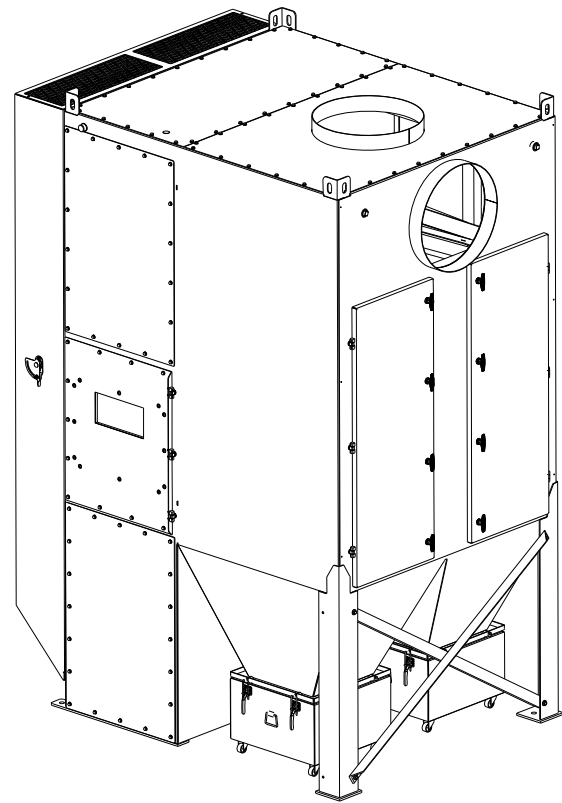


TG 4



TG 12

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.**



## APPLICATION OF DUST CONTROL EQUIPMENT

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.

When combustible materials are present you must consult with an expert in fire extinguishing and/or explosion protection systems, who is also familiar with the local codes, for support and guidance on the selection and installation of an appropriate fire and/or explosion protection system.

DO NOT allow sparks, cigarettes or other burning objects to enter the hood or duct of any dust, fume, or mist collection equipment as these may initiate a fire or explosion of any combustible materials accumulated in the collector.

Portions of dust, mist, and fume-collection equipment, including the clean- and dirty-air plenums may be considered "OSHA Confined Spaces." Refer to the appropriate OSHA regulations to determine if a specific installation should be considered a confined space and if a permit program is required.

Recirculating filtered air in your facility can be a hazard. Consult with OSHA to ensure compliance with all codes regarding recirculating filtered air.

Improper operation of a dust, fume, or mist 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 dust, fume, or mist collection equipment is properly selected, installed, and operated for its intended use.

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

For optimum collector performance, use only Donaldson Torit replacement parts.

### Data Sheet

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

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



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



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



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

## Description

The standard continuous-duty TG Series, Models TG2, 4, 6, 8, and 12, are a family of completely packaged, fully assembled, and pre-wired dust collectors on a remarkable small footprint. All-welded and designed with clean lines, the compact models integrate effortlessly with operational equipment. The TG Series collectors use rectangular filter packs with proprietary PowerCore filter media. Filter packs can be pulse-cleaned on- or off-line. The downward airflow design through the collector housing delivers high filtration efficiency while using less energy.

Included in the packaged design is a high-performance fan mounted in a separate compartment at the base of the unit for maximum noise control; integrated electrical controls with motor starter in an easy to reach location, installed energy-efficient Torit PowerCore Filter Packs with flame-retardant Ultra-Web media, a state-of-the-art ZERO-TURN Power Pulse cleaning system, integrated solenoid pilot valves, built-in exhaust silencer; built-in airflow damper; and dust discharge container. The filter housing offers completely tool-less serviceability.

Options include anti-static Ultra-Web media, various cleaning controls including low-voltage feedback relay, airflow controller and particulate sensor, high static and premium efficiency motors, HEPA afterfilters, several dust container options, explosion protection devices and spark management options.

## Purpose and Intended Use



injury.

Do not misuse or modify.

Misuse or modification of this equipment may result in personal

The TG Series collectors are equipped with a group of features tailored to the metal working industry. Typical point-of-use applications include laser cutting, plasma cutting, welding and some thermal spray applications.

Torit PowerCore TG Series dust collectors can be integrated with process equipment such as laser tables, plasma tables, welding, and spray booth equipment. Discuss the use, application, and integration of this equipment with a Donaldson Torit representative.

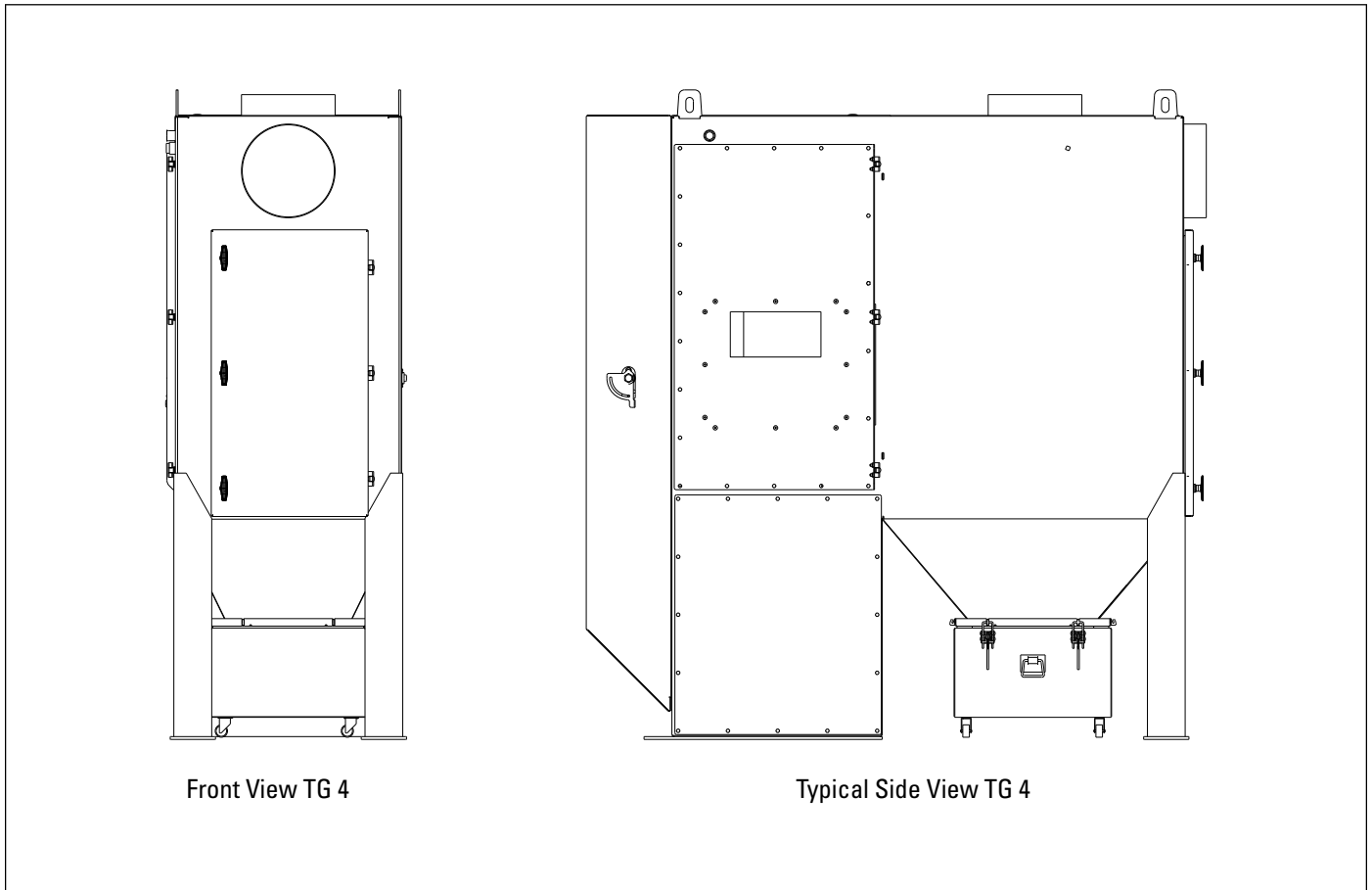


Combustible materials such as buffing lint, paper, wood, metal dusts, weld fume, or flammable coolants or solvents represent potential fire and/or explosion hazards. Use special care when selecting, installing, and operating all dust, fume, or mist collection equipment when such combustible materials 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



Front View TG 4

Typical Side View TG 4

All Units (as per IBC 2006 Specifications):

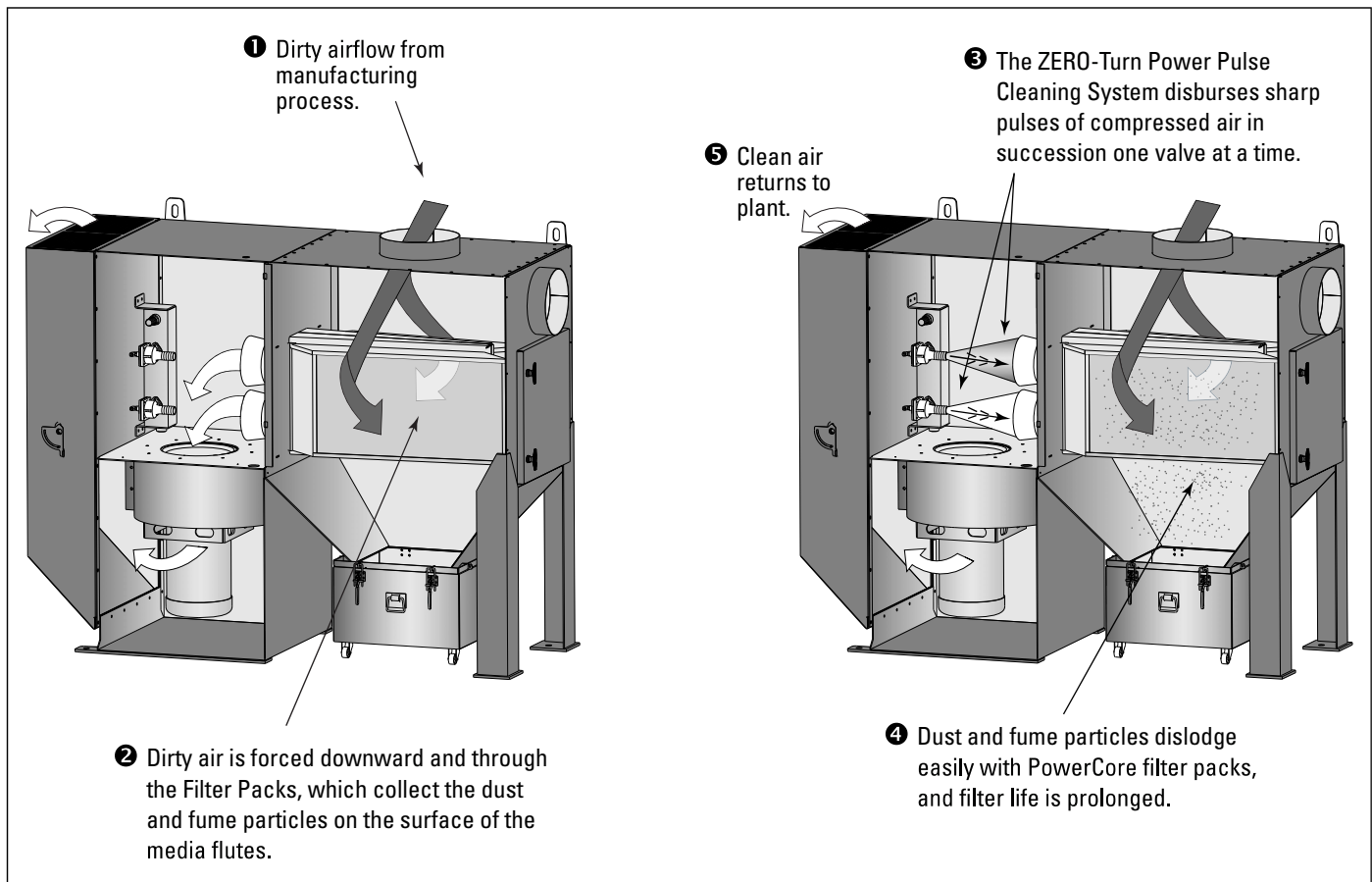
Seismic Spectral Acceleration, S <sub>s</sub> .....	1.5 g
Seismic Spectral Acceleration, S <sub>1</sub> .....	0.6 g
Installed Unit Base Elevation .....	Grade
Occupancy Category .....	II
Compressed air, maximum psig .....	90-100
Housing rating, inches water gauge (TG2, TG4) .....	-12
Housing rating, inches water gauge (TG6 through TG12) .....	-15
Power .....	208-Volt, 230/460-Volt, 575-Volt, 3PH, 60 Hz

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

## Operation

During normal operation, dust-laden air enters the unit through the top, front, or low drop-box inlet. Airflow is then directed downward through the collector and heavier particulate falls directly into the hopper. The filter packs remove fine particulate and clean, filtered air passes through the packs to the clean-air plenum and discharges through the clean-air outlet.

Cleaning is achieved with the Zero-Turn Power Pulse Cleaning System by reverse pulsing filter packs with controlled bursts of compressed air. Cleaning control is determined by pressure drop across the filter packs ("Delta P") or by manually initiating the controls to pulse continuously (when the collector is running). The cleaning sequence starts at the top filter packs and continues down through each filter pack set. Removal, inspection, and change-out of the filter packs is done from outside the unit by opening the filter pack access door, unclamping the right and left filter banks, and sliding the individual filter packs out.



Typical Unit Operation

## Inspection on Arrival

1. Inspect unit on 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 unit 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 unit from truck.
8. Check for hardware that may have loosened during shipping.
9. Use caution removing any 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 unit 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 unit according to the National Electric Code, NFPA No. 70-latest edition and NFPA 654.

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 unit prior to, or during unit installation.

### **NOTICE**

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

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

## Installation



Site selection must account for wind, seismic zone, and other live-load conditions when selecting the location for all units.

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 roof is not an access platform. Do not stand on roof of collector to avoid possible personal injury.

## Site Selection, grade-mounted

1. The collector is intended to be located indoors under normal circumstances on a reinforced concrete foundation.
2. Units can be located outdoors when equipped with appropriate exhaust hoods, and remote-mounted controls.
3. For ease of installation, prepare rear bolt hole locations and set anchors prior to final set-up of collector.

## Unit Location



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

Consult with local authorities for the proper location of the collector including consideration of any hazardous materials or conditions that may be present.

Foundation must be capable of supporting the entire weight of the unit, plus the weight of the collected material, piping, and ductwork.

Prepare the foundation in the selected location. Install anchor bolts a minimum of 1 3/4-inches above foundation.

If explosion protection devices are to be part of the installed system, locate the collector in accordance with local code requirements (Example: NFPA 654). These codes may require units be located either outside or against an exterior wall.

### Site Selection, Outdoor

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

Building codes or zoning requirements may restrict overall height, require screening, or regulate the distance from lot lines.

Prepare the foundation in the selected location and install anchor bolts as required by applicable local codes.

The foundation must be capable of supporting the entire weight of the unit, plus the weight of the collected material. Consider any additional support requirements for ductwork and piping.

If unit is to be located outdoors, an appropriate exhaust hood, and remote-mounted controls are necessary. Consider the effects of condensation caused by the temperature difference between the process airstream and outdoor temperatures.

When outdoor locations are selected, always mount motors with drain holes pointed down for proper drainage of moisture.

### Site Selection, Indoor

Locate the collector to ensure easy access to electrical and compressed-air connections, solid collection containers, and routine maintenance.

Locate the collector to minimize directional changes in ductwork. Avoid elbows immediately in front of the inlet.

Prepare the foundation in the selected location and install anchor bolts.

The foundation must be capable of supporting the entire weight of the unit, plus the weight of the collected material. Consider any additional support requirements for ductwork and piping.

Provide appropriate clearance from heat sources and avoid interference with utilities.

## 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
Large Crescent Wrench	Spreader Bars



## Hoisting Information

### **WARNING**

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

Lift only from provided lift lugs located at the top of the collector.

Use appropriate lifting equipment for weights being handled 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 lugs.

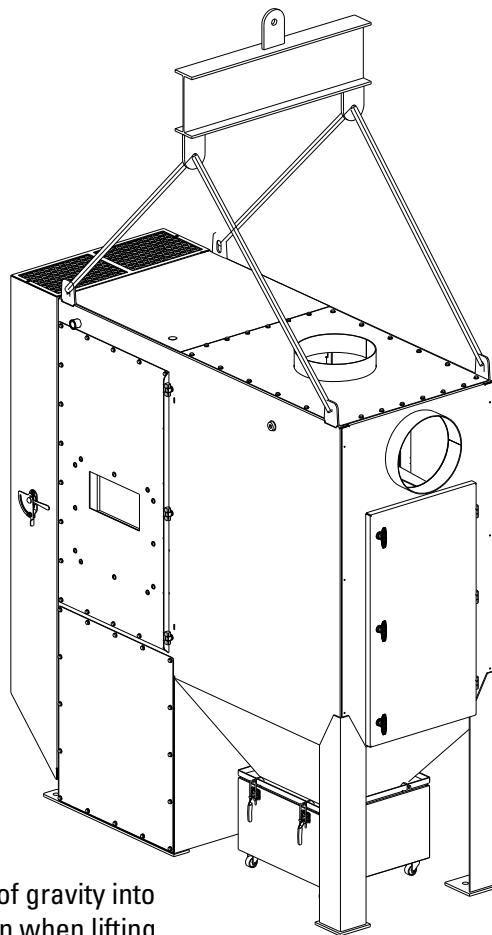
Use spreader bars to prevent damage to unit's casing.

Use fixed length lifting straps to connect to spreader bar(s).

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

Allow only qualified crane operators to lift the equipment.

Refer to applicable OSHA regulations and local codes when using cranes, forklifts, and other lifting equipment. Lift unit and accessories separately, and assemble after unit is in place.



### **CAUTION**

unit.

Take center of gravity into consideration when lifting

Typical Rigging and Hoisting

## Electrical Wiring



### WARNING

Electrical service or maintenance work during installation 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 unit's rating plate for required voltage.

If the unit is not furnished with a factory-mounted disconnect, 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 unit'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.

## Standard Equipment

Standard collectors include a fan, motor, control panel, 22-gallon dust container, and an exhaust silencer and damper. The unit is fully assembled and ready to connect to electrical supply, compressed air, and ductwork. A detailed drawing, shipped with each collector, provides weight, specifications, and unit dimensions including anchor bolt locations for the collector's base plate.

## Cleaning Controls

There are 14 standard options that are offered with this collector.

### Integrated Torit Delta P

- Manual Motor Control (Standard Control Feature)
- 24VDC Start/Stop and feedback relay, and Manual Motor Control

### Integrated Torit Delta P Plus

- Manual Motor Control
- 24VDC Start/Stop and feedback relay, and Manual Motor Control

### External Remote-Mount Torit Delta P

- Manual Motor Control
- 24VDC Start/Stop and feedback relay, and Manual Motor Control
- Manual Motor Control and Particulate Sensor
- Manual Motor Control and Airflow Controller (VFD)
- Manual Motor Control, Airflow Control (CFD), and Particulate Sensor

### External Remote-Mount Torit Delta P Plus

- Manual Motor Control
- 24VDC Start/Stop and feedback relay, and Manual Motor Control
- Manual Motor Control and Particulate Sensor
- Manual Motor Control and Airflow Controller (VFD)
- Manual Motor Control, Airflow Control (CFD), and Particulate Sensor

The standard controller is the Integrated Torit Delta P with Manual Motor Starter.

**Note:** Reinforced collectors and collectors being located outside require external remote-mount controllers.

### Delta P Control

The Torit Delta P Controller monitors the differential pressure between the clean and dirty air plenums, providing a visual display of the filter condition. It controls the pressure drop by turning the cleaning mechanism On and Off at the chosen limits. There are three (3) set points: High Pressure On, Low Pressure Off, and Alarm. The first two, High Pressure On and Low Pressure Off, control the filter cleaning system. The third, Alarm, provides a relay output to activate an external alarm supplied by others.

For complete information, see the most current version of the Delta P Installation, Operation, and Maintenance manual.



Delta P Control Display

### Delta P Plus Control

The Torit Delta P Plus Controller monitors the differential pressure between the clean and dirty air plenums, providing a visual display of the filter condition. It controls the pressure drop by turning the cleaning mechanism On and Off at the chosen limits. There are three (3) set points: High Pressure On, Low Pressure Off, and Alarm. The first two, High Pressure On and Low Pressure Off, control the filter cleaning system. The third, Alarm, provides a relay output to activate an external alarm supplied by others.

The user can program the Delta P Plus Controller to pulse while the collector is running to maintain a relatively constant pressure drop across the filters, pulse only after the collector is shut down (after-shift cleaning), or a combination of both, cleaning while running as well as end of the shift.

For complete information, see the most current version of the Delta P Plus Installation, Operation, and Maintenance manual.



Delta P Plus Control Display

### **24VDC Motor Start with Feedback Relay**

The 24VDC start relay allows a customer supplied piece of equipment to start the dust collector. This is accomplished by the customer's equipment sending a 24VDC signal to the collector controller which then activates the fan and pulsing systems. The low voltage feedback relay allows the dust collector controller to interlock with other customer supplied equipment by relaying the low voltage signal back to the sending equipment. The feedback occurs when the collector is running.

### **External Remote-Mounted Controls**

Remote mounted controls are required when the unit is reinforced, the unit is being installed outdoors, or if particulate sensing or airflow control is required. Similar to the integrated controllers, the Torit Delta P and Delta P Plus are the options for pulse control. Locate the control panel as close to the collector as possible to minimize the length of tubesheet differential pressure tubing.

### **Particulate Sensor**

The particulate sensor constantly samples the clean air exhaust air stream when the collector is on. In instances where a filter leak is detected the controller will stop the fan and pulsing, and turn on a visual warning beacon.

### **Airflow Controller**

The airflow controller is used to maintain a constant duct static pressure loss, thus a constant air volume through the duct system. It compensates for variations in filter pressure drop such as during startup with new filter packs when the filter pack resistance is low, or towards the end of a filter pack's life when the pressure drop is higher.

The airflow controller varies the speed of the fan wheel to adjust to the required airflow. An energy savings can be realized when the application is not requiring maximum power.

## Compressed Air Installation

### **WARNING**

Turn compressed air supply OFF and bleed 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 from the collector when closed and include provisions to allow closed-position locking.

### **NOTICE**

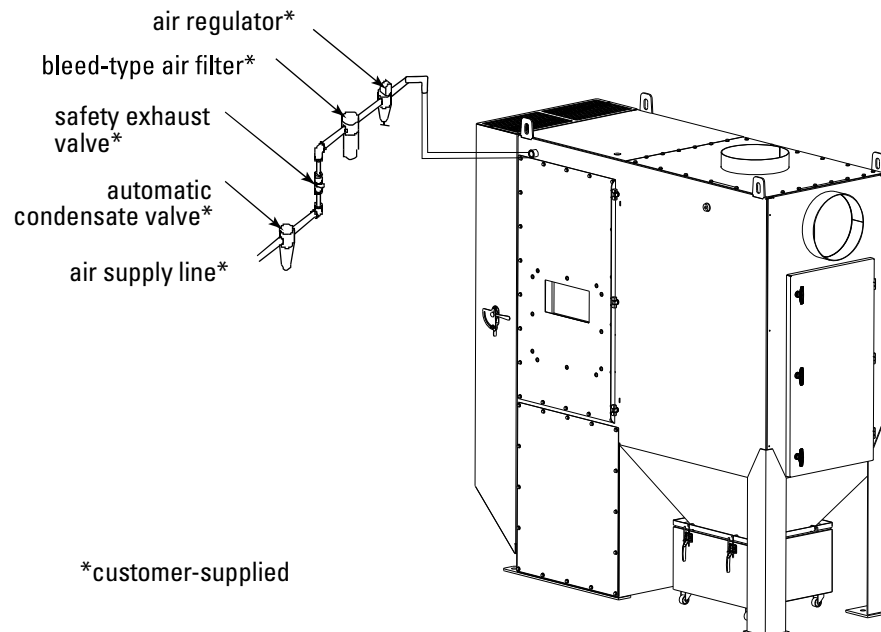
Do not set compressed-air pressure above 100-psig. Component damage can result.

All compressed-air components must be sized to meet the maximum system requirements of 90-100 psi 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 unit's compressed-air manifold.

1. Remove the plastic pipe cap and connect the coupling to the compressed-air supply line. Use thread-sealing tape or pipe sealant on all compressed air connections and fittings.
2. Install a customer-supplied shut-off valve, bleed-type regulator with gauge, filter, and automatic condensate valve in the compressed-air supply line. Interlocking the shut-off, bleed-type valve to your fire control systems is recommended for applications handling combustible dust.
3. Set compressed-air supply between 90-100 psig. The pulse-cleaning controls are factory set to clean one filter pack every 10-seconds during each cleaning cycle on the TG2 through TG8 and two filter packs every 10-seconds on the TG12.



Compressed Air Installation

## Solenoid Connection (external mounted controls only)

The collector is equipped with 115-Volt solenoid valves to control the pulse-cleaning valves, which clean the filters.

Weatherproof NEMA 4 enclosures with 3D2 solenoids or explosion proof NEMA 9 enclosures with 5D2 solenoids are mounted near the unit's compressed-air manifold.

If external remote-mounted controls were selected, connect solenoids to the solid-state timer following the wiring diagram supplied with the unit. Wire the solenoids so that pulsing occurs in a top to bottom fashion. Filter life and cleaning operation will be affected if not wired correctly.

## Timer and Solenoid Specifications

### Input

105-135V/50-60Hz/1Ph

### Pulse ON Time

Factory set at 100-milliseconds, or 1/10-second.

### Pulse OFF Time

Factory set at 10-seconds.

### Operating Temperature Range

-20° F to 130° F

### Transient Voltage Protection

50 kW transient volts for 20-millisecond duration once every 20 seconds, 1% duty cycle.

### Solenoid Valves

115-Volt at 19.7 watts each

### Compressed-Air

Set compressed-air supply at 90-psig. The timer is factory set to pulse one valve every 10-seconds when pulsing is activated on the TG2 through TG8, and two valves on the TG12.

### NOTICE

Do not increase supply pressure above 100-psig. Component damage can occur.

## Preliminary Start-Up Check

Instruct all personnel on safe use and maintenance procedures.

### WARNING

Electrical work during installation 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 and bleed 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.

1. Check all electrical connections for tightness and contact.
2. Motor and fan should be wired for counter-clockwise rotation when viewed from the inlet cone. Access this view by "bumping" the motor (quick start then stop of the motor control button), then open the control/solenoid panel from above and view through the inlet cone.

To reverse rotation, three-phase power supply: Turn electrical power OFF at source and switch any two leads on the motor junction box.

### WARNING

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

3. All access panels should be sealed and secure.
4. Confirm the dust container is properly sealed and clamped.
5. Set the exhaust damper to the fully-closed position.
6. Remove all loose items in or near the inlet and outlet of the unit.
7. Confirm that all remote-mounted controls and solenoid enclosures (if applicable) are properly wired and all service switches are in the OFF position.

8. Confirm 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 psig.
11. Turn blower fan motor ON.

### **WARNING**

Do not look into fan outlet to determine rotation. View the fan rotation through the top of the inlet cone (will be counter clockwise). See step 2.

Confirm 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 blower motor failure.

## Maintenance Information

Instruct all personnel on safe use and maintenance procedures.

### **WARNING**

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.

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

### **NOTICE**

Do not set compressed-air pressure above 100-psig.

Component damage can result.

All compressed air components must be sized to meet the maximum system requirements of 90-100 psi.

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 unit'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 collector performance.

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.

2. Monitor pressure drop across filters.

Abnormal changes in pressure drop 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.

3. Monitor exhaust.

## Filter Installation and Replacement

### **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.

## Filter Change Procedure

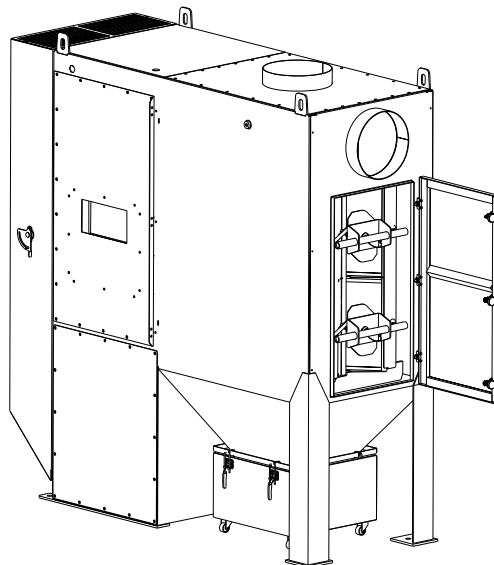
### **CAUTION**

Do not climb on door, door frame, retention parts or filter components.

Use care when servicing the filters as there are rotating parts.

1. Turn power off to collector and bleed manifold pressure to 0 psi.
2. Open access door by turning handles counterclockwise and swinging door fully open.
3. Remove each locking pin
4. Rotate each assembly counter clockwise to decompress filters
5. Detach right side arms and rotate them up and reinstall locking pins to hold arms in place.
6. Detach left side arms and let them rotate down and out of the way
7. Open cradles fully to access filters.
8. Holding filter handle push filter back towards tubesheet and slide the filter towards the center to clear filter cradle.
9. Remove filter, and reinstall new filter by pushing new filter all the way to the tubesheet, then pulling it toward you to seat it in the filter cradle. All filters must be seated fully into the cradles before they can be closed.
10. After all new filters are installed, close filter cradles by operating the retention mechanism in opposite order: position the left side arm onto the left side cradle pin, remove locking pin from right side arm and position onto the right side cradle, rotate retention mechanism clockwise to seal filters and reinstall locking pins. If retention mechanism is hard to close, check that filter is seated properly in filter cradle.
11. Close door, secure latches.

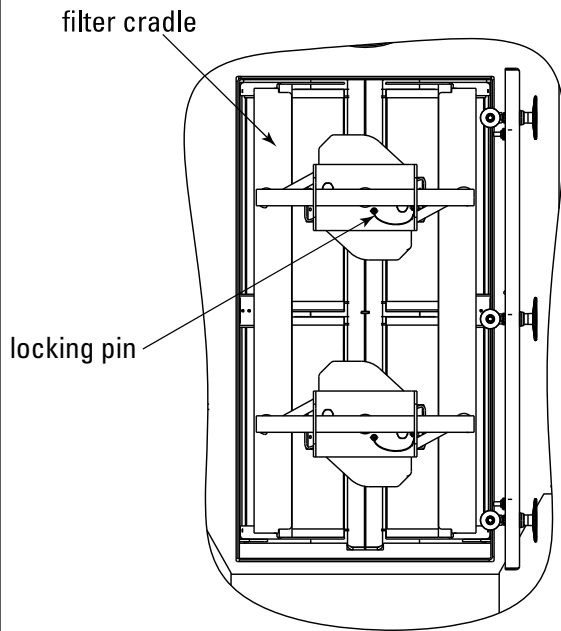
Step 2



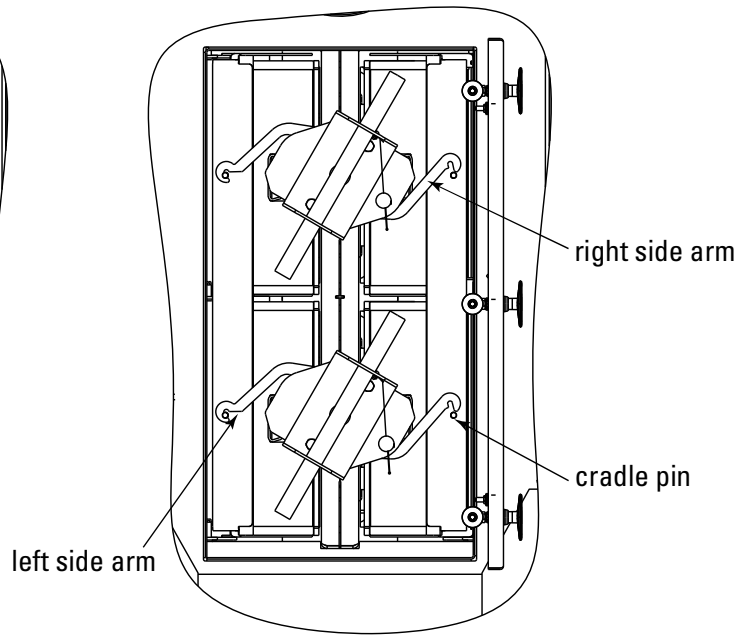
Filter Removal and Replacement



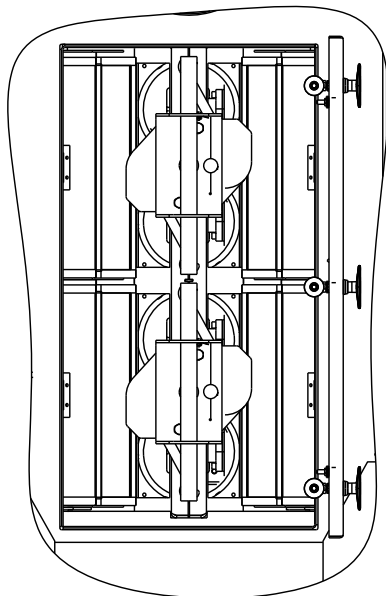
Step 3



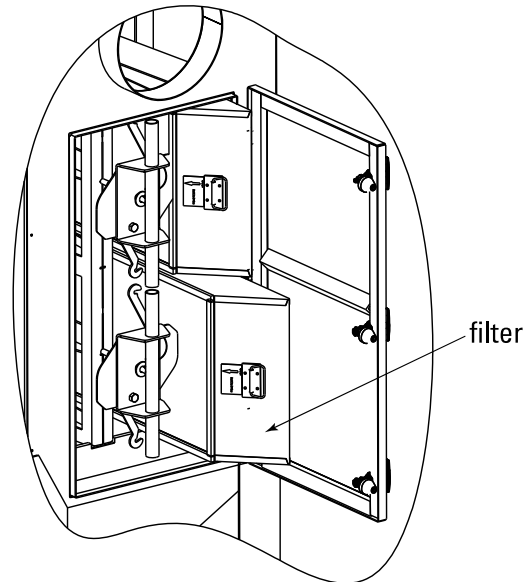
Step 4



Steps 5, 6, and 7



Steps 8 and 9



Filter Removal and Replacement

## Dust Disposal

### **WARNING**

Use proper safety and protective equipment when emptying dust container.

Dust containers may be heavier than they appear.

Use care when removing dust container to avoid personal injury.

### **CAUTION**

To reduce the risk of damage from fires or explosions, combustible dust should not be stored in the collector.

Remove accumulated dust from the collector at least once per day and at more frequent intervals if conditions warrant.

Use extreme caution when removing combustible materials. Avoid creating dust clouds and ensure no materials are burning prior to servicing the dust container.

Dispose of collected dust in accordance with all local codes and regulations.

1. Turn unit OFF and empty dust container as necessary to minimize dust in the hopper.
2. Reinstall dust container.

## 22-Gallon Dust Bin

A 22-gallon pail pack is standard with all models. Four rigid clamps secure the bin to the hopper flange.

For dust removal:

1. Unlatch the four clamps to lower the dust bin.
2. Roll dust bin out from the collector.
3. Dispose of dust.
4. Reinstall the dust bin and reclamp to the collector.

## Exhaust Damper

An exhaust damper can be adjusted to regulate or limit airflow when unit is in operation. Before start-up, set the exhaust damper to the fully-closed position as shown below. Adjustments to airflow can be made by loosening the wing nut and sliding the handle to open or close the damper. When replacing filters, reset the damper to the fully-closed position and then open to reestablish desired airflow.

## Optional Equipment

### Explosion Vents

#### **WARNING**

Personal injury, death, or property damage can result from material discharge during venting.

The material discharged during the venting of an explosion must be safely directed outdoors away from areas occupied by personnel to reduce risk of personal injury or property damage.

The risk of damage or injury can be minimized or avoided by locating vented equipment outside buildings and away from normally occupied areas.

Explosion vents should be inspected regularly to confirm physical and operational condition. Replace any damaged parts immediately.

Standard explosion vents are intended for outdoor installations only.

Remove all shipping materials, including covers, from the explosion relief vents prior to installation. Failure to remove shipping covers will seriously compromise explosion vent operation.

Explosion venting calculations are based on formulas from NFPA-68 for outdoor applications only, with no duct or obstructions on the explosion vent panel.

Contact Donaldson Torit for assistance in calculating specific venting requirements for equipment.

## Sprinkler Installation

### **CAUTION**

Sprinkler systems place a large quantity of water in the dust collector when activated. Provide adequate drainage to remove water to avoid personal injury or property damage.

Fire control sprinklers are available for all models operating under negative pressure. Donaldson Torit supplied sprinklers require a minimum of 15-psig water pressure. The volume of water discharged per sprinkler head is 17 gallons per minute.

### **NOTICE**

Consult with local authorities when installing fire control systems on dust collection equipment.

1. Remove or open the filter access covers to access the sprinkler tap located in the dirty-air plenum.
2. Apply pipe sealant to the threads of the pipe reducer located on the sprinkler assembly.
3. Thread sprinkler assembly onto the 1-in diameter sprinkler tap.
4. Tighten securely.

## HEPA Afterfilter Installation

The optional HEPA afterfilter is designed to capture small particulate and is attached to the units clean-air outlet.

1. Turn supply power OFF.
2. Remove the bolts from the top back roof panel.
3. Position the HEPA mounting frame on top of the clean-air outlet aligning existing hole pattern.
4. Mark and match-drill the front flange holes in the roof panel using a 0.266-in diameter drill bit.
5. Apply 1/4-in diameter rope-type sealant toward the inside of bolt pattern.
6. Position the HEPA mounting frame on the top panel aligning the bolt patterns.
7. Bolt in place using the hardware supplied and the hardware removed in Step 2.
8. Position HEPA filter on mounting frame and secure with latches.
9. Reset exhaust damper to fully closed position.
10. Turn unit ON.
11. Adjust airflow using the airflow control damper.

Rear HEPA package can be purchased from home office and contains a new bolt-on clean air outlet section.

## Troubleshooting

Problem	Probable Cause	Remedy
Power pack/fan motor do not start	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.
Power pack/fan motor start, but do not stay running	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.
	Damper control not adjusted properly	Check airflow in duct. Adjust damper control until proper airflow is achieved and the blower motor's amp draw is within the manufacturer's rated amps.
	Electrical circuit overload	Check that the power supply circuit has sufficient power to run all equipment.
Clean-air outlet discharging dust	Filter packs not installed correctly	See Filter Replacement.
	Filter pack damage, gasket damage, or holes in media	Replace filter packs as necessary. Use only genuine Donaldson replacement parts. See Filter Replacement.
Insufficient airflow	Fan rotation backwards	Proper fan rotation is clockwise from the top of the unit. The fan can be viewed from 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.
	Filter packs need replacement	Remove and replace using genuine Donaldson replacement filter packs. See Filter Replacement.
	Lack of compressed air	See Rating and Specification Information for compressed air supply requirements.

Problem	Probable Cause	Remedy
Insufficient airflow continued	Pulse cleaning not energized	Use a voltmeter to check the solenoid valves in the control panel. Check pneumatic lines for kinks or obstructions.
	Pulse valves leaking compressed air	Lock out all electrical power to the unit and bleed the compressed air supply. Check for debris, valve wear, pneumatic tubing fault, or diaphragm failure by removing the diaphragm cover on the pulse valves. Check for solenoid leaks or damage. If pulse valves or solenoid valves and tubing are damaged, replace.
No display on the Delta P Controller	No power to the controller	Use a voltmeter to check for supply voltage.
	Fuse blown	Check the fuse in the control panel. See wiring diagram inside the control panel. Replace if necessary.
Display on Delta P Controller does not read zero when at rest	Out of calibration	Recalibrate as described in Delta P Maintenance Manual
Delta P Controller ON, but cleaning system does not start	Pressure tubing disconnected, ruptured, or plugged	Check tubing for kinks, breaks, contamination, or loose connections.
	High Pressure On or Low Pressure Off setpoint not adjusted for system conditions	Adjust setpoints to current conditions.
Pulse cleaning never stops	Pressure switch not operating correctly	Check pressure switch inside the control panel.
	High Pressure On or Low Pressure Off setpoint not adjusted for system conditions	Adjust setpoints to current conditions.
	Pressure tubing disconnected, ruptured, plugged, or kinked	Check tubing for kinks, breaks, contamination, or loose connections.
Alarm light is ON	Alarm setpoint too low	Adjust to a higher value.
	Excess pressure drop	Check cleaning system and compressed air supply. Replace filter packs if filter packs do not clean down.
	Pressure tubing disconnected, ruptured, plugged, or kinked	Check tubing for kinks, breaks, contamination, or loose connections.
Delta P Controller arrow keys to not work	Improper operation	Press and hold one of the three setpoint keys to use arrow keys.





## The Donaldson Torit Warranty

Donaldson warrants to the original purchaser that the major structural components of the goods will be free from defects in materials and workmanship for ten (10) years from the date of shipment, if properly installed, maintained and operated under normal conditions. Donaldson warrants all other Donaldson built components and accessories including Donaldson Airlocks, TBI Fans, TRB Fans, Fume Collector products, Donaldson built electrical control components and Donaldson built Afterfilter housings for twelve (12) months from date of shipment. Donaldson warrants Donaldson built filter elements to be free from defects in materials and workmanship for eighteen (18) months from date of shipment. 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.



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