

Field Assembly
Instructions

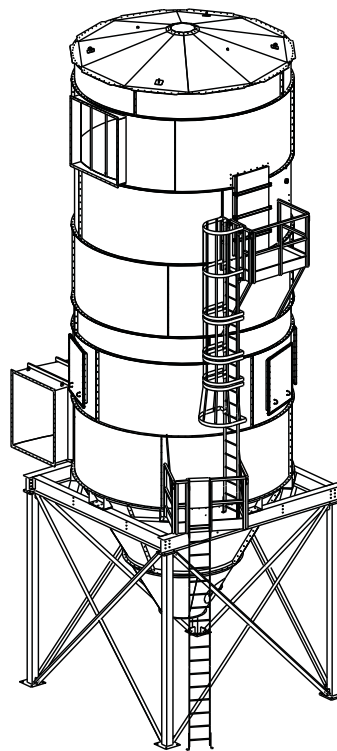
Field Assembly Manual

Panelized RF Baghouse Dust Collector Models RFWP and RFWPH

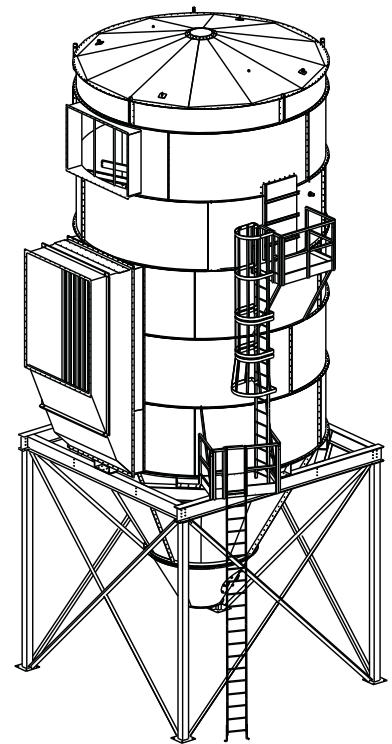


Throughout this manual statements indicating precautions necessary to avoid equipment failure are referenced in a **Note**. Statements indicating potential hazards that could result in *personal injury* or *property damage* are referenced in a **CAUTION!** box.

Illustrations are for reference only as actual product may vary.



Model RFWP



Model RFWPH

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.



CAUTION!

Application of Dust Control Equipment

- Combustible materials such as buffing lint, paper, wood, aluminum or steel dust, weld fume, or flammable solvents represent fire or explosion hazards. Use special care when selecting and operating all dust or fume collection equipment when combustible materials are present to protect workers and property from damage due to fire and/or explosion. Consult and comply with National and Local Codes relating to fire or explosion and all other appropriate codes when determining the location and operation of dust or fume collection equipment.
- When combustible materials are present, consult with an installer of fire extinguishing systems familiar with these types of fire hazards and local fire codes for recommendations and installation of fire extinguishing and explosion protection systems. Donaldson dust collection equipment is not equipped with fire extinguishing or explosion protection systems.
- DO NOT allow sparks, cigarettes or other burning objects to enter the hood or duct of any dust or fume control equipment as these may initiate a fire or explosion.
- For optimum collector performance, use only Donaldson replacement parts.

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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 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 _____	

Scope

The Panelized RF Baghouse Field Assembly Manual, IOM AD3670202, covers the field assembly of the new panelized RF dust collector for both Involute Inlet and High Body Inlet models. Read and follow all Field Assembly manual instructions and cautions in this manual prior to assembly in order to achieve expected assembly results.

Refer to the RF Installation and Operation Manual (IOM AD3670201) for any RF operation, service, and troubleshooting information.



CAUTION!

- Misuse or modification of this equipment may result in personal injury.
- Do not misuse or modify.

Inspection on Arrival

1. Inspect unit components upon delivery.
2. Report any damage to the delivery carrier.
3. Request a written inspection report from the Claims Inspector to substantiate claim.
4. File claims with the delivery carrier.
5. Compare unit components received with description of product ordered.
6. Report incomplete shipments to the delivery carrier and your Donaldson representative.
7. Remove crates and shipping straps. Remove loose components and accessory packages before lifting major components from truck.
8. Any damaged components should not be used.



CAUTION!

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

- Components will either be provided with lifting lugs for a crane or require load/transfer with a forklift. Do not lift in any way that could damage components during off-loading. Do not allow any tipping or uncontrolled swaying.
- Use appropriate lifting equipment and adopt all safety precautions needed for moving and handling the equipment.
- A crane and forklift is recommended for unloading, assembly, and installation of the collector.
- Follow any present guidelines which show where and how to lift; uneven lifting may result in swinging parts.
- Use caution while working under above construction. Parts may fall. Check for overhead interference with power lines, guy wires, utility lines, roof overhang or air traffic.

Installation Codes and Procedures



CAUTION!

OSHA may have requirements regarding recirculating filtered air in your facility. Consult with the appropriate local authorities to ensure compliance with all codes regarding recirculating filtered air.

1. Safe and efficient operation of the unit depends on proper installation.
2. 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.
3. A qualified installation and service agent must complete installation and service of this equipment.
4. Use caution when unloading components. Do not damage components. Do not use damaged components.
5. Do not hang or mount external piping, ductwork or accessory items to the collector without proper support.

Installation

Site Selection

1. The unit can be located on a reinforced concrete foundation or other structurally approved surface.
2. All pertinent loads including wind, seismic, dead, and other live-load conditions must be considered when selecting the location.
3. Provide clearance from heat sources and interference with utilities when selecting the location.



CAUTION!

- Consult and comply with all national and local codes relating to fire or explosion protection, and all other appropriate codes when determining the location and operation of dust collection equipment.
- If sprinklers are installed, overflow drain devices are required. Properly size the overflow drains to match the flow rate output of the sprinkler taps.
- Donaldson equipment is not equipped with fire extinguishing or explosion prevention systems.
- Installation requires use of an overhead crane. Use proper equipment and protection. Protective gear should be worn to protect workers in case of falling components. Failure to comply can result in personal injury and/or property damage.
- Inspect area prior to assembly. Be certain no equipment/rigging will interfere with overhead power lines, guy wires, overhangs, or other obstructions.
- Use proper falling/safety precautions when working at any levels off of grade.
- Unsupported/external components hanging off the collector may result in structural failure.

Unit Location

1. When hazardous conditions or materials are present, consult with local authorities for the proper location of the collector.
2. The foundation or support structure must be sized to withstand all pertinent loads (dead, live, snow and dust , etc.), in addition to shear and overturning reactions from wind, seismic, and explosion venting forces. All tributary piping and ductwork to the collector and possible water accumulation from a sprinkler system, if applicable, should be taken into consideration when determining appropriate load.
3. A concrete foundation must be properly reinforced (with rebar, etc.) and be of sufficient strength and thickness to withstand above loads. Make sure the foundation is poured at least 28 days in advance to develop full strength prior to setting the collector and epoxy anchor bolts, etc. Refer to the collector specification control drawing for anchor bolt type, size, and embedment requirements. Ensure the anchor bolt length extends above the foundation sufficiently to meet grouting, baseplate thickness and hardware requirements to secure the collector.
4. Locate the collector to ensure the inlet has at least five diameters of straight duct prior to the collector inlet including a transition to the full inlet dimensions. Inlet transition should have a taper with a maximum of a 90-degree included angle. The shortest and straightest outlet-duct length and easy access to electrical connections and routine maintenance should also be considered when determining collector location.

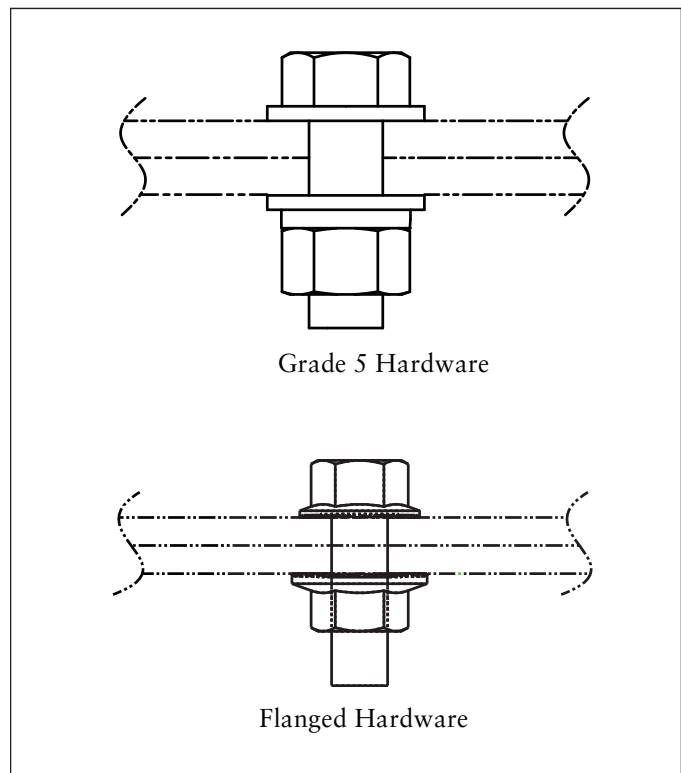
Note: Donaldson equipment is not designed to support site-installed ducts, interconnecting piping, or electrical services. All ducts, piping, or electrical services supplied by others must be adequately supported to prevent property damage.

5. Ensure placement site does not interfere with overhead wires, guy wires, or air traffic.

Hardware Requirements

Typical Hardware
Bolt, Grade 5
2-Hardened Washers per ASTM F436
Lock Washer
Nut, Grade 5
Flanged Nut, Case Hardened
Flanged Bolt, Case Hardened

Hardware Size		
Size	Assembly	Recommended Bolt Torque (ft/lbs)
3/8-in	Ladder Platform	37
1/2-in	Hopper Body(ies) Involute Inlet High Inlet Roof	90
5/8-in	Tube Sheet	180
3/4-in	Leg Structure	319



Hardware

Electrical Wiring



CAUTION!

- Electrical installation must be performed by a qualified electrician and comply with all applicable national and local codes.
- Lock out electrical power sources before performing service or maintenance work.
- Do not install in classified hazardous atmospheres without an enclosure rated for the atmosphere.

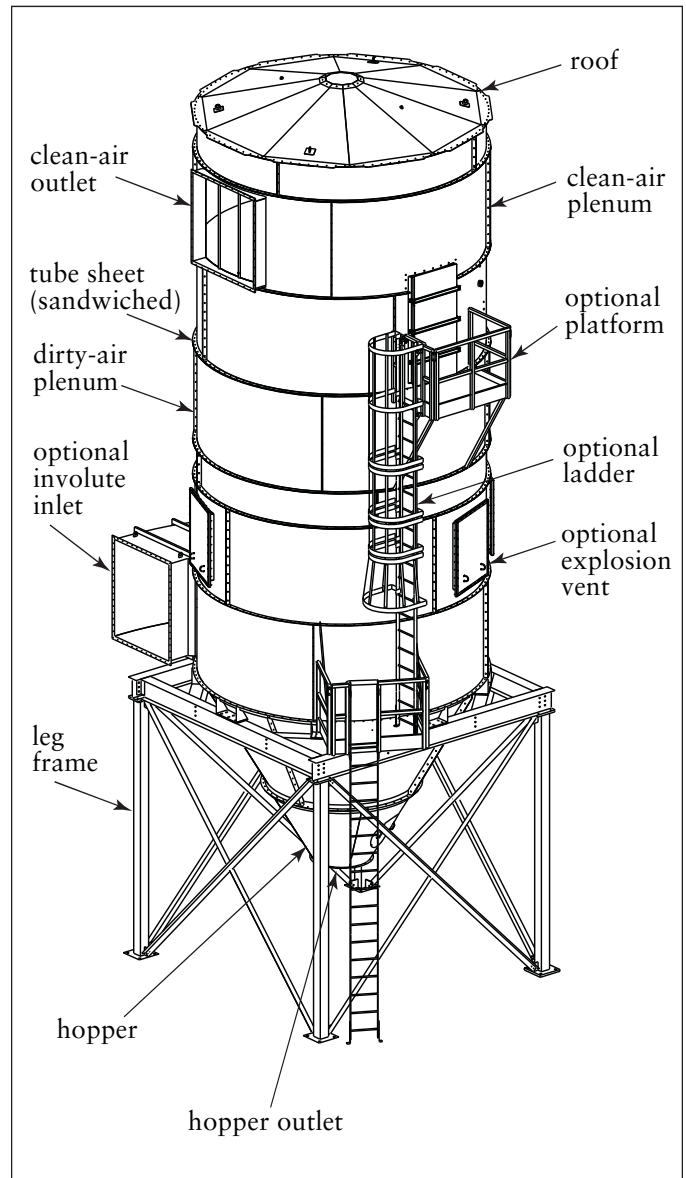
1. All electrical wiring and connections, including electrical grounding, should be made in accordance with the National Electric Code and NFPA No. 70-latest edition.
2. Check local ordinances for additional requirements that apply.
3. The appropriate wiring schematic and electrical rating must be used. See unit's rating plate for required voltage.
4. 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 and NFPA No. 70-latest edition. Check unit's rating plate for voltage and amperage ratings.
5. Refer to the wiring diagram for the number of wires required for main power wiring and remote wiring.



CAUTION!

Special attention may be required to ground the collector. Follow the appropriate steps to ground the collector. Lack of an effective ground may create a risk of personal injury and/or death.

RF Baghouse Assembly



RF Assembly Components, Model RFWP shown

Note: Take the following special precautions during installation:

- Follow all assembly instructions and notes and cautions to achieve expected assembly results. Assembling the structure in the wrong sequence or without following proper procedure can result in structural failure and improper operation.
- Follow the provided bolting instructions. Using incorrect or insufficient fasteners can compromise structural integrity. Improper tightening of bolt hardware may compromise structural integrity.
- Do not assemble the collector in the wrong sequence or using the incorrect components.
- Use only provided lifting lugs in the prescribed fashion and do not lift more weight than what is specified.
- Lift rings and sections only when the load is balanced.

Leg Structure Assembly

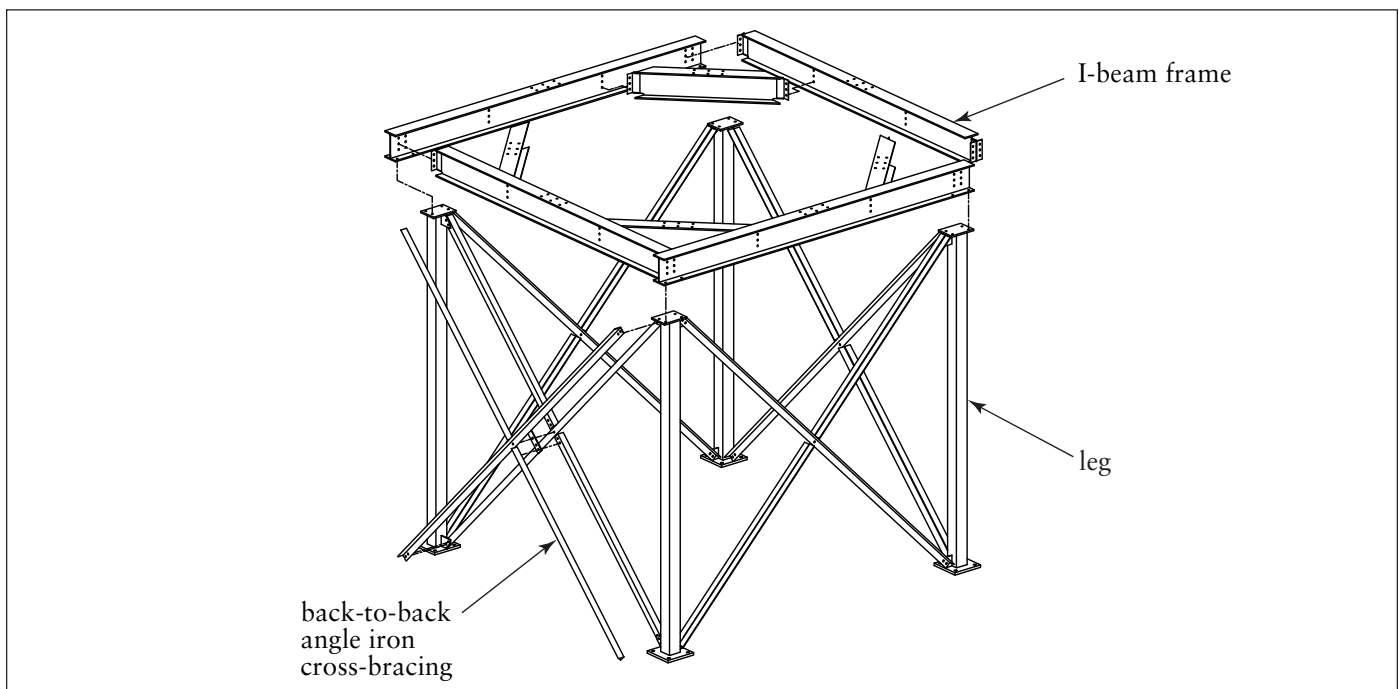


CAUTION!

- Take appropriate precautions to avoid injury (pinching) during leg structure assembly or handling.
- Take appropriate precautions to prevent tripping or falling when working on or around the leg structure.

Note: Temporary support is required until all legs and cross-bracing are in place.

1. Set the legs onto the pre-poured foundation and bolt tight.
2. Install all cross-braces spanning the legs using the 3/4-in supplied hardware.
3. Keep bolts partially tightened until the I-beam perimeter frame can be set into place.
4. Lay out the I-beam frame at grade level and install hardware hand tight.
5. Lift the I-beam frame onto the leg structure, ensuring frame is level and plumb.
6. Tighten all hardware.



Leg Structure Assembly

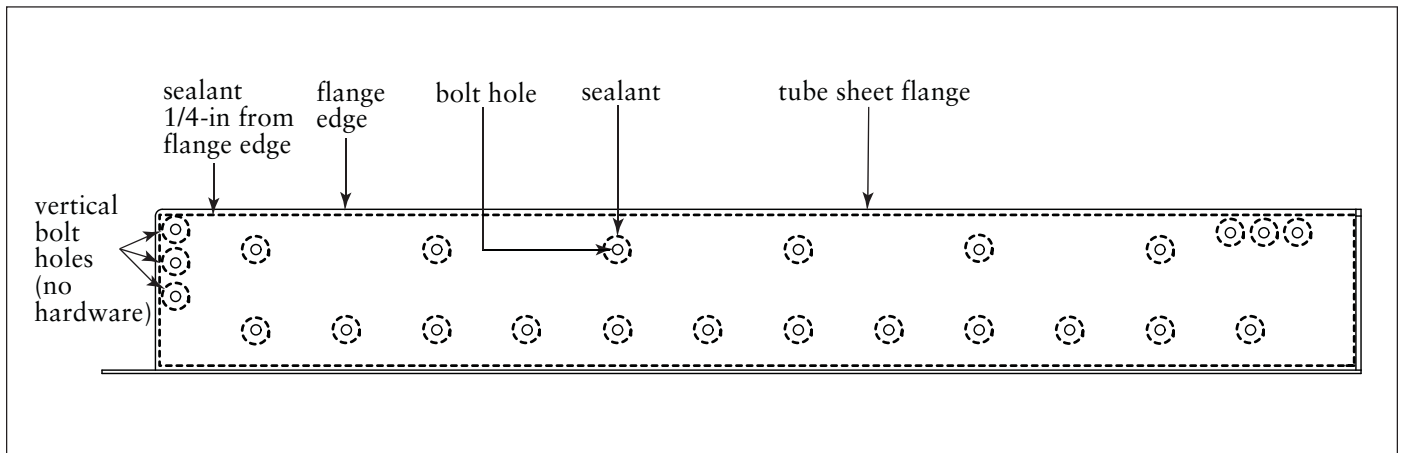
Tube Sheet Assembly



CAUTION!

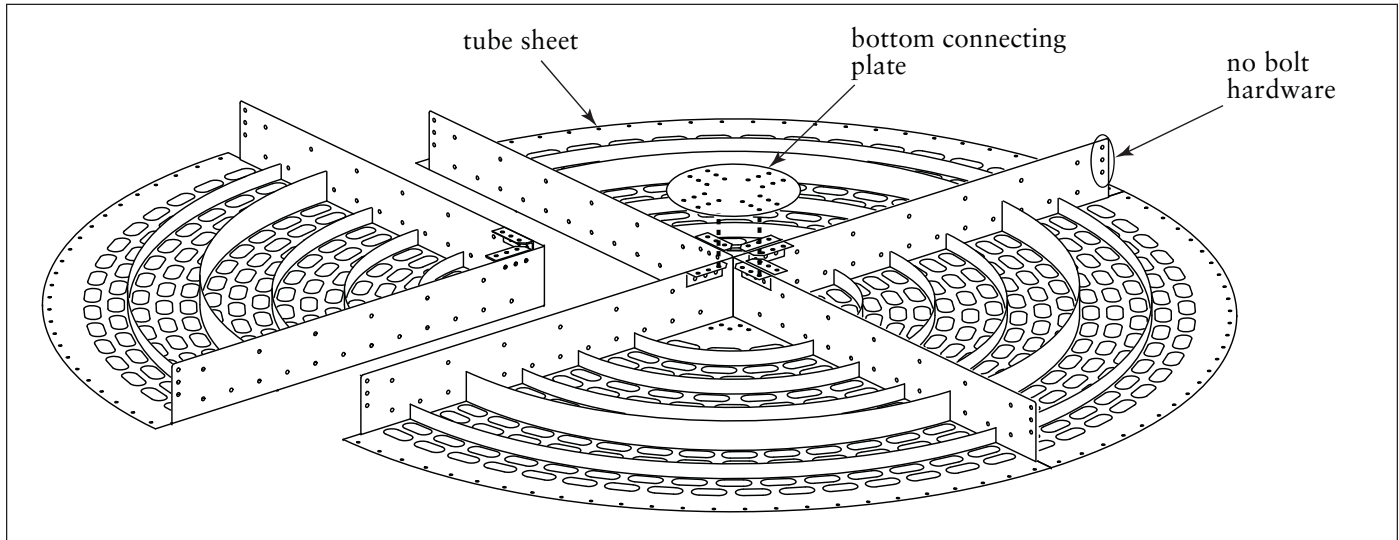
- Take appropriate precautions to avoid injury (pinching) during tube sheet assembly or handling.
- Take appropriate precautions to prevent tripping or falling when working on or around the tube sheet.

1. Lay out the panels of the tube sheet with flange-side up on a level area using stand-offs to avoid ground contact and to keep the tube sheet surface free from blemishes.
2. Apply sealant to the connecting flanges of the tube sheet prior to aligning bolt holes. Apply sealant around the inside perimeter within 1/4-in of all flange edges and around all bolt holes as shown.
3. Bolt the connecting flanges together using the provided 5/8-in hardware. Keep the last three vertical bolt holes at the perimeter free of hardware as shown.



Tube Sheet Flange - Sealant Application

- Attach the circular bottom connecting plate to tie in all pieces of the tube sheet as shown. Use the supplied 2½-in length hardware for bolting through the multiple material thicknesses associated with the bottom connecting plate.



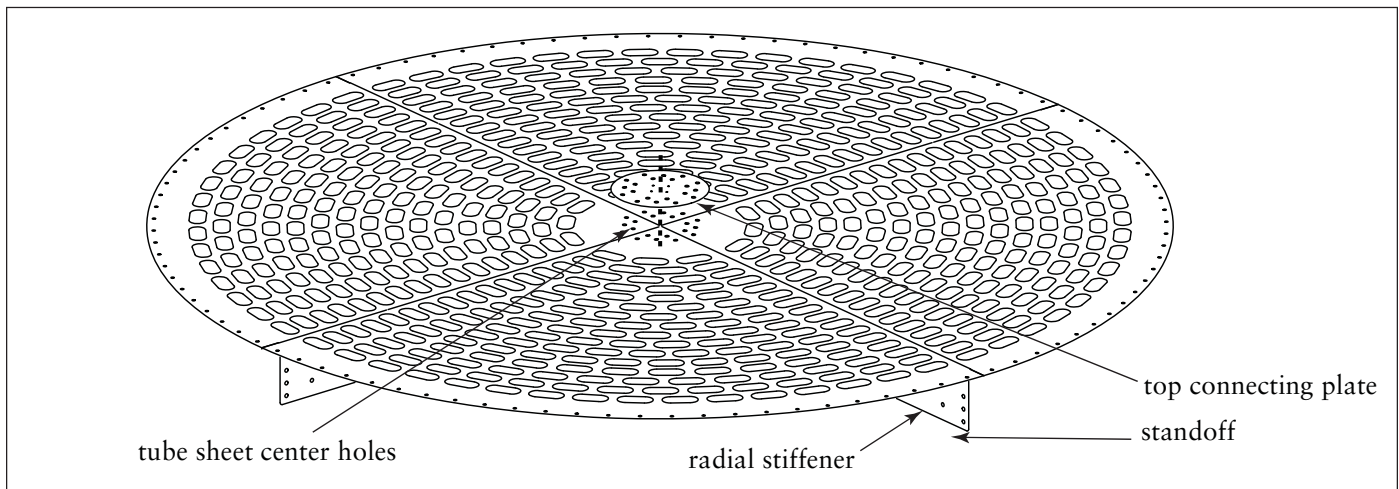
Tube Sheet (Upside Down) - Bottom Connecting Plate

- Turn the tube sheet over to the upright position. Use stand-offs placed under the radial stiffeners to keep the tube sheet off of grade as shown. Make certain the tube sheet is level.
- On the top connecting plate, apply sealant to one side outside the bolt pattern, inside the bolt pattern, and around each bolt hole.
- Set the top connecting plate onto the tube sheet center and align the holes with the sealant. Securely bolt plate and tube sheet together.



CAUTION!

Use appropriate lifting equipment and procedures when turning the tube sheet assembly over to avoid possible injuries.



Tube Sheet (Upright) Top Connecting Plate

Hopper Assembly

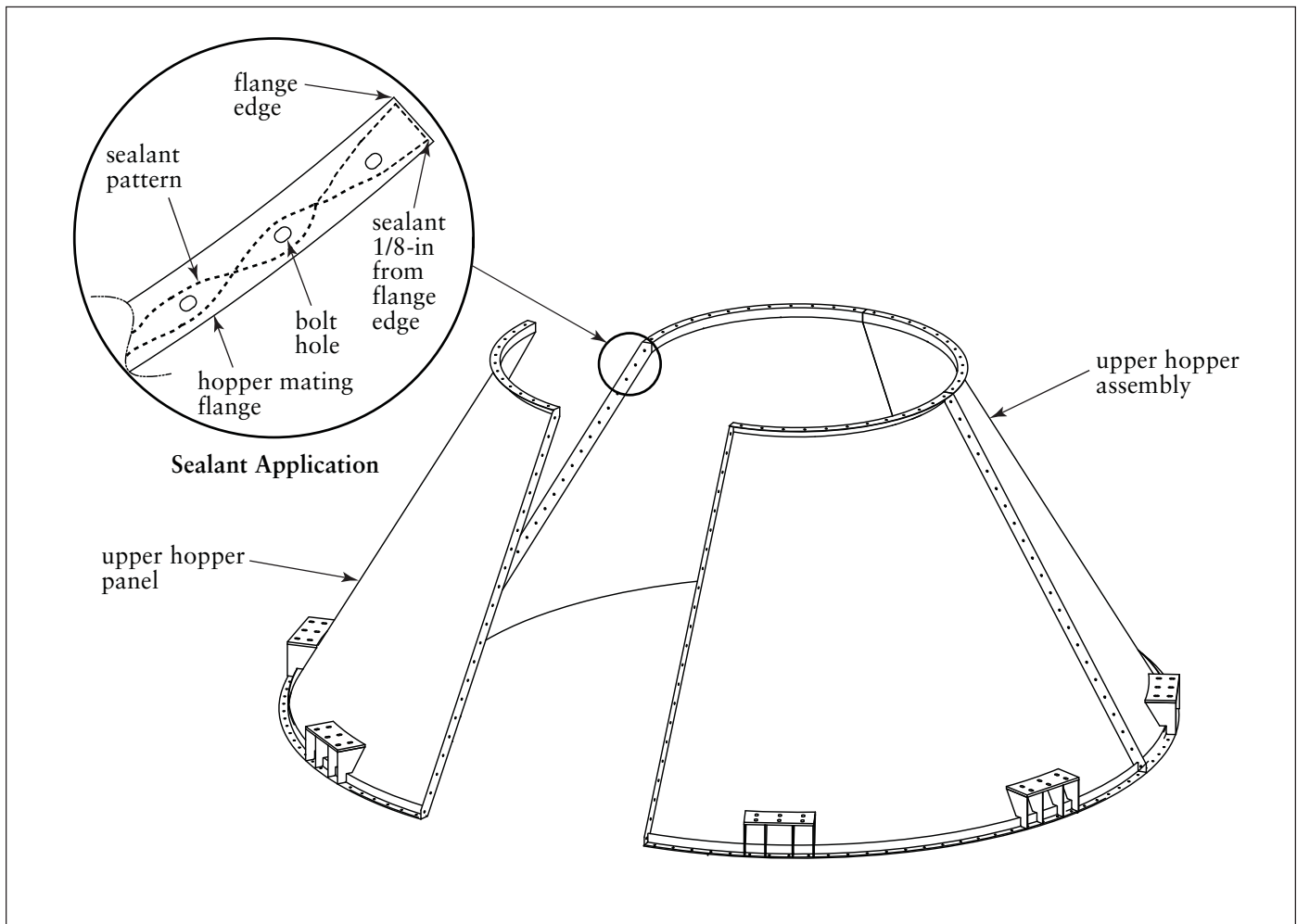


CAUTION!

- Take appropriate precautions to avoid injury (pinching) during hopper assembly or handling.
- Take appropriate precautions to prevent tripping or falling when working on or around the hopper and tube sheet assembly.

1. Mount the upper hopper panel upside down on a flat, clean surface. Use the tube sheet as a fixture if there is no flat area to work on. Do not apply sealant between the hopper panel and the tube sheet.

2. Temporary supports at the ends of each hopper panel may be required until the upper hopper ring is complete.
3. Before connecting the adjacent hopper panel, apply sealant to the mating flange within 1/8-in of both flange edges as shown.
4. Set the next panel and hand-tighten the hardware (connecting bolts should draw the adjoining flanges together but still allow for some slippage). Repeat steps until upper hopper assembly is complete.



Upper Hopper Assembly (Upside Down)

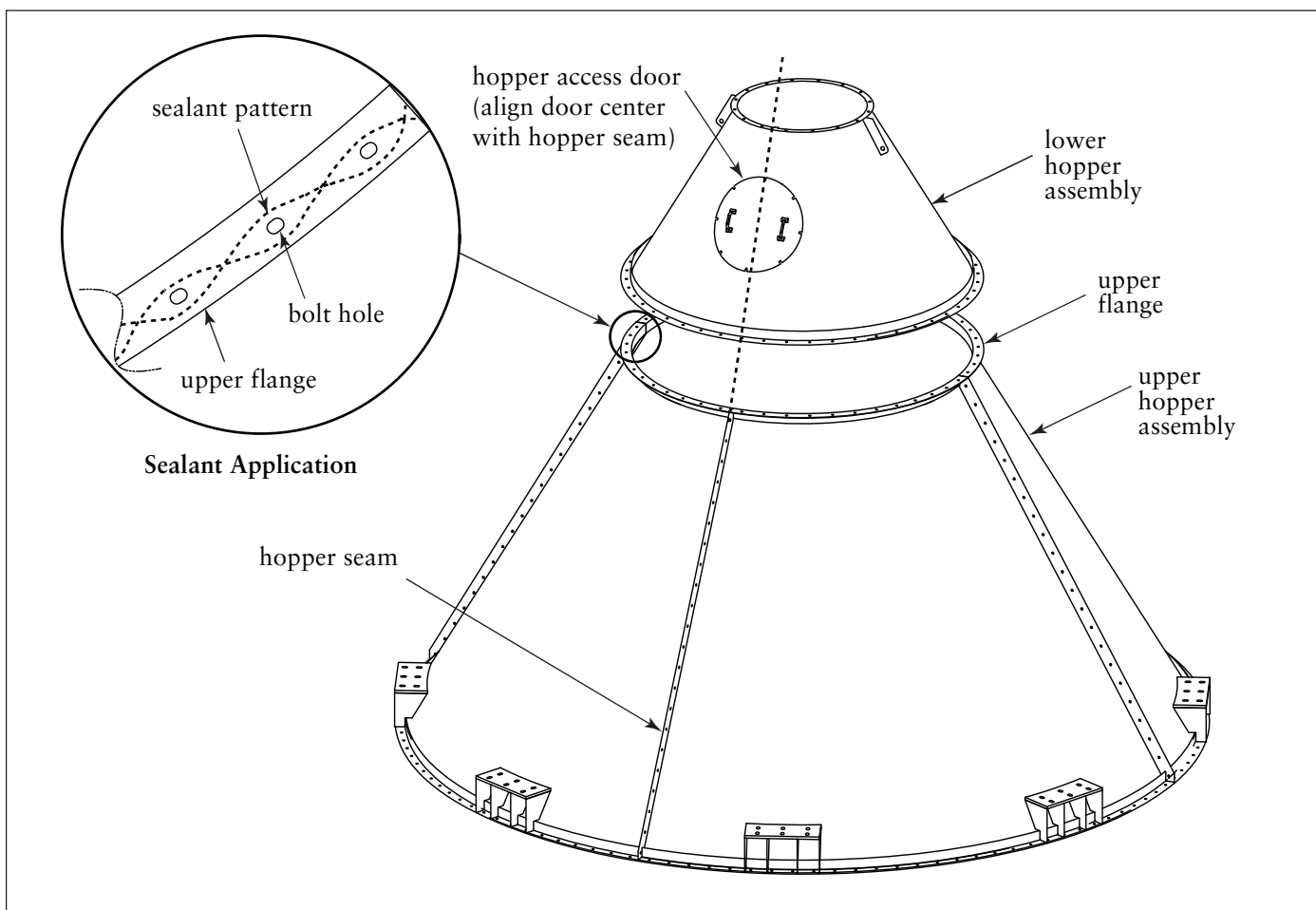
5. After the upper hopper is assembled, apply sealant to the top of the upper flange as shown to prepare for the lower hopper to be set.
6. Lower the lower hopper assembly onto the upper hopper assembly.
7. Align the hopper access door with a mating seam of the upper hopper assembly. This will force the hopper outlet flange's bolt pattern to straddle the centerline of the collector.
8. Insert all bolts connecting the lower hopper assembly to the upper hopper assembly and then tighten. Proceed by tightening all bolts of the upper hopper assembly.

9. After hopper assembly is completely bolted and tightened, undo any bolts connecting it to the tube sheet (if used).
10. Lift the hopper and rotate it to the upright position.



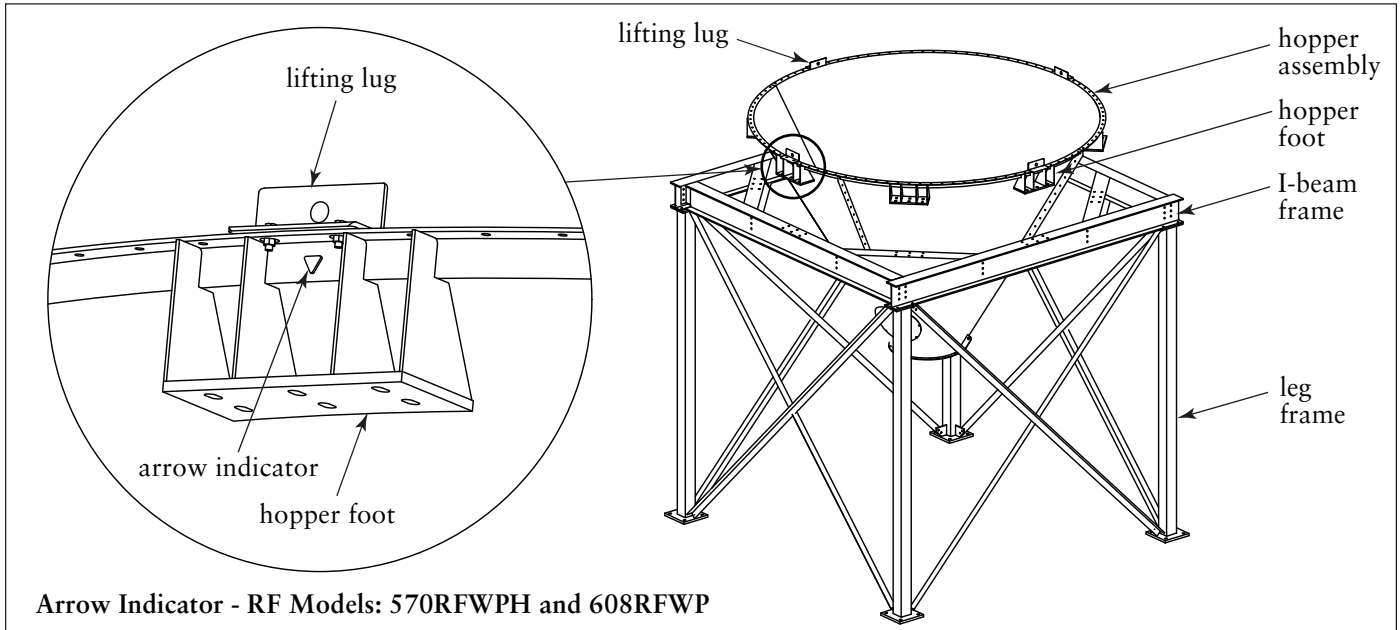
CAUTION!

- Use caution when lifting/rotating hopper. Keep tension on all straps/cables when lifting. Failure to comply may result in personal injury and/or property damage.
- Water overflow drains are required if sprinkler/fire suppression system is installed.



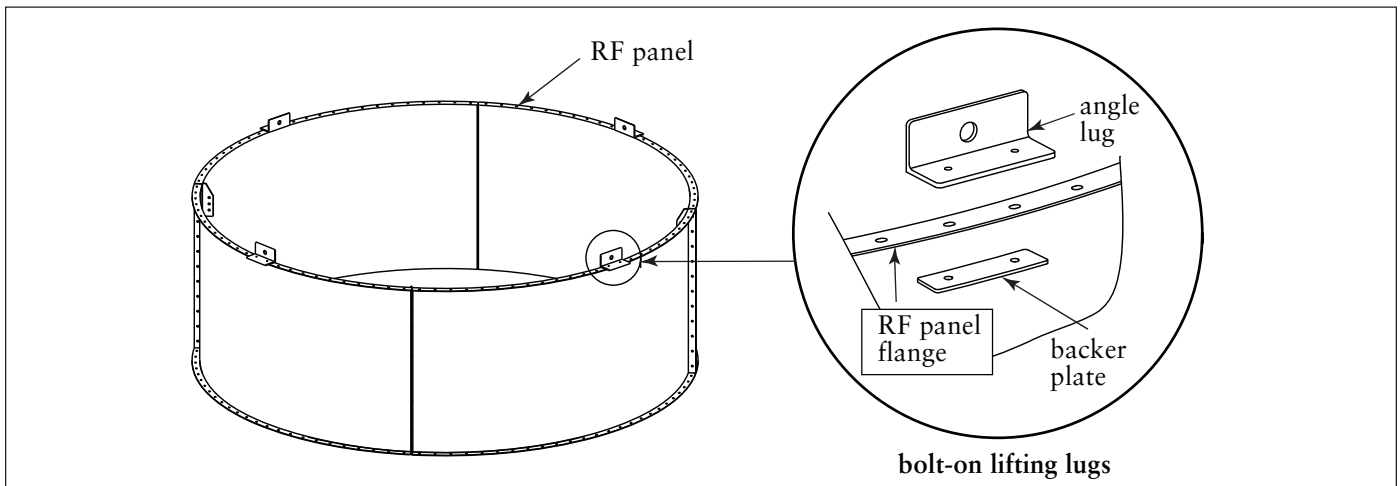
Hopper Assembly (Upside Down)

11. Attach lifting lugs 90° apart to the top of the hopper.
12. On RF models 570RFWPH and 608RFWP only, align the arrow indicators inside the hopper feet in the 0°, 90°, 180°, and 270° positions per the configuration drawing. See below illustration.
13. In this orientation, lower the hopper assembly into the leg frame. Fasten the hopper assembly securely to the I-beam frame with the provided 3/4-in hardware.



Hopper to Leg Frame Installation

Note: Lifting Lugs Bolt-On Usage - Use the provided bolt-on lifting lugs and grade 5 hardware when moving panels into position. Position the lugs such that excess swaying will be minimized. When lifting an assembly, use all four lugs with the backer plates attached. Never lift more than what is recommended in this manual.



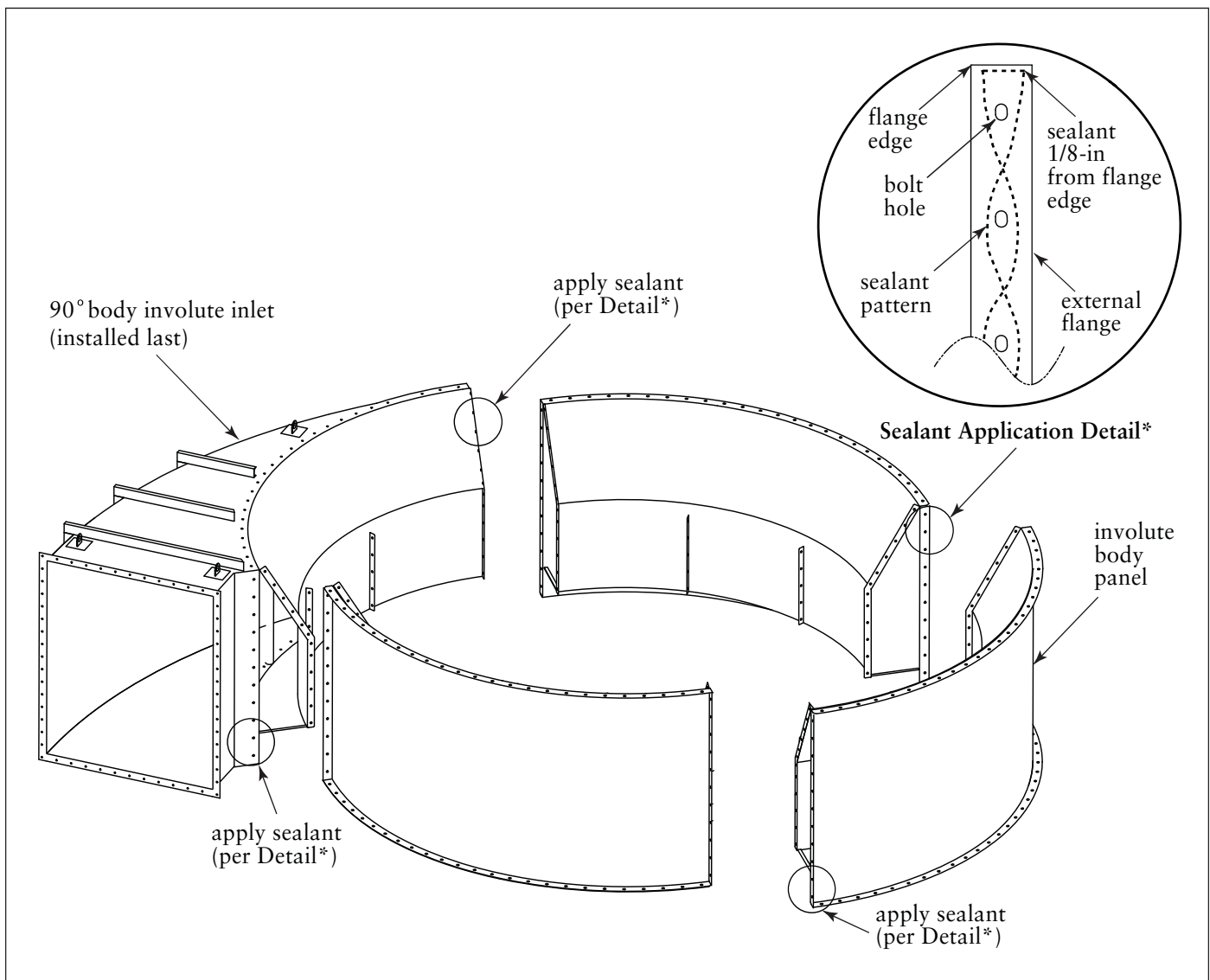
Bolt-On Lifting Lugs

Involute Inlet Assembly

Note: For High Inlet Models, see “Dirty Air Plenum with High Body Inlet Assembly” section.

1. Place the involute body panels onto a flat, clean surface. If there is no suitable surface, use the tube sheet as a template. Do NOT apply sealant between tube sheet and body panels. The 90° body involute inlet should be reserved and set into position last. Prior to setting an adjacent

panel, apply sealant to all external flanges within 1/8-in from flange edge as shown. Once the body panels are bolted and joined with the 1/2-in hardware, apply sealant to the 90° body involute inlet and set it into place.

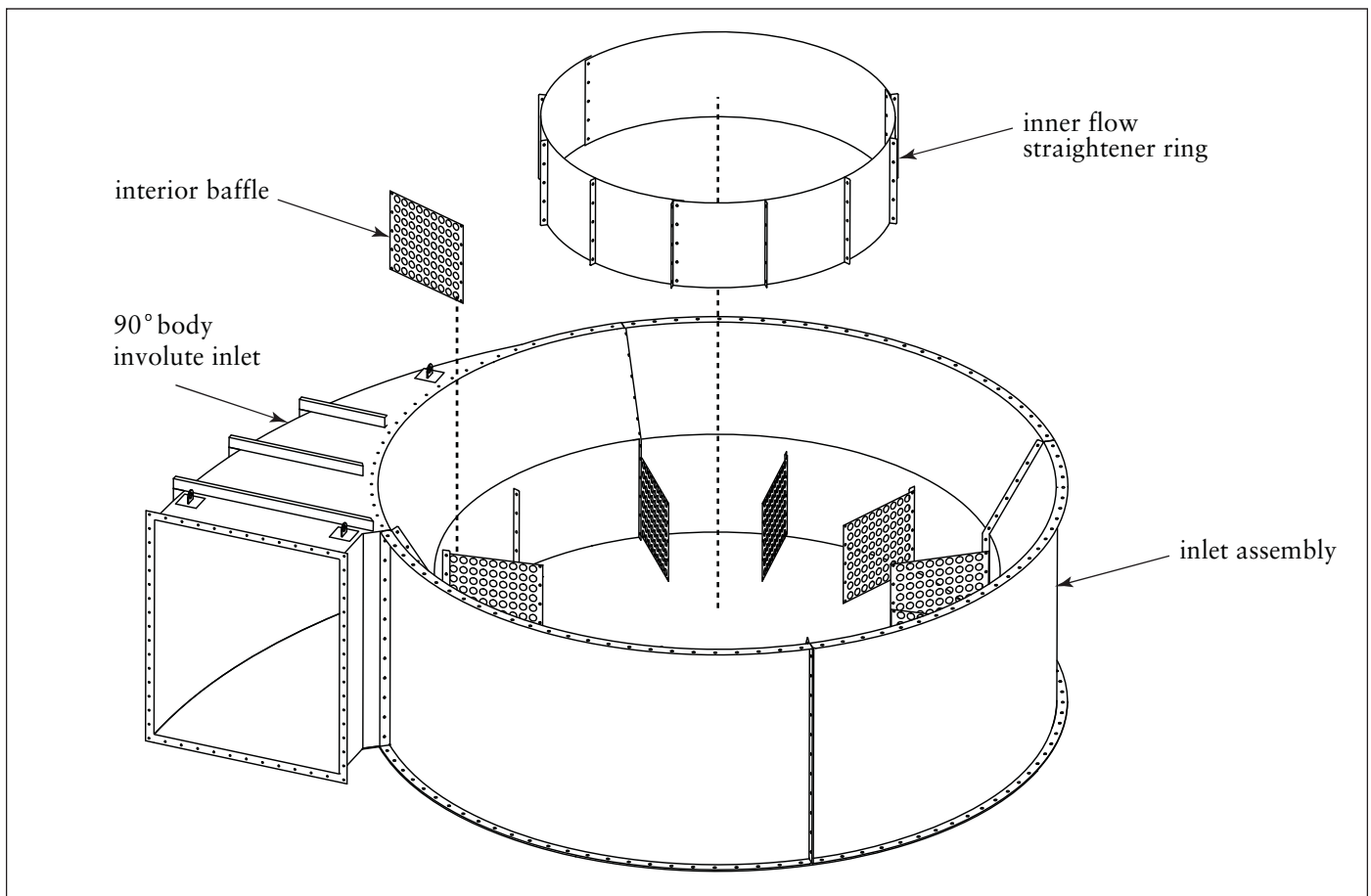


Involute Body Panel Assembly

2. After assembling the perimeter body panel assembly, install the interior baffles by bolting them to the inlet assembly.
3. Off to the side, assemble the inner flow straightener ring. The inner ring panels overlap each other to complete the ring. Orient all hardware bolting from the outside of the ring to the inside of the ring to eliminate any interference in the next step. Lift and then lower the inner flow straightener ring into the center of the inlet as shown.

Note: Improper installation of internal baffles and inner flow straightener ring will compromise structural integrity. Ensure proper installation of the internal baffles and inner flow straightener ring.

4. Rotate the inner flow straightener ring until all adjoining flanges make contact. Bolt together and tighten all bolts.



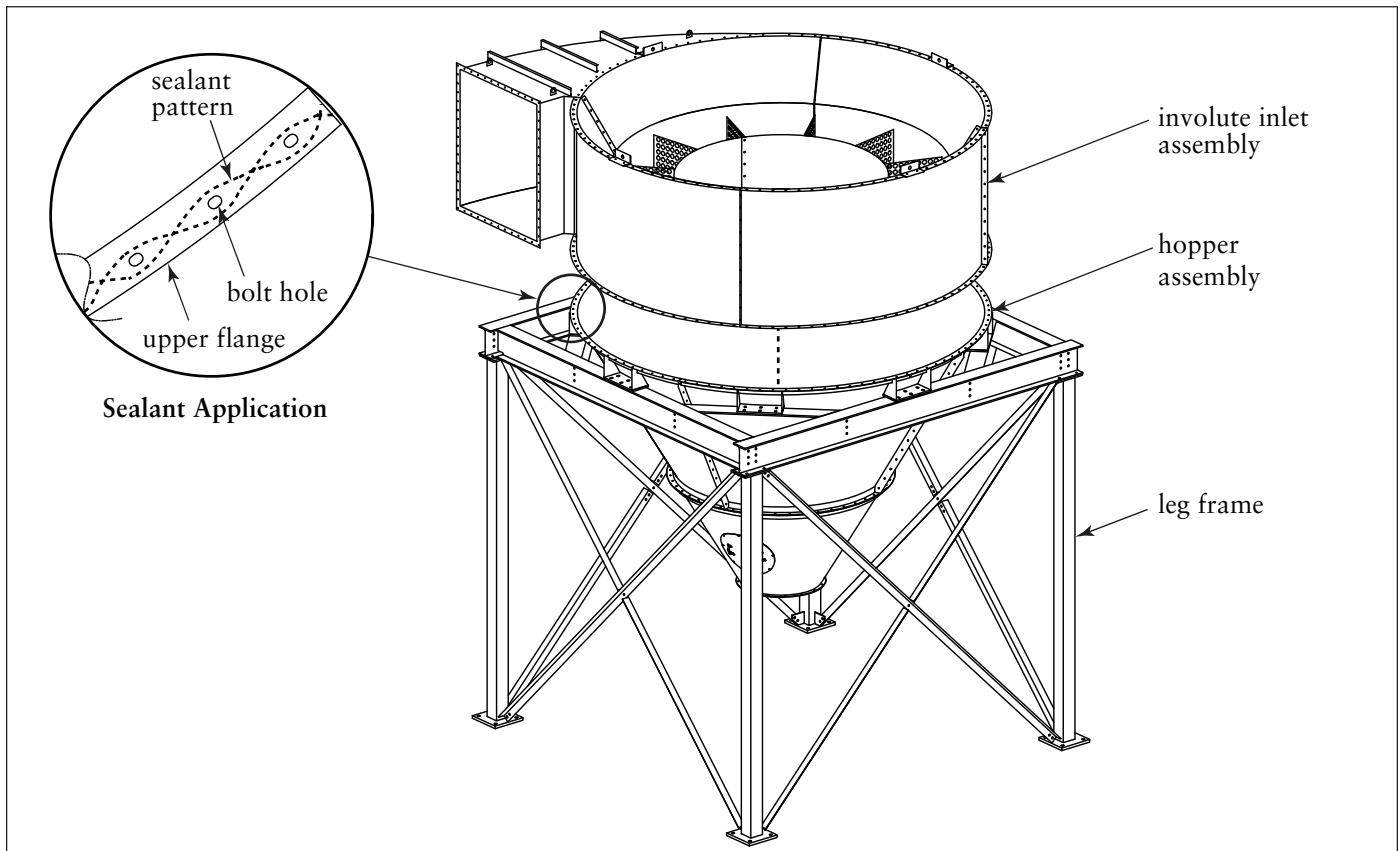
Inner Flow Straightener Ring Installation

5. Apply sealant to the top of the hopper flange as shown to prepare for the setting of the inlet assembly onto the hopper flange. Properly attach and lift inlet assembly with the lifting lugs per note on page 13. Lift inlet assembly into position while noting final desired orientation.
6. Inspect the orientation of the inlet ensuring the inlet flange is parallel to the I-beam frame as shown on the configuration drawing. As the inlet is lowered onto the hopper, align all holes and bolt tightly with 1/2-in hardware.



CAUTION!

- Lift the involute inlet ring in a balanced fashion to eliminate any unnecessary swinging, tipping, or uneven lifting.
- Lifting with the (3) lifting lugs on the involute inlet will result in uneven lifting and cause damage to the inlet section (fall hazard).
- Do not lift the involute inlet section by the perforated flow straightener baffles.



Involute Inlet Assembly Installation

Dirty Air Plenum Assembly for Involute Inlet

Note: For High Inlet Models, see “Dirty Air Plenum with High Body Inlet Assembly” section on page 22.

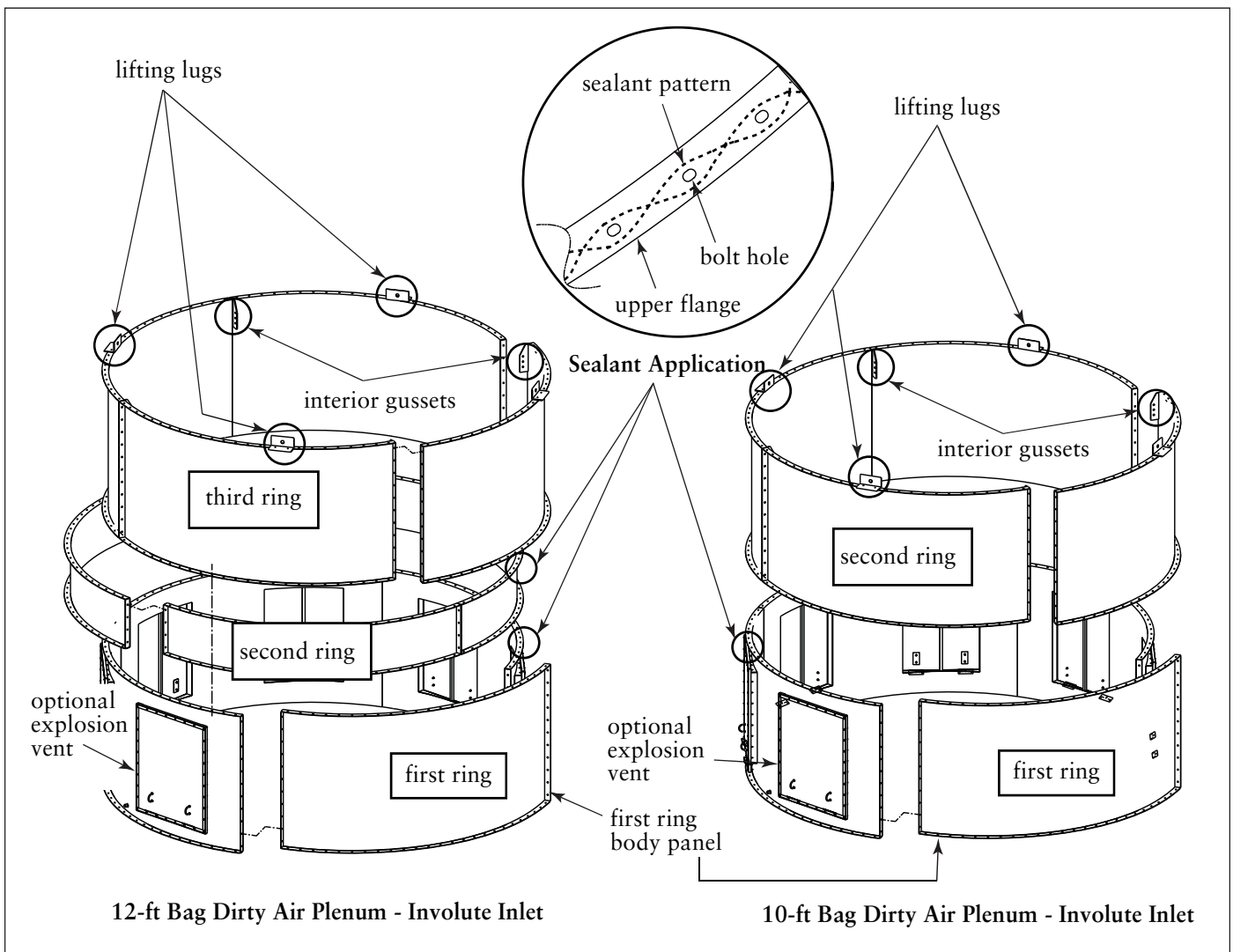
1. Set the 66-in tall first ring body panels onto a clean flat surface. It is recommended that a tube sheet be used as a template. Do not apply sealant to the tube sheet. Do not use panels with interior gussets, which are used for the top ring.



CAUTION!

Optional explosion vents must be in the lowest ring. Errors in location of explosion relief panels will reduce their performance potentially causing a risk of personal injury or death.

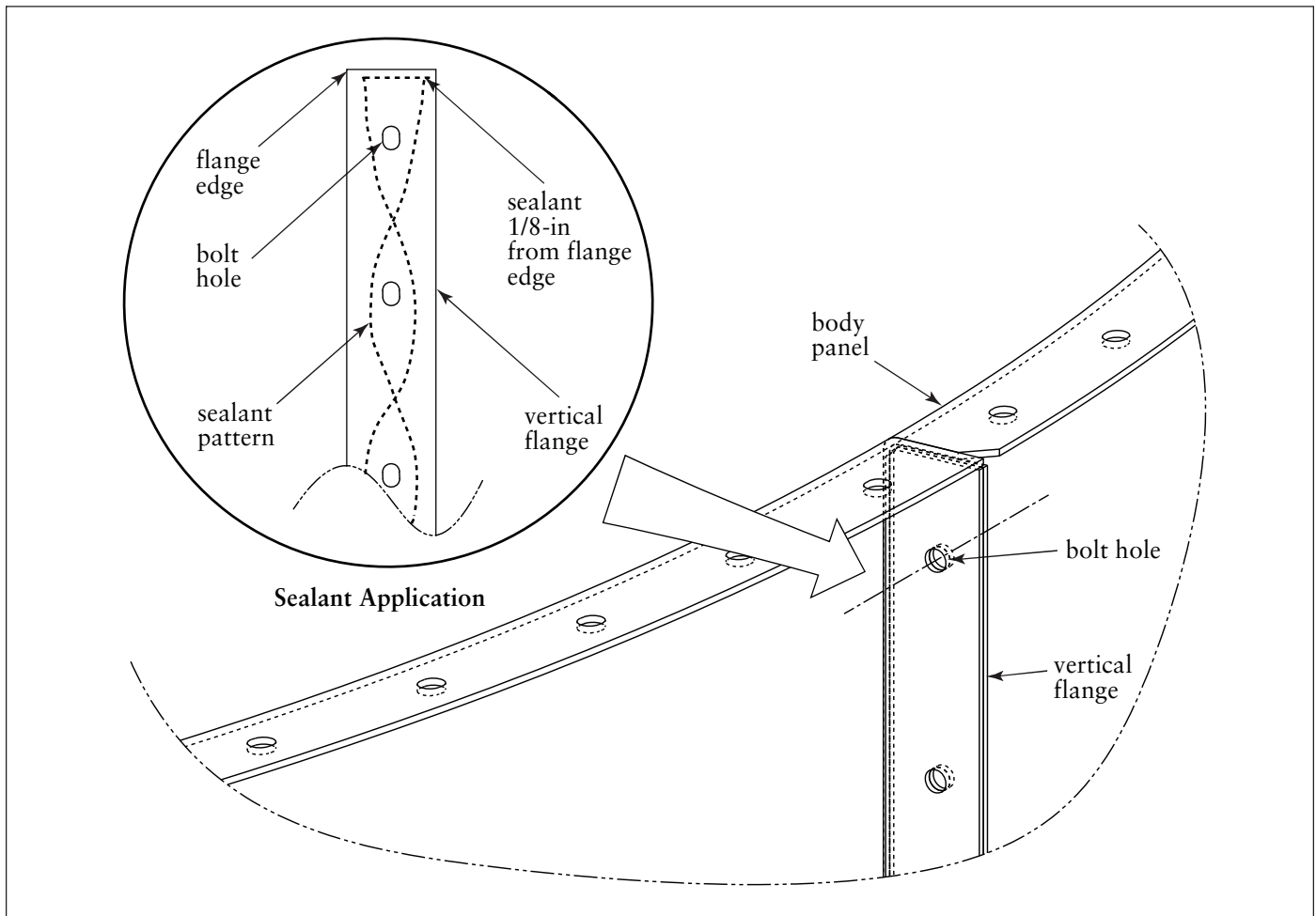
Note: Take precaution against pinching when handling and installing one body panel to the next.



Dirty Air Plenum Assembly - Involute Inlet

2. Once two or more panels are side by side, apply sealant to the vertical flange of the panel within 1/8-in of the vertical flange's top and bottom edge as shown and press up against the adjoining panel. Align the holes and insert the 1/2-in bolt hardware. Keep hardware hand-tightened.

Note: Take precaution against pinching when handling and installing one body panel to the next.



Panel Installation

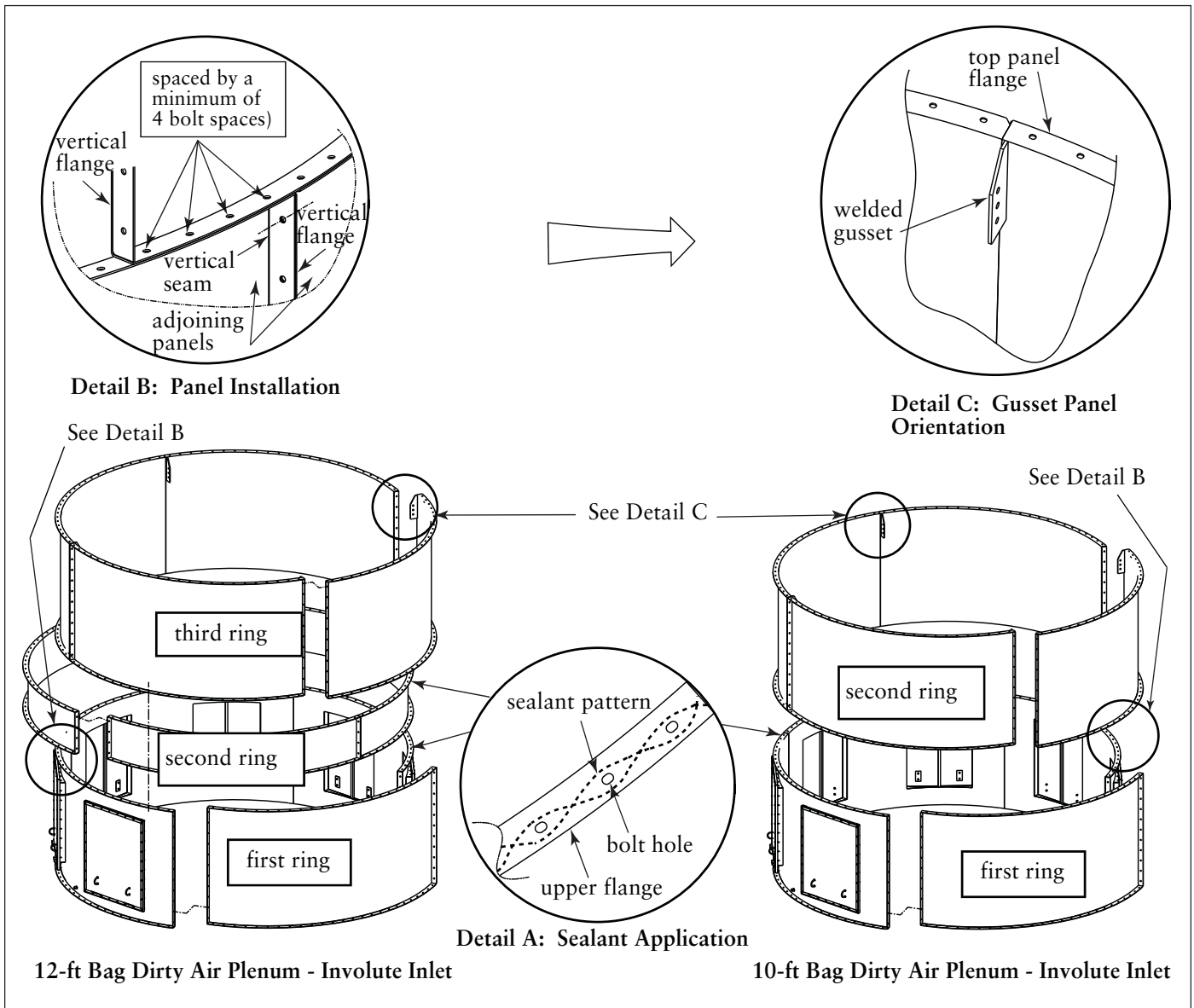
3. Finish joining the body panels until a complete body panel ring is assembled.
4. After completing the first body panel ring assembly, apply sealant to the top flange. See Detail A.

Note: The vertical seams between body panel assemblies must be spaced by a minimum of 4 bolt spaces as shown in Detail B. Insert hardware and hand-tighten.

5. Assemble the second ring on top of the first. For a 12-ft bag length collector, the next ring will be a 24-in tall ring. For a 10-ft bag length

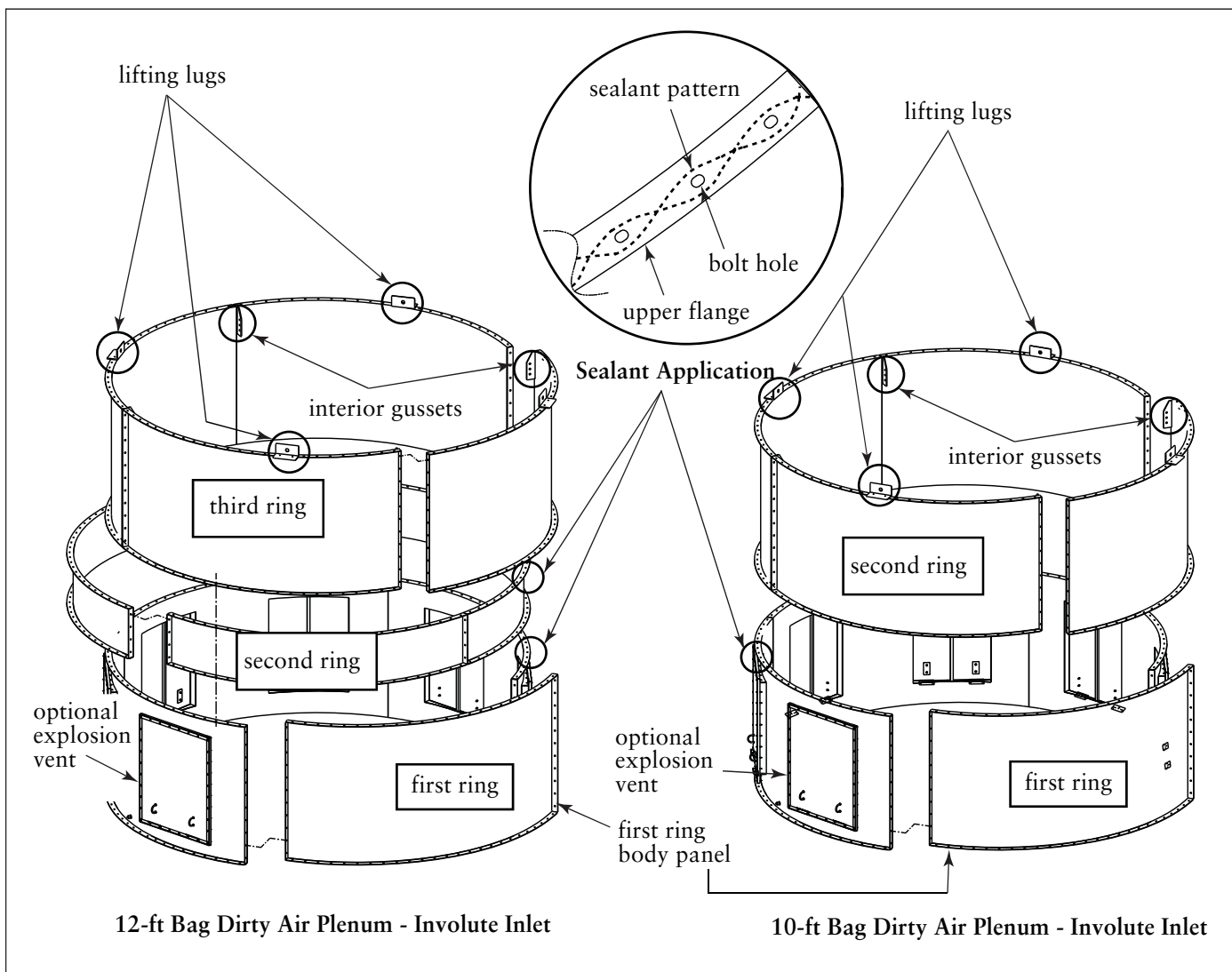
collector, the next ring will be a 66-in tall ring. This ring of the Dirty Air Plenum and additional rings will be assembled using the prior ring as a template. Lift a panel into place taking note that vertical seams must be spaced by a minimum of 4 bolt spaces. See Detail B. Insert hardware and hand tighten.

Note: The upper most ring of the dirty air assembly uses panels with gussets welded to them. Gussets must be oriented to the top of the ring. These will be used to secure the tube sheet in later steps. See Detail C.



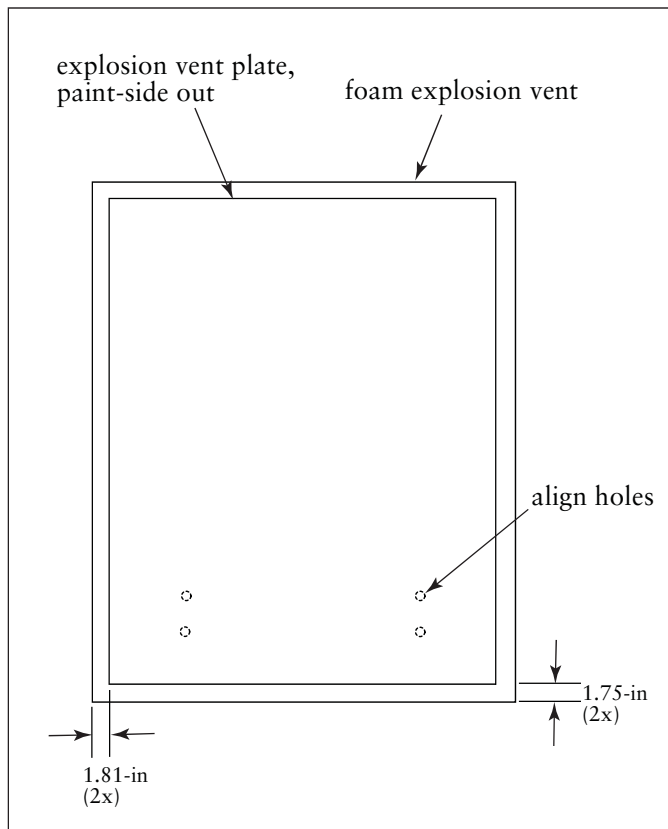
Dirty Air Plenum Panel Assembly - Involute Inlet

6. As adjacent panels are installed, install the adjacent plate by applying sealant to one face of the vertical flange and pressing it up to the other vertical flange from the outside of the collector. Insert bolts and hand-tighten. See Panel Installation illustration on page 18.
7. After completing the second body panel ring, tighten the connections between the first and second body panel rings followed by all the vertical flanges.
8. For 12-ft bag length collector, the third and final dirty air plenum ring will be 66-in tall. Assemble ring following the previous steps 5-7, ensuring the vertical seams overlap each other by a minimum of 4 bolt holes. See previous illustration on page 19.
9. Properly attach lifting lugs and lift dirty air plenum with the lifting lugs per note on page 13.
10. Set the dirty air plenum off to the side but within reach of the crane. Use standoffs under the flanges to keep them off of grade.

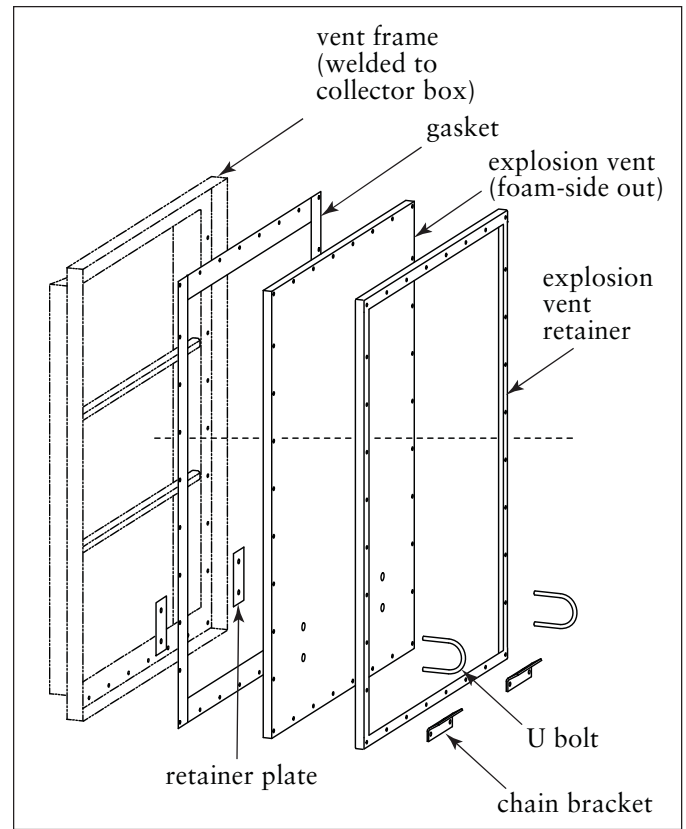


Dirty Air Plenum Assembly - Involute Inlet

11. If applicable, install optional explosion vents by referring to the Donaldson-supplied drawing to finish explosion vent assembly and vent installation to the collector.



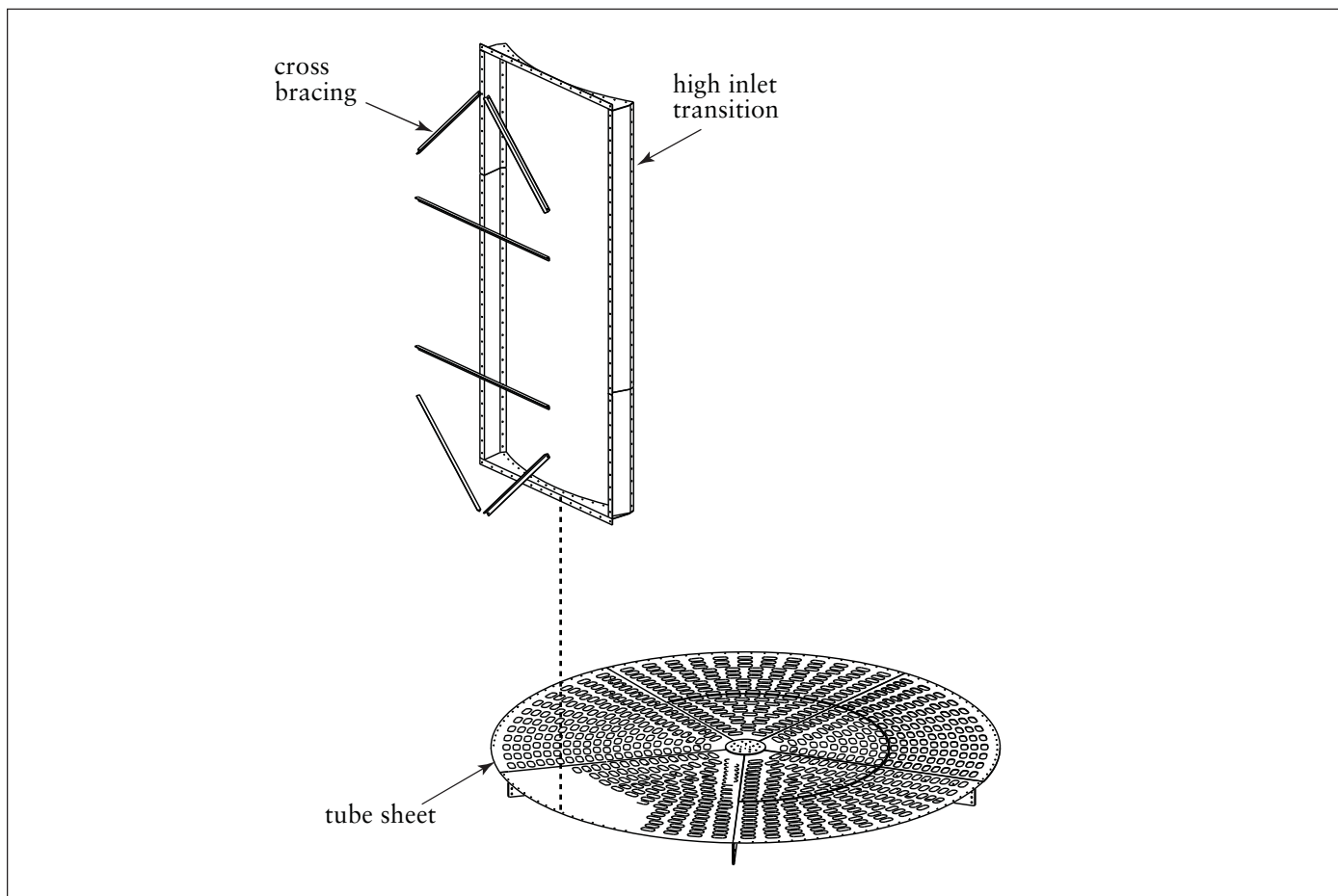
Explosion Vent Assembly - Sealant Application



Explosion Vent Assembly and Installation

Dirty Air Plenum with High Body Inlet Assembly

1. Locate the high inlet transition and attach the temporary cross bracing with the provided nuts and bolts.
2. Set the high inlet transition onto the tube sheet (do not apply sealant to the tube sheet). Use the tube sheet to help align the panels until all is assembled.



High Inlet Transition Installation

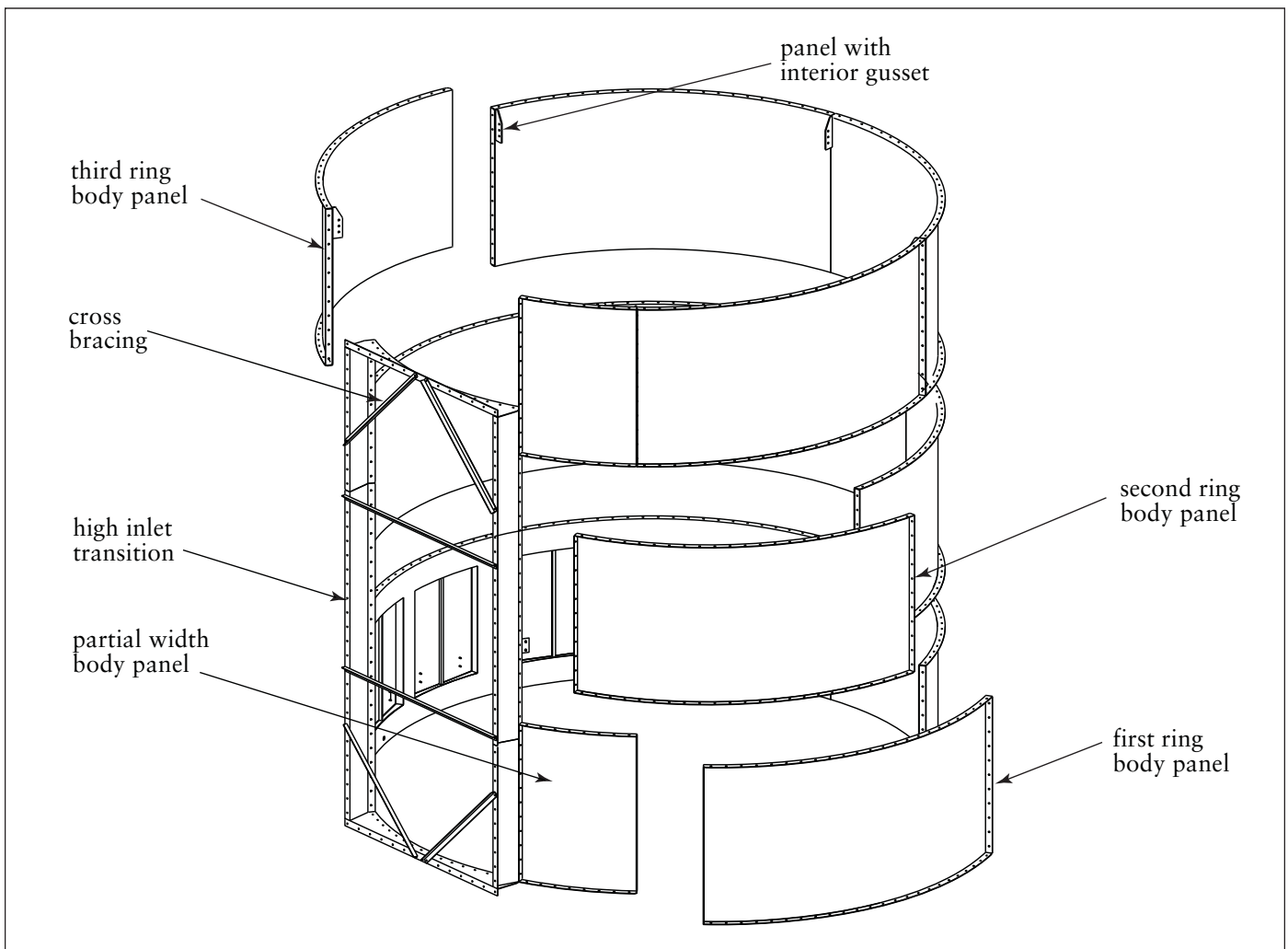
Note: Not Applicable to Involute Inlet.

3. Locate the three 66-in tall partial width body panels. Do not use panels with interior gussets, which are used for the top ring.
4. Set the first 66-in partial width body panel onto the tube sheet (do not apply sealant to the tube sheet) to the right of the inlet transition.

Note: Take precaution against pinching when handling and installing one body panel to the next.

5. **For Non-Explosion Vented Dirty Air Plenum:** Locate a standard 66-in tall panel and place it in the next, counter-clockwise position relative to the first partial width panel. Join panels following instructions below. Continue placing standard panels until the space for the high inlet is all that remains.

For Explosion Vented Dirty Air Plenum: For the 570RFPWH model, locate a standard 66-in tall panel and place it in the next, counter-clockwise position relative to the first partial panel. Join panels following instructions below. Continue

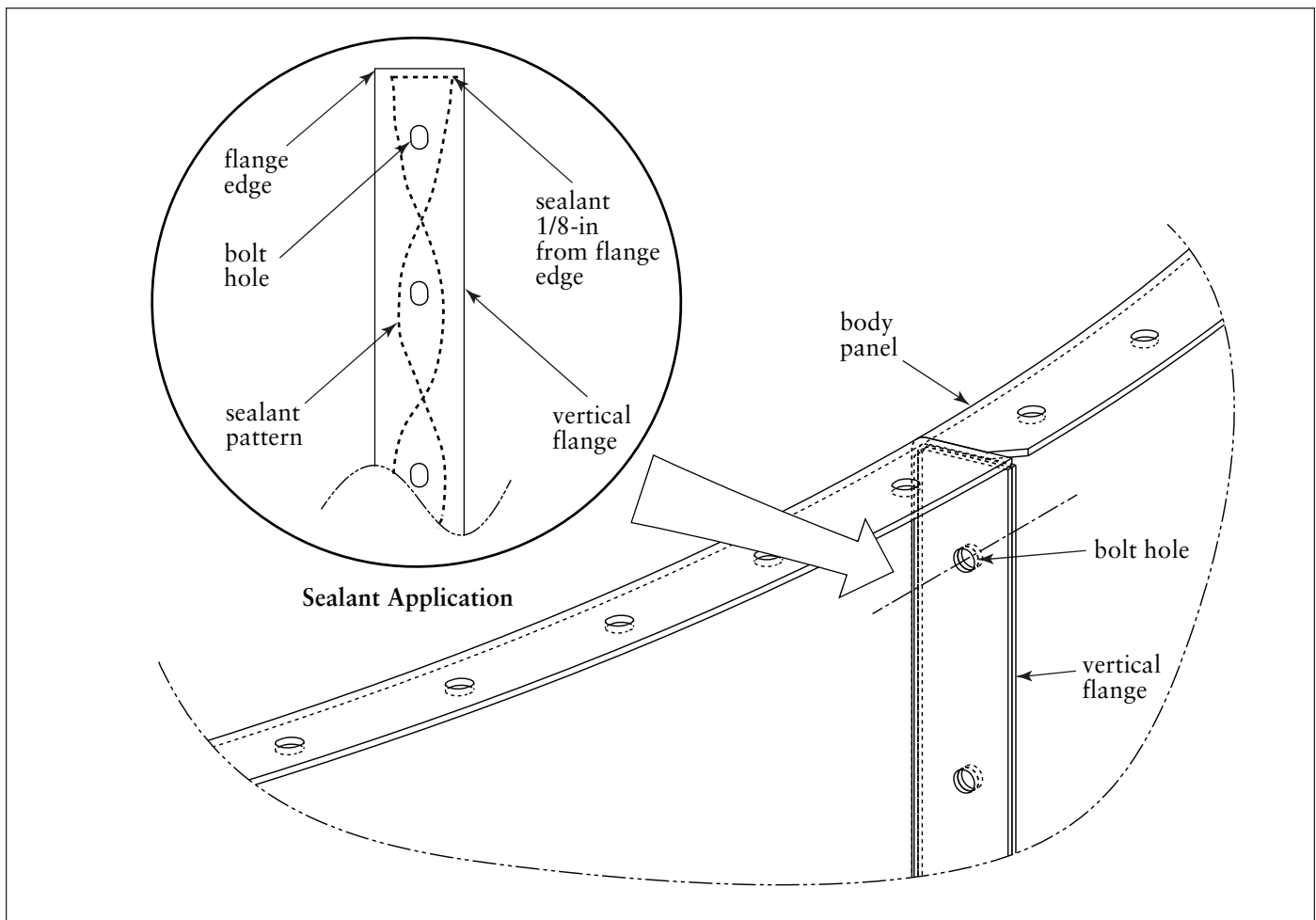


Dirty Air Plenum Assembly (776/851 Size shown)

by placing explosion vent panels until reaching the high inlet. **Donaldson-supplied customer drawing takes precedence over these manual instructions.**

For the 776RFWPH and 851RFWPH, the next (2) panels will be standard, non-explosion vent panels. The remaining (2) panels in that ring will have (3) explosion vents each. **Donaldson-supplied customer drawing takes precedence over these manual instructions.**

6. Once two or more panels are side by side, apply sealant to the vertical flange of the panel within 1/8-in of the vertical flange's top and bottom edge as shown and press it up against the adjoining panel. Align the holes and insert the 1/2-in bolt hardware. Keep hardware hand-tightened.



Panel Installation

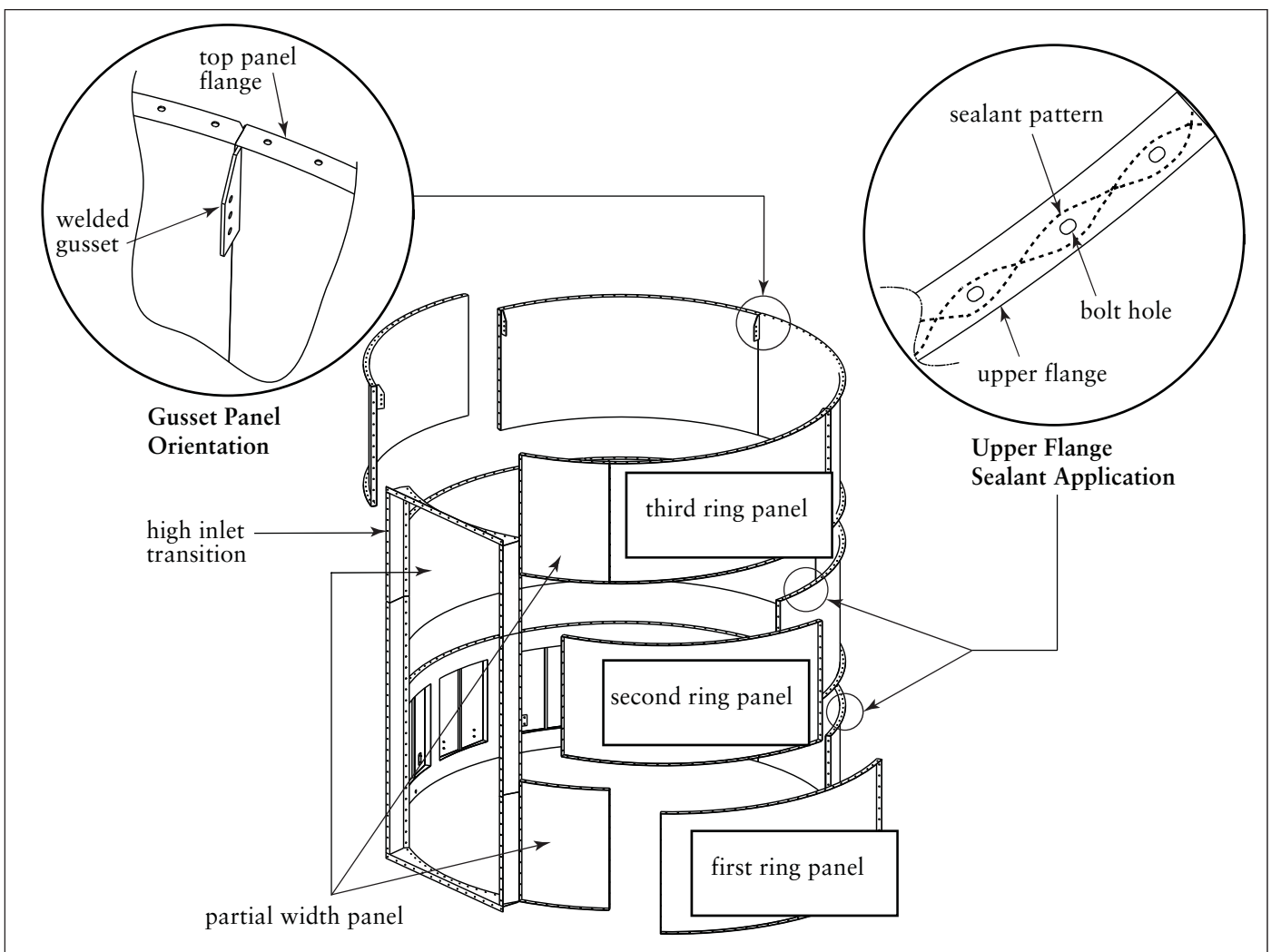
7. Upon completing the first ring of panels, apply sealant to the top of the first ring's flange.
8. Install a second ring of panels by placing a full sized 66-in tall panel on top of the partial/full panel seam by following step 6.

Note: The vertical seams between body panel assemblies must be spaced by a minimum of 4 bolt spaces. Insert hardware and hand-tighten.
9. Continue setting panels around the circle - counter-clockwise. Another partial width panel will complete this ring. Attach the panels as previously described. Once the second ring is

complete, apply sealant to the second ring's upper flange.

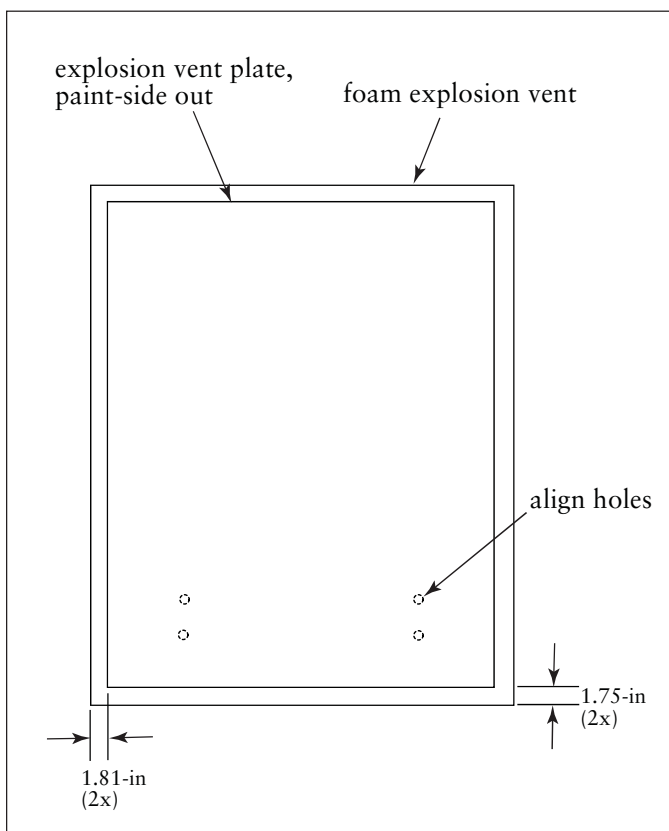
10. Assemble the third ring of panels starting with spanning the partial/full panel seam from the second ring (ensure two partial width panels do not stack on top of one another). Then attach the gusseted panels in a similar manner to the first ring. Install and hand-tighten hardware on the Dirty Air Plenum from top to bottom.

Note: The panels used for this ring contain a welded gusset, which will be used to position and bolt the tube sheet into place at a later time.

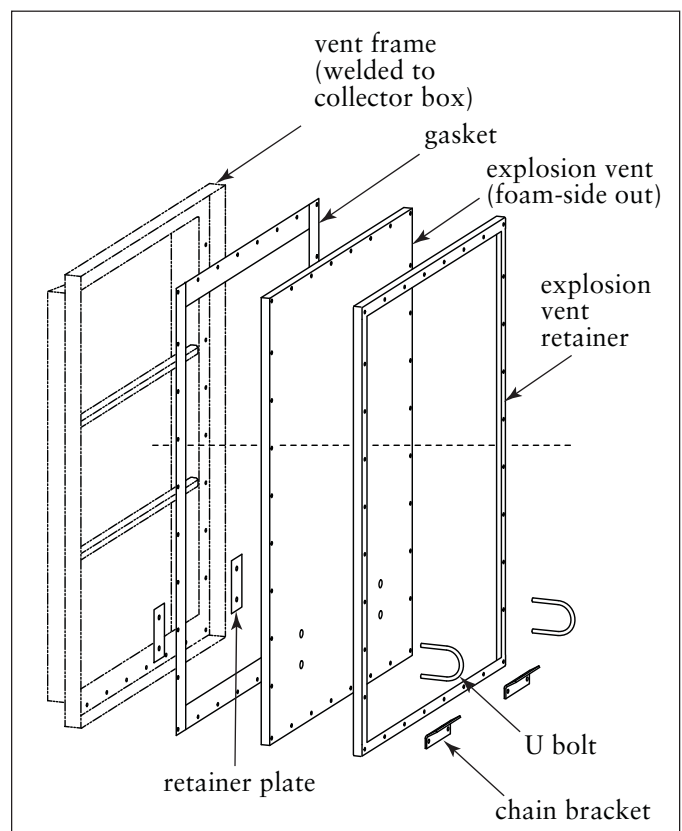


Dirty Air Plenum Assembly - Sealant Application (776/851 Size shown)

11. Properly attach lifting lugs and lift dirty air plenum with the lifting lugs per note on page 13.
12. Set the dirty air plenum off to the side but within reach of the crane. Use standoffs under the flanges to keep the plenum off of grade.
13. If applicable, install optional explosion vents by referring to the Donaldson-supplied drawing to finish explosion vent assembly and vent installation to the collector.



Explosion Vent Assembly - Sealant Application



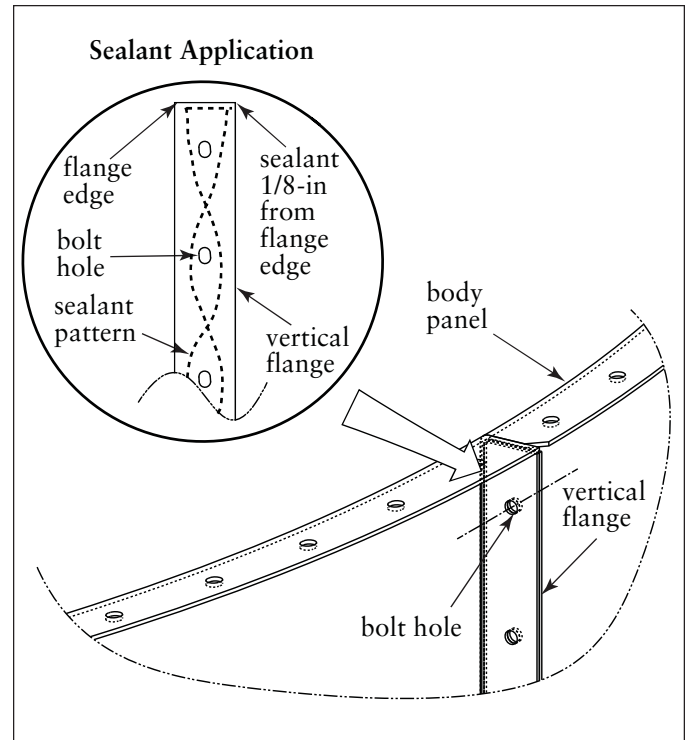
Explosion Vent Assembly and Installation

Clean Air Plenum Assembly

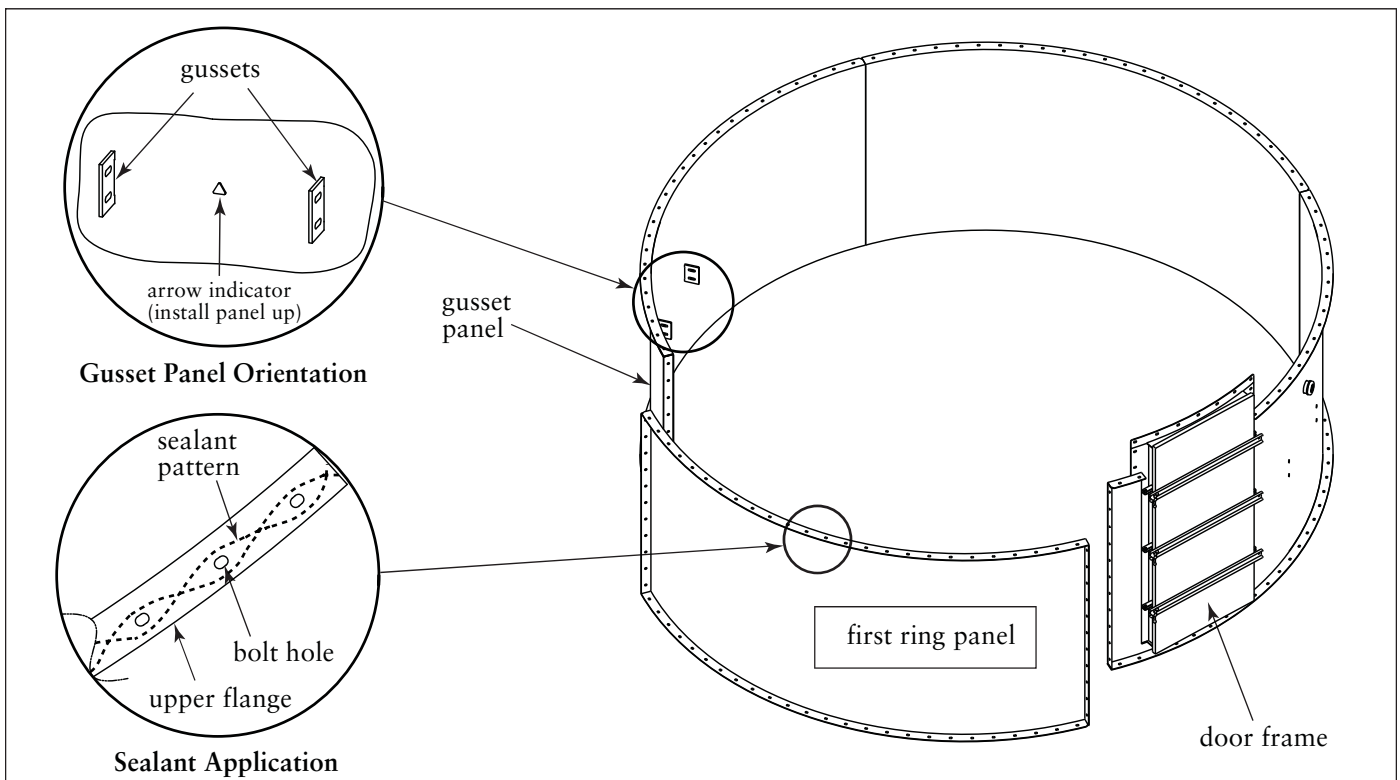
1. Set the 66-in tall clean air first ring body panels onto a flat clean surface. The tube sheet may be used as a template if no other suitable surface is available. Do not apply sealant to the tube sheet.
2. Once two panels are side by side, apply sealant to the vertical flange of the panel within 1/8-in of the vertical flange's top and bottom edge as shown and press up against the adjoining panels. Align the holes and insert the 1/2-in bolt hardware. Keep hardware hand-tightened. The first ring of clean air plenum includes the door frame panel and the cleaning system's H-frame gusset panel.

Note: The panel containing the welded gussets must be opposite the door frame as shown. This will be used for the cleaning drive H-frame for later installation. There is an arrow indicator denoting which direction is up as shown.

3. After assembling first ring, apply sealant to the top flange of the first ring as shown and to the door frame flange.



Panel Installation



First Ring Assembly - Clean Air Plenum

4. Prepare to assemble the second ring. The second ring has unique panels, which includes the outlet panel and door frame panel as shown.

Note: The placement of the outlet is critical to ensure proper orientation. Consult the original order or Donaldson-supplied customer drawing to determine where to position the outlet (0°, 180°, or 270°) while noting the door access is always at the 90° position. The arrow indicator on the outlet panel denotes which direction is up as shown.

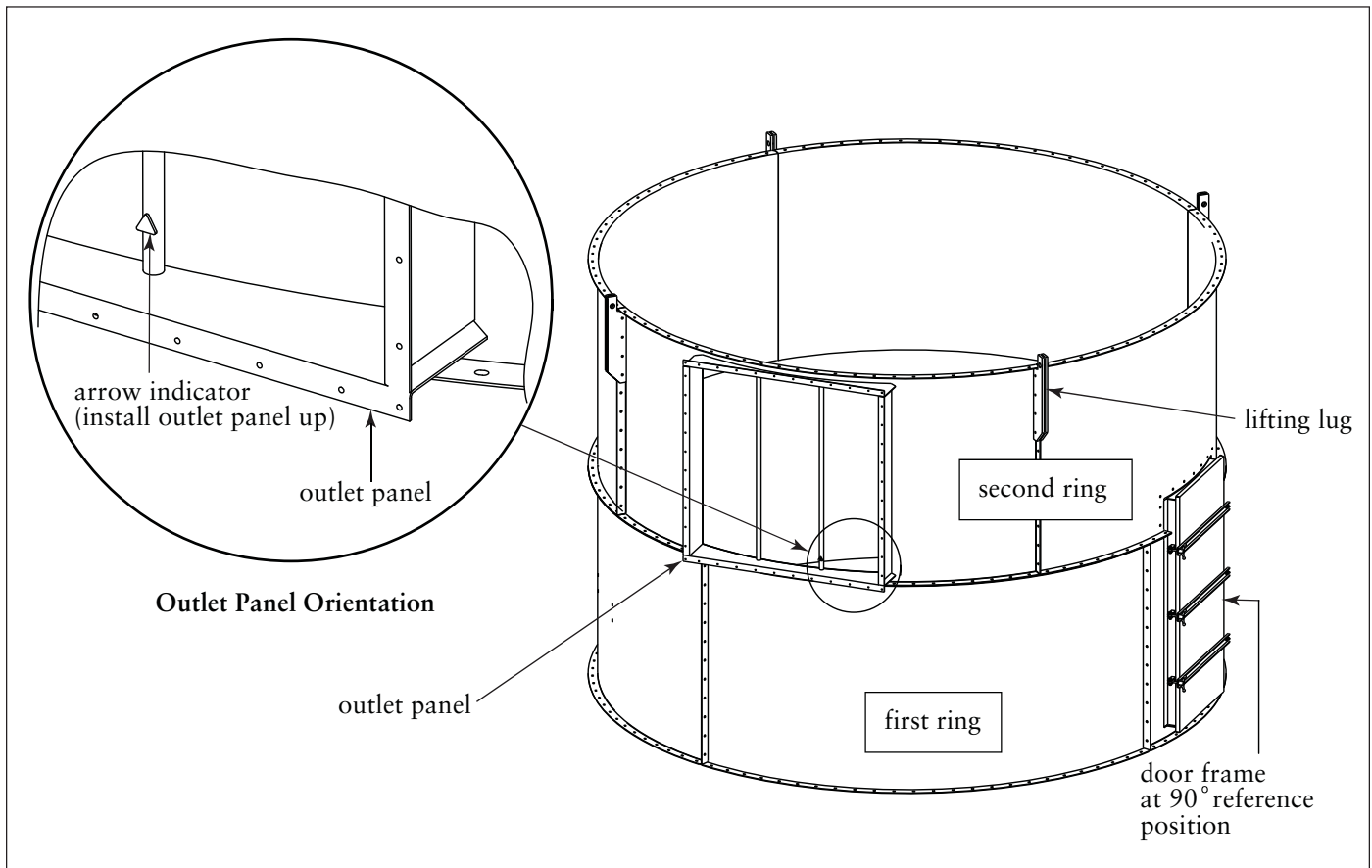
Note: The vertical seams between body panel assemblies must be spaced by a minimum of 4 bolt spaces. Insert hardware and hand-tighten.

5. Assemble panels for the second ring. Install the panels by applying sealant and then pressing it up to the adjacent panel. Insert bolts and hand-tighten. See Panel Installation illustration on page 27.
6. For a 10-ft bag length collector, attach the 4 hole, 3/4-in plate lifting lugs on the outside of the collector using the grade 8, 1/2-in hardware per print. Attach the lifting lugs to the (4) upper most set of bolt holes.



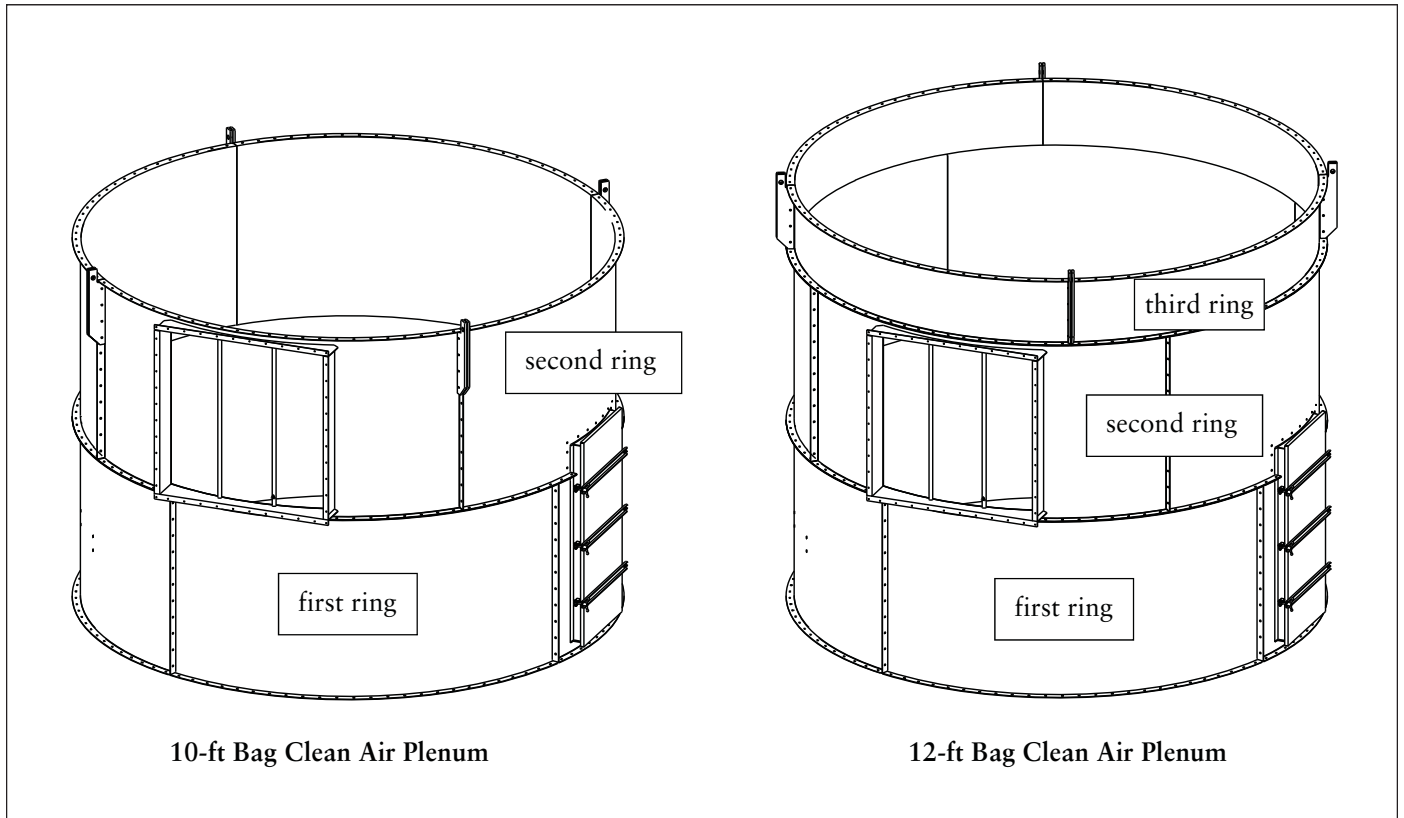
CAUTION!

Lifting lug attachment requires the supplied grade 8, 1/2-in diameter hardware. Using any other grade may result in lifting lug failure.



Second Ring Assembly - Clean Air Plenum

7. Once the second ring assembly is complete, tighten the bolts between the first and second ring, followed by the vertical flanges and lifting lugs.
8. For a 12-ft bag length collector, the third and final clean air plenum ring will be 24-in tall. Assemble ring following step 2. Attach the 4 hole 3/4-in lifting lugs on the outside of the collector using the grade 8, 1/2-in diameter hardware per print.



Clean Air Plenum

Cleaning Mechanism Installation

The H-frame for the cleaning system can now be installed into the Clean Air Plenum.

1. Lift the H-frame into position, ensuring it remains horizontal throughout the lifting and lowering process. Lower the H-frame into the Clean Air Plenum.

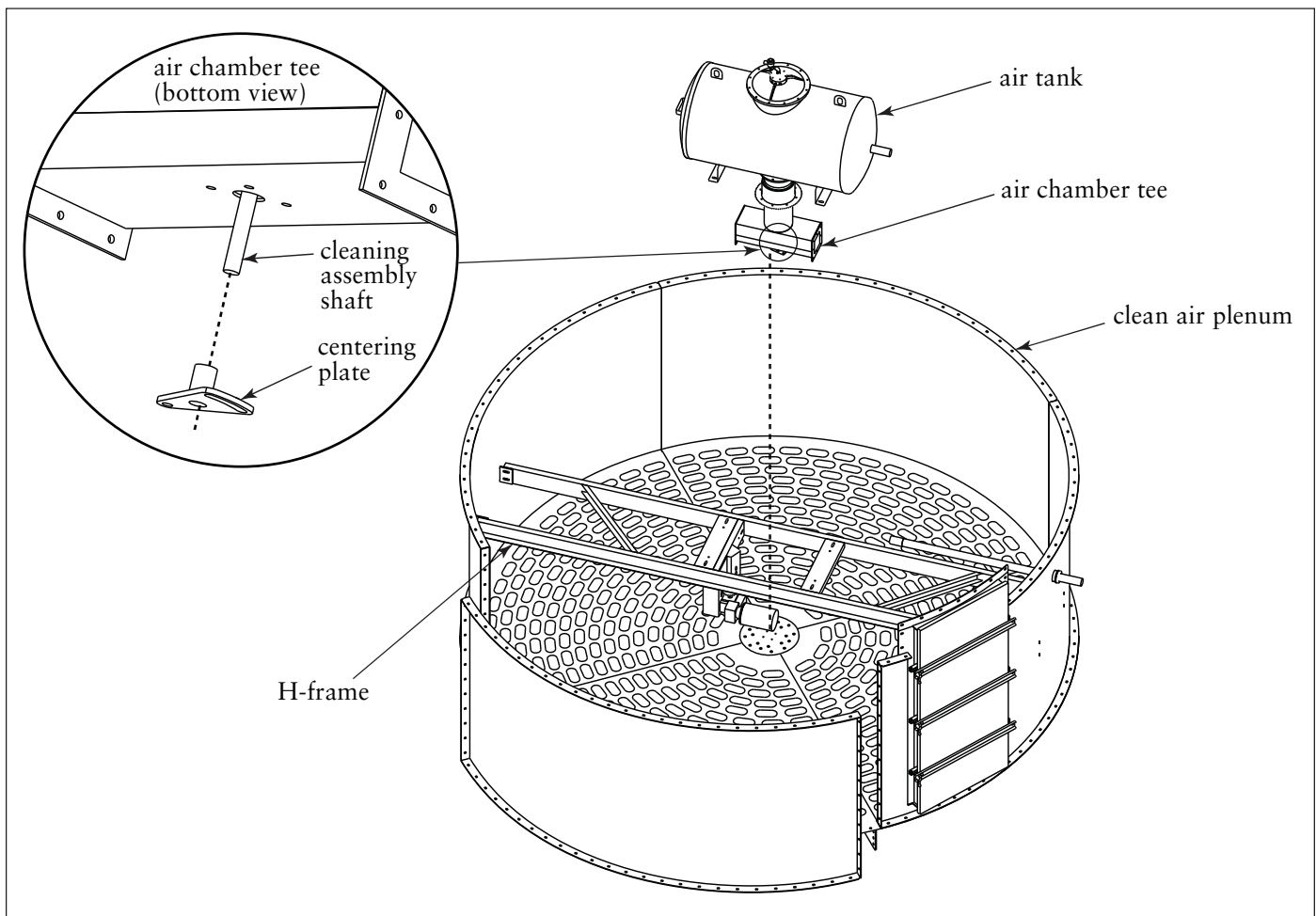


CAUTION!

Lowering the H-frame into position can create pinch points. Take proper precautions to avoid personal injury.

2. Bolt the H-frame into position using 1/2-in hardware, ensuring it is parallel relative to the Clean Air Plenum body flanges.

3. Apply sealant to the bottom bolt flange of the Air Tank.
4. Bolt the Air Chamber Tee to the Air Tank with 3/8-in hardware per the provided print.
5. Lower the Air Tank assembly into the clean air plenum and into the H-frame as shown.
 - a. Slide the centering plate onto the cleaning assembly shaft and temporarily secure it to the shaft with tape. Failure to do so will result in relifting the air tank at a later time.
 - b. Square the Air Tank assembly and connect the (4) 1/2-in corner bolts, which holds the Air Tank assembly to the H-frame. Leave connecting hardware hand-tightened at this time.



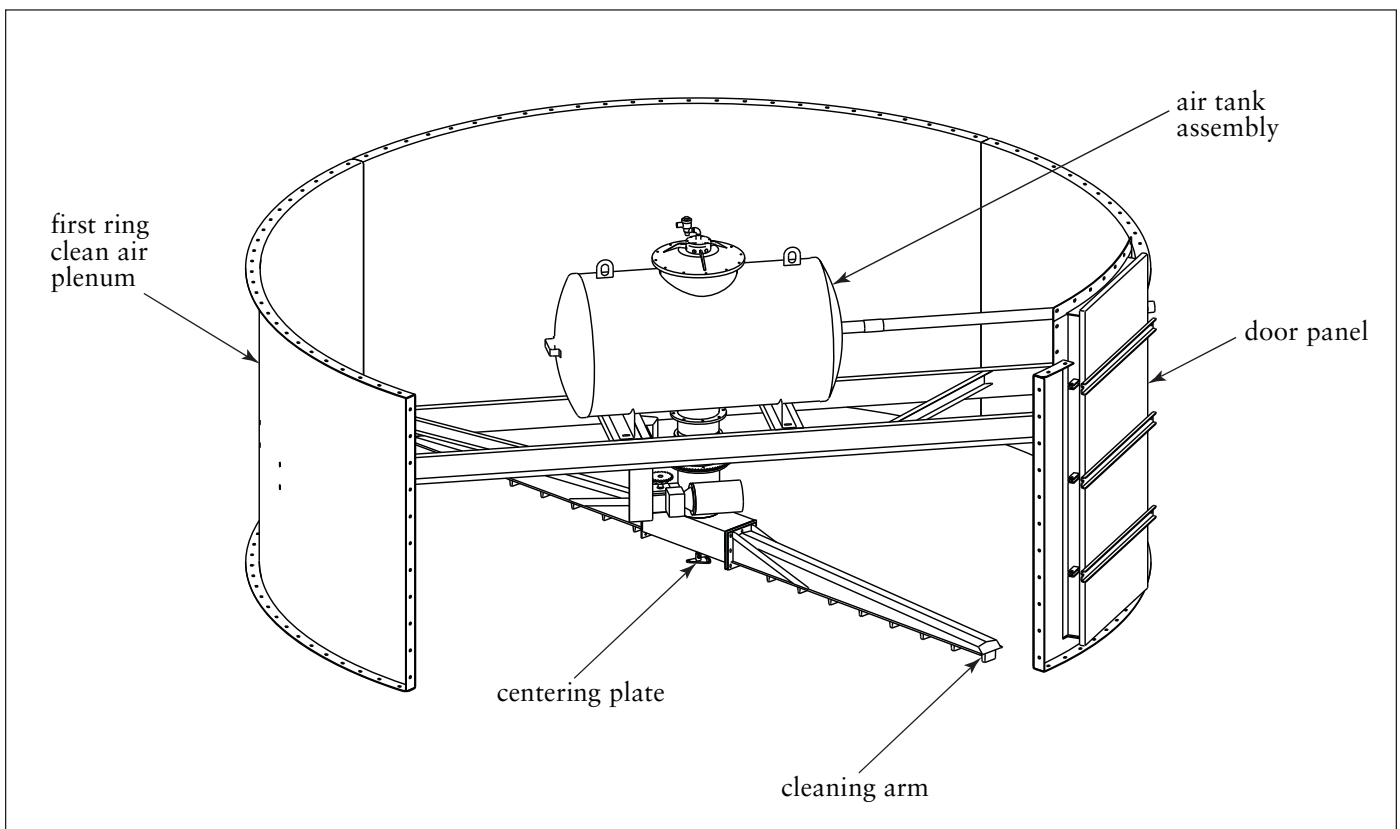
Cleaning Mechanism Installation

6. Install the cleaning arms to the Air Tank Assembly (reference the included print AD3627302 or AD3627301 depending on collector size). The Centering Plate found at the bottom of the shaft of the rotating Air Chamber Weld will later be installed to the tube sheet (after unit installation).



CAUTION!

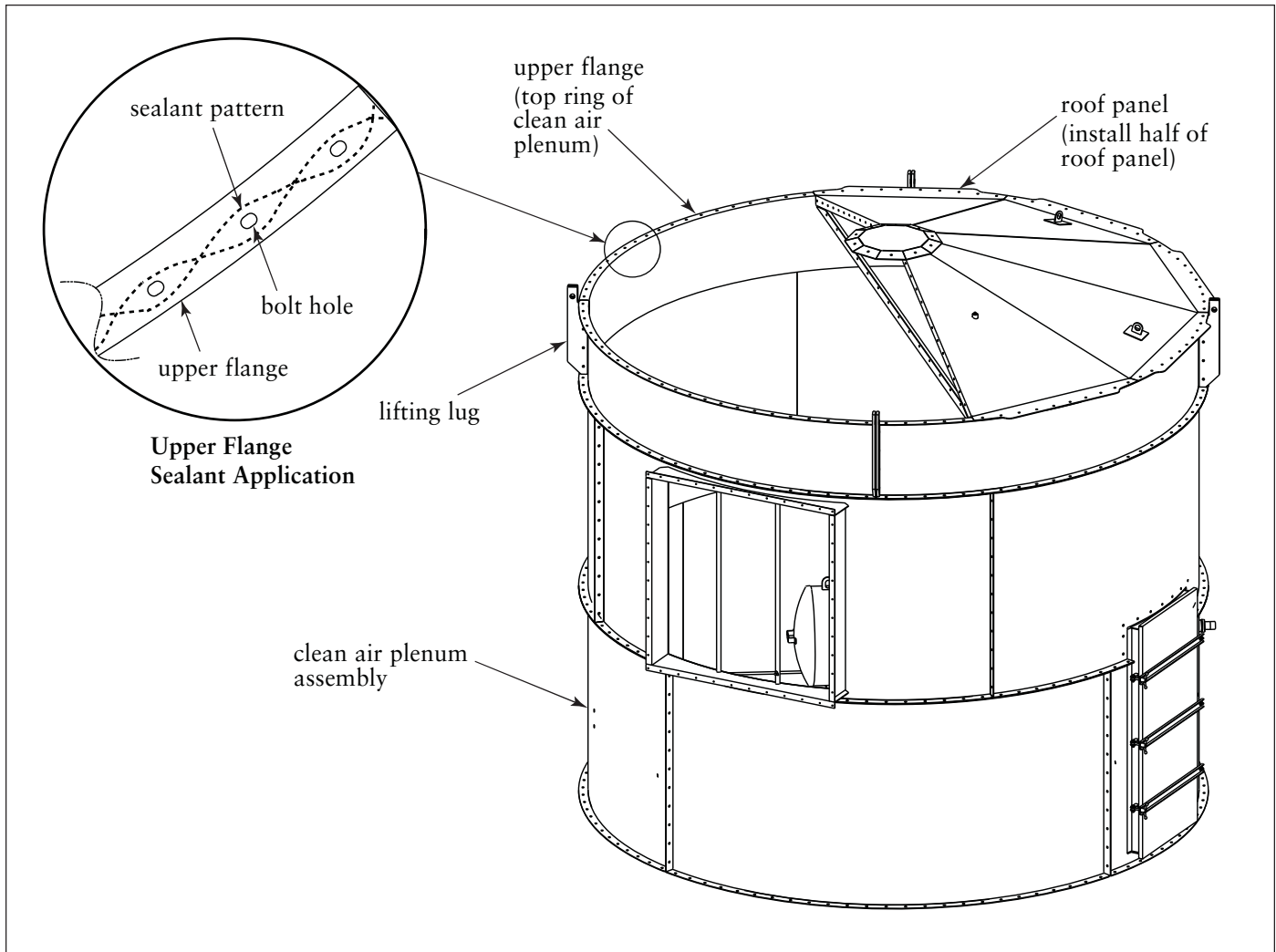
- Damage may occur to the rotating arms if interference is made while lifting or assembling body sections.
- Take precaution against pinching when handling and installing the cleaning system components.



Cleaning Arm Installation

Roof Installation

1. Apply sealant to the top bolt flange of the clean air plenum assembly.
2. Lift the first half roof panel into position as shown and insert the 1/2-in hardware around the perimeter and hand-tighten it.



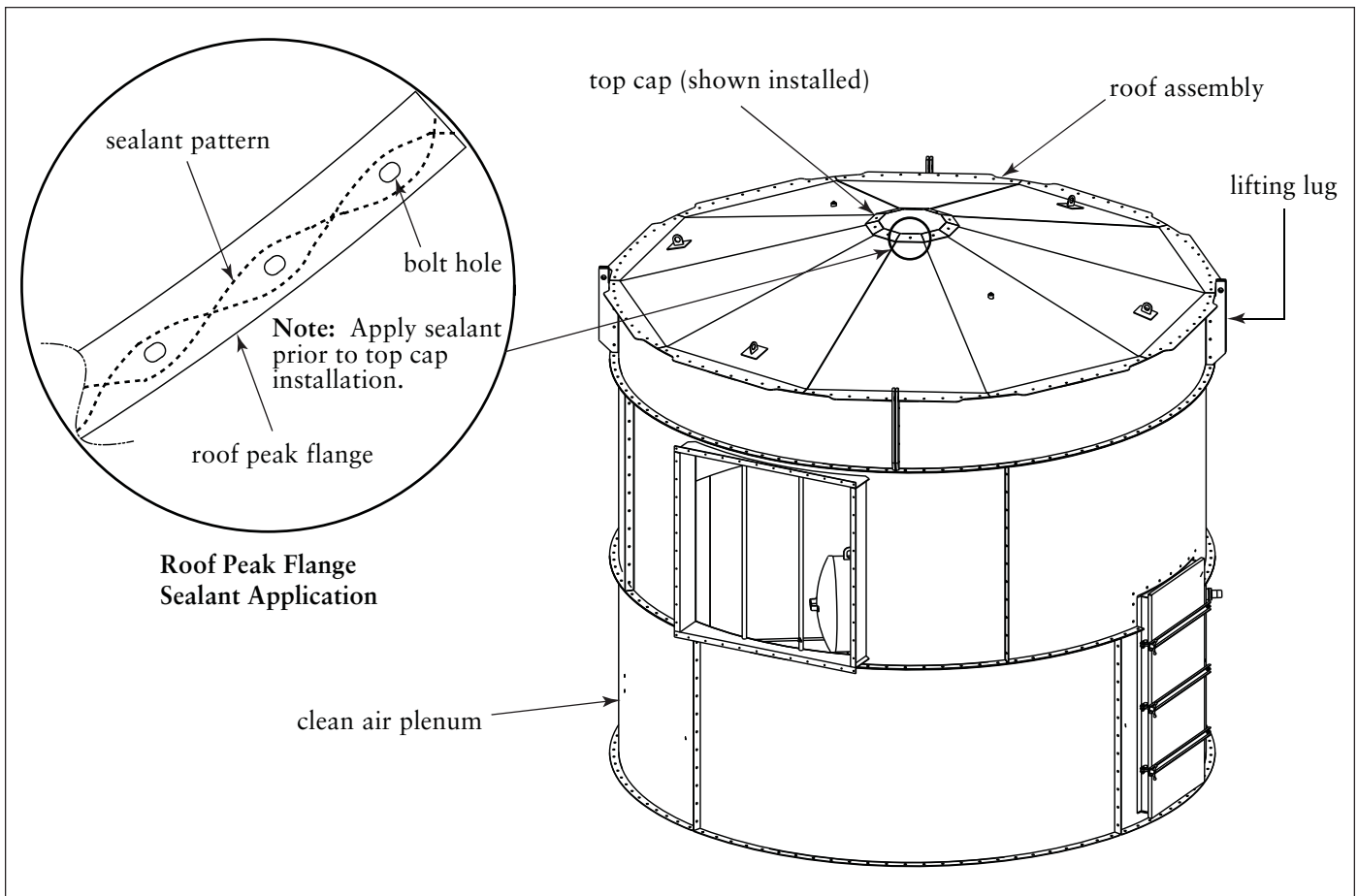
Roof Installation, 12-ft Bag Clean Air Plenum shown

3. On the second half roof panel, apply sealant liberally to the adjoining roof panel flange prior to lifting.
4. Lift the second half roof panel into position.
5. Insert hardware around the perimeter and hand-tighten.
6. Locate personnel to the inside and insert all hardware joining the two half roof panels.
7. Once all the hardware is hand-tightened, begin final tightening with the internal adjoining flanges between the two half roof panels. Then move to the outside and tighten the perimeter bolt hardware.
8. Prepare to set the top cap into the opening at the peak of the roof. Apply a liberal ring of sealant to the inside of the bolt hole pattern, and around each individual bolt hole. Set the top cap into place as shown and bolt tight.
9. Properly attach and lift clean air plenum with the lifting lugs per note on page 13.
10. Lift and relocate the clean air plenum with cleaning mechanism and roof. Use standoffs to keep the collector off of grade.



CAUTION!

Do not lift assembly by roof lugs or personal injury and/or property damage may ensue. Use provided lift hardware.



Roof Top Cap Installation, 12-ft Bag Clean Air Plenum shown

Collector Body Assembly for Higher Crane Capacity: Rated to Lift Combined Load of Dirty Air Plenum, Tube Sheet, Clean Air Plenum, and Roof

Note: Ensure the crane capacity is rated for the combined load of the Dirty Air Plenum, Tube Sheet, Clean Air Plenum, and Roof before following the below collector body assembly procedure. If a lower crane capacity is used, follow collector body assembly instructions on page 38.



CAUTION!

- Do not lift collector body assemblies from any flanges found on the inlet, outlet, or doorways.
- Use the provided bolt-on lifting lugs in the appropriate manner and do not lift more than the specified weight.
- Only lift rings and sections when the load is balanced.

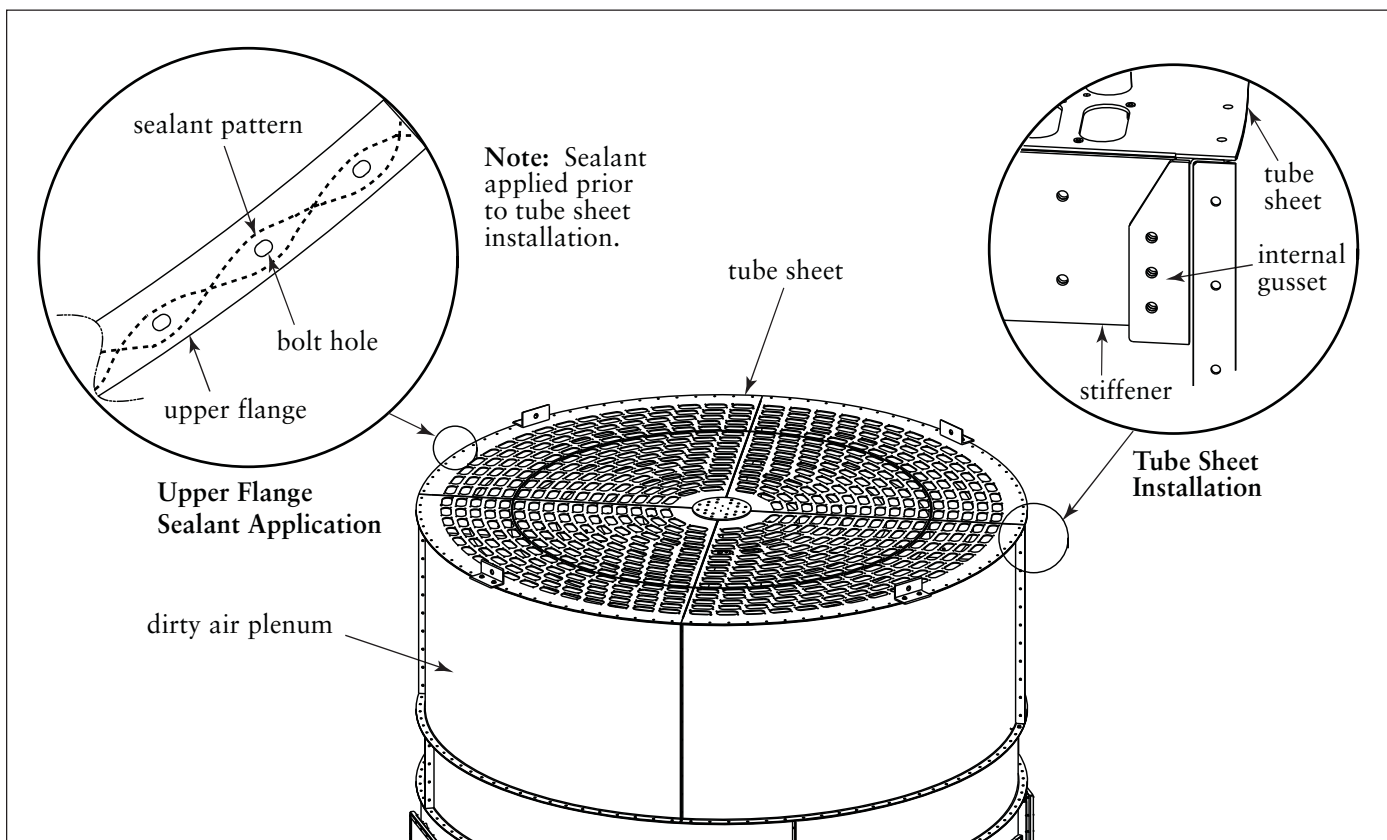
2. Lift the tube sheet into the dirty air plenum and slowly lower the tube sheet into position. Tube sheet stiffeners will be facing down.
3. While the tube sheet is still off the flange but the radial stiffeners are in the dirty air plenum body, rotate the tube sheet clock-wise (from top) until the stiffeners make contact with the internal gussets of the dirty air plenum as shown.
4. Lower the tube sheet into position. Insert only the 5/8-in hardware required to connect the tube sheet radial stiffeners to the internal gussets and tighten.



CAUTION!

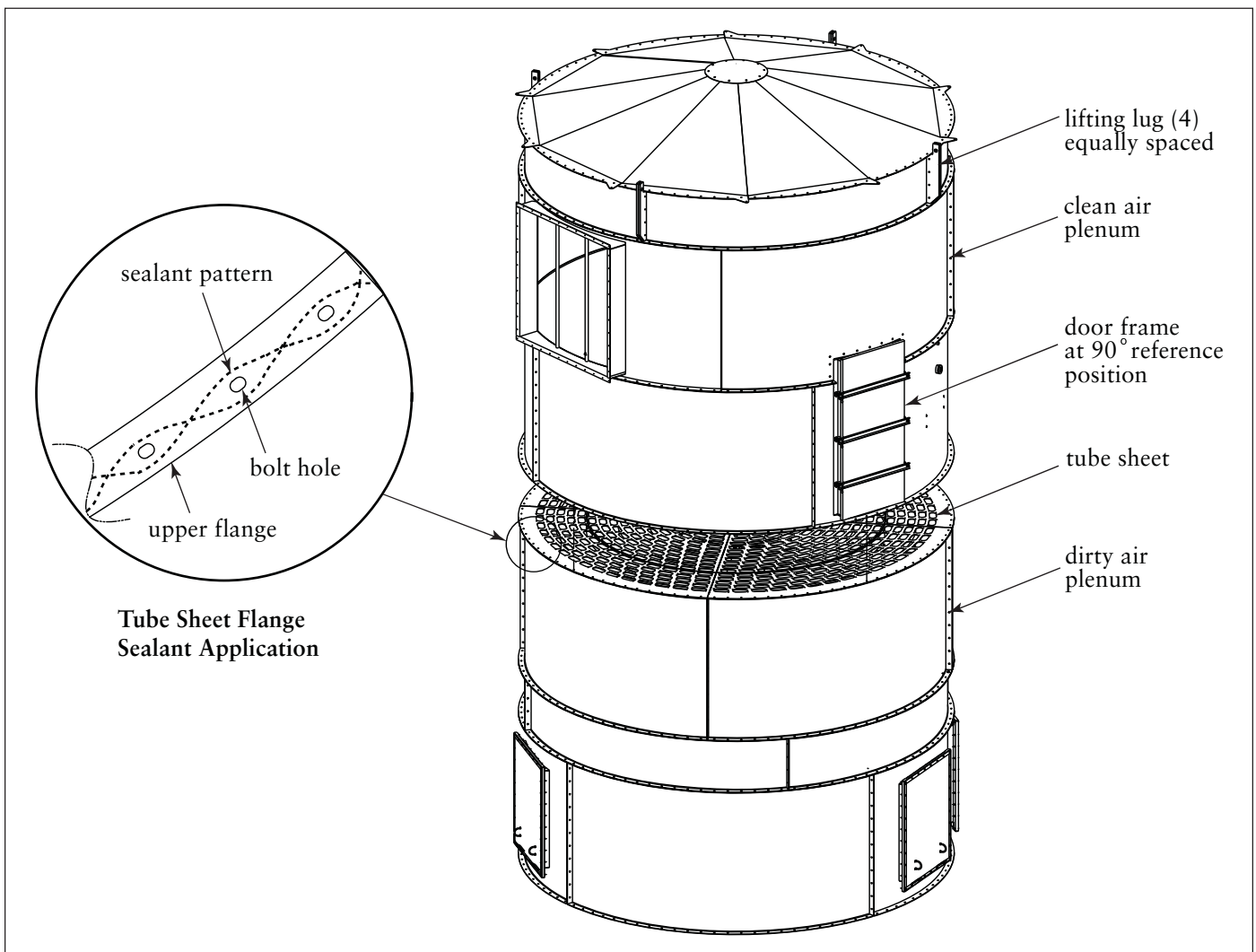
Take precaution against pinching when handling and installing the tube sheet into the Dirty Air Plenum.

1. Apply sealant to the top flange of the dirty air plenum collector body assembly as shown.



Tube Sheet Installation, Model RFWP shown

5. Apply sealant to the perimeter of the tube sheet as shown to prepare it for the clean air plenum installation.
- Note:** Ensure the crane capacity is rated for the combined load of the Dirty Air Plenum, Tube Sheet, Clean Air Plenum, and Roof for the next steps. If desired, the major components can be lifted individually following the procedure on pages 38 - 39.
6. Lift the clean air plenum with the existing attached lifting lugs onto the tube sheet ensuring that the doorway is in the 90° position per the specification drawing. Insert the 1/2-in hardware and then tighten the bolt perimeter.

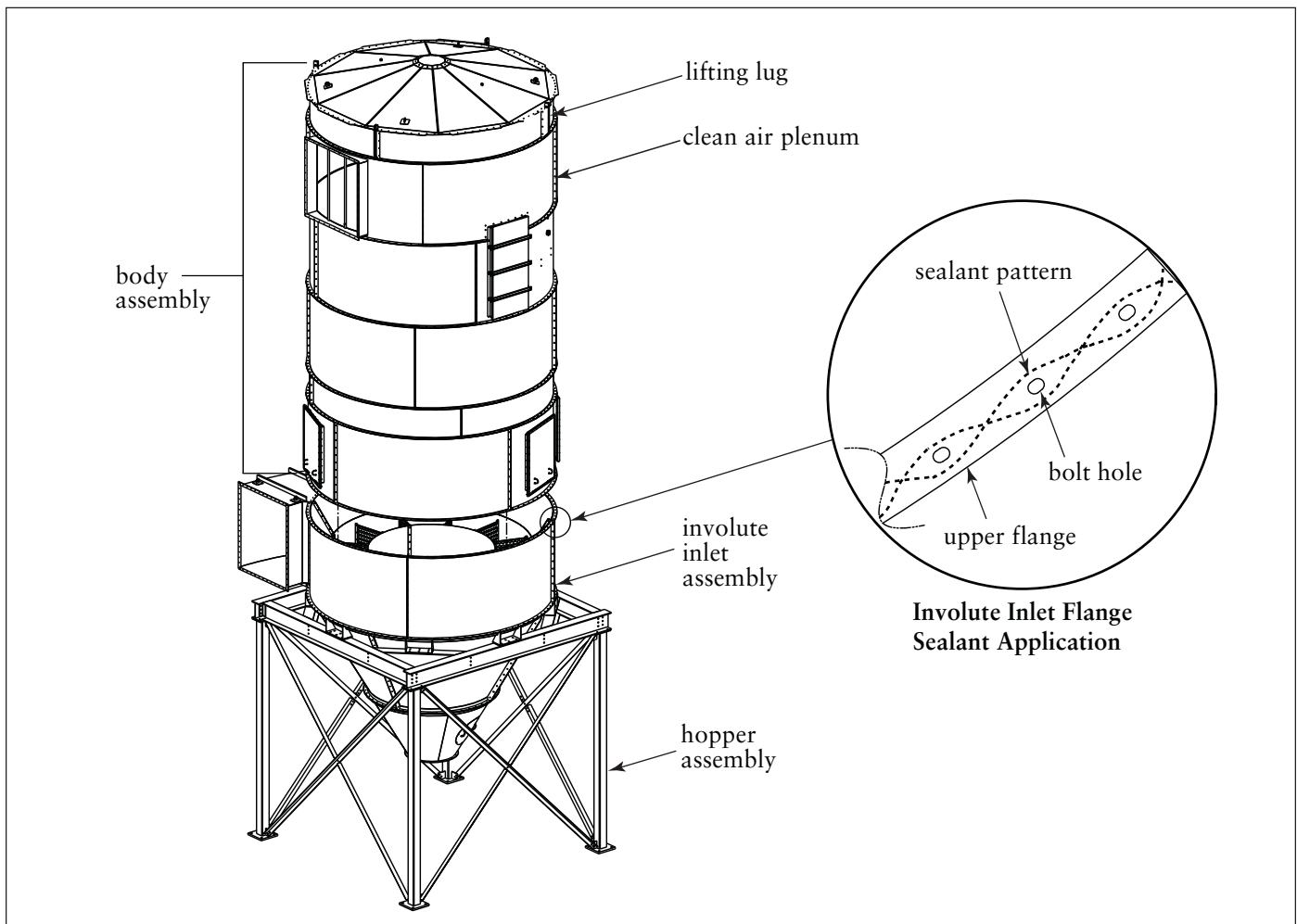


Clean Air Plenum Installation, Model RFWP shown

7. Apply sealant to the top of the involute inlet flange as shown. For a high body inlet, apply sealant directly to the top of the hopper flange.
8. Lift the body assembly with the main lifting lugs attached to the clean air plenum. Position the body over the involute inlet. For the high body inlet, this assembly lifts directly onto the hopper flange. Properly orient the body per the Donaldson-supplied customer drawing or specification drawing and lower into position.

9. Insert all the 1/2-in hardware and then tighten the entire connecting perimeter.

Note: It is critical that the orientation matches the specification drawing to ensure there will be NO interference with ladder and platform locations or explosion vent locations.



Dirty Air Plenum Installation, Model RFWP shown

- To prepare for high inlet installation, apply sealant to both connecting flanges of the high inlet within 1/8-in from the flange edge as shown. High inlet will press up against the high inlet transition from the outside of the high inlet transition.

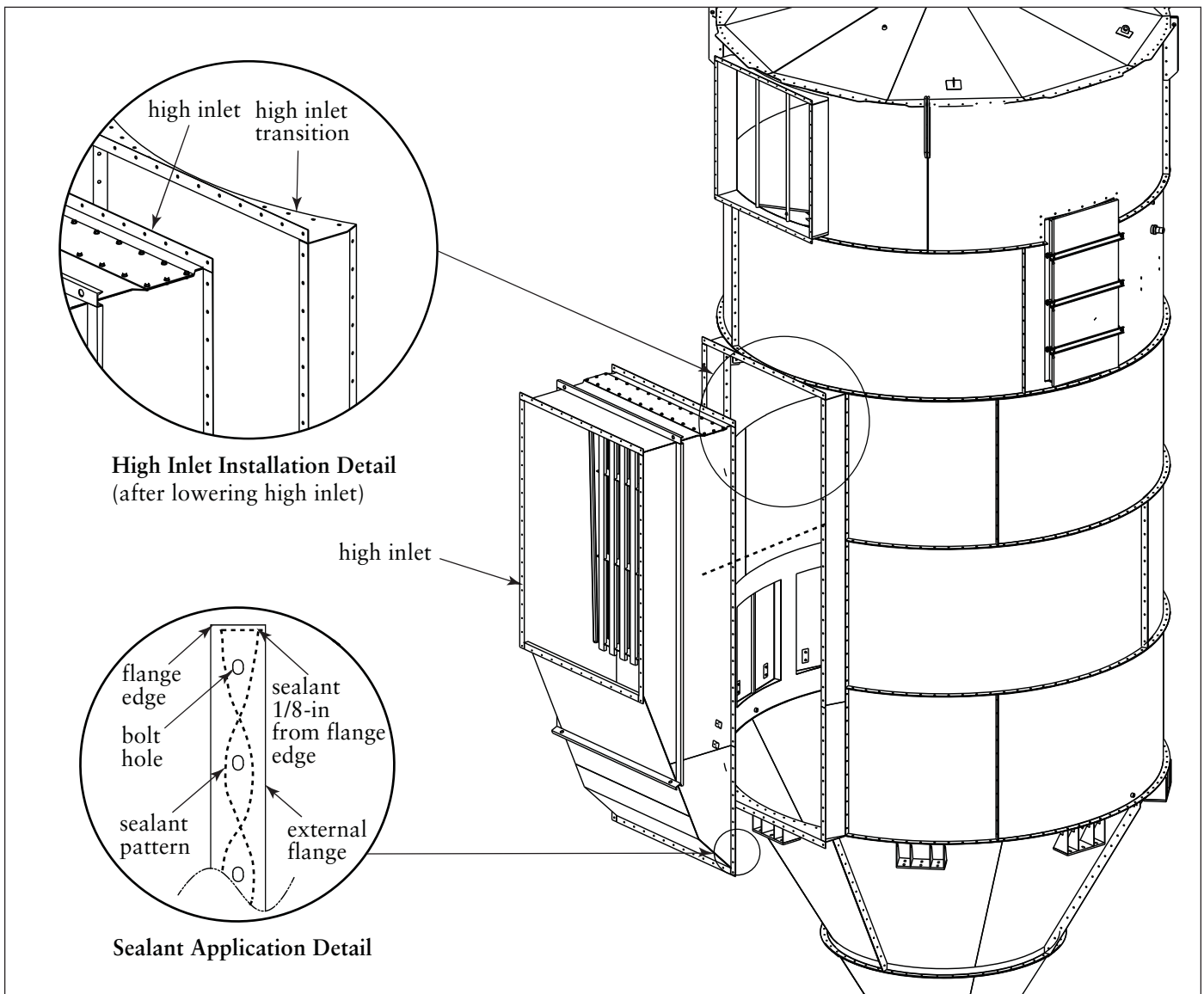
Note: Sealant application must be done before lowering into position.

- Lift the inlet assembly into the proper orientation and lower it into place as shown. Press the flanges up against the outside of the high inlet transition. Align the holes and then insert and tighten hardware.



CAUTION!

Take precaution against pinching when lowering the High Inlet into the Dirty Air Plenum body.



High Inlet Installation

Collector Body Assembly for Lower Crane Capacity

Note: Ensure the crane capacity is rated for the Dirty Air Plenum plus the Tube Sheet load or the Clean Air Plenum plus Roof load (whichever is greater) before proceeding with the below collector body assembly procedure.



CAUTION!

- Do not lift collector body assemblies from any flanges found on the inlet, outlet, or doorways.
- Use the provided bolt-on lifting lugs in the appropriate manner and do not lift more than the specified weight.
- Only lift rings and sections when the load is balanced.

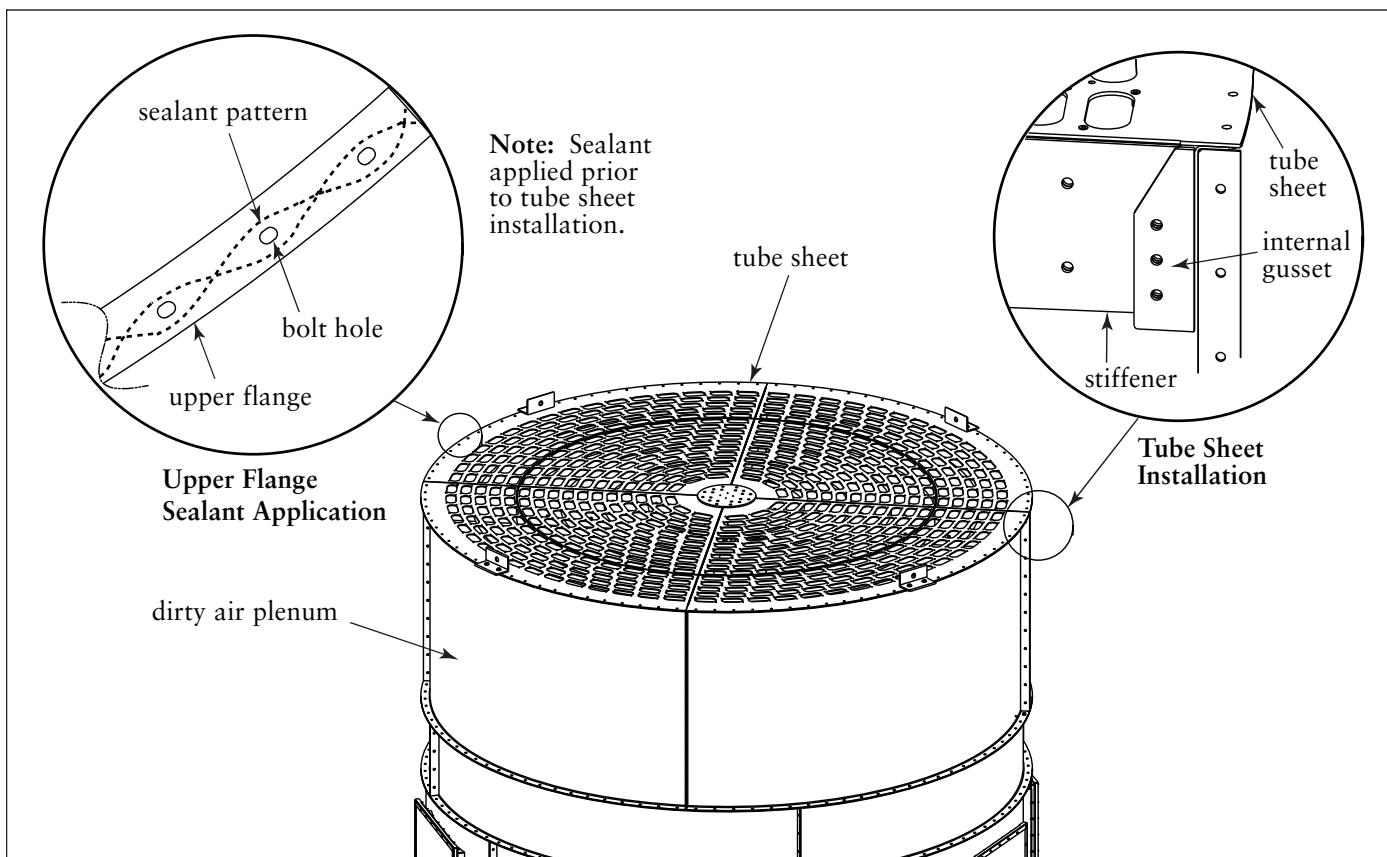
1. Apply sealant to the top flange of the dirty air plenum collector body assembly as shown.

2. Lift the tube sheet into the dirty air plenum and slowly lower the tube sheet into position. Tube sheet stiffeners will be facing down.
3. While the tube sheet is still off the flange but the radial stiffeners are in the dirty air plenum body, rotate the tube sheet clock-wise (from top) until the stiffeners make contact with the internal gussets of the dirty air plenum as shown.
4. Lower the tube sheet into position. Insert only the 5/8-in hardware required to connect the tube sheet radial stiffeners to the internal gussets and tighten.



CAUTION!

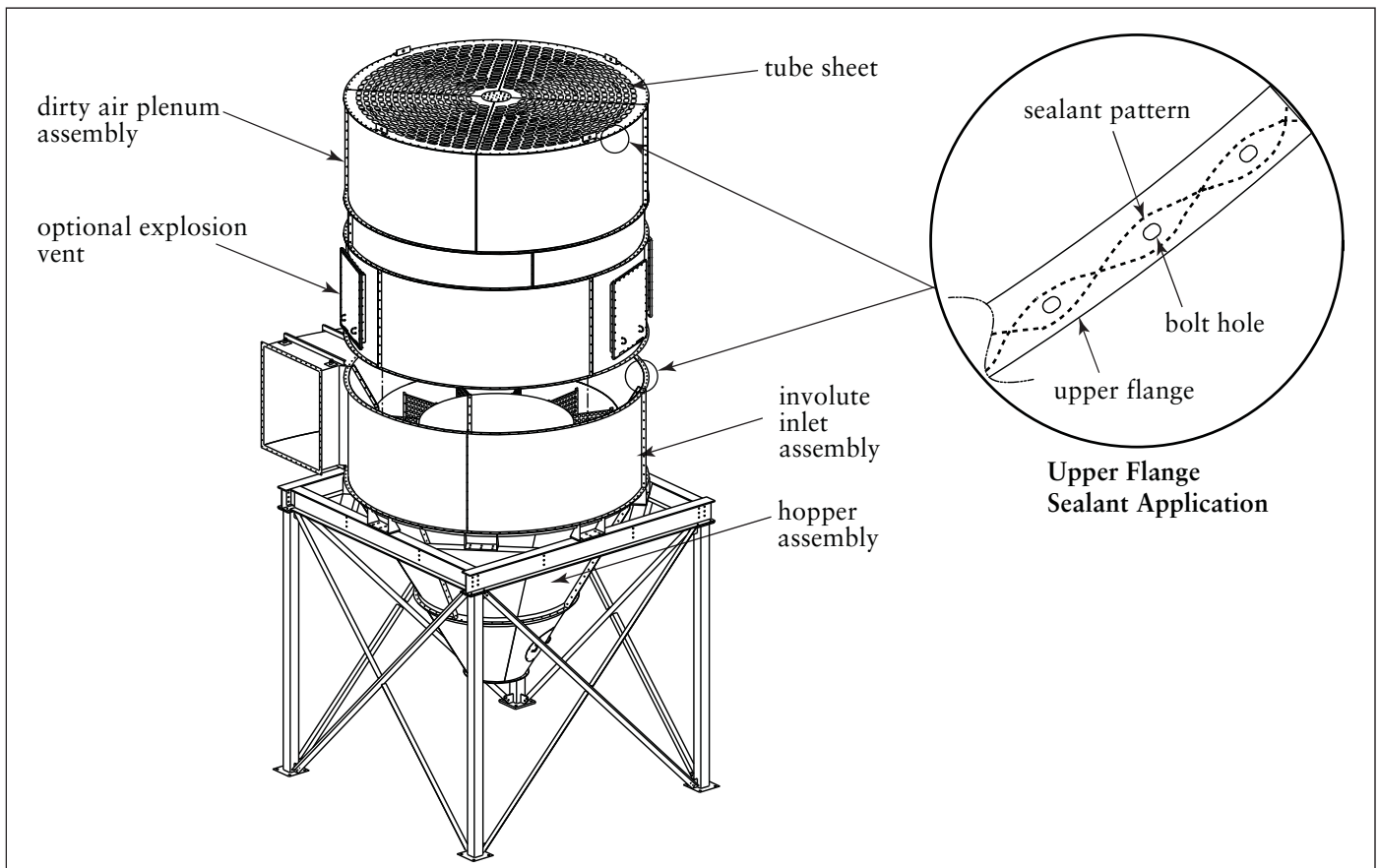
Take precaution against pinching when handling and installing the tube sheet into the Dirty Air Plenum.



Tube Sheet Installation, Model RFWP shown

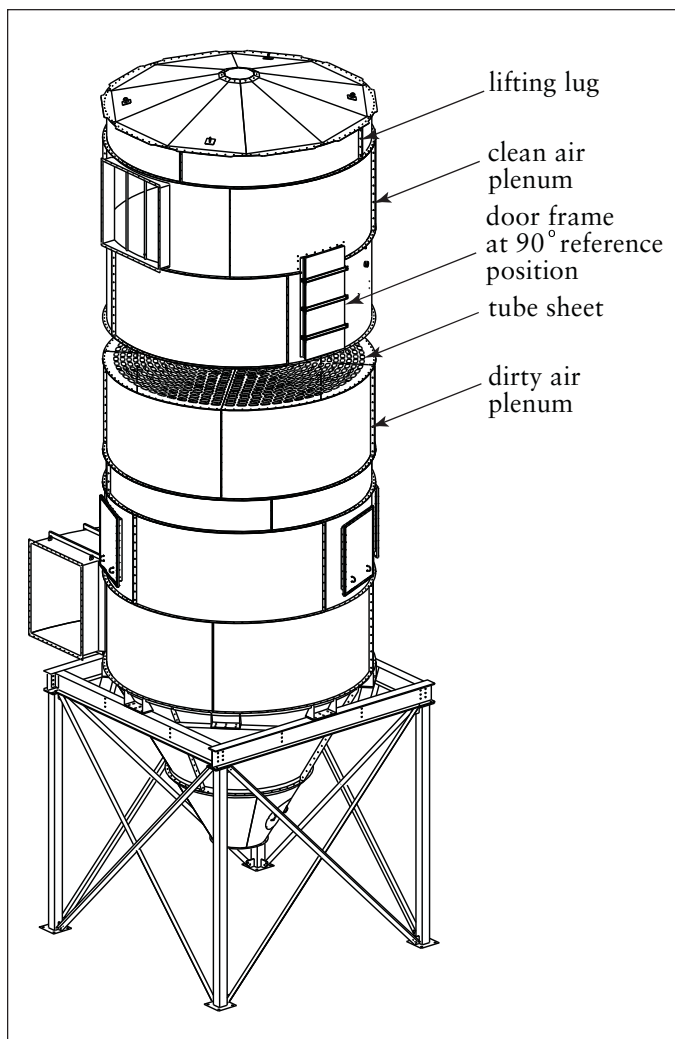
5. Apply sealant to the top of the involute inlet flange as shown. For a high body inlet, apply sealant directly to the top of the hopper flange.
6. Properly attach and lift dirty air plenum assembly with the lifting lugs per note on page 13.
7. Lift the dirty air plenum assembly with tube sheet onto the involute inlet assembly. For the high body inlet, this assembly lifts directly onto the hopper flange. Properly orient the dirty air plenum assembly to the hopper inlet assembly and lower into place.
8. Insert all hardware and then tighten the entire connecting perimeter.
9. Remove the angle iron lifting lugs.
10. Apply sealant to the perimeter of the tube sheet as shown to prepare it for the clean air plenum installation.

Note: It is critical that the orientation matches the specification drawing to ensure there will be NO interference with ladder and platform locations.



Dirty Air Plenum Installation, Model RFWP shown

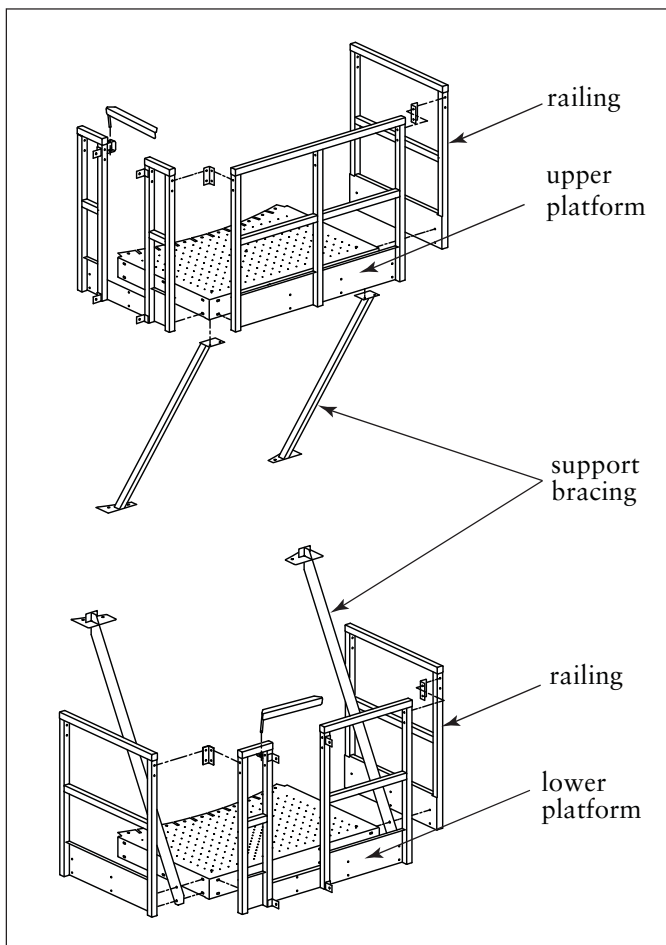
11. Lift the clean air plenum by the previously attached lifting lugs onto the tube sheet ensuring that the doorway is in the 90° position per the specification drawing. Insert all hardware and then tighten the bolt perimeter.



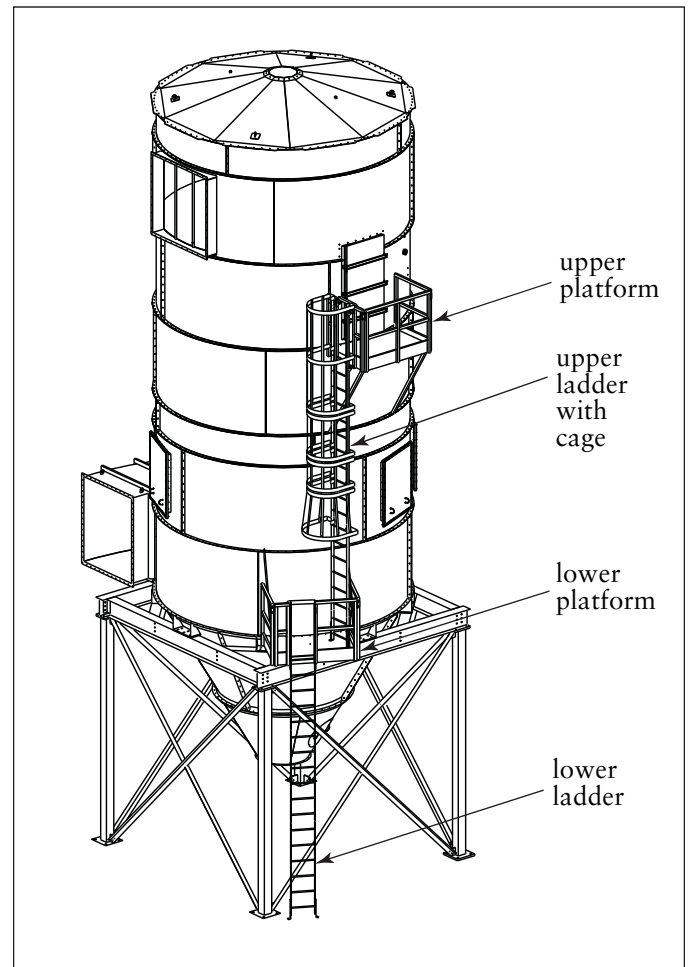
Clean Air Plenum Installation, Model RFWP shown

Ladder/Platform Installation

1. Assemble the platform assembly including the cross bracing and railing.
2. Lift the platform assembly into position.
3. Remove the hardware located where the platform assembly will connect to the body panel body.
4. Position the platform assembly, then reinstall and tighten using the provided longer-length hardware.
5. Assemble the ladder packs at grade level. Temporarily bolt the adjustable, bottom section of the ladder at the highest position.
6. Lift the completed ladders, one at a time into position.
7. Fasten the ladder tops into position on the platform assembly. Loosen the bottom ladder section(s) and position it to touch the bottom support or platform assembly. The base of the first (lower) ladder will connect to grade. Concrete anchors will be required to complete this connection. The base of the upper ladder will connect to the lower platform; match drilling into the platform is required for this ladder connection. Install the optional upper ladder side support by attaching it to the ladder side and then to the can body by removing one bolt and installing the bracket to the can body and then reinstalling the bolt.



Platform Installation

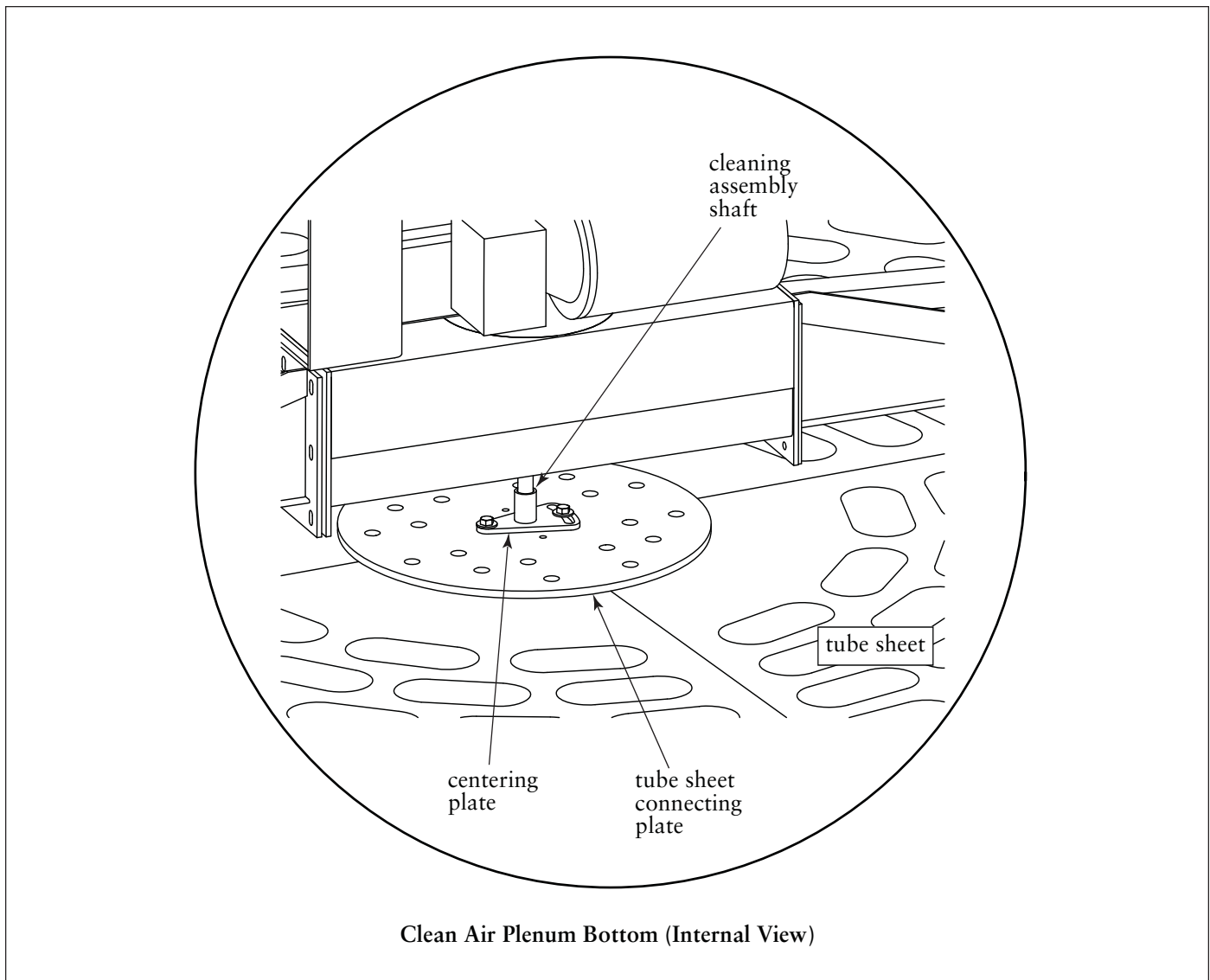


Ladder Installation

Cleaning System Installation

1. With the cleaning arms attached, check the cleaning arms for free rotation. If rotation is difficult, ensure that the H-frame is parallel to the tube sheet by measuring the distance from the H-frame to the tube sheet at all 4 corners - all 4 measurements should be the same. Adjust the H-frame by moving it in its mounts to the Clean Air Plenum body.
2. Ensure the air tank is flush with the top of the H-frame by using the threaded holes found on the underside of the H-frame as shims at all four corners of the mounting pads.
3. Check alignment of the Centering Plate to the pre-drilled and tapped holes in the tube sheet plate. If the Centering Plate holes do not align with the tube sheet plate in any orientation, slide the air tank until it aligns. Check for free rotation of the cleaning arms and tighten the air tank to the H-frame.

Note: The Centering Plate allows for movement to help align the cleaning mechanism. It is able to bolt in any of four orientations allowing a wide range of movement.



Cleaning System Installation

4. Apply hardware adhesive to the 3/8-in hardware and tighten the Centering Plate to the tube sheet plate. If the Centering Plate will not align with a bolt location on the tube sheet plate, the assembly is out of alignment and needs to be fixed by repeating step 3. Check rotation of the arms and repeat this step if necessary.

Note: Repositioning of the air tank assembly may be required for this step to ensure the cleaning arms can rotate freely.

5. Install the gear reducer and sprocket along with the chain tensioner to the H-Frame (reference print AD3633002 or AD3633001 depending on size).

Note: Drive sprocket, tensioner, and idler sprocket must lie in the same plane. Adjust driver sprocket and chain tensioner to achieve results.

6. Connect the chain from the drive sprocket to the rotating assembly using the master link.
7. Install motor to the gear reducer.
8. Panelized RF field assembly is complete. Refer to the Panelized RF Installation and Operation Manual for start-up, bag and cage installation, and operating instructions as well as service and troubleshooting information.

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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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