

Hazardous Location Product Line Catalog



Innovation In Air Distribution

**Setting the Industry Standard
for over 27 years**



Grade-D Air Filtration

Breathing Air Compressors

Air Cylinder Carts

Fire/Rescue Equipment

Confined Space Ventilation Products

HEPA Vacuums



**For Use In
Hazardous
Locations**

Grade-D Filtration

Portable Systems - The Breather Box™



Intrinsically Safe Breather Box™

High Performance Portable Grade-D Breathing Air Filtration System

The Breather Box™ is a portable Grade-D filtration system designed to provide breathing air for a specific number of workers. The system filters incoming air from a compressor to provide respirator users with Grade-D quality air and monitors for CO and/or Oxygen (optional).

The first stage element filters bulk water and particulate and has an auto drain. The second stage coalescing filter eliminates atomized oils, mists, ultra-fine particulates, and has an auto drain. The third stage filter removes organic vapors and odors and has a manual drain. Filter change indicators are standard on all three stages of filtration. Filtration efficiency is 99.99% @ .01 micron. All Breather Boxes™ are designed to be used in the upright and closed position to prevent internal contamination.

The standard carbon monoxide (CO) airline monitor operates on disposable 9-volt batteries for continuous air monitoring. An external audible alarm and light signals the workers of high CO content. Point-of-Attachment (POA) boxes can extend respirator usage beyond 300 feet.



Model No.	Description
BB30-COIS	30 cfm Breather Box™ Intrinsically Safe - (48 cfm flow capacity) 2 couplings
BB50-COIS	50 cfm Breather Box™ Intrinsically Safe - (79 cfm flow capacity) 4 couplings
BB100-COIS	100 cfm Breather Box™ Intrinsically Safe - (123 cfm flow capacity) - 4 couplings (Optional 6 or 8 couplings)

Approved for Class I, Division 1, Groups C and D environments and are 9VDC operation only



Did You KNOW?

- All portable and fixed breathing air filtration systems meet or exceed OSHA 1910.134, Canadian Z180.1 Breathing Air Standards and British Standard BS-EN 12021:1999 "RESPIRATORY PROTECTIVE DEVICES"
- All filtration units are designed to flow the NIOSH required maximum capacity per worker
- Air Systems provides at NO CHARGE your first lab certified air quality test of your new breathing air filtration device. Contact Customer Service for details.



Custom Designed Breather Box™ Options

- Clear View Windows
- Independent Regulators to allow different respirators and lengths of hoses to be used simultaneously
- Fully Automated Reserve Air System
- Low Pressure Alarms

Contact Customer Service for Details



Breathing Air Panels for Permanent Mounting Applications

Permanent mounted Grade-D filtration systems are designed to provide breathing air for a specific number of workers. The system filters compressor air to provide respirator users with Grade-D quality air. The first stage element filters bulk water and particulate, the second stage coalescing filter removes atomized oils and ultra-fine particulate, and the third stage removes organic vapors and odors. Filter change indicators are standard on all three filtration stages. Filtration efficiency is 99.99% @ .01 microns. A built-in intrinsically safe carbon monoxide monitor operates on twin 9-volt DC for continuous detection. An audible alarm and light signals the workers of high CO content in their breathing air. Filtration components are mounted on a powder coated steel panel.
Models available in explosion-proof or intrinsically safe versions.



BB30-COPMIS
2 Worker Grade-D Filtration

Model No.	Description
BB15COPMIS	15 cfm Grade-D breathing air panel with intrinsically safe CO monitor (30 cfm flow capacity) - 1 coupling
BB30COPMIS	30 cfm Grade-D breathing air panel with intrinsically safe CO monitor (48 cfm flow capacity) - 2 couplings
BB50COPMIS	50 cfm Grade-D breathing air panel with intrinsically safe CO monitor (79 cfm flow capacity) - 4 couplings or NPT outlet
B100COPMIS	100 cfm Grade-D breathing air panel with intrinsically safe CO monitor (123 cfm flow capacity) - 4 couplings or NPT outlet

Approved for Class I, Division 1, Groups C and D environments and are 9VDC operation only

CO Monitor Specifications:

- Calibration: Less than 2 minutes
- Monitor display: LCD 3-digit readout
- Temperature range: 4 to 113 degrees F (-20 to 45 degrees C)
- Accuracy: +/- 1% of full scale
- Monitor range: 0-200 ppm CO (15-23% for optional O₂)
- Pressure range: 1-3 psi, flow 50-100cc
- Sensor type: 3-electrode electrochemical with bias voltage
- Humidity range: 5% to 95% relative humidity
- Warranty: 2 years on entire unit and CO sensor (1 year on oxygen sensor)
- Alarm set point: 10ppm CO (5 ppm Canada)
- Test circuitry: manual push-to-test for sensor operation and alarms
- Shielding: internal RFI/EMI circuitry, aluminum case
- Warning indicators: low battery (amber), normal operation (green), high CO level (red) (LED indicators vary with model ordered)
- Dimensions: 7.0" L x 2.75" H x 5.1" W



CO Monitors

**Panel Mounted CO Monitor
for Fixed Systems**
Continuous Sampling of CO and/or O₂ levels



CO-91PMIS



Model No.	Description
CO-91PMIS	Panel mounted intrinsically safe CO monitor, 9 VDC only, approved for Class I, Division 1, Groups C and D environments, audible alarm, visual lights, flowmeter, quick connect calibration fitting, LCD display

Portable CO Monitoring Intermittent or Continuous Sampling

This portable airline monitor connects easily to a breathing air filtration source or ambient air pumps and monitors the air for CO content. The audible alarm (90 dBA) and light will activate when the CO level exceeds 10ppm (5ppm Canadian). External alarm and lights allow for the unit to be used in the closed position and eliminates damage and contamination of the internal components.

Specifications:

- Operates on 9-volt batteries
- Connector kit includes 1/4" Industrial Interchange coupling supplied on 5ft. hose
- Standard version allows air pressures up to 150psi
- Available in high pressure version up to 6000psi for fill compressors

Applications

- Portable filter pots
- Filter systems
- Ambient air pumps
- Equipment Rentals
- Retro-fit compressors and filtration systems



**CO91-14LAC
Portable CO Monitor**



Model No.	Description - Intrinsically Safe
CO91-14IS	Portable Intrinsically Safe CO monitor, 9 VDC only, approved for Class I, Division 1, Groups C and D environments, audible alarm, visual lights, flowmeter, quick connect calibration fitting, LCD display

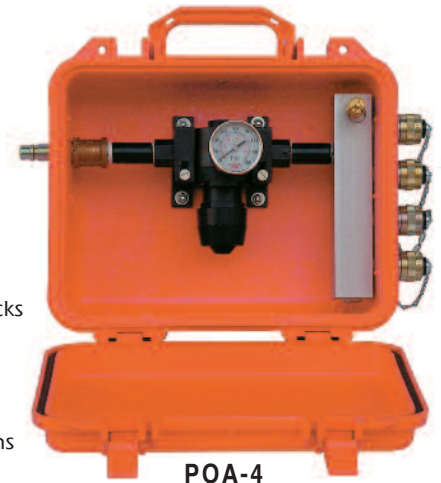
Remote Air Manifolds Point of Attachments (POA)

A remote air manifold is often called a Point-of-Attachment (POA). All of our remote air manifolds meet NIOSH requirements of the 87-116 (1989) document for point-of-attachment.

The Point-Of-Attachment (POA) series provides remote manifold capability for respirator users, while complying with NIOSH regulations. The POA consists of a regulator, pressure gauge, safety relief valve, and fitting congruency necessary for proper respirator operation. The POA box can be located any distance from the Grade-D filtration Breather-Box™ or filtration panel. The remote air manifold (POA) assembly becomes the NIOSH attachment point for the respirators and is now limited to a maximum 300 feet of breathing air hose at the air outlet fitting on the remote POA box.

Specifications:

- Adjustable regulator
- 1/2" industrial interchange male inlet plug
- Pressure gauge (0-160 psi)
- Safety relief valve - set at 125 psi
- 1/4" respirator couplings supplied with safety locks
- Aluminum block manifold
- Unbreakable water resistant polycarbonate case
- Rubber gasketed lid helps to prevent internal contamination
- Unit can be taken into wet or hazardous locations



POA-4

Model No.	Description
POA-4	Standard POA Box - 4 couplings
POA-4R	POA Box with 4 independent regulators
POA-4F	POA Box with final particulate filter
POA-4RF	POA Box with final particulate filter and 4 independent regulators
POA-X	POA Box, replace "X" in part number for the required number of fittings
POA-XWM	Wall mounted POA manifold, replace "X" in part number for the required number of fittings

Please specify 1/4" Hansen style or Schrader style fittings when ordering. Other fittings available for an additional charge.



**Did You
KNOW?**

Using POA units, you can move the NIOSH point-of-attachment for airline respirators closer to the worker.

POA units can be used in hazardous locations.

TA3-AXAF Explosion-Proof Auto-Air™ Breathing Air Compressor Package Designed for use with Pressure Demand Respirators Only

Specifications:

- 110 psi output air pressure, 3 couplings supplied
- Explosion-proof electric motor - 230 VAC, 3 phase
- Explosion-proof on/off switch
- 25 ft. power cord, no plug, user wired per NEC requirements
- 3-worker operation - pressure demand respirators only
- Full automatic back-up air feature, up to 4500 psi capability
- Pneumatic visual indicator and audible alarm for system failure
- Grade-D, 3-stage filtration with 30 cfm flow capacity
- Twin-Air™ tank design for cool breathing air output, ASME coded
- Intrinsically safe carbon monoxide monitor, approved for 9-volt DC operation in Class 1, DIV. 1, Groups C and D Environments
- Holds one SCBA cylinder up to 4500 psi back-up air
- Steel air control panel with high pressure regulator
- Pneumatic 10" tires

This compressor is not designed for use with constant flow respirators or Vortex cooling tubes due to low output pressures.



TA3-AXAF

Grade-D, 3-stage Filtration with
Approved Intrinsically Safe Carbon Monoxide Monitor

Model No.	Description
TA3-AXAF	Explosion-proof compressor includes: Grade-D filtration, air control panel with CO monitor, 25 ft. power cord, user wired per NEC requirements. Reserve air cylinders sold separately.
AC-60	60cf aluminum cylinder - 2400 psi rated
AC-87	87cf carbon fiber cylinder - 4500 psi rated
BB30-FK	Replacement Filter Kit - 30 cfm
BBK-20	Calibration kit for CO monitor - 20 ppm CO, zero air, regulator and case - 17 liter size disposable cylinders
BBK-10	Calibration kit - same as above with 10 ppm CO gas for Canadian calibration

Note: Size the reserve air system to achieve the required egress time



The Auto-Air™ Breather Box™

Fully Automatic Reserve Air System for Work in IDLH Environments

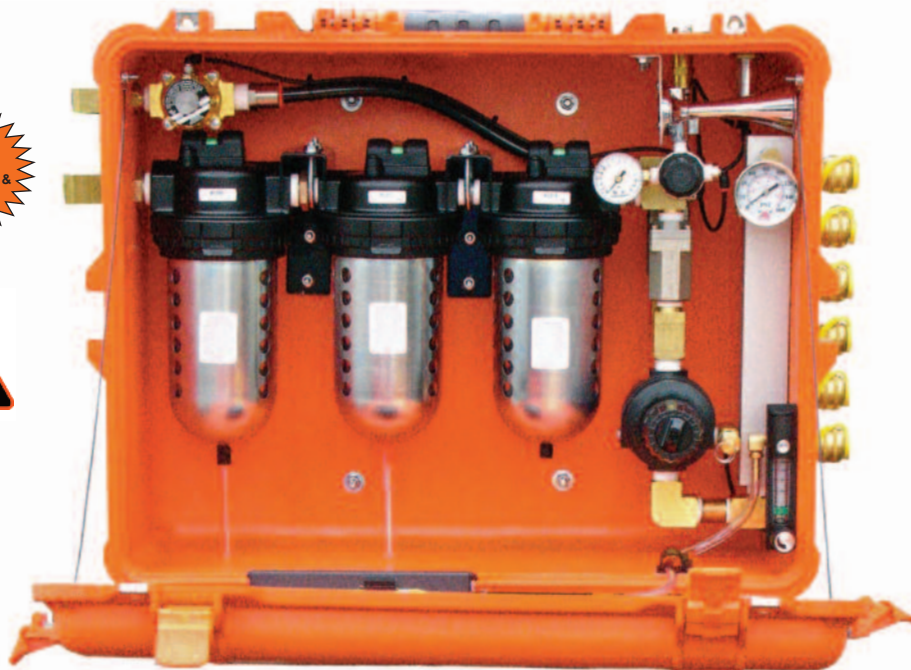
What Is an Auto-Air™ System?


If IDLH work environments exist, the Auto-Air™ Breather Box™ option should be considered. The Auto-Air™ filtration system was developed to provide Grade-D breathing air with full automatic reserve air in the event of either electrical failure or reduced pressure from the main air source while working in hazardous environments.

Reserve air activation occurs at 60 psi and/or loss of electrical supply, the system automatically switches to the reserve air cylinder(s). Local and optional remote alarms signal the workers that the primary air system has failed and has switched to the back-up air system. This Auto-Air™ feature is offered in pneumatic versions for hazardous locations.



2 YEAR WARRANTY ON CO SENSOR & MONITOR



Fully Pneumatic System
with  certified intrinsically safe CO monitor for use in hazardous location environments

B100COAAP6



Model No.	Description - Pneumatic Versions
BB30-COAP	30 cfm Intrinsically Safe Auto-Air™ Breather Box™ (48 cfm flow capacity) - 2 couplings
BB50-COAP	50 cfm Intrinsically Safe Auto-Air™ Breather Box™ (79 cfm flow capacity) - 4 couplings
BB100COAAP	100 cfm Intrinsically Safe Auto-Air™ Breather Box™ (123 cfm flow capacity) - 4 couplings
B100COAA6	100 cfm Intrinsically Safe Auto-Air™ Breather Box™ (123 cfm flow capacity) - 6 couplings

Please specify 1/4" Hansen style or Schrader style fittings when ordering. Other fittings available for an additional charge.

 Approved for Class I, Division 1, Groups C and D environments and are 9 VDC operation only

Always size the reserve air systems to allow an adequate safety factor for all workers to egress the environment.

Did You KNOW?

NIOSH requires the use of a 5 minute airline escape respirator when working in IDLH environments. Our Auto-Air™ feature does not replace the NIOSH requirement, however, some work environments may require a 30-minute (or longer) airline escape method to safely egress the hazardous area. This situation would require the use of an Auto-Air™ Breather Box™ or Auto-Air™ Cart.



Grade-D Filtration Auto-Air™ Cart




The Auto-Air™ Cart

The Auto-Air™ Cart provides a systems approach to breathing air filtration. The cart contains our Grade-D filtration unit with a pneumatic reserve air system and twin air cylinder storage. Choose a cart size based on the desired amount of reserve air needed to allow workers to safely egress the work area. Carts can operate with 2400 to 5000 psi cylinders in hazardous locations.

Intrinsically Safe Auto-Air™ Cart Complete Pneumatic Operation

Note: Intrinsically Safe (IS) CO monitors are  approved for Class I, Division 1, Groups C and D environments and are 9VDC operation only

All lights and remote alarms are pneumatically operated and spark free. The intrinsically safe CO monitor is  approved and operates on 9-volt DC batteries only.

Applications

- Refineries
- Chemical and Pharmaceutical Manufacturing
- Refueling Applications
- Tank Cleaning
- Fuel Cell Entry
- Grain Silo Entry



B10023HTAP

System mounted on 2300 series large cylinder cart



For Use In Hazardous Locations

All HTAA Series Standard Carts Hold Two 87 or 60 CF Air Cylinders. Large Cylinder Carts Pictured are for Long Duration Reserve Air Applications.

BB50-HTAAP

System mounted on small cylinder cart



The custom Auto-Air™ Cart, pictured left, utilizes our Ergo-Air® Cart frame. The unit holds two large storage air cylinders and provides ease of mobility for use in plant air operations. Any size Auto-Air™ Breather Box™ can be added to the Ergo-Air® Cart frame.

Consult Customer Service to design a cart to meet your application



For Use In Hazardous Locations



Model No.	Description
BB30-HTAAP	Small Carts 30 cfm Intrinsically Safe Auto-Air™ Small Cart - (48 cfm flow capacity) - 2 couplings
BB50-HTAAP	50 cfm Intrinsically Safe Auto-Air™ Small Cart - (79 cfm flow capacity) - 4 couplings
BB100HTAAP	100 cfm Intrinsically Safe Auto-Air™ Small Cart - (123 cfm flow capacity) - 4 couplings
B10023HTAP	Large Carts 100 cfm Intrinsically Safe Auto-Air™ Large Cart - (123 cfm flow capacity) - 4 couplings

Please specify 1/4" Hansen style or Schrader style fittings when ordering. Other fittings available for an additional charge.

 Approved for Class I, Division 1, Groups C and D environments and are 9 VDC operation only

MULTI-PAK™ Air Cylinder Carts

The patented MULTI-PAK™ series of SCBA Cylinder carts has been designed with the user in mind. Choose from many basic designs to fit any job application. All of the small MULTI-PAK™ carts feature fold-down handles, recessed air control panels, rounded cart corners, quick release hose racks, and many other unique features. Choose the pressure range and number of fittings required. All carts have input and output pressure gauges.

Ideal for working in hazardous locations and emergency response.



Specifications

- Fold down handle
- Intrinsically safe low pressure alarm whistle
- High flow adjustable regulator
- Input and output pressure gauges
- Solid aluminum block manifold
- Universal handtight CGA fittings with bleeder valves
- Wrenchtight fittings on Model MP-2L
- Nylon cylinder straps with Velcro®
- Quick release hose rack
- 8" Semi-pneumatic tires
- Steel frame with black powder coat paint
- 21" L x 16" W x 41" H (Handle up) 34.5" (Handle down)
- Weight: 49 lbs.



U.S. Patent #D443,744

MP-4H

Cylinders Not Included

MULTI-PAK™ Rescue Cart

MP-4R



- High pressure auxiliary CGA-347 inlet for continuous operation from an external air supply, e.g. truck air
- Secondary low pressure regulator to operate pneumatic tools and lift bags at low pressure
- Cylinder selector valve for independent cylinder operation

Cylinders Not Included

Cart Models Available for 2216 to 4500 PSI

Model No.	Description
MP-2L	MULTI-PAK™ 2-cylinder air cart, 2400 psi, supplied with 2-outlet manifold, CGA-346 wrenchtight nuts
MP-2H	MULTI-PAK™ 2-cylinder air cart, 4500 psi, supplied with 2-outlet manifold, CGA-347 handtight nuts
MP-4H	MULTI-PAK™ 2-cylinder air cart, 4500 psi, supplied with 4-outlet manifold, high flow regulator, CGA-347 handtight nuts
MP-4R	MULTI-PAK™ Rescue, 2-cylinder air cart, 4500 psi, supplied with 4-outlet manifold, high flow regulator, CGA-347 handtight nuts
Accessories	
AC-87	87cf carbon fiber cylinder, 4500 psi
AC-60	60cf aluminum cylinder, 2216 psi
MP-C	Black nylon cart cover for small MP-series carts

PAK-SFL™

Forklift or Wall Mounted PAK

The PAK-SFL™ is a complete single user breathing air PAK assembly and was designed to mount a single bottle on a forklift while still allowing the ability to detach and carry as needed. Can also be mounted on a wall for back-up air or use in emergency response situations.

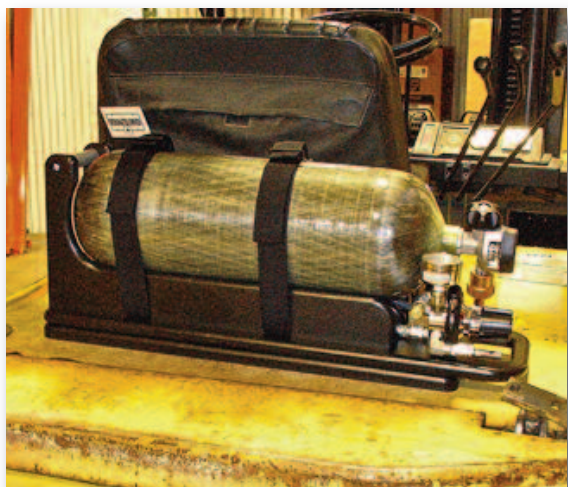
PAK-SFL



Cylinder Not Included



Quick release mount



PAK and bracket mounted on forklift

PORTA-PAK™ Twin Cylinder PAK



PAK-3

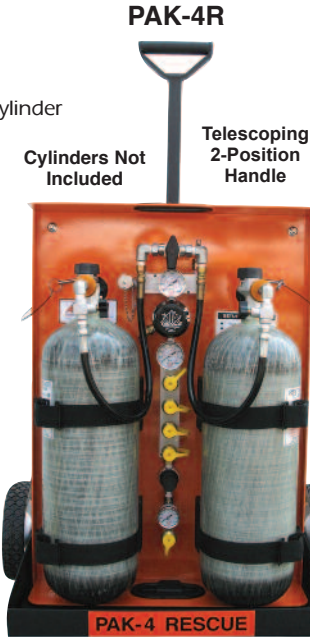
Cylinders Not Included

PAK-3™ Specifications:

- CGA-347 operation at 4500 psi
- Universal handtight nuts
- Low pressure alarm whistle
- Check valves in-line to allow independent cylinder operation and removal
- Orange powder coated aluminum frame with padded carry handles
- 4-outlet breathing air manifold w/ safety relief valve
- Quick connect couplings with dust caps; specify desired fittings when ordering
- Wall mount brackets and pull cart available
- Dimensions: 29" L x 21" W x 6" D
- Weight: 25 lbs. w/out cylinders

Accepts either 2216 psi or 4500 psi cylinders

Model No.	Description
PAK-3	PORTA-PAK™ tray assembly, no cylinders Bottled air tray assembly complete without cylinders, cart, or cover Includes cylinder directional valve, secondary low pressure regulator, gauge, and outlet fitting
PAK-4	
PAK-4R	PAK-4R™ Rescue Cart - same as PAK-4™ with PAK-CRT included
Accessories	
PAK-CRT	PORTA-PAK™ cart only
PAK-CRTC	Cart cover - aluminum
PAK-C	PORTA-PAK™ nylon cover
PAK-WM	PORTA-PAK™ wall mount brackets, 2 each



PAK-4R™ Rescue Cart With Removable Air Cylinder Tray

PAK-4R™ Specifications:

- CGA-347 operation at 4500 psi
- Adjustable cylinder straps with velcro
- 3-way high pressure directional cylinder valve
- High pressure male inlet, CGA-347
- Low pressure regulator for pneumatic tools
- 8" diameter ball bearing wheels
- Adjustable output regulator w/relief valve
- In-line check valves
- Telescoping aluminum handle
- Rear hose rack
- Removable air cylinder tray
- Low pressure alarm whistle
- Dimensions: 33" H x 25" W x 17" D
- Weight: 37 lbs. w/out cylinders



MULTI-PAK™ Large Cylinder Air Carts

Large Cylinder Air Carts Available in Cylinder Pressures from 2400 TO 5000 PSI

The MULTI-PAK™ series of large air cylinder carts are designed for long duration industrial applications. The entire line of carts are built for easier mobility and function. The large cylinder carts incorporate features such as protected recessed controls, an equipment storage box, narrow profile, 16" pneumatic tires and quick-release hose hangers. Pick and choose the features that best suit your job application and work environment.



Front view with hose storage rack - holds 200 feet of 3/8" hose

Model MP-2300ENB Pneumatic Alarm Whistle

Specifications

- 5000 psi hardware
- Pneumatic low pressure alarm whistle, available with bell alarm
- Solid aluminum block manifold
- In-line check valves
- High flow adjustable regulator
- Input and output pressure gauges
- Storage box with latch
- Universal handtight nuts - fits 2400 to 5000 psi cylinders
- Quick release hose rack - holds 200ft of 3/8" hose
- 16" pneumatic tires
- 62" H x 25" W x 30" D w/cylinders
- Weight: 112 lbs. without cylinders

MP-2300ENB

Cylinders Not Included



Ideal for working in hazardous locations or emergency response

Model No.	Description
MP-2300ENB	Pneumatic Alarm 2-cylinder cart complete with pneumatic alarm whistle, no cylinders supplied, 5000 psi rated
AC-300	Optional Cylinders 300 cf steel cylinder - 2400 psi 444 cf steel cylinder - 4500 psi 472 cf steel cylinder - 5000 psi
AC-444	
AC-472	



Rear Storage Box

Ergo-Air® Cart System

Air Systems' innovative air cylinder cart has been ergonomically designed to help prevent back injuries and facilitate mobility. The Ergo-Air® Cart features one-hand operation during raising or lowering of the air control panel and cylinders.

No back strain is placed on the operator during pushing or pulling the cart. The basic cart design comes standard with Air Systems' unique air control panel and cart assembly. Several hose reel options are available to meet particular job applications.

Helps Reduce Back Injuries

Ergonomically Designed Mobile Breathing Air Cart System

Ideal for working in hazardous locations or emergency response

Ergo-Air® Cart Details

- 2400 or 5000 psi rated air pressure regulator
- Steel air control panel with 4-outlet respirator manifold
- 16" semi-pneumatic rear tires and front locking swivel casters
- High pressure hardware with in-line check valves
- Twin cylinder straps with padded brackets
- Cart lifting hooks
- Cart Dimensions: 32"W x 41"D x 62"H
- Available steel upper storage cabinet: Dimensions: 24" W x 12" H x 12" D

Available with twin auto hose reels and 16" pneumatic tires



EAC-97NB
with Available Upper Storage Case

Ergo-Air® is a Registered Trademark of Air Systems International, Inc.



Raising cart: 15 lbs. of force
Lowering cart: 35 lbs. of force

Model No.	Description (Reels and Cylinders Sold Separately)
EAC-97NB	Semi-Pneumatic Tires - LP Alarm Whistle Ergo-Air® cart, 2400 psi regulator
EAC-97HNB	Ergo-Air® cart, 5000 psi regulator
EAC-97PTNB	Pneumatic Tires - LP Alarm Whistle Ergo-Air® cart, 2400 psi regulator
EAC-97PHNB	Ergo-Air® cart, 5000 psi regulator
EAC-97150A	Cart Options Single HR-50. auto hose reel - holds 50 ft. 3/8" hose
EAC-97250A	Dual 50 ft. auto hose reels installed
EAC-97300M	300 ft. manual hose reel -holds 200 ft., 1/2" or 300 ft., 3/8" hose
EAC-97210M	Dual 100ft. manual hose reels installed -holds 100 ft. 3/8" hose
EAC-97450M	Manual hose reel - holds 450ft. of 3/8" hose or 300 ft. of 1/2" ID hose
H-300-5	Breathing air hose 1/2" ID - 300 ft.
H-300-3	Breathing air hose 3/8" ID - 300 ft.
EAC-97SBU	Storage cabinet - upper
EAC-C	Nylon cart cover- fits all Ergo-Air® carts

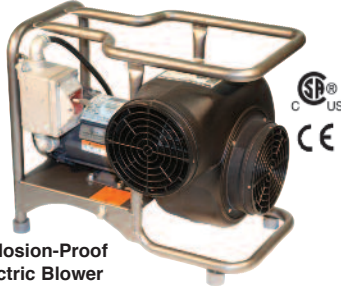
Ventilation Equipment Selection for Hazardous Locations

Once it is determined there is a hazardous location or potential for a hazardous work location, it is necessary to take every precaution to guard against ignition of the hazardous atmosphere. The traditional “Combustion Triangle” is made up of three elements: 1) fuel, 2) oxygen and 3) an ignition source. All three must be considered when developing a plan to ventilate hazardous or potentially hazardous environments.



Hazardous location electrical equipment, approved by a Nationally Recognized Testing Laboratory (NRTL) such as UL or CSA, is designed and constructed to eliminate the potential for ignition of the work environment.

The following is a list of equipment criteria to consider for all hazardous locations:



Explosion-Proof Electric Blower SVB-E8EXP

Explosion-Proof Electric Products - Units should have a hazard label stating Class, Group, and Division approvals listed from the approving agency, e.g. CSA or UL. Blowers should have a grounding lug to ground the unit and safely remove the build-up of static electricity to a safe grounded source. These types of electric blowers should have a metal frame and housing or a conductive plastic housing to assure a good ground to the electrical source and an aluminum non-sparking blower wheel to prevent metal sparking.

Intrinsically Safe Equipment - Electrical equipment should be certified as intrinsically safe due to its low voltage properties. Pneumatic or air driven equipment cannot cause a spark and do not require third party electrical approval because there are no electrical parts. Even with intrinsically safe equipment, proper grounding and non-sparking components should still be utilized at all times.



Pneumatic Air Powered Blower SVB-A8



Conductive Duct SVH-CND815

Conductive Ducting - Choose ventilation duct that has fabric made of conductive material. This type of duct will reduce the potential build-up of static electricity on both the interior and exterior surfaces of the duct that can result from the movement of air and small dust particles during ventilation. Air Systems adds a grounding wire to the conductive duct's interior wire helix; it attaches to the blower so that any static charges can be removed to either the blower's ground lug or to Air Systems' Conductive Saddle Vent® Ventilation System.

Controlling Static Electricity in Hazardous Ventilation Locations

The Saddle Vent® was developed and patented by Air Systems International over 25 years ago as a safety tool to maintain continuous ventilation while allowing unrestricted entry and egress to a manhole or tank. Air Systems has continued to improve the Saddle Vent® by developing a fully conductive Saddle Vent® and a ventilation method for removing static electricity from the entire ventilation system. This system consists of the entire length of ventilation duct all the way back to the blower and safely discharging static to a safe electrical ground.

The new recommended method, The Conductive Saddle Vent® Ventilation System, uses conductive ventilation ducting connected to the Conductive Saddle Vent® which is then connected to an explosion-proof or pneumatic blower. The entire system is assembled above ground in less than five minutes before installing it in the opening to the manhole or tank; it can then be tested for electrical conductivity using a standard ohm meter.

Achieving an electrical resistance reading less than 500K ohms will assure an electrical path is made for static electricity to safely discharge back to the blower and its grounded electrical connection. This ventilation system is the only safety industry method for safely removing static build-up during confined space entry; it provides continuous confined space ventilation, unrestricted entry and egress and the entire system can be tested prior to commencing work operations in a hazardous work area.

Controlling static electricity discharge will prevent spontaneous ignition of hazardous vapors and dusts. As a work tool, The Conductive Saddle Vent® Ventilation System will allow workers to concentrate on the many other hazards associated with working in a confined space while maintaining continuous ventilation.



Conductive Saddle Vent® SV-189CND





Confined Space Ventilation

The Conductive Saddle Vent®

The Conductive Saddle Vent® System

Approved For Use In Hazardous Locations

The Latest Innovation in Saddle Vent® Technology



The Conductive Saddle Vent® System is now standard with our explosion-proof & pneumatic blower kits or it can be purchased separately to upgrade your current ventilation procedures.

The Conductive Saddle Vent® System Set Up Procedure

- Step 1)** Select an electric explosion-proof or pneumatic blower with an installed metal grounding lug.
- Step 2)** Read and follow recommended work procedures found in ANSI/API 2015 and 2016 prior to entering a tank or confined space.
- Step 3)** Use only conductive ducting supplied with a continuous metal helix and a static ground wire connected to the helix. The ground wire is connected to the metal ground lug on the blower. (See Pic. 1).
- Step 4)** Attach the conductive elbow to the top of the black Conductive Saddle Vent®, (see Pic. 2), and attach the ground wire from the duct to the elbow. If no elbow is used, an alternate ground lug is provided on the top of the Saddle Vent®.
- Step 5)** Attach conductive duct to the base of the Saddle Vent® and attach the ground wire to the Saddle Vent®.
- Step 6)** **Test the ventilation set-up for conductivity prior to starting ventilation.** Use a volt/ohm meter set to read ohms in "thousands". Attach a lead from the meter to the farthest end of the duct's grounding wire and the other lead touching the ground lug on the blower. A reading less than 500K ohms will assure a good ground is achieved to allow any static charges to flow toward the grounded source (See Pic. 3). Pneumatic blowers should have a ground wire run from the blower to a grounded source.
- Step 7)** The ventilation system is now ready for use. Place the duct and Saddle Vent® system in the manhole and secure with the universal mount. Follow the "Typical Saddle Vent® set-up procedure found in your blower's instruction manual.

For work in hazardous locations, read and follow recommended work procedures found in ANSI/API 2015 and 2016 prior to entering a tank or confined space.

Saddle Vent® Safety Improvements

The original Saddle Vent® was constructed of standard polyethylene which carries the potential of static electricity build-up on its surface. Static electricity is a source of ignition for fire and explosions.

Air Systems developed an improved Saddle Vent® to safely remove potential static electricity charges from the ventilation system. The use of conductive polyethylene to construct the Saddle Vent® and conductive ventilation duct now provides the safest possible confined space ventilation procedure available.

The fully Conductive Saddle Vent® removes static electricity from the entire ventilation system when installed properly.

Saddle Vent® is a Registered Trademark of Air Systems International, Inc.

U.S. Patents #6,843,274
#7,467,645
#7,992,593 B2

Canadian Patents #2,561,299
#2,436,809

China Patents CN1813137B
European Patents #1491695
Australian Patents 2004 202394
Other U.S. and International Patents Pending



Length: 43.5"
Width: 14.5"
Depth: 3.5"
Top Opening: 8" O.D.
Bottom Opening: 8" O.D.
Construction: Polyethylene
Temperature Rating:
+250°F Melt Temp.
- 158°F Brittleness Temp.

Conductive Saddle Vent® SV-189CND

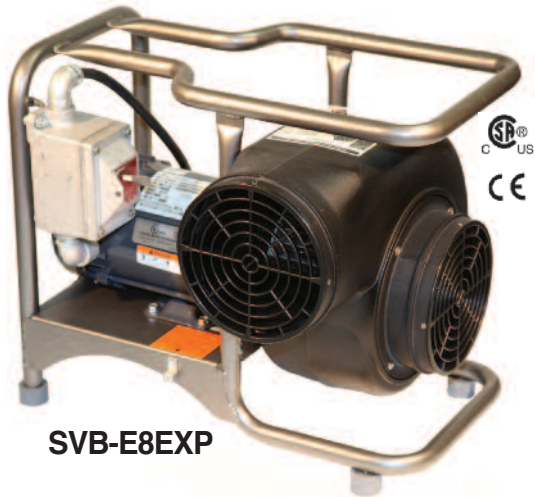


90° Conductive Elbow SV-90CND

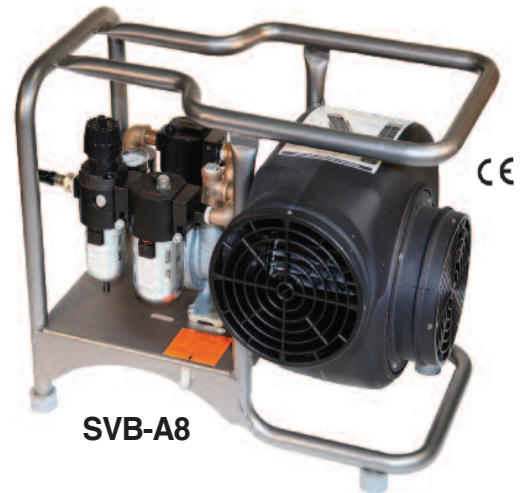
Model No.	Description
SV-189CND	The Conductive Saddle Vent®
SV-90CND	90° elbow for Conductive Saddle Vent®
SV-UM	Universal Saddle Vent® Mounting Bracket

Centrifugal Blowers

Heavy Duty, Industrial Grade, Ergonomically Designed



SVB-E8EXP



SVB-A8

Explosion-Proof Electric Blower

- Explosion-proof switch installed and wired with 25 ft cord, no plug, user wired per NEC requirements
- 3/4 HP electric motor, 115 VAC, 12.6 amp
- Approved for Class I, Div. 1, Groups C and D Class II, Div. 1, Groups E, F, G
- CSA approved and CE registered
- Conductive Polyethylene fan housing
- Aluminum non-sparking blower wheel
- Static grounding lug installed
- Powder coat tubular steel frame with dual handles
- Molded conductive safety guards
- 8" intake and exhaust flange
- Weight: 68 lbs.
- 1570 cfm, free air delivery
- 1047 cfm, 25 ft duct, 1 - 90° bend

International blowers available.
Contact Customer Service for details and specifications.

Pneumatic Air Powered Blower Intrinsically Safe Operation

- 4HP air motor, operates from 10 - 100 psi
- Ultra-quiet operation – under 80 dbA
- CE registered
- Conductive Polyethylene fan housing
- Aluminum non-sparking blower wheel
- Static grounding lug installed
- Powder coat tubular steel frame with dual handles
- Adjustable flow output regulator
- In-line moisture separator/lubricator provided as standard
- Air Systems' unique muffler and oil coalescing filter installed at air motor discharge
- 8" intake and exhaust flange
- Molded conductive safety guards
- Weight: 48 lbs.
- 1500 cfm free air delivery at min psi and cfm
- 1040 cfm free air delivery at min psi and cfm, 25 ft duct, 1 - 90° bend
- 3000 cfm free air delivery at max psi and cfm
- 1725 cfm free air delivery at max psi and cfm, 25 ft duct, 1 - 90° bend

Saddle Vent® Ventilation™ Technology



Conductive Saddle Vent® Ventilation Kits for Hazardous Locations

SVB-E8XCUP



All Conductive Blower Kits Include:

- 1) Pneumatic or Explosion-proof Blower
- 2) Conductive Saddle Vent® - SV-189CND
- 3) 90° elbow for Saddle Vent® - SV-90CND
- 4) 15 ft. duct - SVH-CND815
- 5) 6 ft. duct - SVH-CND86
- 6) Duct canister (holds 50ft. of duct) - SVH-DC25
- 7) Universal mount - SV-UM

Model No.	Description
SVB-E8XCUP	Explosion-Proof 8" Electric Blower Kit, includes SVB-E8EXP blower and SV-CUPCND Conductive Saddle Vent® Ventilation Kit
SVB-A8CUP	Pneumatic 8" Blower Kit, includes SVB-A8 blower and SV-CUPCND Conductive Saddle Vent® Ventilation Kit
SV-CUPCND	Kit only - Includes Conductive Saddle Vent® and elbow, 6 and 15 ft Conductive duct, Duct canister, and universal mount

In-Line Axial Fan

The 10" in-line axial fan was designed to be used as a stand alone fan or attached in series to run long lengths of ventilation duct.

Intake and exhaust flanges allow for either 8" or 10" duct to be attached to either end of the blower to achieve positive or negative ventilation. The blower is made of light weight steel and is available in standard electric or explosion-proof electric.



Dual Grounding Lugs

10" to 8" Duct Adapters
Supplied with Blower for
Intake and Exhaust

SVF-10EXP



ATEX Approved Motor Available.
Contact Customer Service for
details and specifications.



For Use In
Hazardous
Locations

Saddle Vent® Ventilation™ Technology

Hook Multiple Blowers in Series to Run Long Sections of Duct



10" In-Line Explosion-Proof Electric Axial Fan

- Explosion-proof Electric Motor: 1/3 HP, 115 VAC, 1-phase, 60 Hz. UL and CSA approved for Class 1, Div. 1, Groups C and D, Class II, Groups E, F, and G - built-in on/off switch
- Automatic reset thermal overload
- Dual grounding lugs installed on steel housing
- Frame: All steel, powder coat red with rubber base feet
- Inlet/Exhaust flange made of molded conductive polyethylene
- Power cord: 25 ft. power cord without plug, user wired per NEC requirements
- Dimensions: 16"L x 16.75"H x 12.5"W
- Weight: 32 lbs.
- 72 dbA @ 3 ft.
- 1390 cfm, free air delivery
- 973 cfm, 25 ft duct, 1 - 90° bend

Model No.	Description
SVF-10EXP	10" Explosion-proof Electric In-Line Fan - plug not provided
SVF-10X220	10" Explosion-proof Electric 220 VAC, 50/60 Hz, ATEX approved motor

Conductive Saddle Vent® Ventilation Kits for Hazardous Locations

Conductive Fan Kits Include:

- 1) Explosion-proof Fan, SVF-10EXP
- 2) Conductive Saddle Vent® - SV-189CND
- 3) 90° elbow for Saddle Vent® - SV-90CND
- 4) 15 ft. duct - SVH-CND815
- 5) 6 ft. duct - SVH-CND86
- 6) Duct canister (holds 50 ft. of duct) - SVH-DC25
- 7) Universal mount - SV-UM



SVF-10EXCUP



Model No.	Description
SV-CUPCND SVF10EXCUP	Includes Conductive Saddle Vent® and elbow, 6 and 15 ft Conductive duct, Duct canister, and universal mount Explosion-Proof 10" Electric Fan Kit, includes SVF-10EXP fan and SV-CUPCND Conductive Saddle Vent® Ventilation Kit



Contractor Grade Explosion-Proof Axial Fans

The contractor's series of ventilation fans is the latest addition to Air Systems' ventilation product group. Known for product quality and performance, Air Systems' offers a rugged polyethylene ventilation line designed to accommodate a variety of applications as well as demanding jobsite conditions at an economical price point.

Fans meet OSHA 29 CFR 1910.303(a) and 1910.7 electric certification requirement.

Applications:

- Boiler Work
- Utility Companies
- Telecommunications
- Petrochemical Tanks
- Construction
- Electrical Transformers
- Maintenance
- Manhole Entry
- Tank Cleaning



CVF-8EXP

Explosion-Proof Electric Ventilation Fan

- 8" Fan, 115 VAC, 1/3 HP
- 25 ft. Power Cord
- Built-In Sealed On/Off Switch, No Plug, user wired per NEC requirements
- UL/CSA US Approved Explosion-Proof for Class I, Groups C and D, Class II, Groups E, F, and G environments
- Weight: 19 lbs.
- 974 cfm, free flow
- 786 cfm, 15 ft. duct, 1 - 90° bend
- 661 cfm, 15 ft. duct, 2 - 90° bends

Model No.	Description
CVF-8EXP	Contractors Explosion-Proof Axial Fan
CVF-8X220	Contractors Explosion-Proof Axial Fan - 220 VAC, 50/60 Hz, ATEX approved motor
CVF15CANEX	Contractors Explosion-Proof Canister Fan, includes CVF-8EXP Fan, 15 ft conductive duct, conductive canister, no plug, user wired per NEC requirements
CVF25CANEX	Contractors Explosion-Proof Canister Fan, includes CVF-8EXP Fan, 25 ft conductive duct, conductive canister, user wired per NEC requirements



CVF15CANEX
with Removable Duct Canister
Weight 35 lbs.



CVFEX15KIT
Kit Weight 64 Lbs.



Conductive Saddle Vent® Ventilation Kits for Hazardous Locations

The Conductive Saddle Vent® is now available in a low cost contractor's kit

Air Systems' Conductive Saddle Vent® System provides optimal safety for your confined space ventilation needs. One part number at one low price provides a high quality ventilation system with a variety of applications for hazardous work environments.

Model No.	Description
CVFEX15KIT	Contractors Ventilation Kit, includes CVF-8EXP Fan, 6 ft conductive duct with conductive canister and 15 ft conductive duct, conductive Saddle Vent®, conductive 90° elbow, and universal mount
CVFEX25KIT	Contractors Ventilation Kit, includes CVF-8EXP Fan, 6 ft conductive duct with conductive canister and 25 ft conductive duct, conductive Saddle Vent®, conductive 90° elbow, and universal mount

Confined Space Ventilation Hazardous Location Ventilators



Venturi Blowers Often Called "Air Horns" or "Eductors"

Venturi Blower Features

- Used to ventilate hazardous vapors or fumes safely
- Operates on compressed air or steam
- No moving parts
- Static grounding lug is standard
- Lightweight cast aluminum base
- Galvanized steel horn (replaceable)
- Steel Handle
- Use in high heat locations
- Operating pressures up to 140 psi
- Larger models available up to 8000 cfm capacity
- API standard base sizes



Note: Order air inlet fittings separately

Air Flow ↑

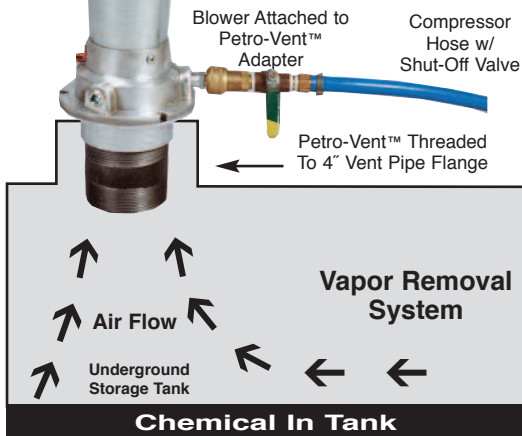
Petro-Vent™ Tank Ventilator

This blower has been designed to meet ventilation requirements for underground storage tanks. A special flange adapter has been developed to thread directly on the 4-inch vent pipe found on most storage tanks. The ASI-1000, ASI-1200 and ASI-2900 bolts directly on the compatible flange.



Model ASI-1000 & ASI-1200
Order adapter ASI-12ADPT

Model ASI-2900
Order adapter ASI-29ADPT

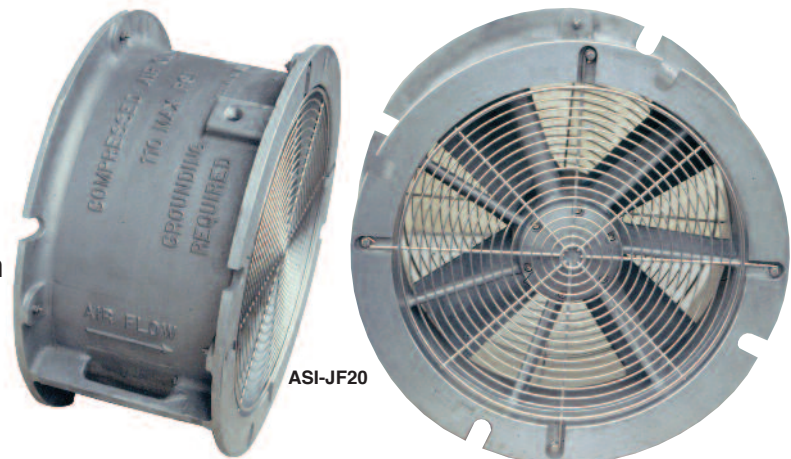


	50 PSIG	70 PSIG	90 PSIG				
Model	Total Air Flow (CFM)	Total Air Flow (CFM)	Total Air Flow (CFM)				
ASI-1000	935	1274	1422				
ASI-1200	1211	1429	1580				
ASI-2900	2770	3340	3752				
ASI-4100	3785	4562	5041				
Model	Air Consumed (CFM)	Air Consumed (CFM)	Air Consumed (CFM)				
ASI-1000	38	53	64				
ASI-1200	38	53	64				
ASI-2900	76	99	127				
ASI-4100	117	152	197				
Model	Overall Length	Diameter of Base	Diameter of Horn	NPT	Bolt Circle	Base Slot	Weight
ASI-1000	16.31"	7.38"	6.19"	1/2"	6.75"	0.31"	5.3 lbs
ASI-1200	32.12"	7.38"	7.37"	1/2"	6.75"	0.31"	8.1 lbs
ASI-2900	44.00"	11.16"	13.00"	1"	10.28"	0.43"	22.1 lbs
ASI-4100	46.50"	14.31"	14.37"	1"	13.18"	0.56"	32.3 lbs



Pneumatic Circular Jet Fan Designed for Hazardous Location Tank Ventilation

Model No.	Fits API Diameter Inch	Max Free Air CFM	Inlet Pressure PSI	Inlet Flow Required CFM	Weight Lbs.
ASI-JF20	20	10,400	40-110	60-290	95
ASI-JF24	24	16,130	40-110	76-338	122



Environmental Control

Pneumatic HEPA Vacuums - For Hazardous Locations

Conductive Pneumatic HEPA Vacuums Safely Remove Potential Static Electricity Build-up



- Pneumatic spark free vacuum motor
- All aluminum non-sparking tools and 2-piece aluminum wand
- 10 ft., 1.5" Conductive Vacuum hose with cuffs (grounds to tank)
- Motor head has grounding wire attached to the recovery can
- 25 ft. ground wire is attached to the vacuum recovery can to attach to a grounded external device for static removal

Specifications

- Inlet Pressure: 1/2" I.D. hose - 80 psi
- Inlet Flow: 70 cfm required
- Vacuum Pressure: 250" water lift maximum, adjusted to 160" water lift with relief valve
- Vacuum Flow: 100 -170 cfm based on inlet pressure
- Noise Level: 75dba @ 90 psi inlet pressure



AV-55P-CND



Note: AV-55P-CND is supplied with all ground wires connected, conductive hose, steel drum and a 55 gallon drum dolly

Model No.	Description
AV-2P-CND	2 gallon recovery, pneumatic motor, stainless steel tank, complete with wand, filters, accessory tools and ground wires
AV-5P-CND	5 gallon recovery, pneumatic motor, stainless steel tank, wand, filters, accessory tools and ground wires
AV-15P-CND	15 gallon recovery, pneumatic motor, stainless steel tank, cart, wand, filter accessory tools and ground wires
AV-55P-CND	55 gallon drum lid assembly with HEPA filter, 1.5" conductive 10ft hose, pneumatic motor, steel 55 gallon drum, drum dolly, filters, accessory tools and ground wires
AV-55DL	Drum lid includes 1.5" goose neck adapter (order motor, filters, and hoses separately)
AV-55DD	Drum Dolly - 55 gallon

Look What's Inside

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