equipment installers



Professional Engineers



Electrical Technicians



# CLIENTS

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# WHY CLEAN AIR TECHNOLOGIES?

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Customized solutions designed specifically for your needs and budget



Specialized staff including professional in-house engineers, in-house engineering technologists and company installers

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**NIGHT CLEANING / FUEL LANES**

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# OPTION 1: CENTRAL VACUUM

Two options chosen based on the number of simultaneous users:

Eurovac I



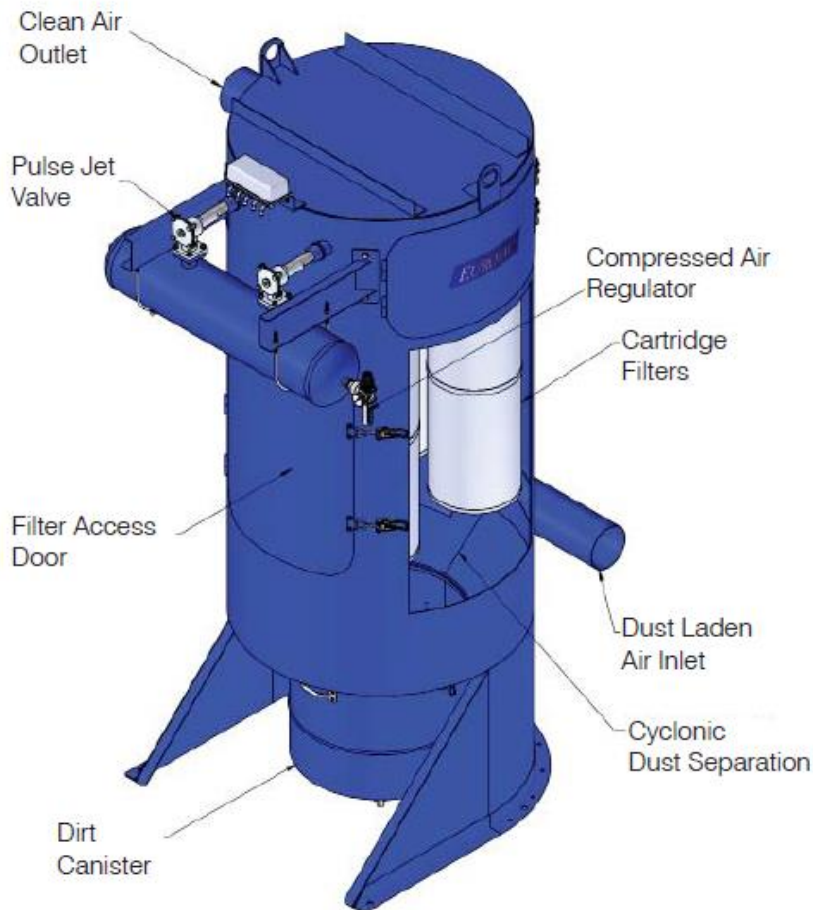
1-4 users at once  
5, 10, 20 HP  
Single turbine

Eurovac III



4+ users at once  
15-175 HP  
Multi stage

# SYSTEM FEATURES AND BENEFITS



## RELIABLE, MAINTENANCE FREE TURBINE OR MULTI STAGE PUMP

- Turbine and multi stage options with **heavy duty cast iron** turbine pump
- Turbine and multi stage options with **continuous run pumps**

## SAFETY FEATURES

- Built-in **thermal heat protection** device
- Control panel with **current overload** protection
- **Vacuum relief valves** available to regulate airflow through the system

## SUPERIOR FILTRATION

- **Cyclonic filtration** removes 99% of dust before the secondary filter
- Remaining 1% of dust removed by a **secondary cartridge filter** which is automatically cleaned by compressed air **pulse jet cleaning** action



# HOSE REELS



- Designed for use in conjunction with Eurovac I or Eurovac III system
- Hose sizes range from 1.5" to 3.5"
- Motorized: remote wireless push button station for up and down control is included.
- Intended to clean the inside of transit vehicles



# HOSE DROPS

- Vacuum outlets for cleaning of smaller debris.
- Typical sizes range from 1.5" to 2" in diameter
- Inlet connections are typically done with a simple flap valve style.



# OPTION 2: BELLOWS SYSTEM

## How it works:



1. Driver parks bus with front door positioned at bellows. When the start button is pushed, the bellows extends into position at the bus door.
2. The blower damper is opened, an atomizing mist is activated and a strong airflow is pulled by a 50HP blower through the cyclone, duct, bellows and bus.
3. The driver takes the air gun and hose and begins to blow deodorized air onto the floor and seats, getting dust and debris airborne.

# OPTION 2: BELLOWS SYSTEM



4.

The dust and debris is filtered and deposited into the trash receptacle.

When the bus is clean, the driver pushes the stop button; the bellows retracts and the damper closes.

The blower and motor continue to run, but the vacuum stops, reducing the amperage consumed by the motor. Energy is thus conserved between buses.

# WHAT WE RECOMMEND:

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Bellows System



High Vacuum System

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# DETAILING

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# CENTRALIZED CHEMICAL DISPENSING

To avoid the hazard and inconvenience of carrying armloads of cumbersome bottles, Clean Air Technologies has developed a centralized chemical dispensing unit that is installed in conjunction with the Eurovac I or Eurovac III central vacuum system.

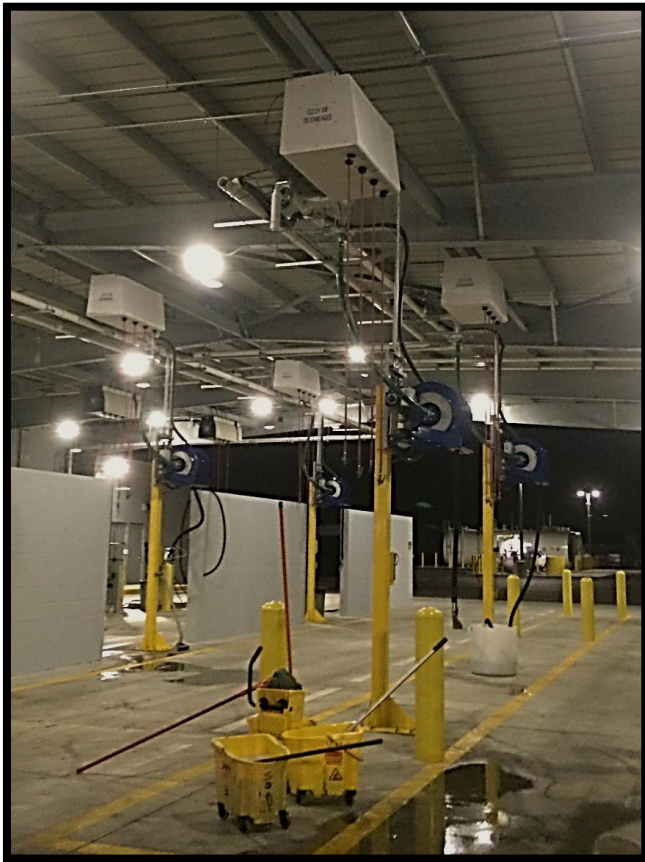


- Automatically mixes cleaning chemicals (including rug shampoo which is heated up to 130°F ) and automatically
- Chemicals pumped to hanging workstations.



# CENTRALIZED CHEMICAL DISPENSING LINES

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- Hanging workstations are strategically located between each detail bay so that the centralized chemicals are conveniently routed to working technicians.
- Chemicals are applied with dispensing guns attached to color-coded coiled hoses.
- The system also features an air gun and compressed air line to blow debris and dust in cracks and hard to reach areas.

# CENTRALIZED CHEMICAL DISPENSING LINES

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In most transit facilities that we have collaborated with in the past, we typically incorporate at least five to six (5-6) lines containing the following cleaning agents:

- ✓ Multi-purpose Cleaner
- ✓ Gum Remover
- ✓ Glass Cleaner
- ✓ Sanitizer (for poles)
- ✓ Heated liquid dispensing
- ✓ Tire cleaner (optional)

# VACUUM AND HEATED EXTRACTION

The following two fixtures fit into the vacuum hose to aid in a more efficient and deeper clean:



## **Stainless steel heated extraction and chemical dispensing wand**

- used for the heated extraction cleaning
- mixes hot water with a chemical cleaning agent for a deeper clean that is both more convenient and creates less mess.

# VACUUM AND HEATED EXTRACTION

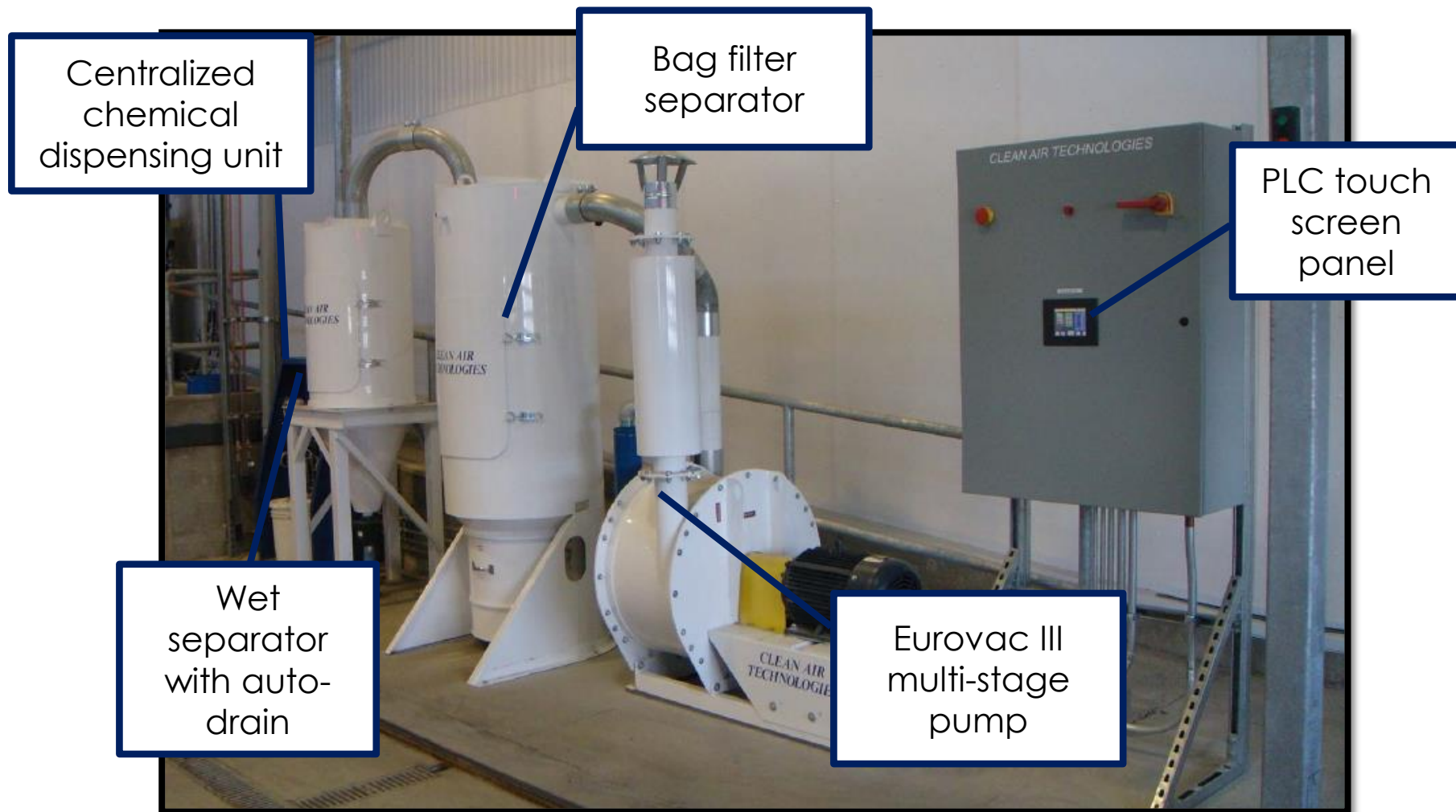
The following two fixtures fit into the vacuum hose to aid in a more efficient and deeper clean:

## **Stainless steel heated extraction and chemical dispensing claw**

- operates in the same manner and off the same system as the heated extraction wand but is a shorter fixture designed to make seat cleaning more convenient.
- heads are easily interchangeable so once the seats are clean, technicians can simply switch the heads to clean the floors.
- The wand can also operate as a dry wand for dirt and debris if the trigger is not pulled for chemical dispensation.



# SAMPLE LAYOUT



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# **BRAKE LATHES**

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# BRAKE LATHES

- When equipped with suitably designed, suction casings, it shall operate to effectively capture potentially harmful airborne dust at the source from the pick-up hoods located at the drum lath and shoe lath.
- Collector is interlocked with the lath system so they operates simultaneous at the same time per the NFPA requirements.



# BRAKE LATHES



Brake Lathe Kit



Drum Kit



Hood System

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# **BODY SHOP**

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# BODY SHOP

**Eurovac I  
Regenerative Blower: 5,  
6.7 & 10 HP Vacuum  
System**



**4-6 users at once**

**Eurovac III: 15-75 HP  
Centrifugal Multi-stage  
Pump Central Vacuum  
System**



**10+ users at once**

**Eurovac II  
2.5HP Portable High Vacuum  
System**



**2 users at once**

# SOURCE CAPTURE HAND TOOLS

Source capture hand tools





# SOURCE CAPTURE HAND TOOLS

Eurovac offers a variety of source capture hand tools that work in conjunction with Eurovac systems:



3" Vacuum Ready  
Orbital Sander



5"-6" Vacuum Ready  
Orbital Sander



8" Vacuum Ready "Mud  
Hog" Orbital Sander



Jitterbug Vacuum  
Ready Sander



Orbital and  
Straightline



Vacuum Ready  
Handsander – 3 sizes  
(5", 7.75", 15.75")



Vacuum Ready Roloc  
Grinder – 2 sizes (2",  
3")



Vacuum Ready Rotary  
Sanders – 4 sizes (4", 5",  
6", 8")



Drills & Routers



Rotary Sanders –  
4 sizes (4"-8")



Trimmer – 5 sizes  
(2"-6")



# ABRASIVES

Eurovac offers a variety of vacuum and non-vacuum ready back-up pads and abrasives. Our different paper packages include:



- Gold premium paper
- Silver premium paper
- Bronze premium paper
- Red resin abrasive
- Black resin abrasive
- Blue fibre disc

# VACUUM DROPS

Vacuum inlets can be either suspended freely (hanging) or mounted to the wall in double or single configurations.



Double inlet hanging or  
wall mount



Single inlet hanging or wall  
mount

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# **WELD FUME EXTRACTION**

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# CENTRAL FUME EXTRACTION ARM & FAN

Eurovac self-supporting arms are the most economical and effective methods for the capture of fumes since contaminants are removed at their source. The use of self-supporting joints, flexible hoses and smooth bore tubing allow for easy placement of the arm's hood near the source of a problem.



- Standard arm length and diameter: 6"x14'; other sizing options available
- Arm tubes are fabricated of steel with cast aluminum joints with a friction disc and are fully adjustable to desired tension.
- "Grab" handle all around the hood and second handle for rotation on the tube
- Air diverter in hood to increase capture velocity
- Heavy duty 360 degree swivel with safety stop
- Smooth tube construction for lowest pressure drop
- Totally encapsulated lift assist spring
- Built-in shut off damper in every arm
- Optional extension booms available for added reach

# BOXAIR FILTER UNIT

Eurovac's mobile BoxAir filter unit is designed to capture, filter and exhaust air impurities created during welding, metal processing or workshop activities.



- 700 CFM @ Hood
- 115/1/60
- Arm Diameter: 6"; Arm Length: 10' (other sizes available)
- Spark Trap, cartridge filter
- Optional HEPA Filter
- Self supporting joints and flexible hose for easy placement for unimpeded air movement

# PORTABLE FUME EXTRACTION SYSTEM

Eurovac's Portable Filtering unit RollOut is designed to exhaust and filter dry impurities with a highly efficient filtering cartridge that makes it ideal for a variety of processes.



- 700 CFM @ Hood
- 115/1/60
- Large Cartridge Filter and Carbon After Filter
- Pulse Cleaning System
- Arm Diameter: 6"; Arm Length: 10' (other sizes available)
- Spark Trap
- Optional HEPA Filter
- Self supporting joints and flexible hoses for easy placement with smooth bore tubing for unimpeded air movement



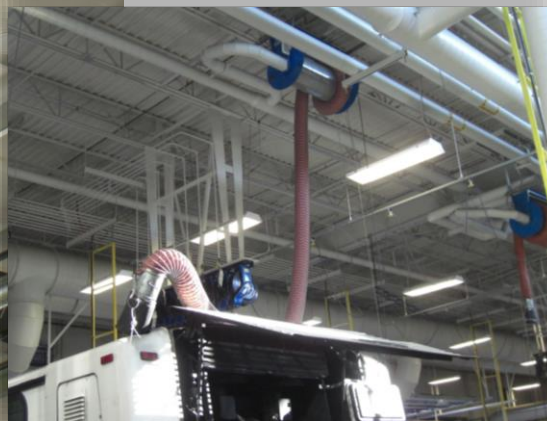
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# **VEHICLE EXHAUST EXTRACTION**

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# SPRING RETURN HOSE REELS

Spring Return Hose Reels are ideal for extracting harmful exhaust fumes and gases from service areas.



- Vehicle exhaust hose is stored on the hose reel drum above the service bay and unrolls when ready for use
- Reel is ratchet locked into place when the enough hose has unrolled
- When finished, technician tugs the hose to release the latch for automatic rewind
- A hose stop is supplied and installed on the hose to ensure the hose does not completely retract.

# MOTORIZED HOSE REELS

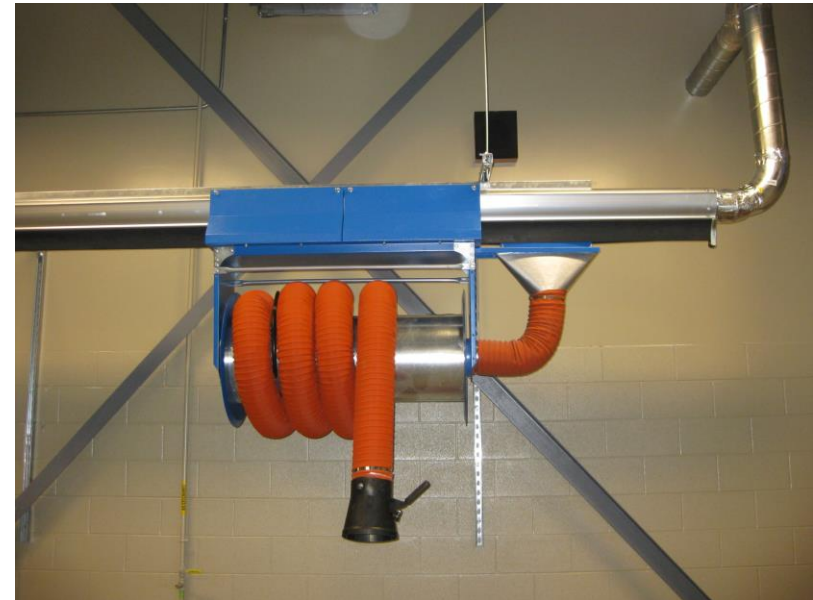
A motorized hose reel is the most user friendly method of vehicle exhaust extraction on the market today.



- Motorized hose reels typically used in applications with tall ceilings or for plants with overhead cranes
- The hose unwinds or rewinds via the push of a button from a technician using a remote transmitter or a pendant/wall switch box.
- Limit switches ensure hose winds and rewinds to the desired length each and every time.

# SLIDING SUCTION RAILS

Sliding suction rails allows you to share exhaust drops which allows for a smaller fan resulting in air makeup and energy consumption savings.



- System comes in 10' sections, includes an air tight rubber seal for vehicle exhaust trolleys to travel along
- Trolleys ready to slide into place with a hose reel or balancer/telescopic drop attached
- Systems include: rail couplings, rail end caps, duct connectors, wall/ceiling brackets & all necessary hose & adaptors



# HOSE BALANCERS

Hose balancers are a very functional and cost effective means for vehicle exhaustion.



- Available with a variety of weight bearing capabilities from 7lbs (3kg) to 27lbs (13kg)
- Standard cable length is 15ft for a 4" hose and 20ft. for a 6" or 8" hose
- Balancers come standard with ratchet lock so you can pull down the exact amount of hose needed



# IN GROUND EXHAUST PORTS

In ground vehicle exhaust systems offer a clean look and are typically considered during the initial design stage of a new facility.



Eurovac offers the following in-ground vehicle exhaust system:

- The hose chaser system option whereby the hose is stored inside the floor port until it is ready to use





# HIGH VOLUME SPIRAL DUCTING

The following is an example of the Eurovac engineered ducting common in all layouts:



# FANS & FAN LOCATION

The placement of fans will vary according to facility. The following shows examples of fans placed on the roof, outside the facility on a wall and inside the facility to illustrate the versatility of our fan placement.



# VARIABLE FREQUENCY DRIVES (VFD'S)

Adding a VFD to your system allows you to automatically adjust your motor speed on user demand which significantly reduces electric bills through reduced energy consumption. VFD's can also be added to a variety of applications to further savings.



## Other Benefits of adding a VFD include:

- Significantly reduced wear and tear on bearings, couplings and motor by running lower loads and RPM's. This in turn extends blower life and reduces maintenance costs and downtime
- Allows you to do your part in preserving our environment
- Further savings available from rebates offered by most energy suppliers
- Controlled ramp up speed so there are no "power spikes" = more energy savings
- Balanced, accurate vacuum performance tailored specifically to the application
- Optional direct by-pass contact

# EQUIPMENT BENEFITS

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Superior products designed to withstand even the most rigorous interior vacuum operators with a durable and attractive powder coat finish on all equipment



Superior filtration:

- Initial wet separator with auto-drain as an option
- Secondary cyclonic filtration
- Final bag filters



Increased productivity and efficiency:

- Place vacuum drops exactly where you need them
- All properly identified cleaning chemicals are at your technicians' fingertips



Lower maintenance costs:

- Clean Air Technologies systems need little to no maintenance whereas portable shampoo or vacuum systems with brush motors can be prone to frequent breakdowns

# ADDITIONAL BENEFITS

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Reduced waste and theft, specifically of chemicals – all chemicals are centrally dispensed and additional inventory can be stored in a secure location



Improved safety by decluttering the work area of electrical cords and hoses which are wall mounted (in wet environments, electrical cords can be especially hazardous)



Professionally engineered layouts customized to your needs and facility



Complete line of quality cleaning accessories for a more effective clean



Turnkey installation

# QUESTIONS?



A grayscale photograph of a Calgary Transit train in a maintenance facility. The train is positioned on tracks, and the facility is filled with various mechanical components, including large air filtration units on either side of the train. The text "THANK YOU" is overlaid in the center of the image.

**THANK YOU**

***CLEAN AIR  
TECHNOLOGIES***

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