# Donaldson.

## **Torit<sup>®</sup> Sealed Drum Kit**

Installation, Operation and Maintenance Manual





This manual contains specific precautions related to worker safety. The hazard alert image denotes safety related instructions and warnings in this manual. DO NOT operate or perform maintenance on this collector until you have read and understood the instruction and warnings contained within this manual.

English Master Language IOM AG8570701 (ENG) Revision 2

#### **IMPORTANT NOTES**

This manual has been supplied to assist with the installation, operation and maintenance for the dust collector accessory purchased. Please read the manual before installing, operating, or performing maintenance on the accessory as it contains specific precautions for worker safety. It is the owner's responsibility to ensure that this manual is available for use by installers, operators and maintenance personnel that will be working with this dust collector accessory. This manual is the property of the owner and should be left with the collector when the accessory installation has been completed. DO NOT operate the collector until you have read and understood the instructions and warnings located in the installation and operation manual.

For additional copies of this manual, contact Donaldson Torit.



The Safety Alert Symbol indicates a hazardous situation which, if not avoided could result in death or serious injury. Obey all safety messages following this symbol to avoid possible injury or death. The possible hazards are explained in the associated text messages.



The Notice symbol indicates a potential situation or practice which is not expected to result in personal injury, but which if not avoided may result in damage to equipment.

#### Contents

IMPORTANT NOTES	i
1 Safety Communication	1
2 Product Description and Intended Use	3
Standard Equipment	3
Sealed Drum Cover Pack	3
55-Gallon Drum	3
3 Operation	4
Checklist	4
4 Product Service	5
Drum Cover Gasket Seal Replacement	
Flex Hose Replacement	7
Troubleshooting	8
Appendix A - Drum Pack Installation	A1
Sealed Drum Kit (SDK) Drum Pack Installation	
Product Information	
Service Notes	
Donaldson Industrial Air Filtration Warranty	A4

1

## Safety Communication

Improper operation of dust collectors and/or dust control systems may contribute to conditions in a work area or facility which could result in severe personal injury, and product or property damage. All dust collection equipment should be used only for its intended purpose and should be properly selected and sized for its intended use.

Process owners have important responsibilities relating to identifying and addressing potential hazards in their processes. When the potential for handling combustible dust exists within a process the process owner should include combustion hazards in their risk management activities and should comply with applicable codes and standards related to combustible dust.

Electrical installation must be performed by a qualified electrician.

This equipment is not designed to support site ducts, piping, or electrical services. All ducts, piping, or electrical services must be adequately supported to prevent injury and/or property damage.

Site selection must account for wind, seismic zone, and other load conditions.

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

Most dusts present safety and health hazards that require precautions. Wear eye, respiratory, head and other protection equipment suitable for the type of dust.

Some components may be heavier than they appear. Use appropriate lifting methods to avoid personal injury and/or property damage.

#### **Combustible Dust Hazards**

Among other considerations, the current NFPA standards require owners whose processes involve potentially combustible materials to have a current Dust Hazard Analysis, which can serve as the foundation for their process hazard mitigation strategy. Mitigation may include but is not limited to:

- · Prevention of all ignition sources from entering any dust collection equipment.
- Selection and implementation of fire and explosion mitigation, suppression, and isolation strategies appropriate for the risks in their process.
- Development and use of work practices to maintain safe operating conditions, and to ensure combustible dust does not
  accumulate within their plant or process equipment.

Donaldson designs, manufactures, and sells industrial air filtration products for a wide variety of applications. Some applications may include processes or materials with inherent fire and explosion hazards. Donaldson is neither an expert nor a certified consultant in fire, spark, or explosion detection, suppression, or control. Donaldson does not provide engineering consulting services related to process or dust hazard analyses, or code and standard compliance. Complying with applicable codes and standards and managing the risks associated with the process or materials remains the responsibility of the process owner/ operator. Donaldson may provide referrals to consultants, suppliers of equipment or services related to the detection and/ or mitigation of sparks, fires and/or explosions, but Donaldson does not assume responsibility for any such referrals, nor does Donaldson assume any liability for the fitness of a mitigation strategy or product for a particular installation or application. The process Hazard Analysis performed by the process owner. Although early engagement of a dust collector supplier provides helpful insights on the availability and features of various products, process owners should consult with a combustible dust expert and/or a process safety expert before making actual product and mitigation strategy selections.

Donaldson recommends that all industrial air filtration system designs be reviewed and approved by an expert consultant who is responsible for the integrity of the system design and compliance with applicable codes and standards. It is the process owner's responsibility to understand the risks in their process and mitigate those risks in accordance with all applicable laws, regulations and standards, including those published by the NFPA. Donaldson also recommends that proper maintenance and housekeeping procedures and work practices be evaluated, developed, and followed to maintain any industrial air filtration products in safe operating condition.

Many factors beyond the control of Donaldson can affect the use and performance of Donaldson products in a particular application, including the conditions under which the product is used. Since these factors are uniquely within the user's knowledge and control, it is essential the user evaluate the Donaldson products to determine whether the product is fit for the particular purpose and suitable for the user's application. All products, product specifications, and data (airflow, capacity, dimensions, or availability) are subject to change without notice, and may vary by region or country.

## **2 Product Description and Intended Use**

Torit Sealed Drum Kits provide a convenient, cost-effective method to connect the dust collector hopper discharge to a sealed container for dust removal. The Sealed Drum Kit consists of a Sealed Drum Cover Pack and a 55 gallon drum, the Sealed Drum Cover Pack mounts directly to the hopper discharge flange and connects to the provided 55 gallon DOT drum of UN Solid Rating 1A2/X430/S using the provided drum ring clamp.

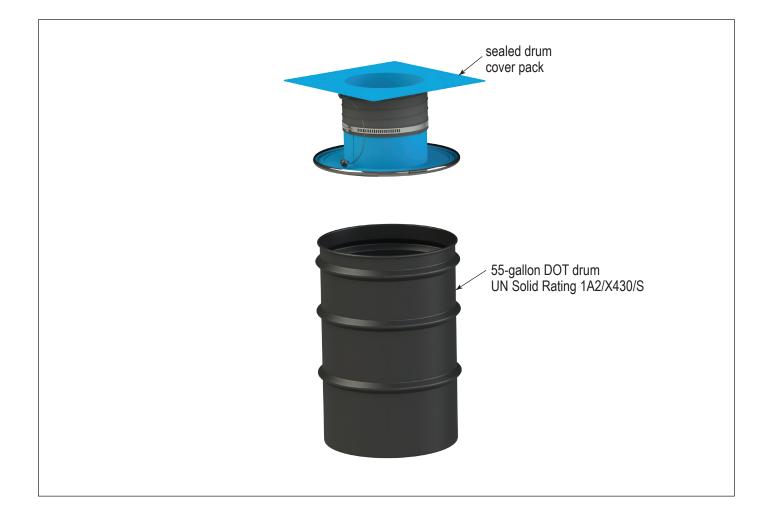
#### **Standard Equipment**

#### Sealed Drum Cover Pack

Mounts directly to the hopper discharge flange and connects to an approved 55 gallon drum using the provided drum ring clamp to seal the drum to the Sealed Drum Cover Pack.

#### 55-Gallon Drum

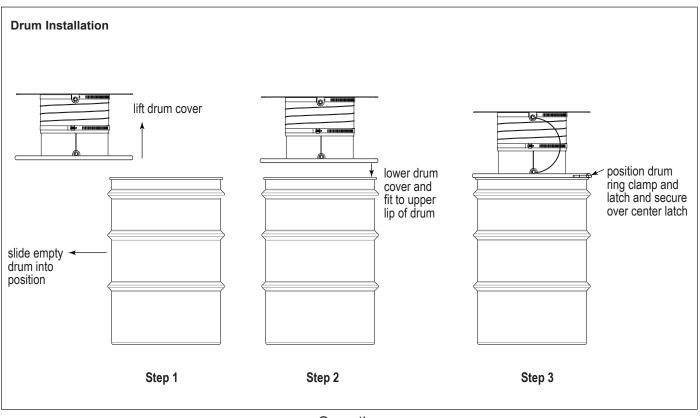
UN Solid Rating 1A2/X430/S DOT drum provided with the Torit Sealed Drum Kit.



## **3** Operation

A properly rated 55 gallon drum is installed under the Sealed Drum Kit drum cover by lifting the drum cover to provide clearance for the drum, sliding the empty drum into place, lowering the drum cover over the 55 gallon drum and seating the cover seal gasket on the drum lip. The drum ring clamp is lowered from the temporary location around the sleeved telescoping duct (which connects the upper flange at the collector hopper to the drum cover) and is fitted over the drum cover edge, seal gasket and the drum lip. The drum ring clamp is closed in place with the over center latch handle and the drum is ready for collector operation.

Reverse the procedure to remove the 55 gallon drum.





#### Checklist

- Before operation confirm a properly rated drum in good physical condition is in place below the Sealed Drum Cover Pack.
- · Confirm the drum has capacity to accommodate material storage.
- Verify the drum is properly sealed to the Sealed Drum Cover Pack and the latch on the Drum Ring Clamp is closed and secured.
- Verify drum is being supported by a suitable surface before operating collector.

## 4

#### **Product Service**



Instruct all personnel on safe use and maintenance procedures.

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

Drum may be heavier than it appears.

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

LOCK-OUT all energy sources prior to performing any service or maintenance on the equipment.

During any service activities there is some potential for exposure to the dust in the collector. Most dusts present safety and health hazards that require precautions. At a minimum wear eye, respiratory, head, and other protection equipment suitable for the type of dust when performing any service activities.

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

Drum may rupture if the drum is not rated for the pressure during a deflagration [up to 1 bar]. To avoid injury from flame or pressure release, ONLY use drums rated as UN1A2/X430/S or stronger.

Do Not Service when materials are suspected to be burning in the drum.

Donaldson Torit Sealed Drum Kits are manufactured to high standards with quality materials and components. Proper maintenance will ensure a long and trouble--free service life. Regular Sealed Drum Kit maintenance should include the following:

- 1. Inspect flex hose for signs of physical damage including any tears or signs of abrasion. Replace the flex hose if any signs of damage are observed.
- Inspect the flex hose clamp connection on the telescoping collar to ensure proper position and to confirm the clamps are tight. Reposition the clamps if necessary and tighten to 40 in-lb torque.
- 3. Inspect the drum cover seal gasket and replace if there is any sign of damage or wear.
- 4. Inspect the 55 gallon drum for any signs of damage including holes in the drum body or damage to the upper lip of the drum. Replace any damaged drum with a 55-gallon DOT drum rated for UN Solid Rating 1A2/X430/S or equivalent.

#### **Drum Cover Gasket Seal Replacement**

To replace a worn or damaged drum cover gasket seal:

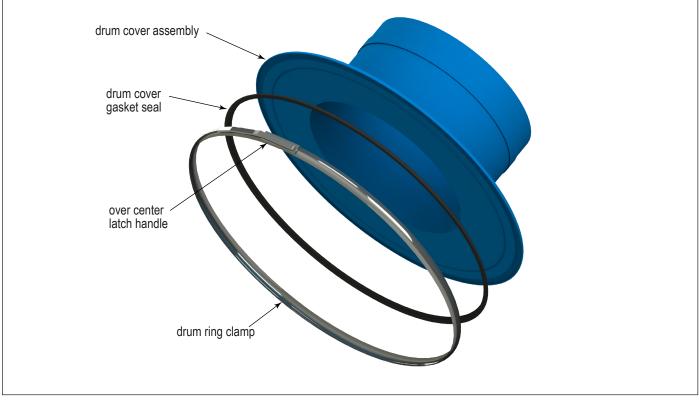
- 1. Unlatch the drum ring clamp using the integral over center clamp and slide the clamp up and over the drum cover assembly. Temporarily position the drum ring clamp around the telescoping collar which connects the hopper adapter flange with the drum cover assembly.
- 2. Remove the 55 gallon drum from below the drum cover assembly.



The drum may be heavier than it appears. Use appropriate lifting equipment and adopt all safety precautions needed for moving and handling to avoid personal injury and/or property damage.

- 3. Pull the worn or damaged gasket from the drum cover assembly and dispose of properly.
- 4. Remove any residual adhesive from drum cover surface.
- 5. Install the new gasket seal on the sealing surface under the outer edge of the drum cover assembly using the supplied adhesive.
- 6. Inspect the new gasket seal for damage. Do not use if damaged.
- 7. Reposition the 55 gallon drum under the drum cover assembly and align the upper seal lip of the drum with the gasket of the drum cover assembly.
- 8. Position the drum ring clamp from the temporary location and fit over the drum cover edge, seal gasket and the drum lip. Latch the drum ring clamp in place with the over center latch handle.

The Sealed Drum Kit is ready for collector operation.

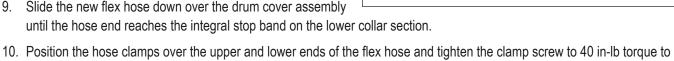


Drum Cover Gasket Seal Replacement

#### Flex Hose Replacement

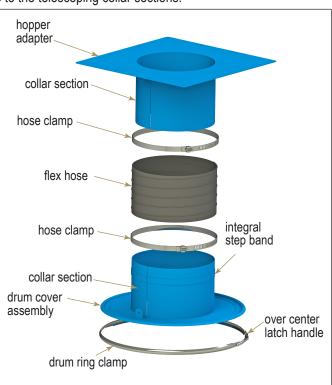
To replace a worn or damaged flex hose:

- 1. Unlatch drum ring clamp and remove drum from below the drum cover assembly.
- 2. Loosen and remove the hose clamps which secure the flex hose to the telescoping collar sections.
- 3. Lower the drum cover assembly and slide the flex hose off lower collar section.
- 4. Remove worn or damaged flex hose from the collar section on the hopper adapter and dispose of properly.
- Inspect the new flex hose for tears or damage. Do not use if 5. torn or damaged.
- Install new flex hose section onto the collar section of the 6. hopper adapter until flex hose contacts the plate of the hopper adapter.
- 7. Slide the drum cover adapter over the collar section of the hopper adapter and lift to provide clearance for an empty drum.
- 8. Slide the unlatched drum ring clamp over an empty drum, slide the drum under the drum cover assembly and lower the drum cover assembly onto the upper lip of the drum. Latch the drum cover assembly to the drum with the over center latch handle on the drum ring clamp.
- Slide the new flex hose down over the drum cover assembly 9.



secure the flex hose to the collar sections on both the hopper adapter and the drum cover assembly.

The Sealed Drum Kit is ready for collector operation.



#### Troubleshooting

Problem	Probable Cause	Remedy
Drum emissions from drum cover	Drum cover not properly clamped	Fit drum ring clamp to drum cover assembly and drum lip and close over center latch handle
	Damaged drum cover seal gasket	Replace the drum cover seal gasket.
	Damaged drum - upper lip or body	Confirm a properly rated drum is in good physical condition and in place below the Sealed Drum Cover Pack before operating. Replace a damaged drum with a 55 gallon DOT drum of UN Solid Rating 1A2/X430/S.
	Damaged flex hose	Replace damaged flex hose.
	Missing or loose clamp on flex hose	Replace missing or damaged clamp and tighten to 40 in-lb torque.
	Drum full	Confirm the drum has capacity to accommodate material storage. Replace with drum with a 55 gallon DOT drum or another 55 gallon DOT drum of UN Solid Rating 1A2/X430/S or equivalent.
	Drum cover seal gasket leaking	Verify the drum is properly sealed to the Sealed Drum Cover Pack and the latch on the Drum Ring Clamp is closed and secured.

## **Appendix A - Drum Pack Installation**

#### Sealed Drum Kit (SDK) Drum Pack Installation

Inspect the Sealed Drum Cover Kit for damage and replace any damaged components.

- 1. Clean the hopper discharge flange and the SDK sealed hopper adapter flange.
- 2. Apply clear sealant in a figure 8 pattern around the bolt holes in the Sealed Drum Cover Pack adapter flange (reference drawing provided with the SDK Kit).
- 3. Align the bolt hole patterns of the hopper adapter flange with the hopper discharge flange and bolt in place with the supplied fastener pack.
- 4. Open the supplied drum ring clamp using the integral over center latch handle and slide up and over the drum cover. Temporarily locate the drum band clamp around the telescoping collar which connects the hopper adapter flange with the drum cover.
- Lift the drum cover to provide clearance for the drum and slide the empty 55 gallon DOT drum of UN Solid Rating 1A2/X430/S into place under the drum cover.
- 6. Lower the sealed drum cover assembly over the drum and seat the drum cover seal gasket on the drum lip.
- 7. Position the drum ring clamp from the temporary location and fit over the drum cover edge, seal gasket and the drum lip. Latch the drum ring clamp in place with the over center latch handle.
- 8. The Sealed Drum Kit is ready for collector operation.

#### **Product Information** (Process Owner to complete and retain for your records)

Model Number			_ Serial Number _		
Ship Date			_ Installation Date		
Filter Type					
Dust Properties:	Kst	Pmax	MIE	ME	EC
Accessories					
Other					

#### **Service Notes**

Date	Service Performed	Notes
-		

#### **Donaldson Industrial Air Filtration Warranty**

Donaldson warrants to the original purchaser only that the Goods will be free from defects in material and manufacture for the applicable time periods stated below: (1) Major structural components for a period of ten (10) years from the date of shipment; (2) Non-Structural, 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 a period of twelve (12) months from date of shipment; and (3) Donaldson-built filter elements for a period of eighteen (18) months from date of shipment.

Buyer is solely responsible for determining if goods fit Buyer's particular purpose and are suitable for Buyer's process and application. Seller's statements, engineering and technical information, and recommendations are provided for the Buyer's convenience and the accuracy or completeness thereof is not warranted. If, after Seller receives written notice, within the warranty period, that any goods allegedly do not meet Seller's warranty, and Seller, in its sole discretion, determines that such claim is valid, Seller's sole obligation and Buyer's exclusive remedy for breach of the foregoing warranty or any Seller published warranty, will be, at Seller's option, either: (i) repair or replacement of such goods or (ii) credit or refund to Buyer for the purchase price from Seller. In the case of repair or replacement, Seller will be responsible for the cost of shipping the parts but not for labor to remove, repair, replace or reinstall the allegedly defective goods. Refurbished goods may be used to repair or replace the goods and the warranty on such repaired or replaced goods shall be the balance of the warranty remaining on the goods which were repaired or replaced. Any repair or rework made by anyone other than Seller is not permitted without prior written authorization by Seller, and voids the warranty set forth herein. Seller warrants to Buyer that it will perform services in accordance with the Sales Documents using personnel of required skill, experience and gualifications and in a professional and workmanlike manner in accordance with generally recognized industry standards for similar services. With respect to any services subject to a claim under the warranty set forth above, Seller shall, in its sole discretion, (i) repair or re-perform the applicable services or (ii) credit or refund the price of such services at the pro rata contract rate and such shall be Seller's sole obligation and the exclusive remedy for breach of the foregoing warranty on services. Products manufactured by a third party ("Third Party Product") may constitute, contain, be contained in, incorporated into, attached to or packaged together with, the goods, Buyer agrees that: (a) Third Party Products are excluded from Seller's warranty in this Section 7 and carry only the warranty extended by the original manufacturer, and (b) Seller's liability in all cases is limited to goods of Seller's design and manufacture only. EXCEPT FOR SELLER'S WARRANTY OF TITLE TO THE GOODS, SELLER EXPRESSLY DISCLAIMS AND EXCLUDES ALL OTHER WARRANTIES WHATSOEVER, WHETHER, EXPRESSED OR IMPLIED, ORAL, STATUTORY, OR OTHERWISE, INCLUDING BUT NOT LIMITED TO MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, NON-INFRINGEMENT OF THIRD PARTY INTELLECTUAL PROPERTY AND ANY WARRANTIES ARISING FROM TECHNICAL ADVICE OR RECOMMENDATIONS, COURSE OF DEALING OR OF PERFORMANCE, CUSTOM OR USAGE OF TRADE. Seller's obligations do not cover normal wear and tear or deterioration, defects in or damage to any goods resulting from improper installation, accident or any utilization, maintenance, repair or modification of the goods, or any use that is inconsistent with Seller's instructions as to the storage, installation, commissioning or use of the goods or the designed capabilities of the goods or that, in its sole judgment, the performance or reliability thereof is adversely affected thereby, or which is subjected to abuse, mishandling, misuse or neglect or any damage caused by connections, interfacing or use in unforeseen or unintended environments or any other cause not the sole fault of Seller, and shall be at Buyer's expense. Seller's warranty is contingent upon the accuracy of all information provided by Buyer. Any changes to or inaccuracies in any information or data provided by Buyer voids this warranty. Seller does not warrant that the operation of the goods will be uninterrupted or error-free, that the functions of the goods will meet Buyer's or its customer's requirements unless specifically agreed to, or that the goods will operate in combination with other products selected by Buyer or Buyer's customer for its use.

The terms of this warranty may only be modified by a special warranty document signed by a Director, General Manager or Vice President of Donaldson. To ensure proper operational performance of your equipment, use only genuine Donaldson replacement parts.

This Product is provided subject to and conditioned upon Donaldson's Terms of Sale ("Terms"), a current copy of which is located at termsofsale.donaldson.com. These Terms are incorporated herein by reference. By purchasing or using this Product, the user accepts these Terms. The Terms are available on our website or by calling our customer service line at 1-800-365-1331.

Significantly improve the performance of your collector with genuine Donaldson Torit replacement filters and parts. **Call Donaldson Torit at 800-365-1331.** 

#### Important Notice

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