



## **Torit Easy-Trunk™ ET-1 & ET-2**

### **Installation and Operation Manual** Installation, Operation, and Service Information



ET-2 illustrated

This manual is property of the owner. Leave with the unit when set-up and start-up are complete. Donaldson Company reserves the right to change design and specifications without prior notice.

Illustrations are for reference only as actual product may vary.



**This is the safety alert symbol. It is used to alert you to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.**

**⚠ WARNING**

Process owners/operators have important responsibilities relating to combustible hazards. Process owners/operators must determine whether their process creates combustible dust, fume, or mist. If combustible dust, fume, or mist is generated, process owners/operators should at a minimum:

- Comply with all applicable codes and standards. Among other considerations, current NFPA standards require owners/operators whose processes involve potentially combustible materials to have a current Hazard Analysis, which can serve as the foundation for their process hazard mitigation strategies.
- Prevent all ignition sources from entering any dust collection equipment.
- Design, select, and implement fire and explosion mitigation, suppression, and isolation strategies that are appropriate for the risks associated with their application.
- Develop and implement maintenance work practices to maintain a safe operating environment, ensuring that combustible dust, fume, or mist does not accumulate within the plant.

Donaldson recommends process owners/operators consult with experts to insure each of these responsibilities are met.

As a manufacturer and supplier of Industrial Filtration Products, Donaldson can assist process owners/operators in the selection of filtration technologies. However, process owners/operators retain all responsibility for the suitability of fire and explosion hazard mitigation, suppression, and isolation strategies. Donaldson assumes no responsibility or liability for the suitability of any fire and/or explosion mitigation strategy, or any items incorporated into a collector as part of an owner/operators hazard mitigation strategy.

Improper operation of a dust control system may contribute to conditions in the work area or facility that could result in severe personal injury and product or property damage. Check that all collection equipment is properly selected and sized for the intended use.

DO NOT operate this equipment until you have read and understand the instruction warnings in the Installation and Operations Manual. For a replacement manual, contact Donaldson Torit.

This manual contains specific precautionary statements relative to worker safety. Read thoroughly and comply as directed. Discuss the use and application of this equipment with a Donaldson Torit representative. Instruct all personnel on safe use and maintenance procedures.

**Data Sheet**

Model Number _____	Serial Number _____
Ship Date _____	Installation Date _____
Customer Name _____	
Address _____ _____	
Filter Type _____	
Accessories _____	
Other _____	



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**DANGER**

**DANGER** indicates a hazardous situation which, if not avoided, will result in death or serious injury.



**WARNING**

**WARNING** indicates a hazardous situation which, if not avoided, could result in death or serious injury.



**CAUTION**

**CAUTION**, used with the safety alert symbol, indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.

**NOTICE**

**NOTICE** is used to address practices not related to personal injury that may result in damage to equipment.

## Description

The Torit Easy-Trunk ET-1 & ET-2 are a stand-alone, ready-to-use collectors that incorporate the best of dust, smoke, and weld fume collection and filtration with proven filter pulse-cleaning technology to provide significant advantages to the customer. They capture dust, smoke, and weld fume right at the source, before reaching the operator's breathing zone. The filter cleaning technology provides the benefit of built-in filter cleaning by allowing the operator to pulse-clean the filters with compressed air by the simple push of a button.

The Easy-Trunk collectors ET-1 & ET-2 are compact and mobile, allowing them to easily fit through any standard doorway. Once positioned in the work area, simply lock the brakes on the front casters, plug into the wall, flip a switch, and start welding. During pulse-cleaning, make sure a compressed air supply of 90-100 psi is connected to the unit.

The collectors are ergonomically designed with the operator panel, pulse buttons, filter access, and dust drawer located at the front of the unit, right at the operator's fingertips. The motor, fan, and air valves are located down and to the rear of the unit, away from the operator to minimize noise.

At the heart of the Easy-Trunk are the Torit Ultra-Web® FR (flame retardant) filters, which have proprietary nano fiber technology to filter submicron-size fume and dust particles. These state-of-the-art filters ensure that

only clean air is returned to the plant environment. Always use Donaldson Torit filters to ensure high-efficiency operation and long filter life. Changing them is easy with the exclusive front-mounted slide-in design.

The Easy-Trunk ET-1 & ET-2 are the ideal weld fume filtration solutions for the customer who needs a compact, mobile, and easy-to-use dust collector with uncompromising performance.

## Purpose and Intended Use



Misuse or modification may result in severe personal injury and/or property damage.

Do not misuse or modify.

Easy-Trunk collectors are portable filter systems designed for light duty or infrequent plant operations.

Easy-Trunk collectors are commonly used for dust and welding fumes.

Easy-Trunk collectors are not intended for use with explosive dusts. Contact Donaldson Torit for selection assistance.

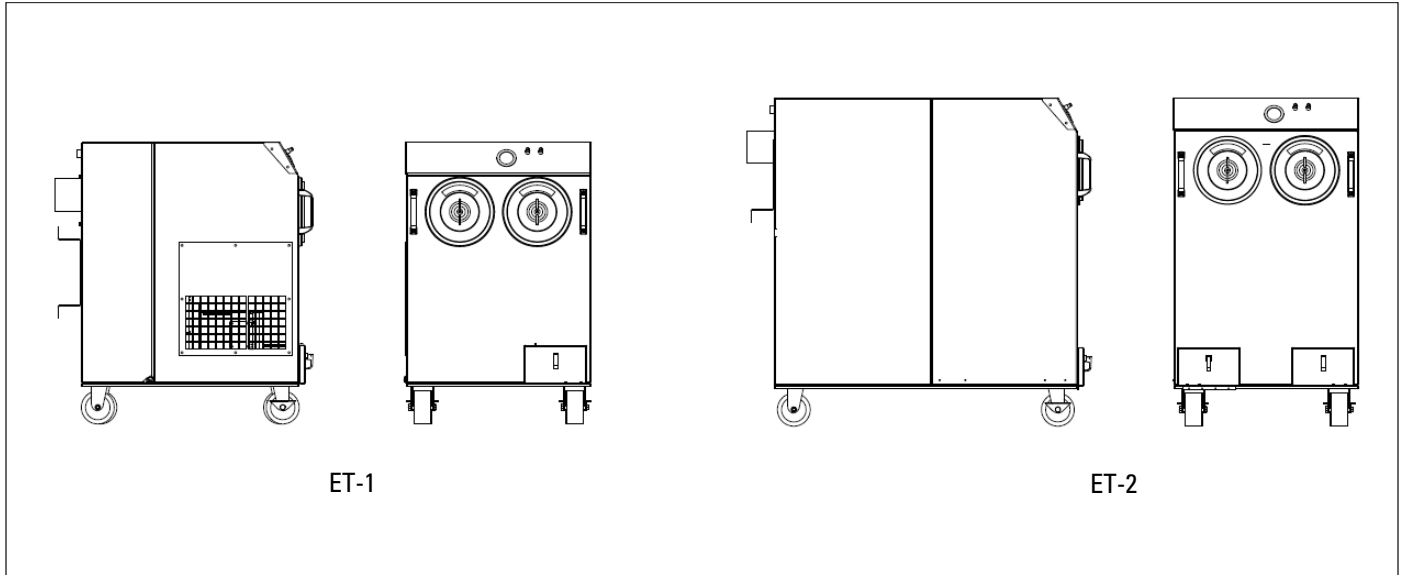


Combustible materials such as buffing lint, paper, wood, metal dusts, weld fume, or flammable coolants or solvents represent potential fire and/or explosion hazards. Use special care when selecting, installing, and operating all dust, fume, or mist collection equipment when such combustible materials may be present in order to protect workers and property from serious injury or damage due to a fire and/or explosion.

Consult and comply with all National and Local Codes related to fire and/or explosion properties of combustible materials when determining the location and operation of all dust, fume, or mist collection equipment.

Standard Donaldson Torit equipment is not equipped with fire extinguishing or explosion protection systems.

## Rating and Specification Information



Power and controls .....220V/50Hz/1Phase or 380V/50Hz/3Phase

\*If collector was supplied with a Record Drawing,  
the specifications on the drawing will supersede the  
standard specifications above.

## Operation

### **NOTICE**

The Easy-Trunk collectors are intended for (maintenance and light production) intermittent duty, not continuous duty.

To start the Easy-Trunk ET-1 & ET-2, plug the power cord into a proper voltage receptacle and turn on the switch.

Fume or dust enters through the extraction arm hood, flows through the trunk arm, and into the collector. As the air passes through the filters, fume or dust is captured and collected on the outside surface of the pleated filter cartridges. The clean, filtered air flows up through the center of the filter elements, passes through the venturis into the clean air plenum, through the blower fan, into the silencer section of the cabinet, and finally exits through the clean side air outlet.

The intake hood of the extraction arm should be located 12 to 18 inches above the arc zone in welding applications. The distance may vary slightly depending upon the type of welding. With the intake hood in this

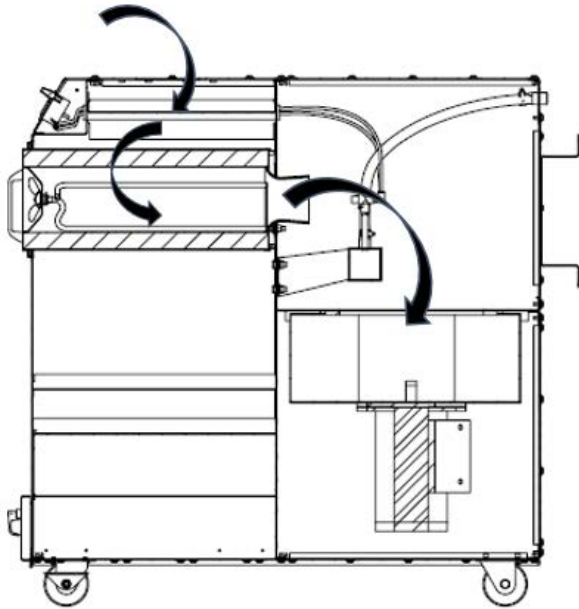
general location, the position of the lamp at the end of the trunk should light the work area. The air intake hood is now in a good position to collect fumes and smoke being generated by the welding operation.

The extraction arm can be rotated and has three flexible joints for optimal positioning of the intake hood. Friction devices are located in each flexible joint to hold the intake hood where it is needed.

The Easy-Trunk ET-2 can easily be rolled to where it is needed by pulling out on the two handles until the stop on each side is engaged. The handles are retracted into the cabinet by pressing down on the release button while sliding the handle back into the cabinet (see Retractable Handle Release).

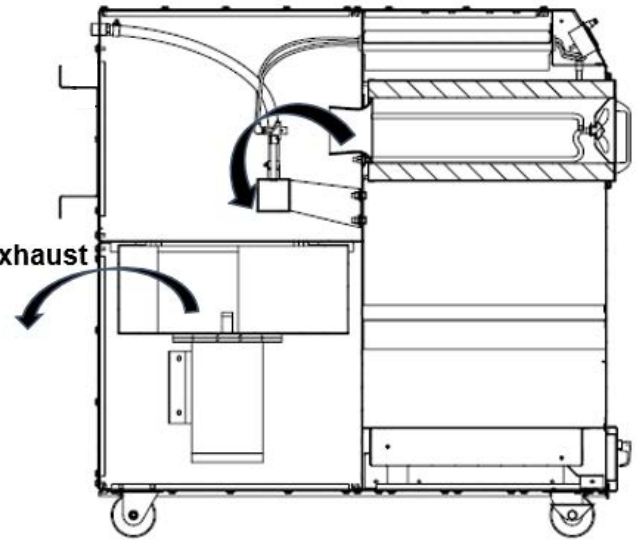
The blower motor is protected from overloading and overheating by an automatic thermal protection built into the motor.

Dirty Air Inlet



Side View , Right

Exhaust



Side View , Left

Unit Operation

## Inspection on Arrival

1. Inspect collector upon delivery.
2. Report any damage to the delivery carrier.
3. Request a written inspection report from the Claims Inspector to substantiate any damage claim.
4. File claims with the delivery carrier.
5. Compare collector received with description of product ordered.
6. Report incomplete shipments to the delivery carrier and your Donaldson Torit representative.
7. Remove crates and shipping straps. Remove loose components and accessory packages before lifting collector from truck.
8. Check for hardware that may have loosened during shipping.
9. Use caution removing temporary covers.

## Installation Codes and Procedures



Codes may regulate recirculating filtered air in your facility.

Consult with the appropriate authorities having jurisdiction to ensure compliance with all national and local codes regarding recirculating filtered air.

Safe and efficient operation of the collector depends on proper installation.

Authorities with jurisdiction should be consulted before installing to verify local codes and installation procedures. In the absence of such codes, install collector according to the National Electric Code, NFPA No. 70-latest edition and NFPA 91 (NFPA 654 if combustible dust is present).

A qualified installation and service agent must complete installation and service of this equipment.

All shipping materials, including shipping covers, must be removed from the collector prior to or during collector installation.

### **NOTICE**

Failure to remove shipping materials from the collector will compromise collector performance.

Inspect collector to ensure all hardware is properly installed and tight prior to operating collector.

## Installation



Use proper equipment and adopt all safety precautions needed for servicing equipment.

Electrical service or maintenance work must be performed by a qualified electrician and comply with all applicable national and local codes.

Turn power off and lock out electrical power sources before performing service or maintenance work.

Do not install in classified hazardous atmospheres without an enclosure rated for the application.



Codes may regulate acceptable locations for installing dust collectors. Consult with the appropriate authorities having jurisdiction to ensure compliance with all national and local codes regarding dust collector installation.

The collector is suitable for indoor installations. Reference the Rating and Specification Information.



## Collector Location

### **WARNING**

Donaldson Torit equipment is not designed to support site installed ducts, interconnecting piping, or electrical services. All ducts, piping, or electrical services must be adequately supported to prevent severe personal injury and/or property damage.

When hazardous conditions or materials are present, consult with local authorities for the proper location of the collector.

### **CAUTION**

Dust collection equipment may reach peak sound pressure levels above 80 dB (A). Noise levels should be considered when selecting collector location.

Locate the collector to ensure easy access to electrical and compressed air connections, to simplify solids collection container handling and routine maintenance, and to ensure the straightest inlet and outlet ducts.

## Site Selection

This collector can be located on a foundation or structural framing.

Provide clearance from heat sources and avoid any interference with utilities when selecting the location.

Portable collectors require special installation accommodations.

**Note:** Collectors with explosion vents are not available in portable configurations.

## Rigging Instructions

### Suggested Tools & Equipment

Clevis Pins and Clamps	Lifting Slings
Crane or Forklift	Pipe Sealant
Drift Pins	Pipe Wrenches
Drill and Drill Bits	Screwdrivers
End Wrenches	Socket Wrenches
Adjustable Wrench	Spreader Bars
Torque Wrench (inch/lbs, 9/16-in Socket)	

### Hoisting Information

#### **WARNING**

Failure to lift the collector correctly can result in severe personal injury and/or property damage.

Use appropriate lifting equipment and adopt all safety precautions needed for moving and handling the equipment.

A crane or forklift is recommended for unloading, assembly, and installation of the collector.

Location must be clear of all obstructions, such as utility lines or roof overhang.

Use all lifting points provided.

Use clevis connectors, not hooks, on lifting slings.

Use spreader bars to prevent damage to collector's casing.

Check the Specification Control drawing for weight and dimensions of the collector and components to ensure adequate crane capacity.

Allow only qualified crane or forklift operators to lift the equipment.

Refer to applicable OSHA regulations and local codes when using cranes, forklifts, and other lifting equipment.

Lift collector and accessories separately and assemble after collector is in place.

Use drift pins to align holes in section flanges during assembly.

## Standard Equipment

### **⚠ WARNING**

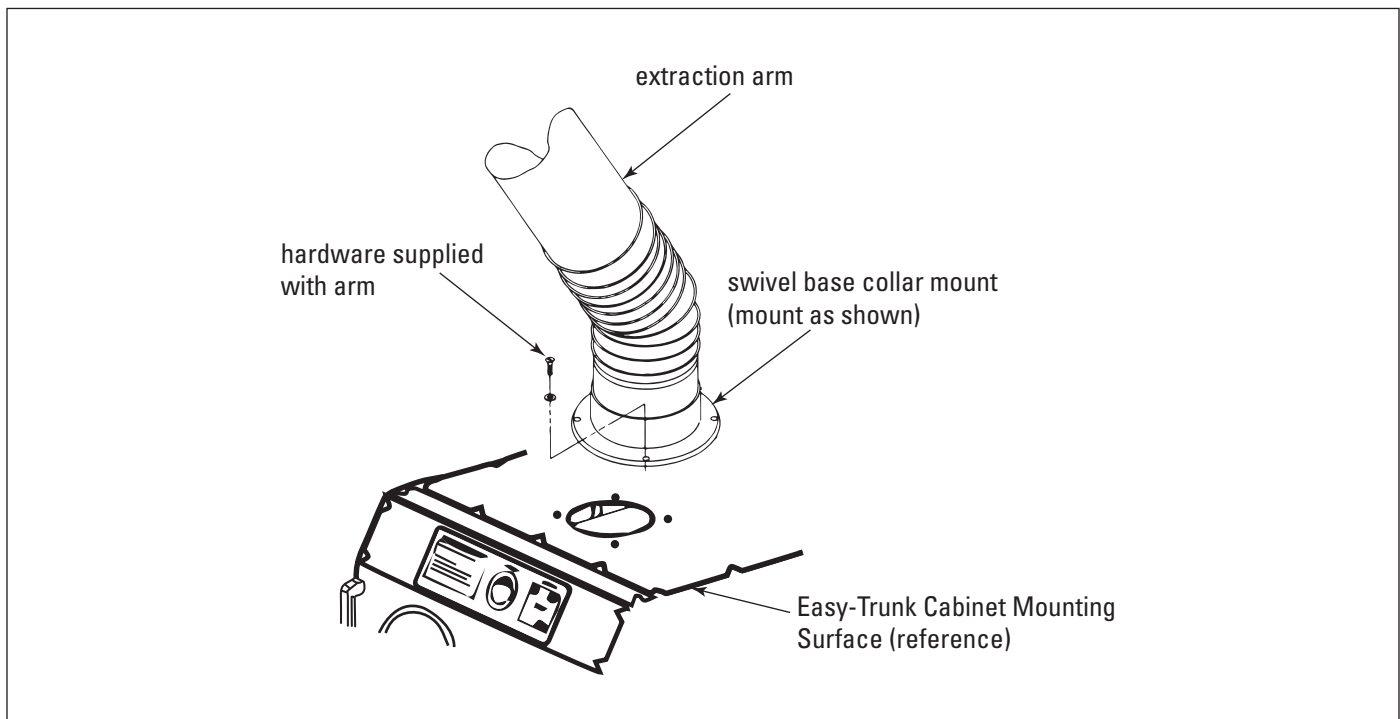
Improper mounting of an extraction arm may result in personal injury and/or property damage. Follow all installation directions carefully.

3. Install flexible ducting back onto the joint by following the instructions in the Ex-Arm Installation and Operation Manual..

## Extraction Arm (Flexible Arm) Mounting

Fasten the Extraction Arm as shown and reference installation instructions in the Extraction Arm Installation and Operation Manual.

1. Remove the flexible ducting from the swivel base casting joint by following the instructions in the Ex-Arm Installation and Operation Manual.
2. Locate the extraction arm onto the collar ring mount adapter by aligning the holes and fasten in place using the supplied bolts, lock washers, and nuts through the opening in the swivel base joint.



Extraction Arm Mounting  
(Extraction arm and bolt pattern may differ from picture)

## Electrical Operation

### China

The Easy-Trunk ET-1 & ET-2 operate at a standard 220/50/1 or 380/50/3 VAC electrical power source.

### Other Countries

The Easy-Trunk ET-1 & ET-2 operate at the required electrical power source.

**NOTICE**

Use of any other type of motor may cause the unit not to start or experience electrical component damage.

## Compressed Air Installation

**WARNING** Turn compressed air supply OFF, bleed and lock out lines before performing service or maintenance work.

A safety exhaust valve should be used to isolate the compressed air supply. The safety exhaust valve should completely exhaust pressure in the collector manifolds when closed, should be capable of being interlocked with fire or explosion mitigation equipment and should include provisions to allow closed-position locking.

**NOTICE** Do not set compressed-air pressure above 100-psig as component damage can occur.

All compressed air components must be sized to meet the system requirements of 90-100-psig supply pressure.

The compressed-air supply must be oil and moisture free. Contamination in the compressed air used to clean filters will result in poor cleaning, cleaning valve failure, or poor collector performance.

Purge compressed-air lines to remove debris before connecting to the collector's compressed-air manifold.

1. Remove the plastic pipe plug from the collector's air manifold and connect the compressed-air supply lines. Use thread-sealing tape or pipe sealant on all compressed-air connections.
2. Install a customer-supplied shut-off valve, bleed-type regulator with gauge, filter, and automatic condensate valve in the compressed-air supply line.
3. Set compressed-air supply to 90-psig. The pulse-cleaning controls are factory set to clean one or more filters every 10-seconds during a cleaning cycle.

## Electrical Wiring

**WARNING** Electrical installation, service, or maintenance work must be performed by a qualified electrician and comply with all applicable national and local codes.

Turn power off and lock out electrical power sources before performing service or maintenance work.

Do not install in classified hazardous atmospheres without an enclosure rated for the application.

All electrical wiring and connections, including electrical grounding, should be made in accordance with the National Electric Code (NFPA No. 70-latest edition).

Check local ordinances for additional requirements that apply.

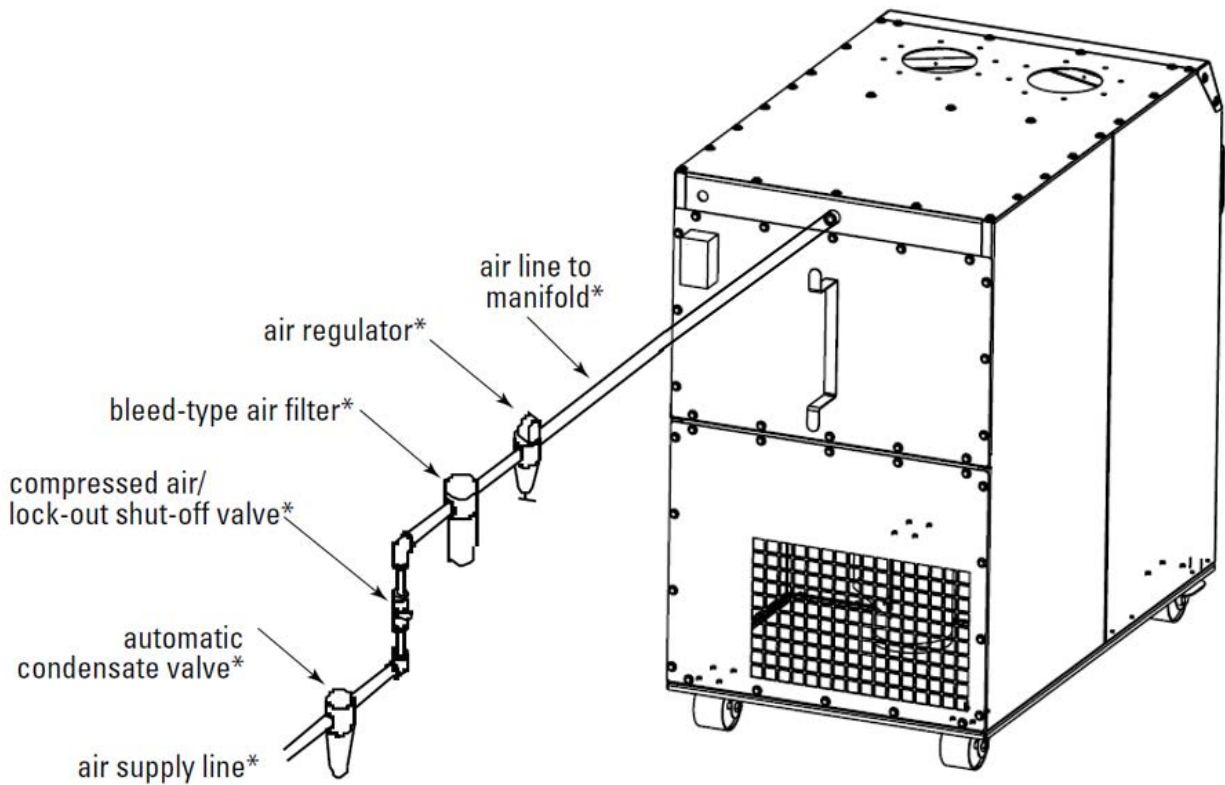
The appropriate wiring schematic and electrical rating must be used. See collector's rating plate for required voltage.

An electric disconnect switch having adequate amp capacity shall be installed in accordance with Part IX, Article 430 of the National Electrical Code (NFPA No. 70-latest edition). Check collector's rating plate for voltage and amperage ratings.

Refer to the wiring diagram for the number of wires required for main power wiring and remote wiring.

**WARNING** Turn power off and lock out electrical power sources.

Turn compressed air supply OFF, bleed and lock out lines before performing service or maintenance work.



\*customer-supplied

Compressed Air Installation (ET-2 illustrated)

## Preliminary Start-Up Check

Instruct all personnel on safe use and maintenance procedures.

### **WARNING**

Electrical work during installation, service or maintenance must be performed by a qualified electrician and comply with all applicable national and local codes.

Turn power off and lock out electrical power sources before performing service or maintenance work.

Turn compressed air supply OFF, bleed and lock out lines before performing service or maintenance work.

Check that the collector is clear and free of all debris before starting.

Do not install in classified hazardous atmospheres without an enclosure rated for the application.

Optional fans over 600 lbs must be independently supported.

1. Check all electrical connections for tightness and contact.
2. Check for proper rotation as noted on the fan and/or hopper discharge device housing.

To reverse rotation, single-phase power supply:  
Follow manufacturer's instructions on the motor's nameplate.

To reverse rotation, three-phase power supply:  
Switch any two leads on the motor junction box.

### **WARNING**

Do not interchange a power lead with the ground wire. Severe personal injury and/or property damage may result.

3. All access panels should be sealed and secure.
4. Check that the dust container is properly sealed and clamped.

5. Check that fan exhaust damper is set to the fully-closed position.
6. Check and remove all loose items in or near the inlet and outlet of the collector.
7. Check that all remote controls and solenoid enclosures (if applicable) are properly wired and all service switches are in the OFF position.
8. Check that all optional accessories are installed properly and secured.
9. Turn power ON at source.
10. Turn the compressed-air supply ON. Adjust pressure regulator for 90-100 psig.
11. Turn fan motor ON.

### **WARNING**

Do not look into fan outlet to determine rotation. View the fan rotation through the back of the motor.

Check that the exhaust plenum is free of tools or debris before checking blower/fan rotation.

Stand clear of exhaust to avoid personal injury.

12. Adjust airflow with the exhaust damper.

### **NOTICE**

Excess airflow can shorten filter life, cause electrical system failure and fan motor failure.

13. Turn powered hopper discharge devices ON.

## Maintenance Information

Instruct all personnel on safe use and maintenance procedures.

**WARNING** Use proper equipment and adopt all safety precautions needed for servicing equipment.

Use appropriate access equipment. The standard collector is not equipped with access platforms unless noted on specification drawings.

Electrical service or maintenance work must be performed by a qualified electrician and comply with all applicable national and local codes.

Turn power off and lock out electrical power sources before performing service or maintenance work.

Do not install in classified hazardous atmospheres without an enclosure rated for the application.

Turn compressed air supply OFF, bleed and lock out lines before performing service or maintenance work.

**NOTICE** Do not set compressed-air pressure above 100-psig as component damage can occur.

All compressed air components must be sized to meet the system requirements of 90-100 psig supply pressure.

The compressed-air supply must be oil and moisture free. Contamination in the compressed air used to clean filters will result in poor cleaning, cleaning valve failure, or poor collector performance.

Purge compressed air lines to remove debris before connecting to the collector's compressed air manifold.

## Operational Checklist

1. Monitor the physical condition of the collector and repair or replace any damaged components.

Routine inspections will minimize downtime and maintain optimum system performance. This is particularly important on continuous-duty applications.

2. Periodically check the compressed air components and replace compressed air filters.

Drain moisture following the manufacturer's instructions. With the compressed air supply ON, check the cleaning valves, solenoid valves, and tubing for leaks. Replace as necessary.

3. Monitor pressure drop across filters.

Abnormal changes in pressure drop may indicate a change in operating conditions and possibly a fault to be corrected. For example, prolonged lack of compressed air will cause an excess build-up of dust on the filters resulting in increased pressure drop. Cleaning off-line with no flow usually restores the filters to normal pressure drop.

4. Monitor exhaust.
5. Monitor dust disposal.

## Filter Removal and Installation

**WARNING** Use proper safety and protective equipment when removing contaminants and filters.

Dirty filters may be heavier than they appear.

Use care when removing filters to avoid personal injury and/or property damage.

Turn power off and lock out electrical power sources before performing service or maintenance work.

Turn compressed air supply OFF, bleed and lock out lines before performing service or maintenance work.

**CAUTION** Do not operate with missing or damaged filters.

## Filter Removal

1. Turn power to collector OFF.
2. Remove the filter access covers by turning the wing nuts counterclockwise.
3. Break the seal between the filter cartridge and the sealing surface.
4. Slowly rotate the cartridge 1/2-turn to remove dust that may have accumulated on the top of the filter.
5. Slide the filter out the access port along the suspension yoke and dispose of properly.
6. Inspect and clean the sealing surface if necessary.

### NOTICE

Clean dust from gasket sealing area to ensure a positive filter gasket seal.

7. Check for an accumulation of dust in the storage area and empty as necessary.

## Filter Installation

1. Slide the new filter cartridge onto each suspension yoke.

### NOTICE

Insert the filter, gasket end first.

2. Wipe cover gaskets clean and replace covers. Tighten securely by hand.

### NOTICE

Inspect and replace any covers with damaged or missing gaskets. Failure to do so may result in leakage in the collector.

Do not use solvents to clean filter seal gaskets.

Tighten access covers securely by hand. Gaskets must be compressed to seal properly.

3. Turn electrical power and compressed air supply ON before starting unit.

### NOTICE

Do not operate collector without door closed or electrical overload will occur.

Do not operate without filter or electrical overload will occur.

## Filter Cleaning

### CAUTION

Do not overclean the filters as filter damage may result. Refer to filter cleaning instructions located on the collector front operator panel.

### NOTICE

Less than three seconds between pulses will cause a lack of compressed air supply to the manifold and a lack of cleaning pressure.

Do not push and hold the pulse button. Press and release quickly for optimum cleaning of the filters.

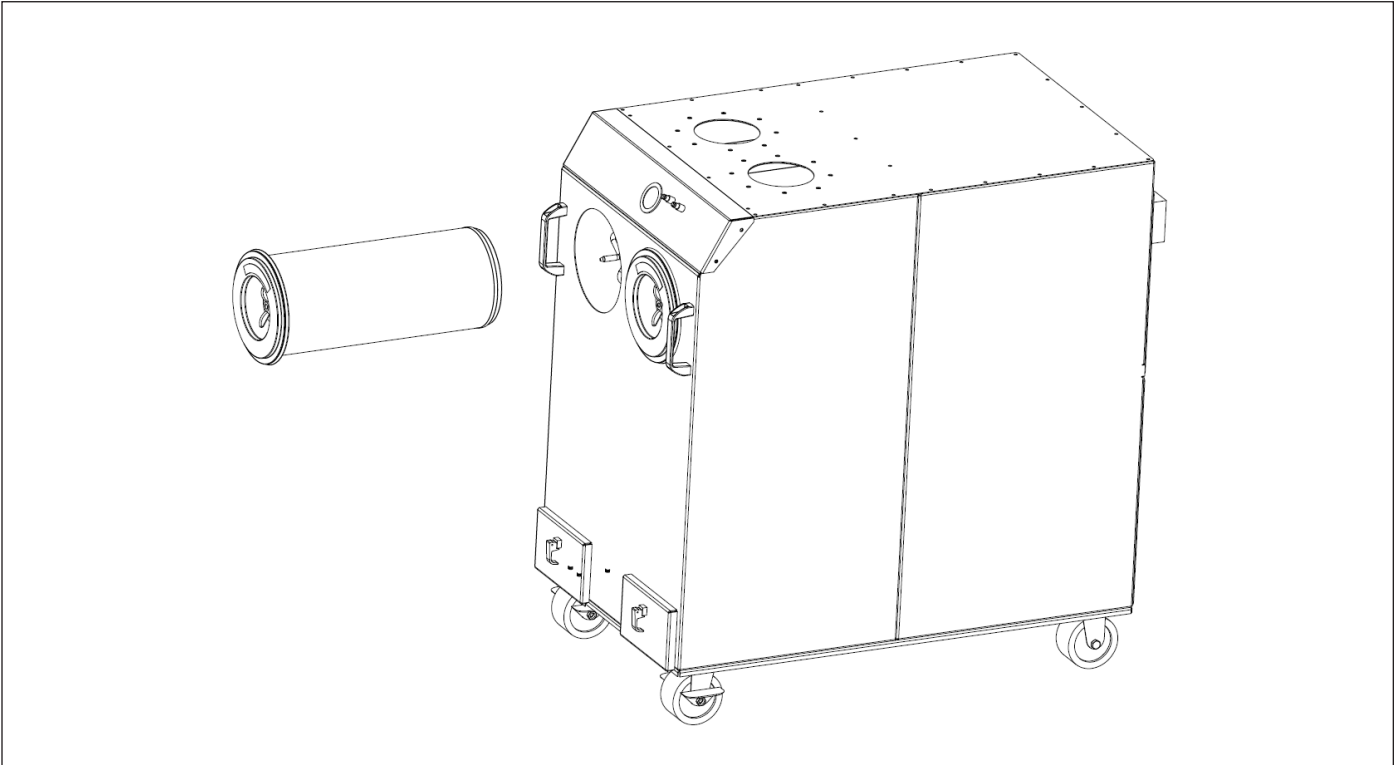
Before attempting to clean the filters, make sure a compressed air supply of 90 to 100 psig is connected to the threaded coupling in the back of the Easy-Trunk. While the Easy-Trunk is on and running, make sure the damper is fully open on the extraction arm. Check the filter gauge on the operator panel to see what color zone (red or green) the filter gauge indicator is in. If it is in the green zone, do not pulse-clean the filters. If the indicator is in the red zone, proceed as follows:

1. Leave power on.
2. Close the damper in the extraction arm by turning the handle above the hood. Notice that the filter gauge indicator drops back into the green zone.
3. Quickly press and release each pulse button in sequence, making sure to wait three seconds between pulses to allow the air manifold to recharge.
4. Open the damper in the extraction arm.
5. Read the filter gauge indicator.
6. Repeat steps 2-5 until the filter gauge indicator is in the green zone.

If the filter gauge fails to return to the green zone after several cleaning attempts, filter replacement may be necessary.

Every time a pulse button is pressed and released, a reverse jet of high pressure air is introduced through the venturis into the filter cartridge. The back flushing of air through the filter initiates the cleaning cycle, which will dislodge any dust or contaminant accumulated on the outside of the filter media. In turn, the dust will fall into the dust drawer located in the bottom of the Easy-Trunk, where it can be easily removed and properly disposed.





Filter Removal and Installation (ET-2 illustrated)

**Torit® Easy-Trunk™ ET-1 & ET-2 Filters Cleaning Instructions**

Pulse filters when filter gauge in red zone

1. Leave power on.
2. Close damper in trunk arm.
3. Push and release pulse buttons in order (1... 2)
4. Open damper trunk arm and read filter gauge.
5. Repeat steps 2-4 until gauge returns to green zone.

Do not overclean.

The diagram shows a circular gauge with a needle. The gauge is divided into two sections: a 'Green Zone' on the left and a 'Red Zone' on the right. The needle is currently pointing into the Red Zone. Labels 'Green Zone' and 'Red Zone' have arrows pointing to their respective sections. The label 'Filter Gauge' is positioned above the gauge.

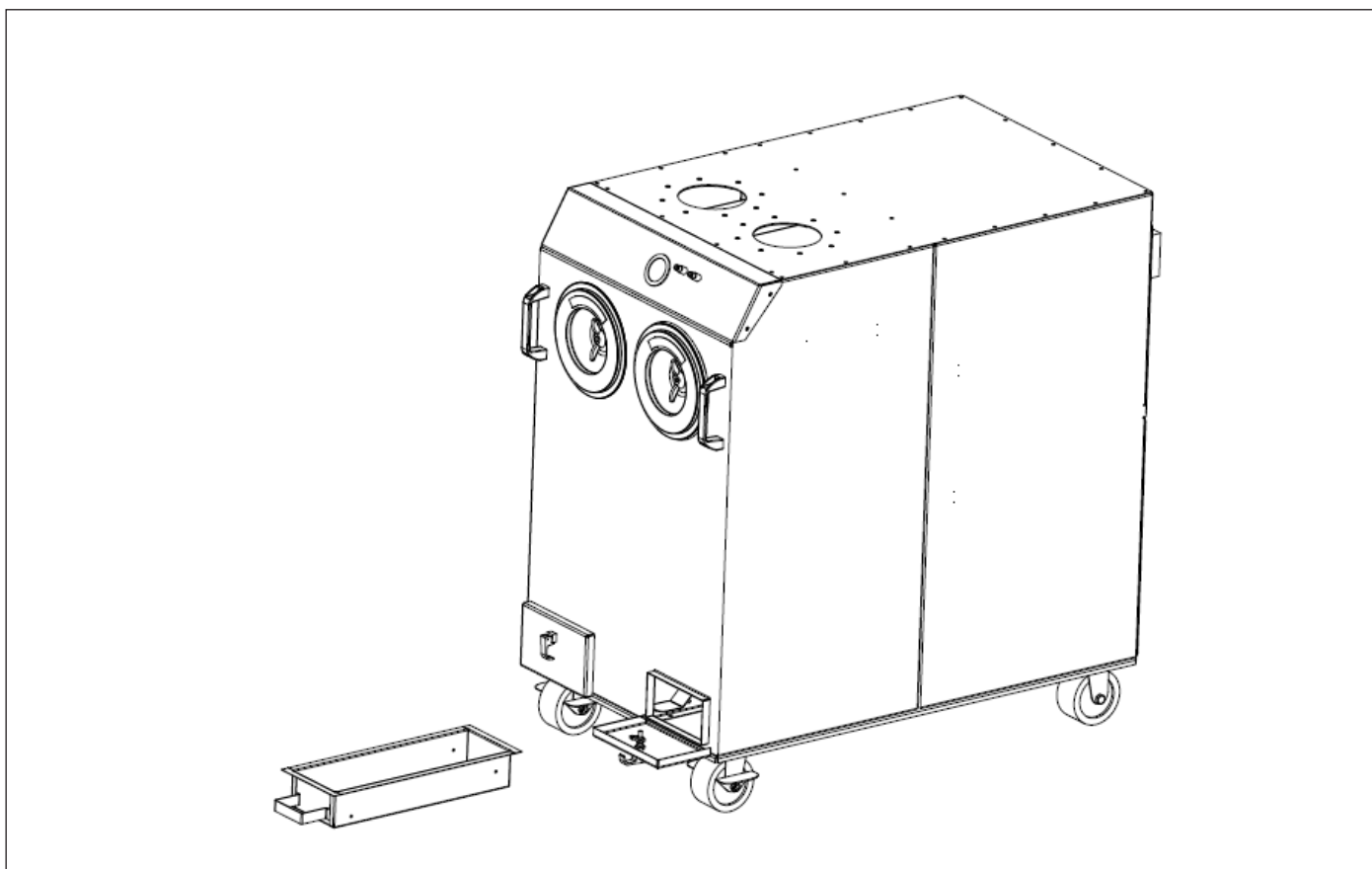
The diagram shows two circular buttons labeled '1' and '2'. Below the buttons, the text reads 'Wait 3 seconds between pulses'.

Filter Cleaning Gauge Panel

## Dust Disposal

The Easy-Trunk ET-1 & ET-2 provides a built-in, sealed dust drawer for the capture and removal of weld fume dust and contaminants from the collector. The dust drawer is located at the front of the collector for easy access and simple disposal.

1. Prior to emptying the dust drawer, it is recommended that all filter elements be pulse-cleaned.
2. Turn power OFF.
3. Facing the front of the collector, open the small door located at the bottom right-hand corner of the collector.
4. Reach inside and underneath the dust drawer opening and remove the flat, slotted cardboard top.
5. Reach inside the opening again, grasp the dust drawer handle, and pull the dust drawer forward and out of the collector.
6. Slide the slotted cardboard top over the tabs provided on the cardboard box insert of the dust drawer.
7. Dispose of the cardboard box and contaminants in a safe and responsible manner.



Dust Drawer (ET-2 illustrated)

8. Place a new slotted cardboard top inside the collector (underneath rails) and new cardboard box insert into the dust drawer.
9. Slide the dust drawer back through the opening, pushing forward until the dust drawer is firmly seated and sealed.
10. Close the small door and twist the T-handle, locking and sealing the door.
11. Turn on the power and resume operation.

### **Extraction Arm (Flexible Arm) Maintenance**

Refer to the Flex Arm Installation and Operation Manual for instructions.

## Spare Parts

Item	Description	Part number
1	Filter Assembly-Ultra Web FR	P191115
2	Diaphragm valve	8PP-19307-00
3	Valve Push Button	3299600
4	Access door gasket	3473200
5	Gage	5876701
6	Latch Lift And Turn	8PP-AK00202-41
7	Hinge	5754401
8	Fume arm DN 160mm x 3m round hood	8PP-AK00214-61
	Fume arm DN 160mm x 3m hippocrepiform hood	8PP-AK00214-63
	Fume arm DN 160mm x 2m round hood	8PP-AK00214-64
	Fume arm DN 160mm x 2m hippocrepiform hood	8PP-AK00214-66

Note: When ordering parts, give model number and order number of dust collector, description and quantity of parts desired.

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## Troubleshooting

Problem	Probable Cause	Remedy
<b>Blower wheel and motor do not start</b>	Improper motor wire size	Rewire using the correct wire gauge as specified by national and local codes.
	Not wired correctly	Check and correct motor wiring for supply voltage. See motor manufacturer's wiring diagram. Follow wiring diagram and the National Electric Code.
	Unit not wired for available voltage	Correct wiring for proper supply voltage.
	Input circuit down	Check power supply to motor circuit on all leads.
	Electrical supply circuit down	Check power supply circuit for proper voltage. Check for fuse or circuit breaker fault. Replace as necessary.
<b>Blower motor starts, but does not stay running</b>	Incorrect motor starter installed	Check for proper motor starter and replace if necessary.
	Access doors are open or not closed tight	Close and tighten access doors. See Filter Replacement.
	Not wired correctly	Check and correct motor wiring for supply voltage. See motor manufacturer's wiring diagram. Follow wiring diagram and the National Electric Code.
	Blower motor thermal overload protection has tripped.	
	Electrical circuit overload	Check that the power supply circuit has sufficient power to run all equipment.
<b>Insufficient airflow</b>	Fan rotation backwards	Proper fan rotation is clockwise from the top of the unit. The fan can be viewed through the back of the motor. See Preliminary Start-Up Check.
	Access doors open or not closed tight	Check that all access doors are in place and secured. Check that the hopper discharge opening is sealed and that dust container is installed correctly.
	Fan exhaust area restricted	Check fan exhaust area for obstructions. Remove material or debris. Adjust damper flow control.
	Filters need replacement	Remove and replace using genuine Donaldson replacement filters. See Filter Replacement.
	Extraction arm damper closed	Locate the damper control handle and move the handle to be in line with the rigid ducting. This will be the wide open setting.
	Obstruction in ducting or hood	Check the hood, ducting, flex duct and exhaust ducting (if used) for blockage. Remove any debris that is blocking airflow. See Extraction Arm Installation and Operation Manual.
	Filters not properly sealed	Ensure filters are tightly sealed. See Filter Removal and Installation.
	Filters are dirty	Pulse clean filters. See Filter Cleaning.

Problem	Probable Cause	Remedy
<b>Insufficient airflow continued</b>	Filter packs need replacement	Remove and replace using genuine Donaldson replacement filter packs. See Filter Replacement.
	Flexible ducting is torn or collapsed or rigid ducting is broken or collapsed	Check the flexible ducting and replace any damaged parts. Check the rigid ducting on the Extraction Arm or exhaust ducting (if applied) for cracks or collapsed section(s). See Extraction Arm Installation and Operation Manual.
<b>Compressed air is leaking</b>	Pulse button(s) not working	Apply compressed air and remove front operator panel. Check each pulse button for air leakage. If leak is found, replace the pulse button(s).
	Diaphragm valve(s) not working	Apply compressed air and remove rear access panel. Check each diaphragm valve for air leakage. If leak is found, replace or rebuild the diaphragm valve(s).
	Pneumatic pulse tube(s) cracked	Bleed compressed air and remove the front operator and rear access panels. Replace all pneumatic tubing.
	Compressed air manifold is cracked	Remove rear access panel and apply compressed air. Check air manifold and connecting hardware for air leakage. Replace the manifold or hardware as necessary.
<b>Pulse function does not work properly or does not work at all</b>	Lack of compressed air	Check that a minimum of 90-psig is available. See Compressed Air Installation.
	Low compressed air supply	Maintain compressed air supply between 90-100-psig during pulse cleaning operation.
	Compressed air supply contaminated	Maintain a moisture and contaminant free system for the compressed air supply.
		Replace or repair pulse buttons, diaphragm valves and pneumatic.
	Pulse button has failed	Remove operator panel and pneumatic line from bad pulse button. Apply compressed air. Use thumb to cover open end of pneumatic line. Quickly remove and replace thumb. If cleaning pulse occurs, replace pulse button.
	Diaphragm valve has failed in open position and leaking compressed air	Remove operator panel and apply compressed air. Push pulse button for bad diaphragm valve and check area surrounding button. If compressed air is escaping from pulse button, replace the diaphragm valve.
	Pneumatic line plugged	Remove operator panel and rear access panel if necessary. Apply compressed air. Remove pneumatic line from the pulse button. Tube is plugged if compressed air does not escape.

## Troubleshooting

Problem	Probable Cause	Remedy
<b>Visual discharge of dust from exhaust</b>	Filters not sealed	Tighten filters securely.
	Filter damage, dents in the end caps, gasket damage or holes in pleated media	Replace filters as necessary. Use only genuine Donaldson replacement parts. See Filter Installation.
	Residual dust from previous leak	Remove the rear access panel and inspect clean air section for contamination. Clean as necessary.
<b>Dust is outside of the dust drawer</b>	Dust drawer not sealed properly	Check that dust drawer is fully seated and sealed in the dust drawer chamber.  Check dust drawer gasket for rips, tears, or deformity. Replace gasket as necessary and spray replacement gasket with release agent. See Replacement Parts Manual.
		Check condition of dust drawer wheels. Replace as necessary if they are bent, loose or missing.
<b>Filter gauge in the red zone with new filters installed</b>	Filter gauge tubing is pinched, plugged or restricted	Remove operator panel and rear access panel if necessary. Remove tubing from the gauge one side at a time. Inspect each tube for any pinched, plugged, or restricted areas.
	Filter gauge tubing is loose or disconnected	Remove operator panel and rear access panel if necessary. High port on the gauge should be connected to the brass barbed fitting directly behind the operator panel.
	Filter gauge tubing has a hole	Remove operator panel and rear access panel if necessary. Remove tubing from gauge one side at a time. Inspect each tube for nicks, cuts, or holes and replace as necessary.
	Filter gauge has failed	Replace filter gauge if all filter tubing troubleshooting proves ineffective in correcting the problem.





## The Donaldson Torit Warranty

Donaldson does not warrant against damages due to corrosion, abrasion, normal wear and tear, product modification, or product misapplication. Donaldson also makes no warranty whatsoever as to any goods manufactured or supplied by others including electric motors, fans and control components. After Donaldson has been given adequate opportunity to remedy any defects in material or workmanship, Donaldson retains the sole option to accept return of the goods, with freight paid by the purchaser, and to refund the purchase price for the goods after confirming the goods are returned undamaged and in usable condition. Such a refund will be in the full extent of Donaldson's liability. Donaldson shall not be liable for any other costs, expenses or damages whether direct, indirect, special, incidental, consequential or otherwise. The terms of this warranty may be modified only by a special warranty document signed by a Director, General Manager or Vice President of Donaldson. Failure to use genuine Donaldson replacement parts may void this warranty. THERE EXIST NO OTHER REPRESENTATIONS, WARRANTIES OR GUARANTEES EXCEPT AS STATED IN THIS PARAGRAPH AND ALL OTHER WARRANTIES INCLUDING MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, WHETHER EXPRESS OR IMPLIED ARE HEREBY EXPRESSLY EXCLUDED AND DISCLAIMED.



### Parts and Service

For genuine Donaldson replacement filters and parts, call the Parts Express Line. For faster service, have unit's model and serial number, quantity, part number, and description available.

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Donaldson Company, Inc. is the leading designer and manufacturer of dust, mist, and fume collection equipment used to control industrial-air pollutants. Our equipment is designed to help reduce occupational hazards, lengthen machine life, reduce in-plant maintenance requirements, and improve product quality.