USER MANUAL

DODECAGON DRUM
USER GUIDE

MENU

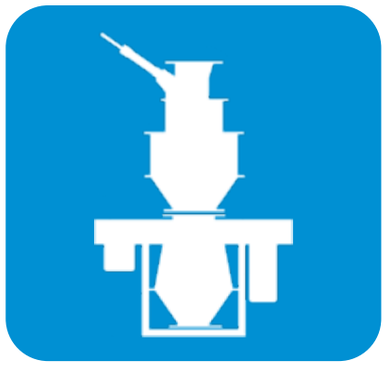
This is an interactive PDF. Click on an icon tile and navigate to a chapter of interest.


Legal & Safety

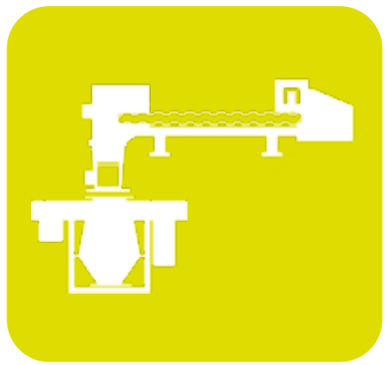

System Diagram


Drum


Powder Feeder


Scale & RMOM


PPS


Belt & RMOM


VFD Control


Pictograms

Users can advance or go back single pages by using quick navigation links shown below, right.

Users can navigate to the Menu by clicking on the Menu icon shown below, left.

LEGAL & SAFETY

This manual contains technical information regarding Bayer SeedGrowth™ Equipment. Please read and understand these instructions completely before proceeding to install and operate the equipment. Bayer reserves the right to change specifications, models, components, or materials at any time without notice. For additional equipment information contact us at 1.800.634.6738. Please have this manual available when contacting Bayer.

Always use caution and common sense when working with any chemical. Read the product label and SDS carefully and follow their instructions exactly as described.

Optimal operating conditions for this piece of equipment requires an ambient temperature 32° F to +104° F (0° C to +40° C), relative humidity less than 90% (minimum condensation). Make necessary provisions to protect this piece of equipment against excessive dust, particles containing iron, moisture and against corrosive and explosive gases.

Our technical information is based on extensive testing and is, to the best of our current knowledge, true and accurate but given without warranty as the conditions of use and storage are beyond our control. Variables, such as humidity, temperature, change in seed size or variety and viscosity of chemical products can all affect the accuracy of the chemical application and seed coverage. To ensure the desired application rate and optimum seed coverage, check the calibration periodically throughout the day, and make adjustments as needed.

Any person who is involved in the installation or periodic maintenance of this equipment should be suitably skilled or instructed and supervised using a safe system of work. Isolate the treater before removing guards for maintenance.

EXPOSURE CONTROL

Always use caution and common sense when working with chemicals. Read the product label and SDS carefully and follow their instructions exactly as described. The following Personal Protective Equipment (PPE) recommendations and best practices help promote safe use in seed treatment.

Note: Exposure Control signs and labels conform to the requirements of ANSI Z535.4 or ISO 3864.

Wear protective clothing

Wear disposable or reusable coveralls with long sleeves.

Hand protection required

Wear chemical-resistant gloves.

Wear rubber boots

Wear chemical resistant rubber boots.

Labels

Label recommendations and directions for handling must be followed, including treatment procedure (use of sticker) as well as the safety requirements.

Treatment products

Keep products in a locked room that has been approved for crop protection products.

Wear a mask

Wear respiratory protection.

Eye protection required

Wear protective eyewear.

Calibration

Seed treatment equipment must be checked and calibrated regularly to ensure accurate and safe application.

Clean seed

Use well cleaned seed to avoid creation of polluted dust that will contaminate the machine, treating facility, workers, farmers and the environment during sowing.

Cleaning

Use a vacuum to clean machines. Avoid using compressed air for cleaning.

Laundry

Wash soiled reusable clothing separately. Workers must take a shower after each shift.

Empty containers

Non-returnable empty containers must be triple rinsed before they can be disposed. For others the recommendation of the producer must be followed.

Spillage

Spillage must be avoided; it must be thoroughly cleaned up to avoid contaminating the environment and waterways.

Maintenance

Keep machinery clean between treating sessions.

REFERENCE SYMBOLS

Symbols and signal words are used to identify the level of hazard and help avoid personal injury.

Note: Safety signs and labels conform to the requirements of ANSI Z535.4 or ISO 3864.

Shock Hazard

Alerts that dangerous voltage may be present.

Warning

Alerts that a hazard may cause serious injury or death.

Caution

Alerts that a hazard may cause minor or moderate injury.

Hand crush - moving parts

Alerts crushing is possible.

Pinch point

Keep hands away from pinch points.

Rotating shaft

Do not wear loose clothing around turning parts.

Disconnect

Disconnect to de-energize before opening.

Tools

Required tools for installation and maintenance.

Use guards

Keep guards in place. Do not remove during operation.

Parts

Required parts for installation and maintenance.

Lifting

Requires two people to safely lift an item.

Tip

Calls attention to special information.

Lift points

Requires the use of proper rigging and lifting techniques based on the lift plan.

Note

Emphasizes general information worthy of attention.

Center of gravity

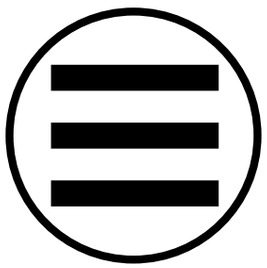
Indicates the center of gravity of the machine to help assist when rigging and lifting.

Example

Provides a problem or exercise that illustrates a method or principle.

PICTOGRAMS

Each Signifier displayed here is specific to this User Manual.



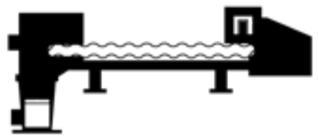
Menu

Previous

Advance

BC Scale

DRUM



Weigh Belt

PPS

Like

RMOM

Powder Feeder

SYSTEM DIAGRAM

Drum size based on seed type and capacity:
36” dia. x 6, 8, 10, 12 ft

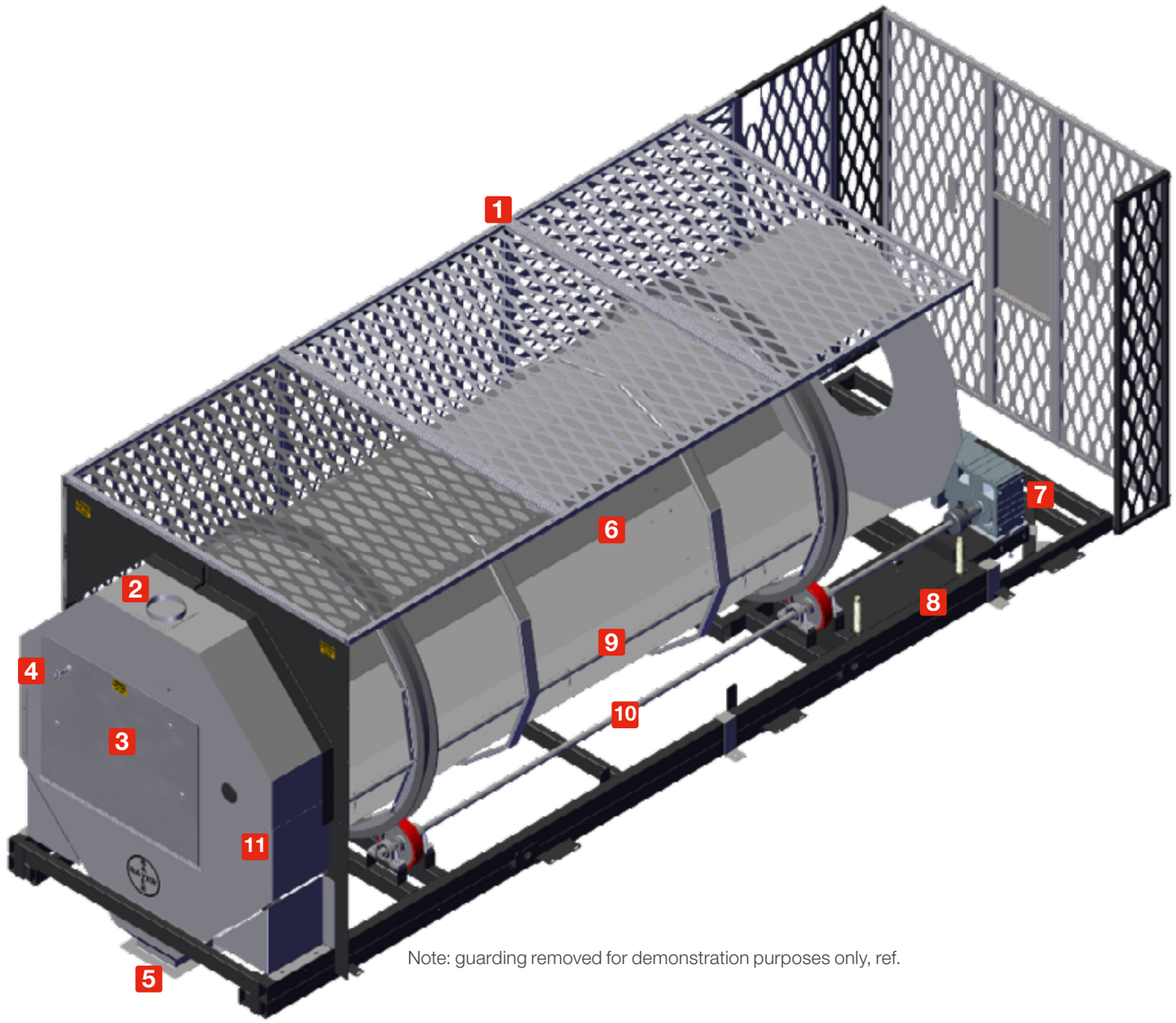
48” dia. x 8, 10, 12ft

Additional drum lift bar kits can be added.

1. Drum Guard Cage
2. Dust Evacuation Port
3. Doghouse Door
4. Quarter Turn Key
5. Seed Discharge Spout
6. Dodecagon Drum
7. Gear Motor
8. Adjustable Frame
9. Internal Lift Bar
10. Drive Shaft
11. Dog House

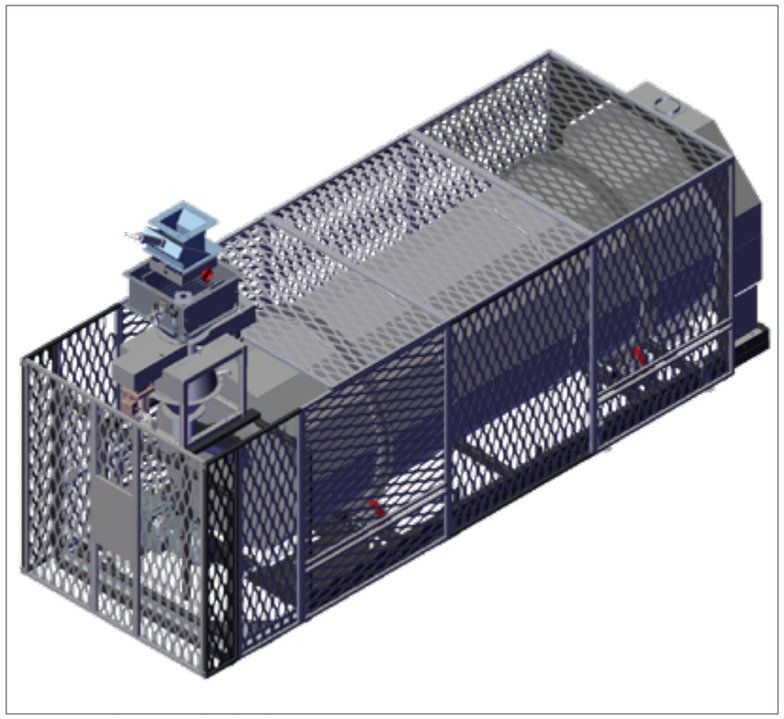
Note: Dodecagon is a plane figure with twelve sides; a twelve sided Drum. Dodecagon will be referred to as Drum throughout this manual.

DODECAGON DRUM, REF.

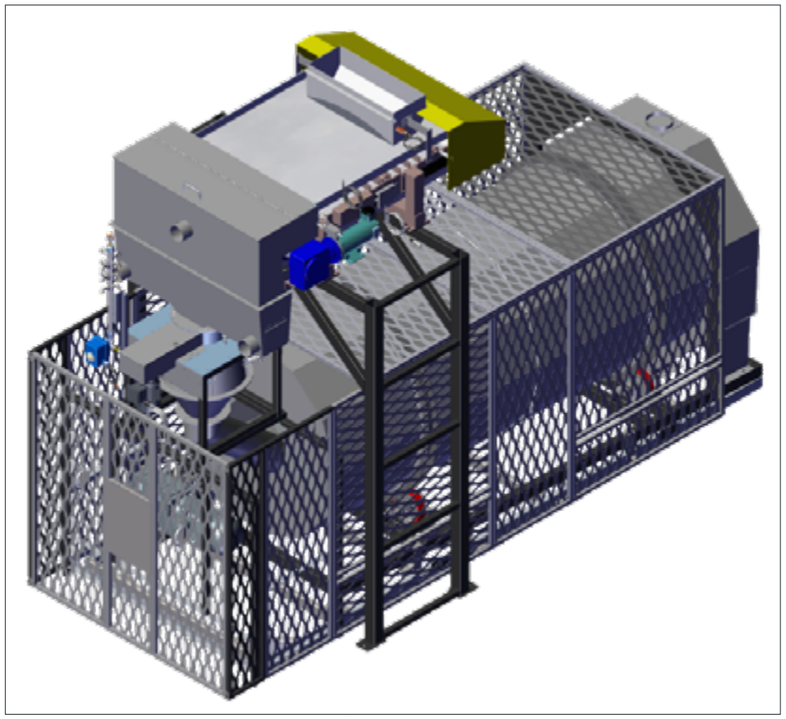


Note: guarding removed for demonstration purposes only, ref.

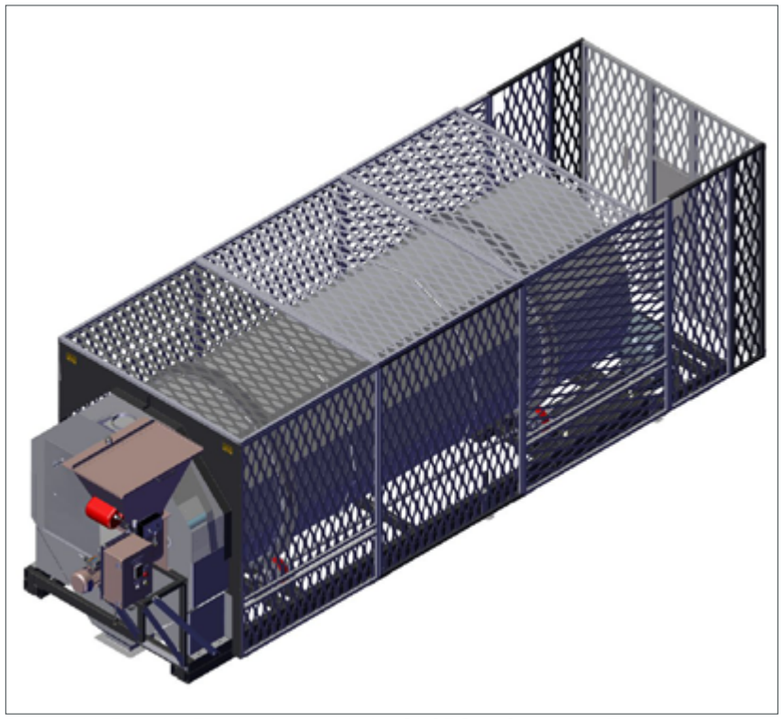
OPTIONAL TREATING CONFIGURATIONS, REF.



Drum with Optional GLCPS Treating Head Assembly, ref.



Drum with Optional Computerized Treating Head Assembly, ref.



Drum with Powder Feeder Assembly for GLCPS or Computer Treater, ref.

Drums are versatile to meet the needs of the end user. Depending upon seed type and capacity, various treating configuration options are available.

DRUM INSTALLATION

Required installation tools

- Material Handling Device
- Tin Snips
- 5/16” Wrench (1)
- 7/16” Wrench (2)
- Standard Screwdriver (flat)

Arrival / Inspection - Drum & Frame Assembly

Upon arrival, the Drum & Frame Assembly ships attached to a pallet, as shown right.

- Inspect for broken, missing or damaged parts and report them immediately!

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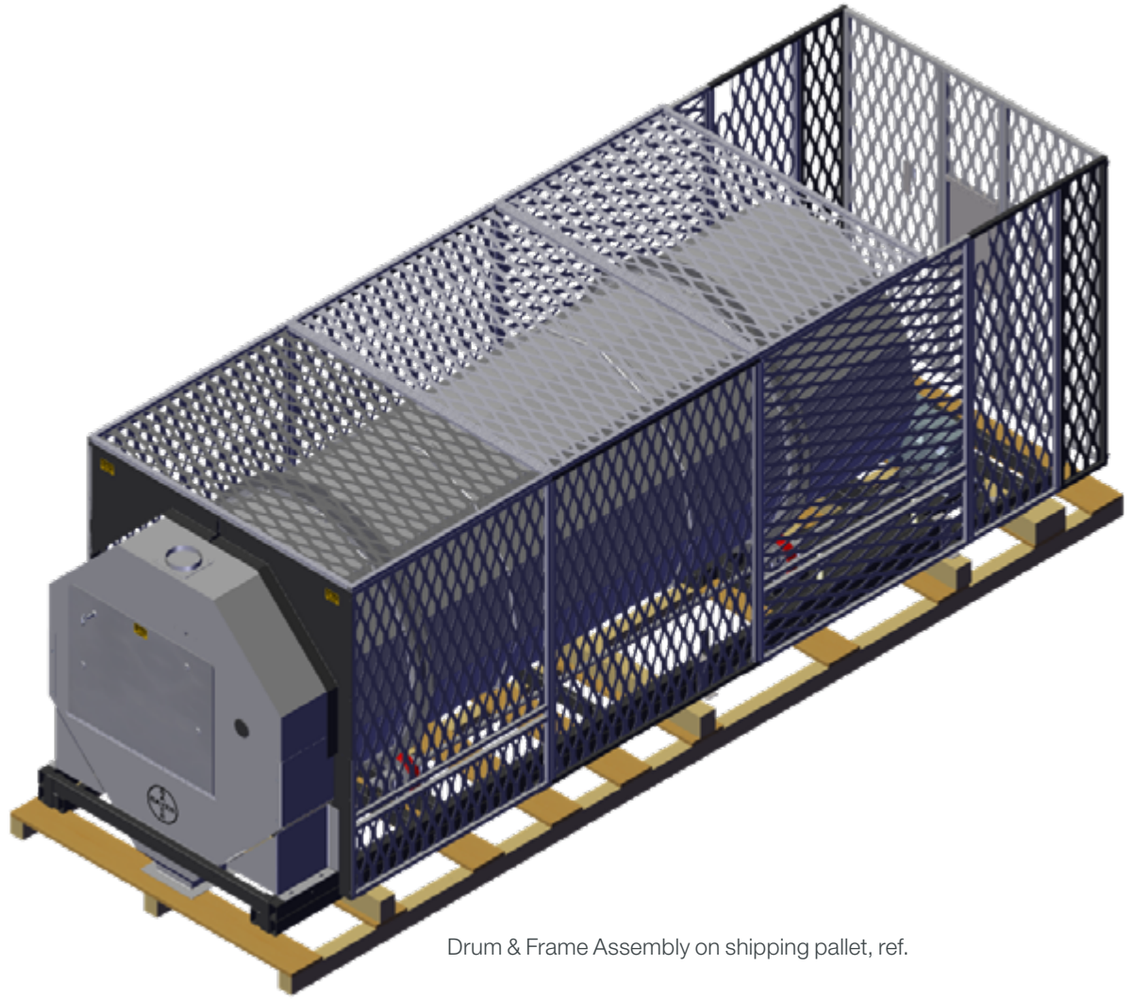

Drum & Frame Assembly on shipping pallet, ref.

Drum Cage Kit Removal

Step 1: Use 7/16” wrench to remove hardware connecting the Drum Guard Kit to the Drum frame.

- They are located along the bottom of the Drum Cage.

Step 2: Use proper rigging and lifting techniques to remove the Drum Cage Kit off the Drum frame.

- Set the Drum Cage Kit aside to re-attach later.

Step 3: Use 7/16” wrench to remove shipping hold down brackets (holds Drum frame to pallet).

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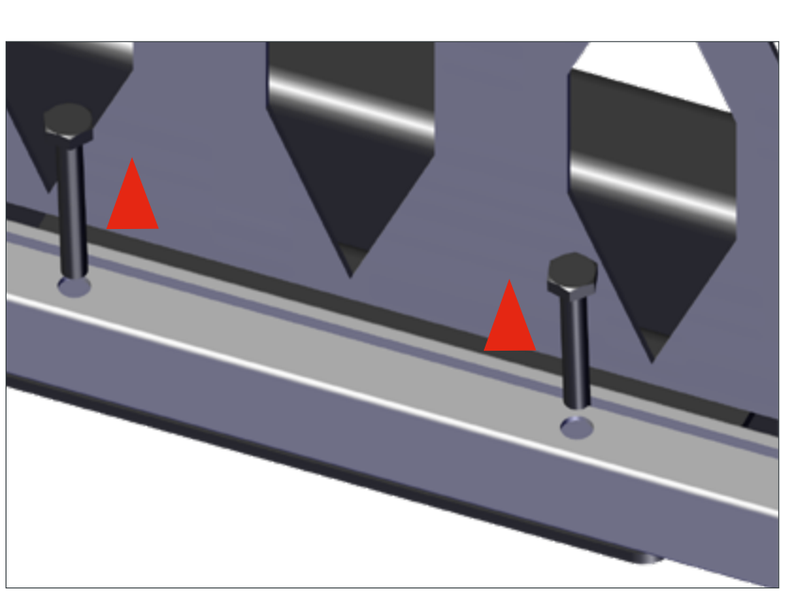
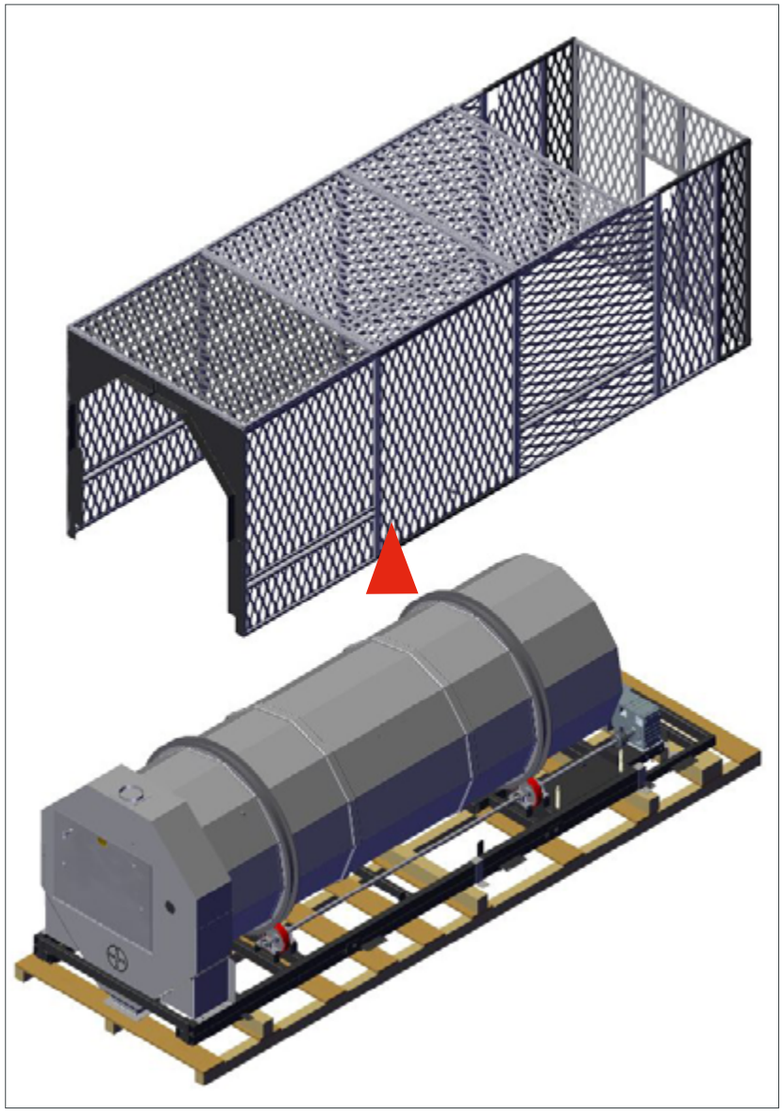
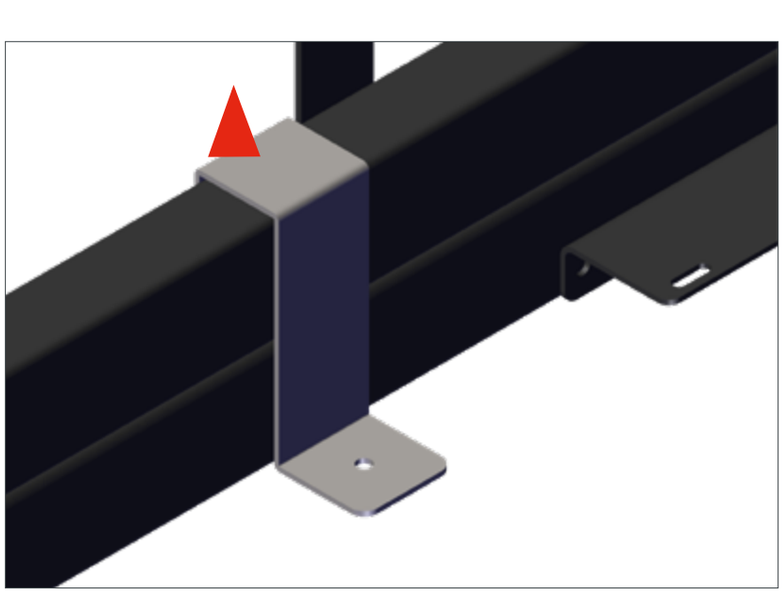


Remove Drum Cage Guards hardware from Drum Frame, ref.



Remove Drum Cage Guards from Drum Frame, ref.



Remove Shipping Hold Down Brackets, ref.

Warning! Removing Drum bands can cause injury! Wear proper personal protective equipment: gloves and safety glasses. Place one hand on the banding above the cut, while standing to the side of the banding. This will reduce the chance of banding flying out of control, causing injury. Discard used banding material responsibly.

Drum Hold-down Banding

Use tin snips to cut the metal banding that holds the Drum down onto the Drum Frame during shipping. Drum bands must be removed prior to running the Drum, to prevent damage to the Drum!

Use safe hand placement to cut the Drum bands, ref.

Note: Use proper rigging and lifting techniques for placement of the drum. Locate the drum on a solid surface and fasten it to the floor with anchors. Plan accordingly! Take into consideration the weight of the Drum plus the weight of a conveying system used for input as well as the weight of collection containers used on both ends of the process: the Drum Discharge Chute hangs below the Lower Drum Frame! The Drum must be easily accessible to an electrical power source. Allow access to the Drum from all sides for the purpose of adjustments, maintenance and clean-up.

Drum & Frame Assembly Placement

Step 1: Use proper rigging and lifting techniques to remove the Drum and Frame Assembly from the shipping pallet (4 lifting lugs provided on the Drum Frame) and place it in the desired location and fasten the Lower Drum Frame in place with anchors.

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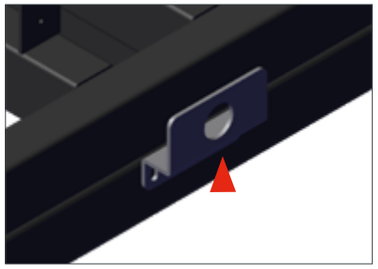
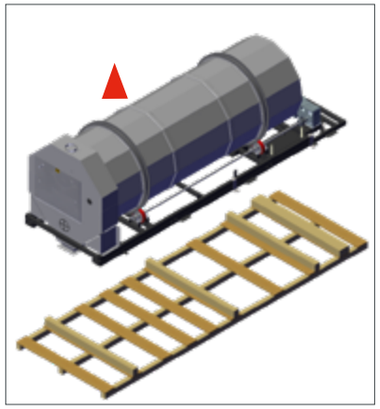
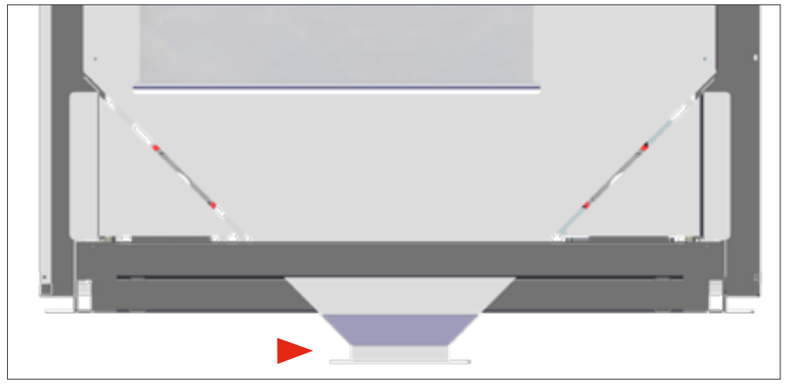


Use Lift Lugs, ref.



Remove Drum from Pallet, ref.



Drum Discharge Chute hangs below the Lower Drum Frame, ref.

Note: 12’ X 48” Drum Dry Weight:
2774.8 LBS [1177 KG].

Warning! Do not set the Drum & Frame Assembly on a flat surface! The Drum Discharge Chute hangs below the Lower Drum Frame. Plan accordingly.

Warning: ensure a licensed electrician wires the system following National electrical codes for the area. Refer to wiring diagrams provided inside the control panel.

Power Supply (service)

Prior to initial start-up, the phase-sequence of the Drum Gear Motor must be checked.

- The motor direction is indicated by arrow stickers on the Drum Gear Motor and the Drum Inlet end of the Drum (indicated by directional arrows).
- Remote mount the Drum VFD Micro Inverter (shipped strapped to the Gear Motor) and land the power cord leads to an external power source.
- Gear Motor and internal Doghouse Light land the power cord leads to an external power source.
- A recommended easily accessible Emergency Disconnect Station (customer supplied) should be installed on or near the Drum.

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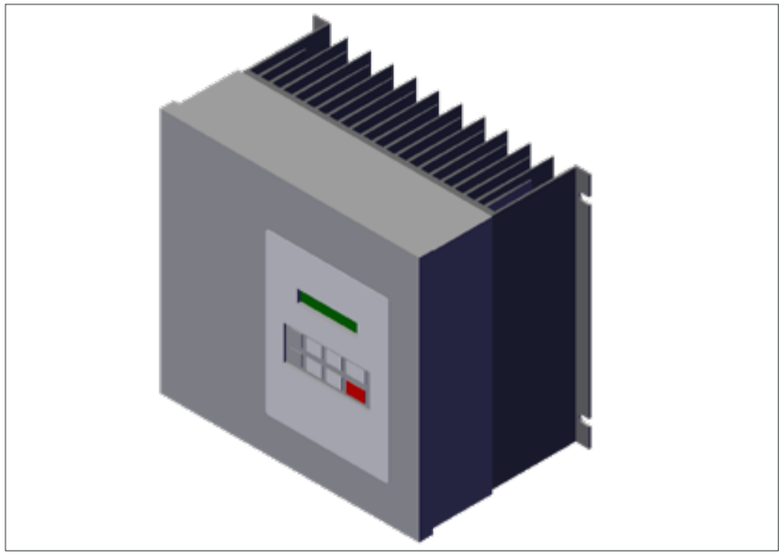
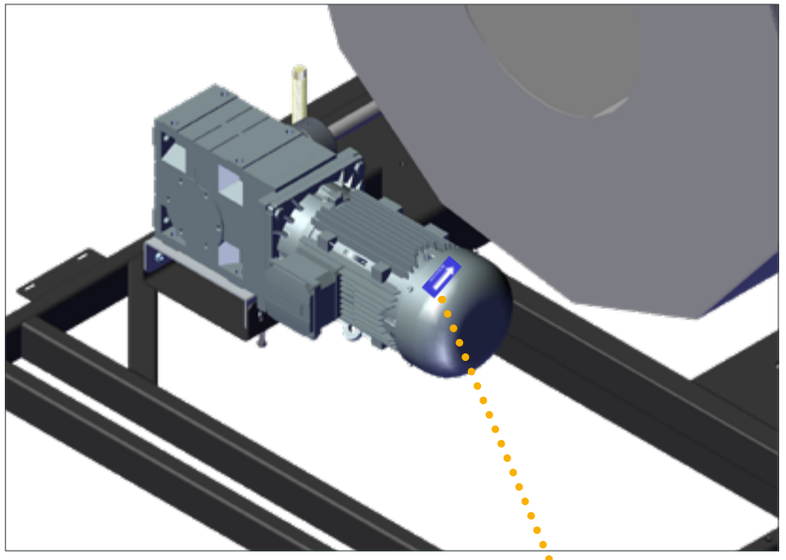
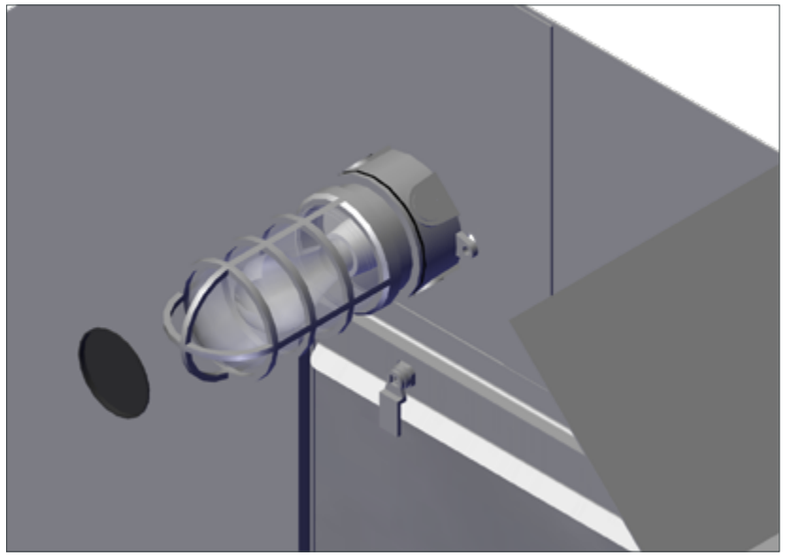


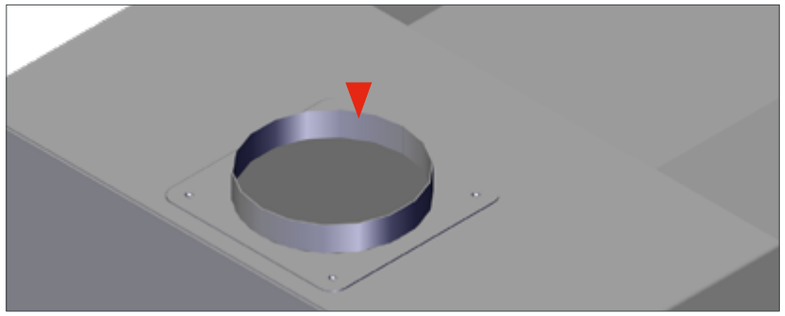
Remote Mount Drum VFD Micro Inverter, ref.



Drum Gear Motor with rotation sticker, ref.



Internal view of the Drum Doghouse Light, ref.

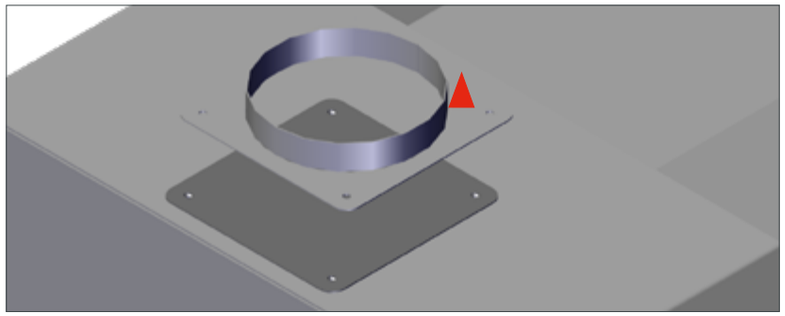


6.0” OD Exhaust Port located on top of the Drum Doghouse, ref.

Integrated Aspiration

Only cleaned and dust-free seed should be used in the treating process. An exhaust unit supplied by the customer must be connected to a central aspiration system. Six inch OD port for the exhaust unit is located on top of the Doghouse (discharge end of Drum).

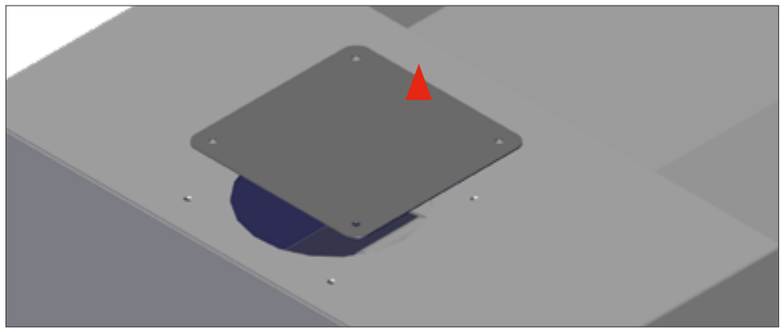
Example: Recommended 500 - 600 cfm.



Remove hardware and the Dust Collection Plate, ref.

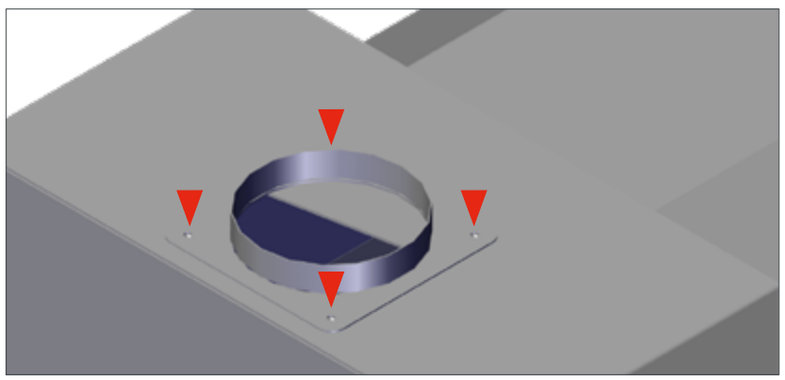
Step 1: Use a 5/16” socket or wrench to remove four (4) 10-32 hex head bolts and washers.

- Remove the Dust Collection Plate.



Remove Doghouse Cover, ref.

Step 2: Remove the Doghouse Cover.



Replace the Dust Collection Plate and fasten with hardware, ref.

Step 3: Replace the Dust Collection Plate and use a 5/16” socket or wrench to securely fasten the four (4) 10-32 washers and bolts.

- Connect to a central aspiration system.

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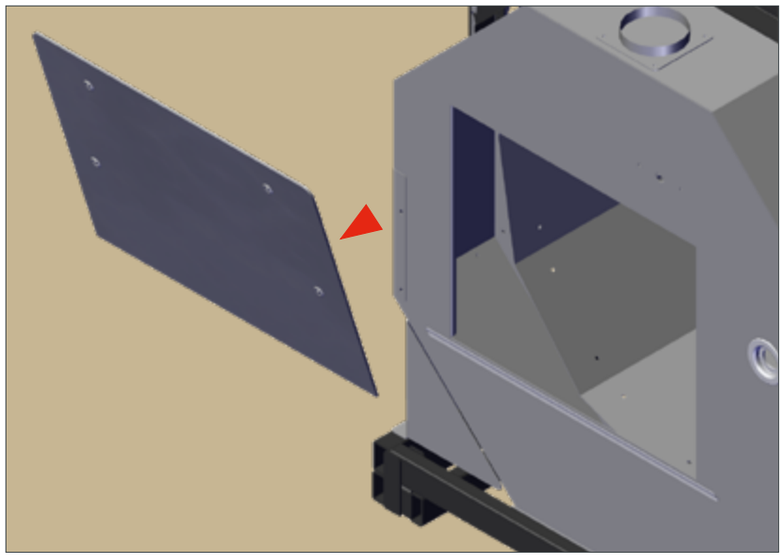


Doghouse Door Removed, ref.

Doghouse Door - Clear Polycarbonate Viewing Window

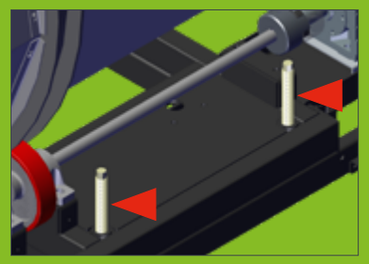
Use the Doghouse Door Viewing Window to observe the mixing process while the Drum is rotating.

- Use the factory supplied Quarter Turn Key to unlock and remove the Doghouse Door for clean out purposes only.
- **DO NOT REMOVE THE DOGHOUSE WHILE THE DRUM IS ROTATING!**

Estimated frame lift per pound per minute

(Based on soybeans):

200lb/min. = 3.0” lift
400lb/min. = 3.5” lift
600lb/min. = 4.5” lift
700lb/min. = 5.0” lift
800lb/min. = 5.5-6.0” lift



Drum Angle Adjustment

Use the Adjustment Bolts on the frame (both sides) to increase or decrease the angle of the drum (remove a section of the Drum Cage Kit to gain access).

- **Decreased Drum angle:** results in less seed capacity running through the drum, achieving dryer and better seed coverage.
- **Increased Drum angle:** results in more seed capacity running through the drum, achieving wetter and poorer seed coverage.

Continued ➲

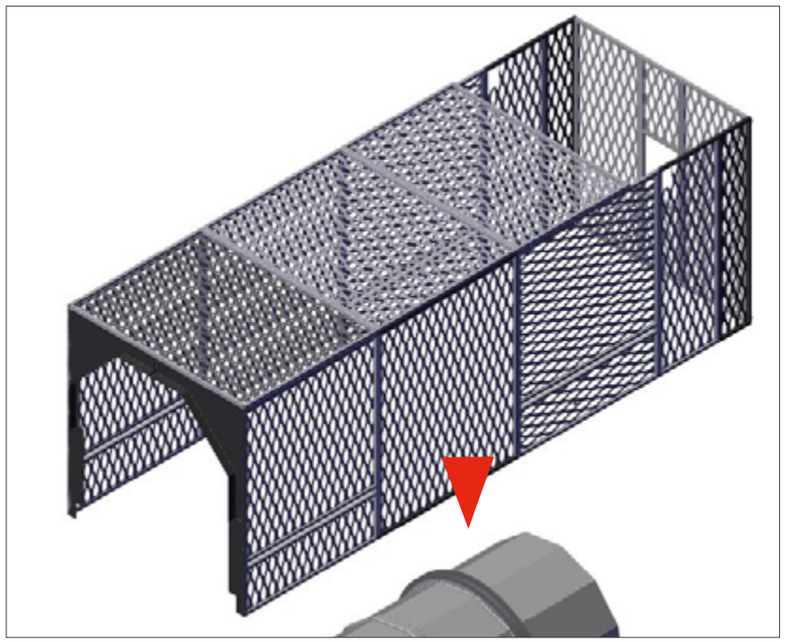
Drum Cage Kit Replacement

Step 1: Use proper rigging and lifting techniques to lift the Drum Cage Kit back onto the Drum frame.

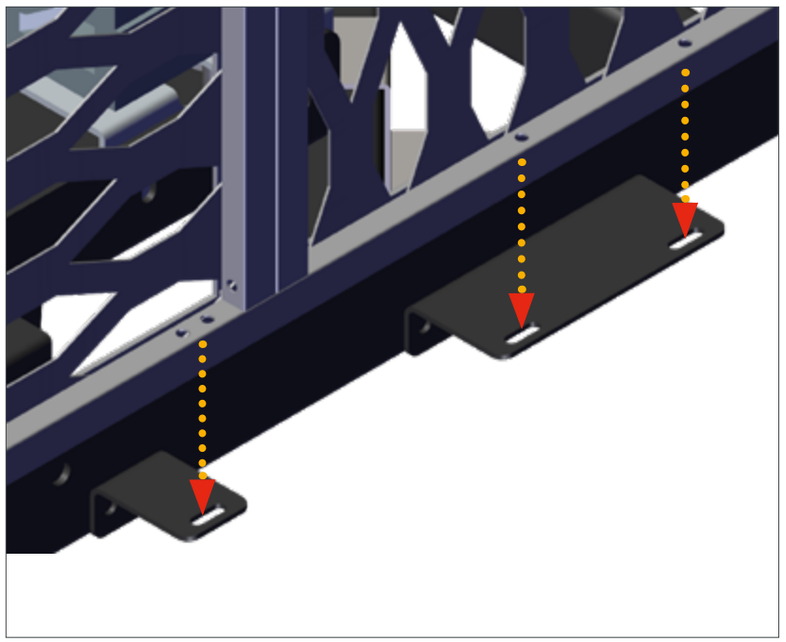
- Align the bolt holes on the Drum Cage Kit with the Cage Tabs welded to the Drum frame.

Step 2: Use 7/16” wrench to connect the Drum Guard Kit hardware to the Drum frame.

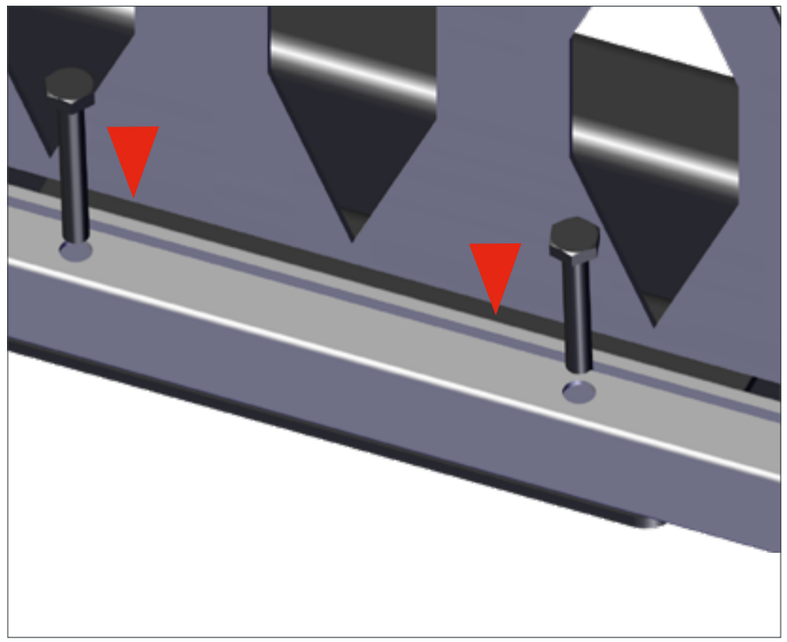
This completes the Drum Installation section.



Replace Drum Cage on Drum & Frame Assembly, ref.



Align Cage Tabs with Drum Cage Guard Holes, ref.



Fasten Drum Cage Guards to Drum Frame, ref.

POWDER FEEDER

Required installation tools

- Material Handling Device
- 9/16” Socket (1)
- Petroleum Jelly

Optional Powder Feeder Assembly

Remove the Powder Feeder Assembly, Frame and Installation Kit from the shipping pallet and check for missing or damaged parts.

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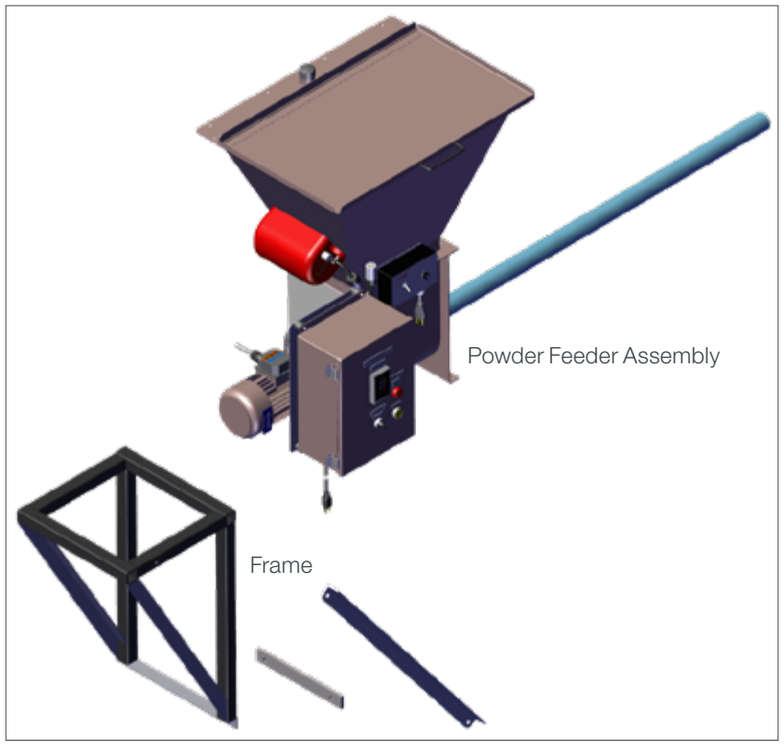
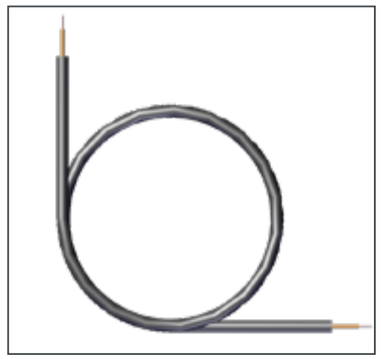


Powder Feeder Assembly, Frame & Installation Kit, ref.



Remote START/STOP Cable, ref.

Installation Kit, ref.

Drum Doghouse

Step 1: Remove the black cap plug from the Doghouse.

Step 2: Apply petroleum jelly onto the backside of the Auger Tube Seal prior to inserting into the Doghouse.

Step 3: Insert Auger Tube Seal into the Doghouse.

Step 4: Apply petroleum jelly onto the orifice of the Auger Tube Seal.

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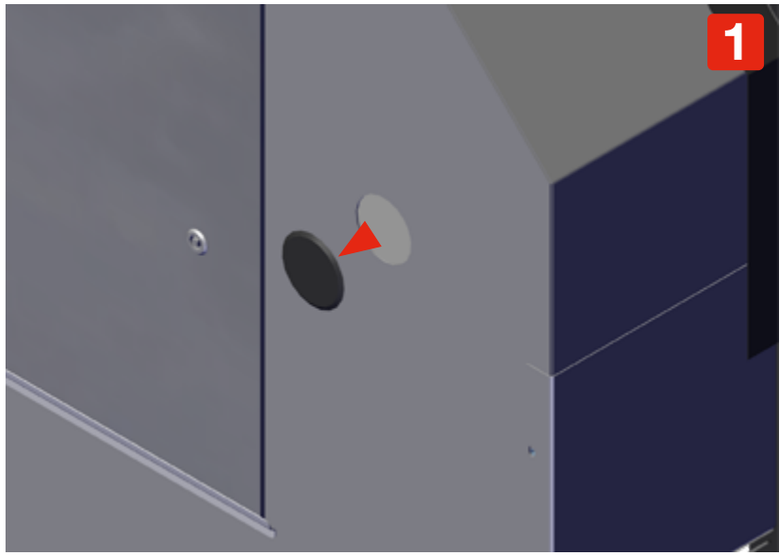
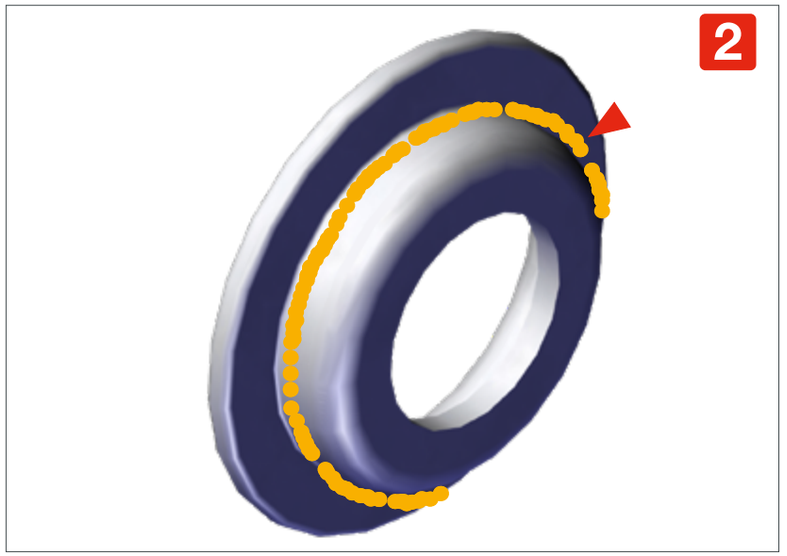
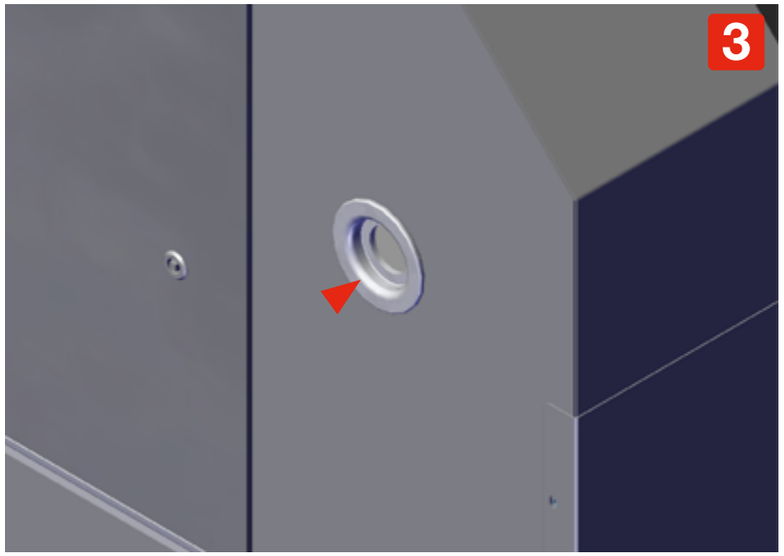


Remove Black Cap Plug from Doghouse, ref.

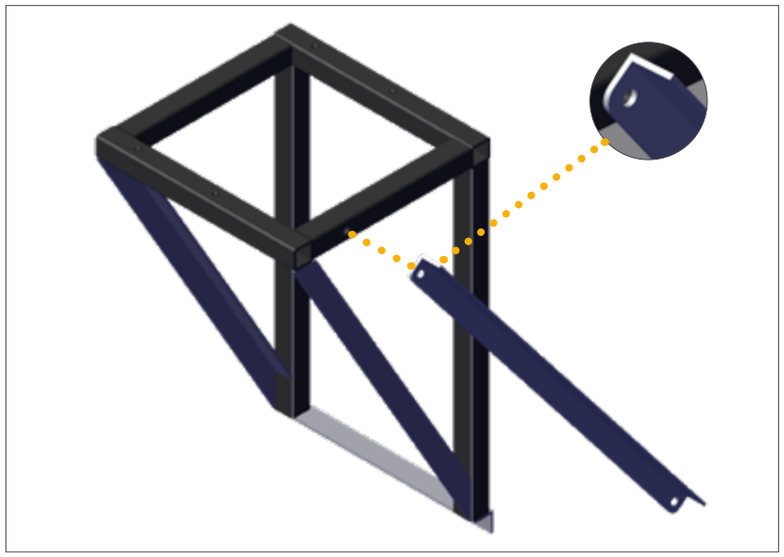


Apply Petroleum Jelly on the backside of the Auger Tube Seal, ref.



Insert the Auger Tube Seal into the Doghouse, ref.

Apply Petroleum Jelly on Auger Tube Seal orifice, ref.

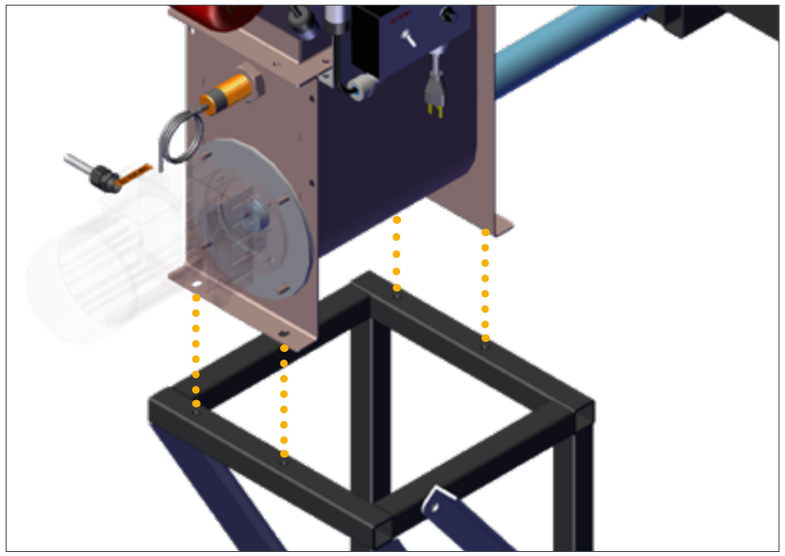


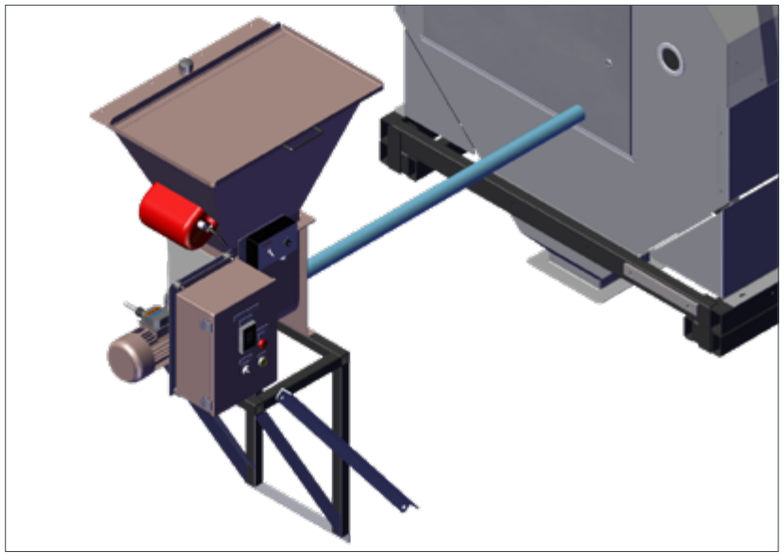
Powder Hopper Support Frame

Step 1: Orient the Support Angle in relation to the Support Frame as shown left.

Step 2: Attach the Support Angle to the Support frame using one 3/8-16 x 2.25 Hex Bolt, Washer and Serrated Nut in the following order: bolt+flat washer+{Support Angle+Hoper Frame]+Serrated Nut.

- Tighten securely in place with a 9/16” socket.





Requires Two People

Use proper rigging and lifting techniques to ensure safety when attaching the Powder Feeder to the Support Frame.

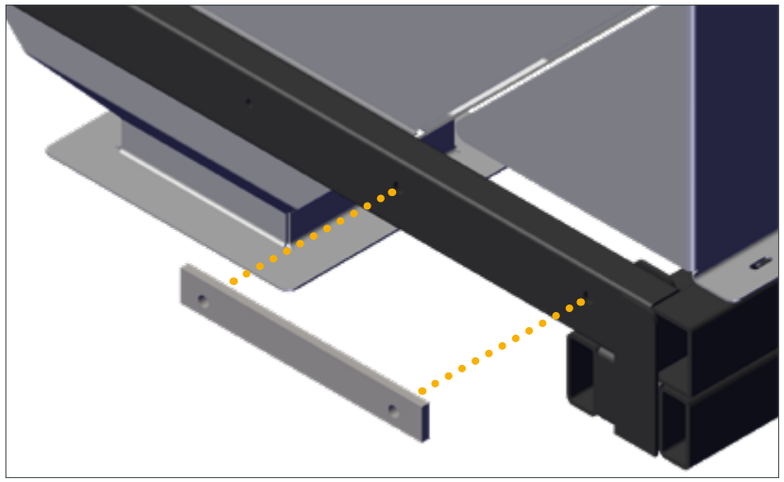
Step 1: Connect the Powder Feeder Assembly on top of the Support Frame.

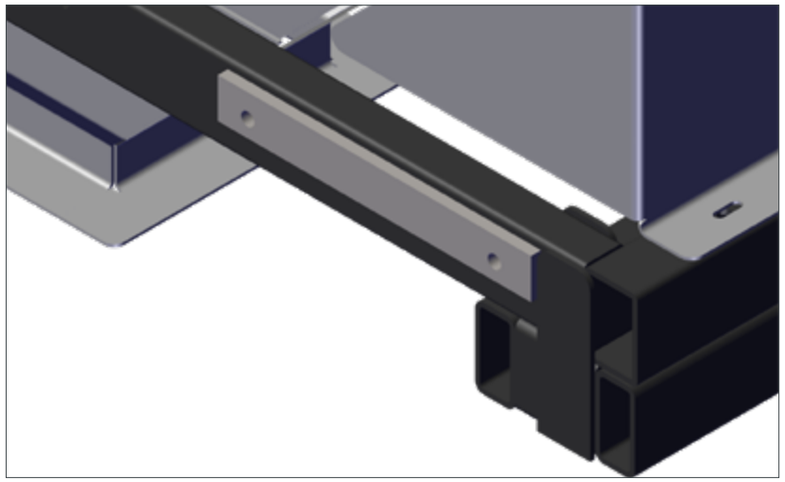
- Align the Powder Body foot mount slot holes with the Support Frame drilled holes.

Step 2: Fasten in place with supplied hardware using four (4) each 3/8-16 x 2.25 Hex Bolt, Washer and Serrated Nut in the following order: bolt+flat washer+{Powder Body+Hoper Frame]+Serrated Nut.

- Tighten securely in place with a 9/16” socket.

Continued ➲

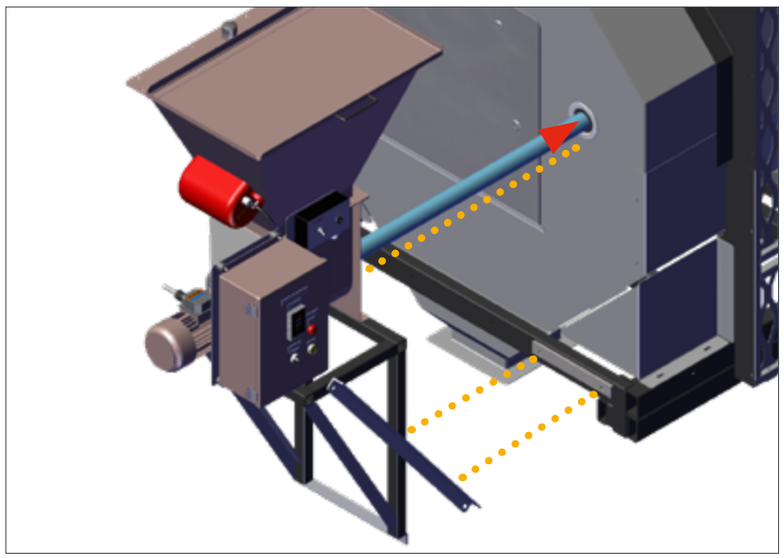




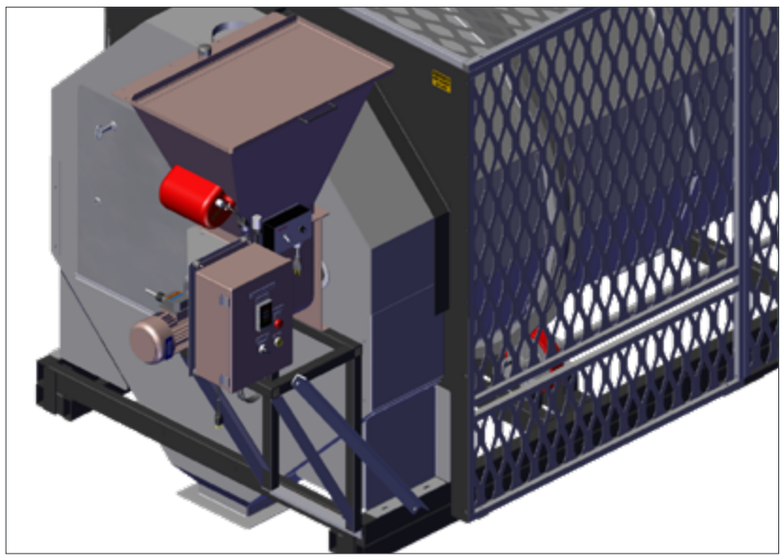
Step 3: Have one person hold the Frame Shim in place against the Drum Frame, aligned with the drilled holes, as shown left.

Step 4: Carefully insert the Auger Tube into the Auger Tube Seal on the Doghouse Door Plate until the Powder Feeder Frame touches the Frame Shim on the Drum Frame.

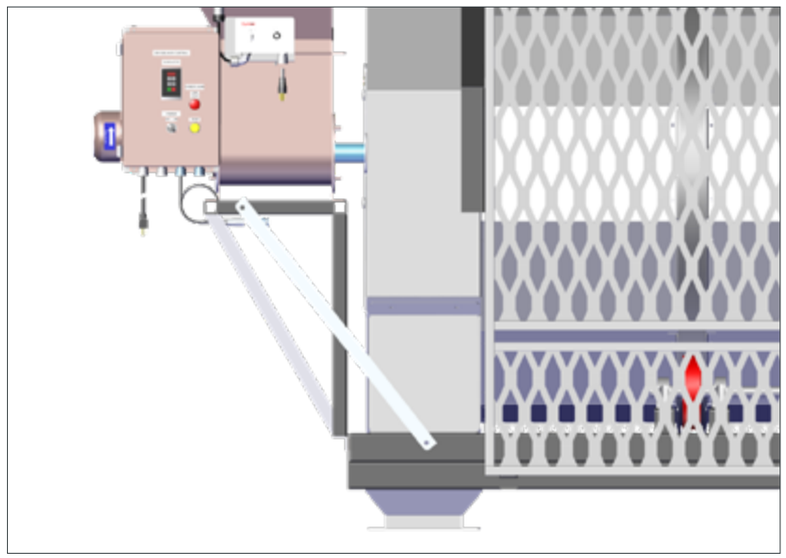
Continued ➲



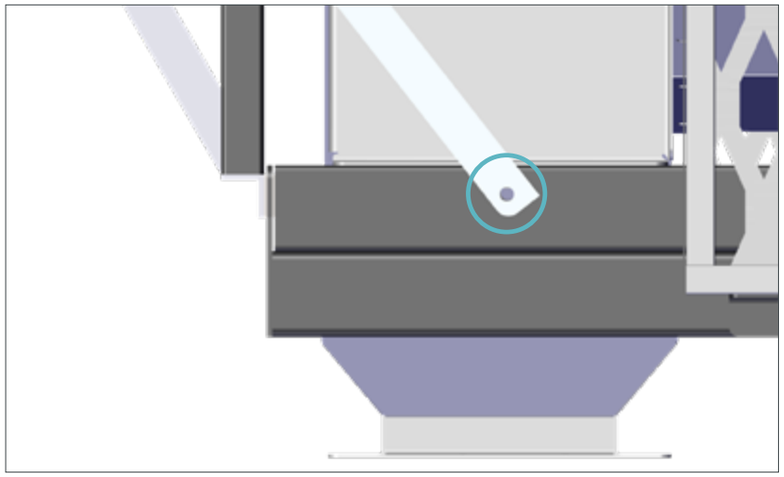
Carefully insert Powder Feeder Assembly into the Auger Tube Seal, ref.



Powder Feeder Assembly installed, ref.

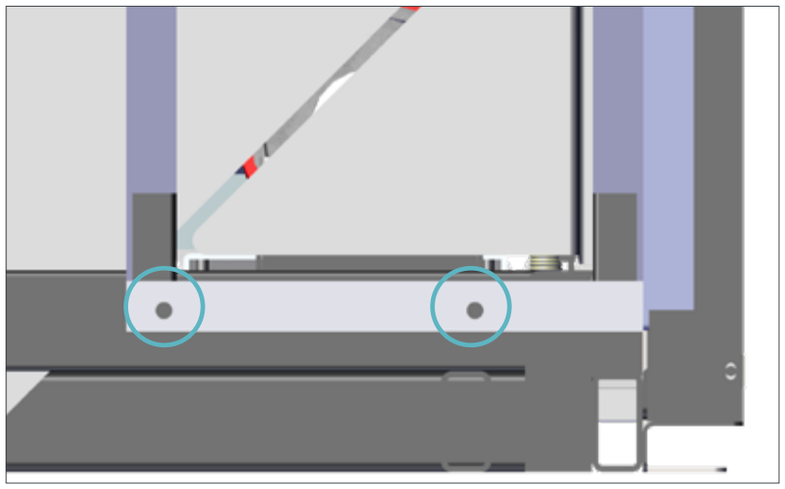


Side view of Powder Feeder Assembly installed, ref.



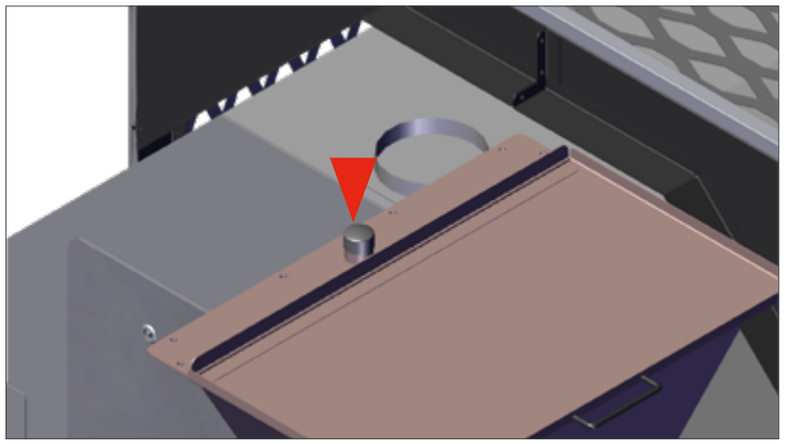
Step 5: Align the Support Angle with the drilled hole on the Drum Frame.

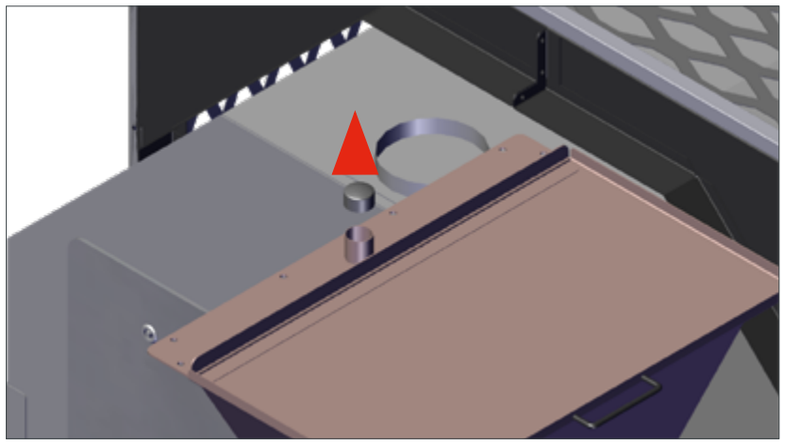
- Bolt in place with 3/8-16 x 2.25 Hex Bolt, Washer, Lock washer and Nut in the following order: Bolt+flat washer+[frame]+lock washer+nut.
- **Hand tighten hardware in place for now.**



Step 6: Fasten the bottom of the Support Frame to the Doghouse Frame using one 3/8-16 x 2.25 Hex Bolt, Washer and serrated Nut on the left side and one 3/8-16 x 2.25 Hex Bolt, Washer and serrated Nut on the right side in the following order: bolt+flat washer+[spacer plate+frame]+lock washer+nut.

- **Tighten all hardware securely in place with a 9/16" Socket.**
- **Remove rigging from the Powder Feeder Assembly.**

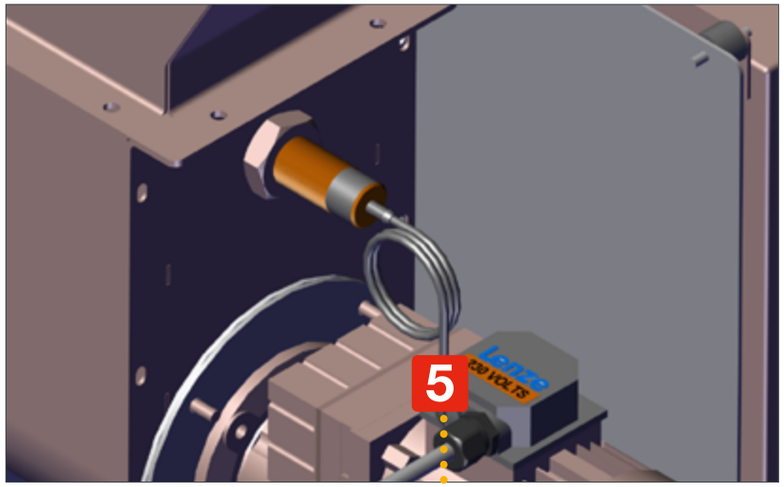


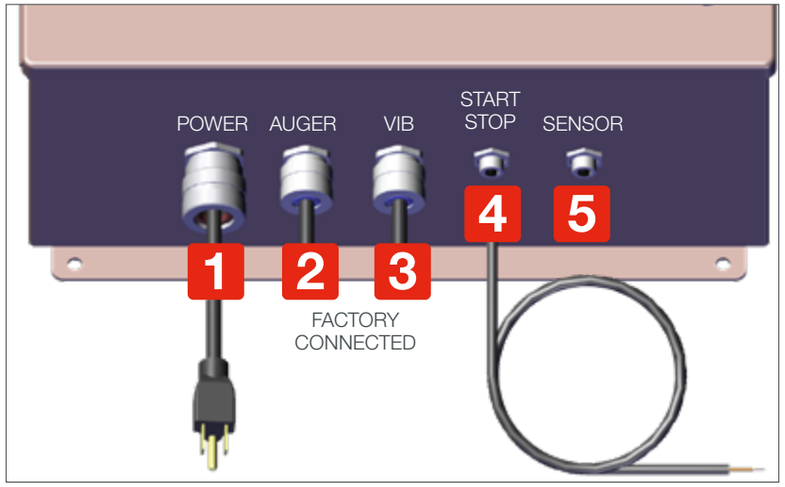


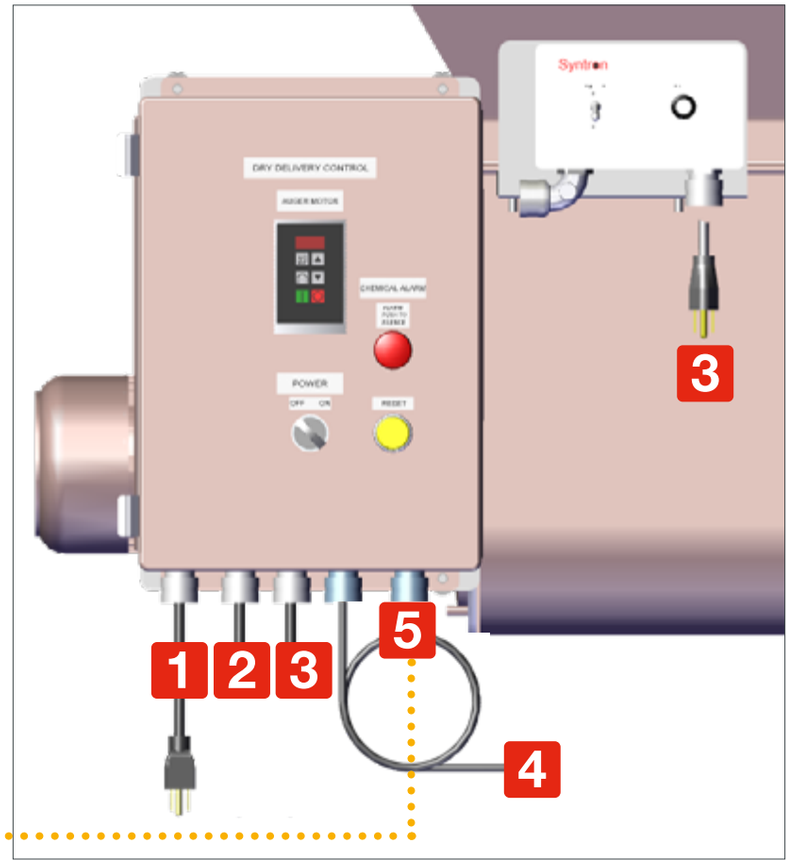
Step 7: Remove the rubber cap from the Dust Evacuation Port located on the top of the Powder Feeder Hopper.

- An 1.50 [38] Dust Evacuation Port is available on top of the Powder Feeder Hopper.
- Connect the Dust Evacuation Port to a shop aspiration system: [50 M^3/HR] recommended.

Continued ➲







Powder Feeder Assembly - Electrical Connections

1. **POWER** Connect the Dry Delivery Control Box Power Male Cord Grip (bottom of the Dry Delivery Control Box marked **POWER**) to an external 230V AC power source.

2. **AUGER** Connected from factory.

3. **VIBRATOR (VIB)** Connected from factory.

4. **POWDER START/STOP** Have a licensed electrician connect the **POWDER START/STOP** Cable to the Main Control Panel marked **POWDER START/STOP***.

- Parts included (bag inside control) for remote start/ stop use when required.

5. **SENSOR** Connect the **SENSOR** Cable to the Dry Delivery Control Box marked **SENSOR**.

This completes the Powder Feeder Installation section.

***WIRING INSTRUCTIONS**

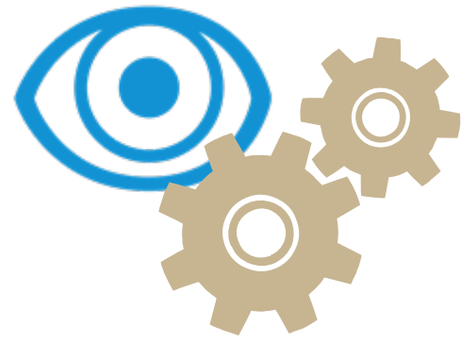
DRY TO DRY CONTROL: USE TERMINALS #223 & #224
ADD HOLE IN THE BOTTOM OF THE *TREATER CONTROL TO INSTALL 1/2" WHITE CORD CONNECTOR FOR START/ STOP CABLE.

GLC CONTROL: USE INTERFACE CONNECTOR A4M PIN #1 & #4

BC SCALE & RMOM

Required installation tools

- Material Handling Device
- 9/16” Socket (1)
- 1/2” Socket (1)
- 3/8” Socket (1)
- 7/16” Wrench (1)
- Feeler Gauge
- Drill Bit Index
- Phillips Screwdriver
- Flat Screwdriver
- Tubing Cutter



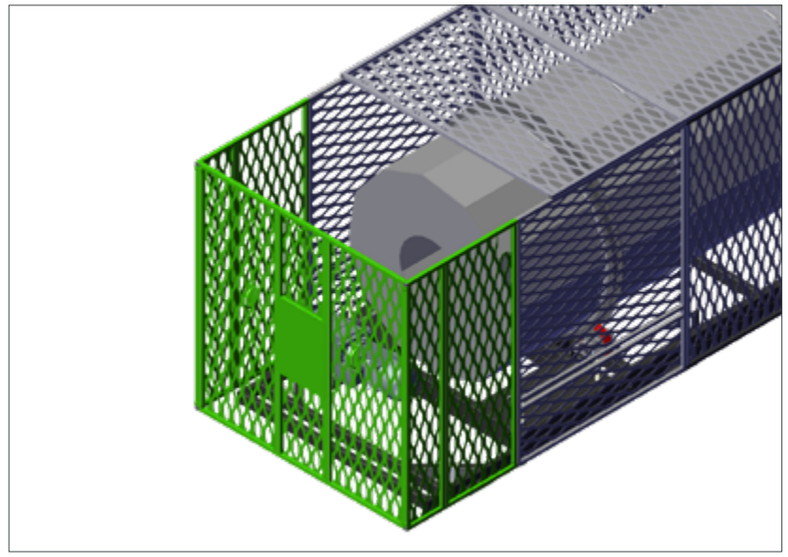
Drum Cage Kit Removal

Remove the Inlet End Guard sections from the Drum & Frame Assembly Lower Frame.

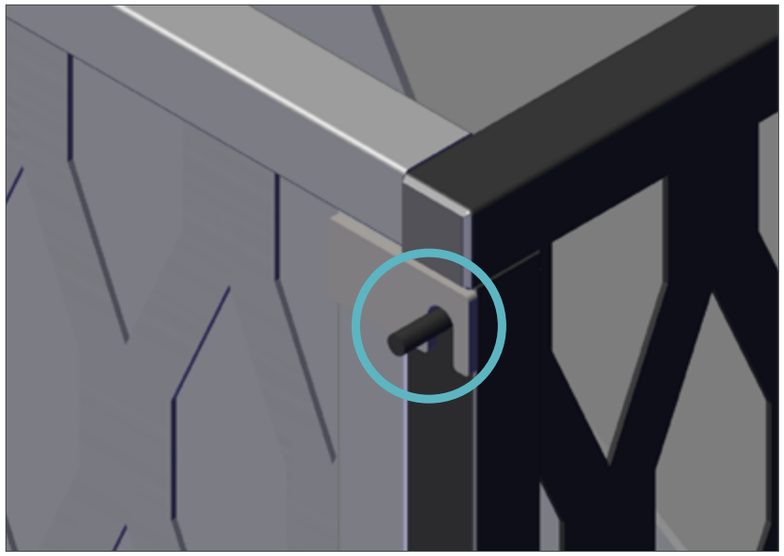
Continued ➲

Note: Rotary Mist-O-Matic® will be referred to as RMOM throughout the manual.

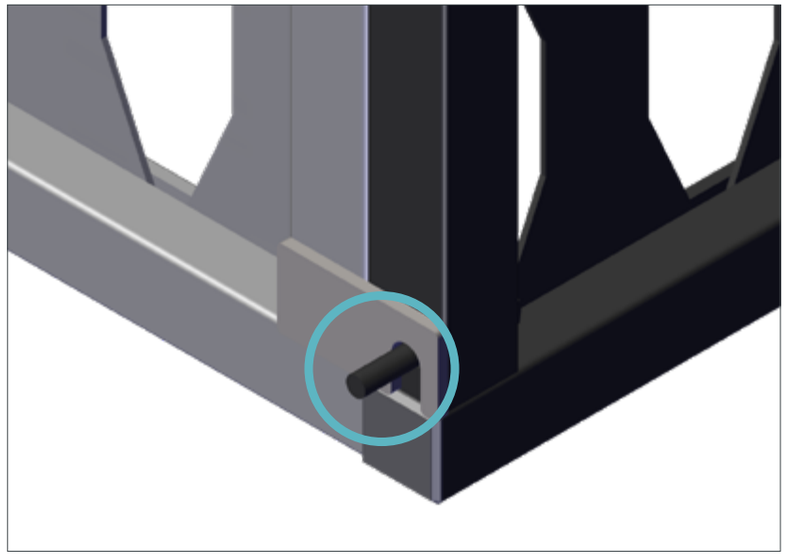
Drum Inlet End Cage, ref.



Remove the highlighted portion of the Drum Inlet End Cage, ref.



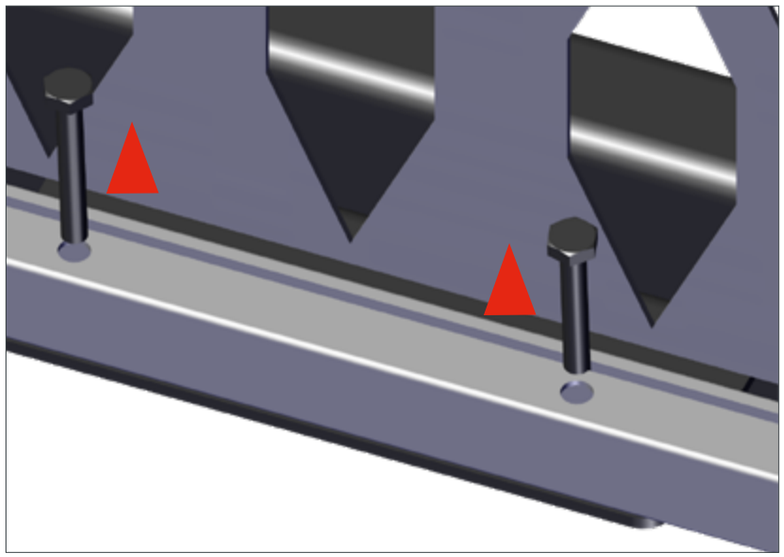
Drum Inlet End Cage Top Corners, ref.



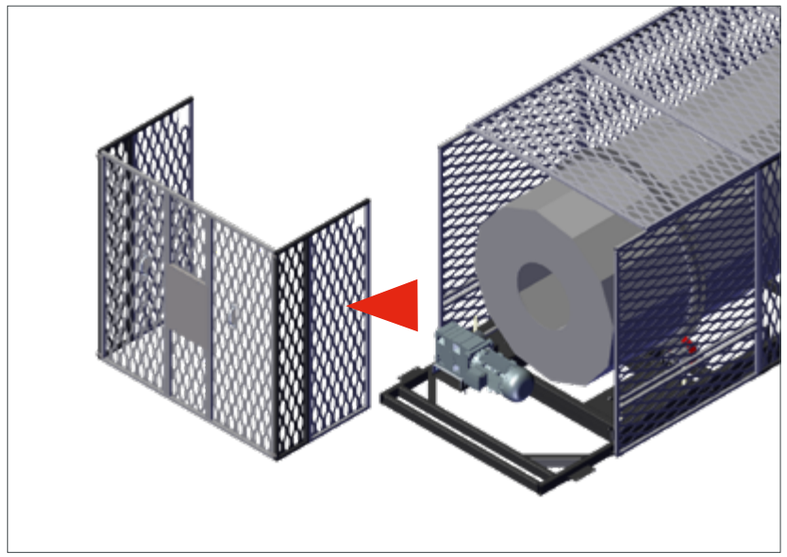
Drum Inlet End Cage Bottom Corners, ref.

Step 1: Use 7/16” wrench to remove bolts that connect the Drum Guard Kit to the Drum frame.

- They are located on both sides along the top and bottom corners of the Drum Cage.



Remove Drum Inlet Side Cage Guards from Drum Frame, ref.



Drum Inlet End Cage Guards Removed from Drum Frame, ref.

Step 2: Use 7/16” wrench to remove bolts that connect the Drum Guard Kit to the Drum frame.

- They are located along both sides of the bottom of the Drum Cage.

Step 3: Remove and set the Drum Cage sections aside to re-attach later.

Continued ➲

Note:
RMOM Assembly Dry Weight: 200 LBS.

RMOM Assembly

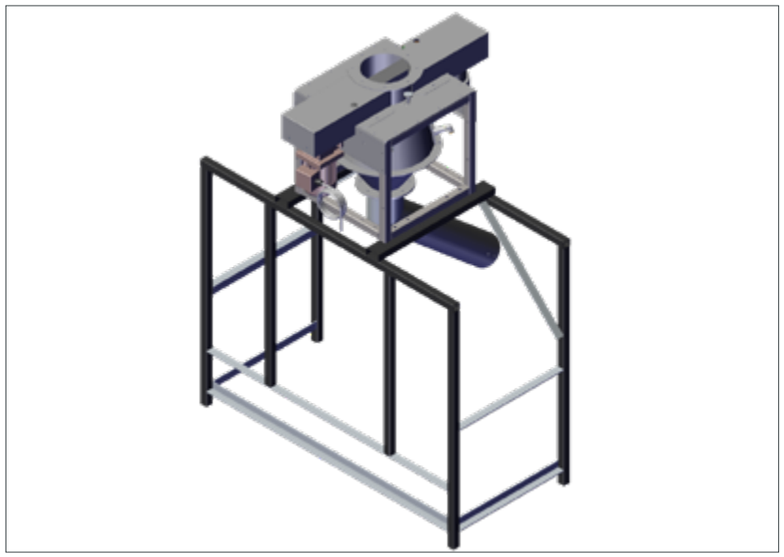
Step 1: Remove the RMOM Assembly from the shipping pallet.

Step 2: Use 7/16” wrench to remove shipping hold down hardware from the RMOM Frame.

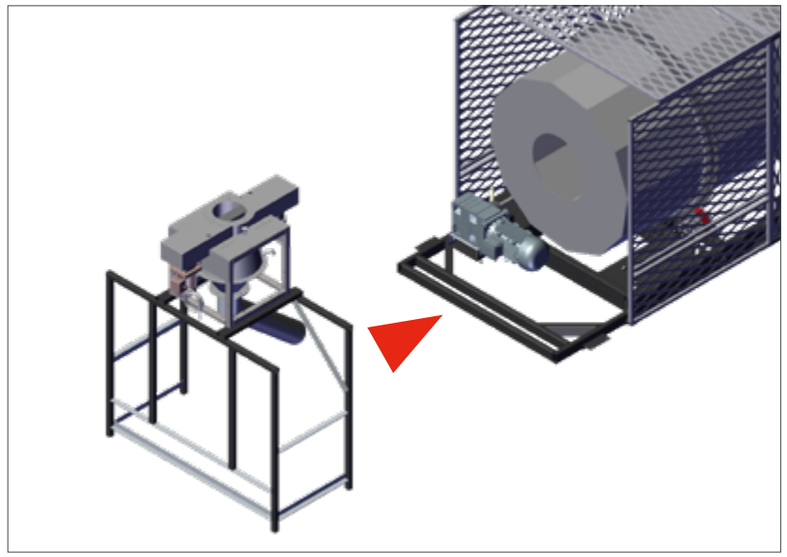
Step 3: Use proper rigging and lifting techniques to remove the RMOM Assembly off the shipping pallet and set it right up to the Drum outside the Drum Lower Frame (highlighted red below).

- The seed Transition fits inside the Drum opening.

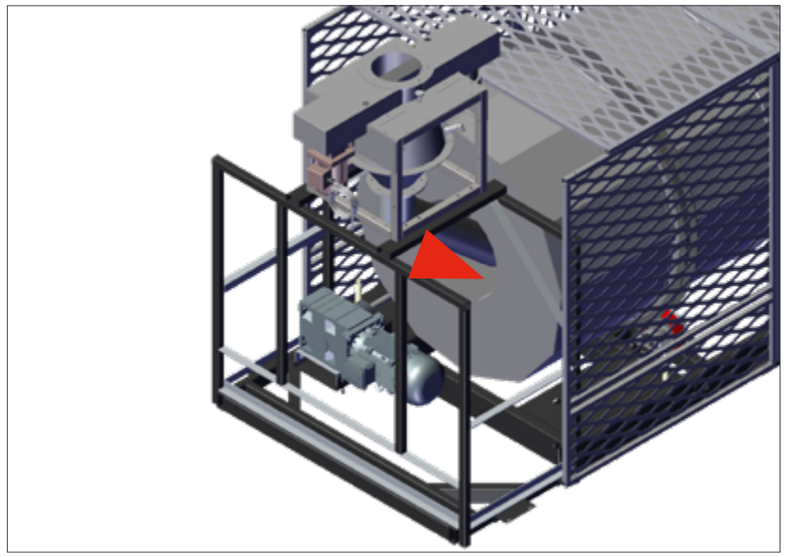
Continued ➲



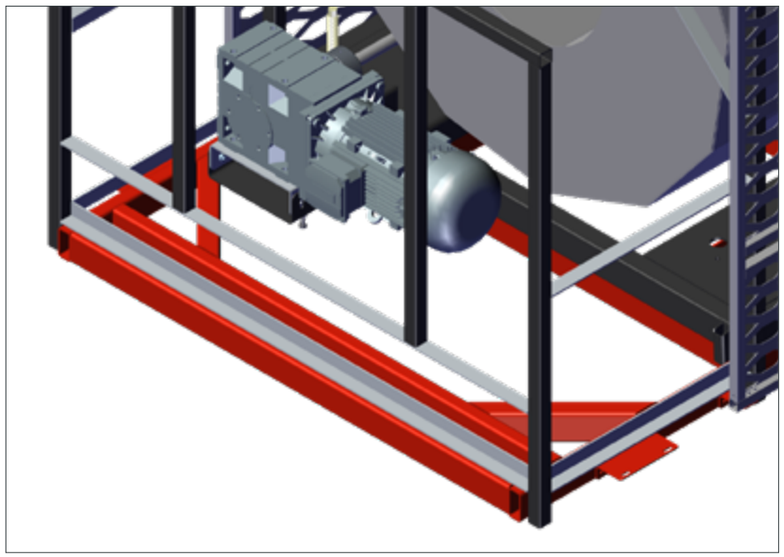
RMOM Assembly and Transition ship mounted on Frame, ref.



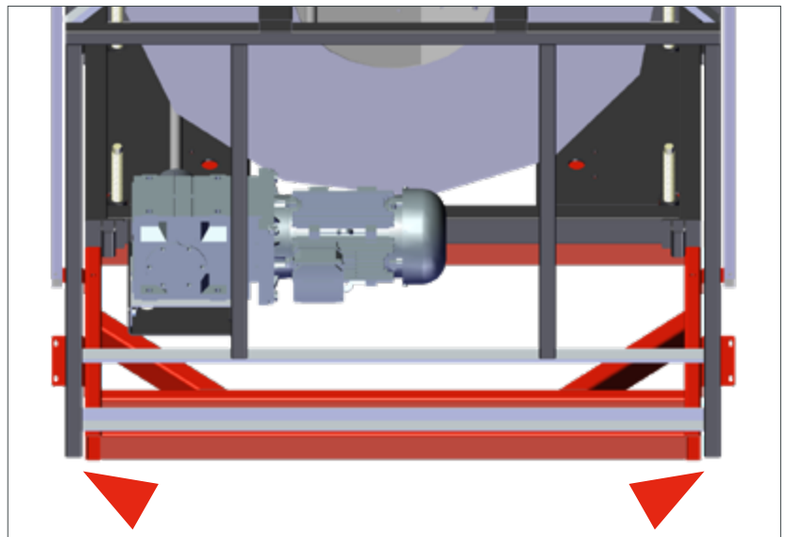
Place the RMOM Frame up to the Drum & Frame Assembly, ref.



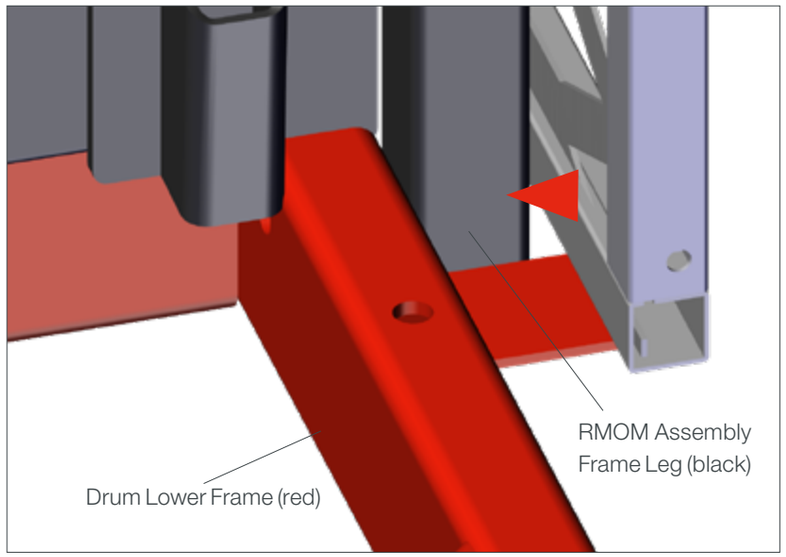
RMOM Assembly Installed; Transition fits in the Drum opening, ref.



Drum Frame (red); RMOM Assembly Frame sits Outside the Drum Frame, ref.



End View: RMOM Assembly Frame sits Outside the Drum Frame, ref.



Detail: corner view of RMOM Assembly Frame sits Outside the Drum Frame, ref.

Note:
Inlet Gasket ships separately with the RMOM
Inlet Flange Gasket:
12.50” Diameter; eight (8) holes.

Note:
BC50 Scale Assembly Dry Weight: 75 LBS.

Step 4: Remove the BC Scale Assembly from the shipping pallet.

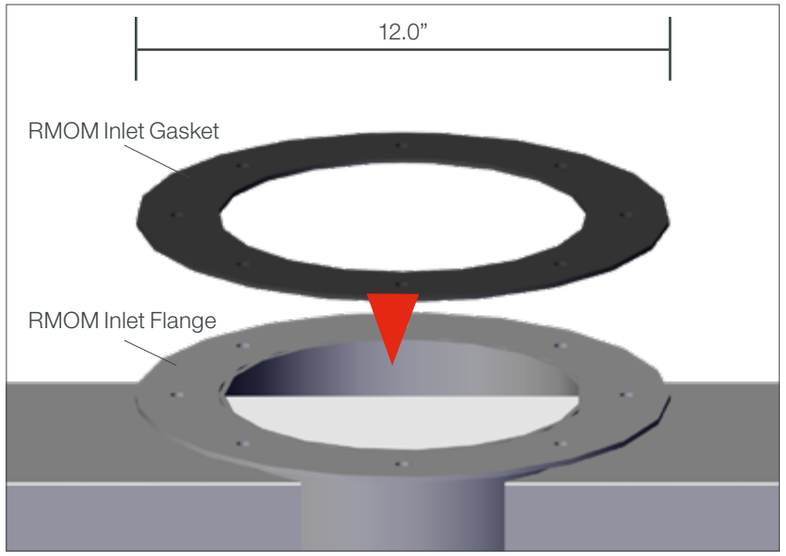
Step 5: Use 7/16” wrench to remove shipping hold down hardware.

Step 6: Place the 12.50” Dia. Inlet Flange Gasket on the RMOM Inlet Flange and align the 8-hole bolt pattern.

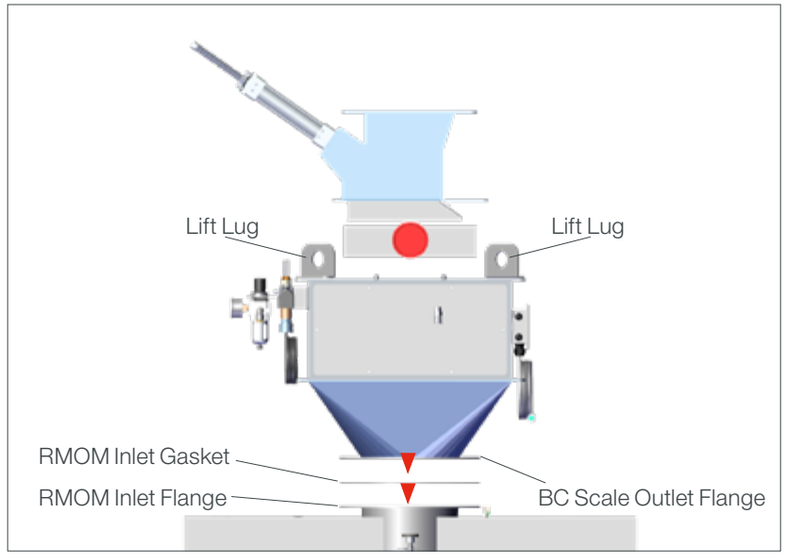
Step 7: Use an overhead hoist to remove the BC Scale Assembly (lift lugs provided) off the shipping pallet and set it on the RMOM Inlet Flange and Gasket; align the 8-hole bolt patterns.

Step 8: Fasten the BC Scale to the RMOM using eight (8) each the factory supplied 5/16-18 x1/2 Hex Bolt and serrated Nut hardware in the following order: bolt+{BC Scale Outlet Flange+Inlet Flange Gasket+RMOM Inlet Flange]+Serrated Nut and tighten securely in place with a 1/2” socket.

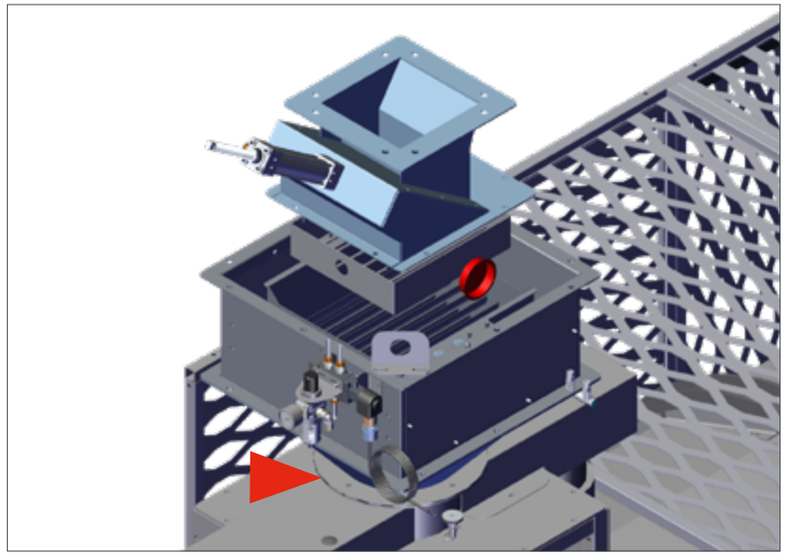
Continued ➲



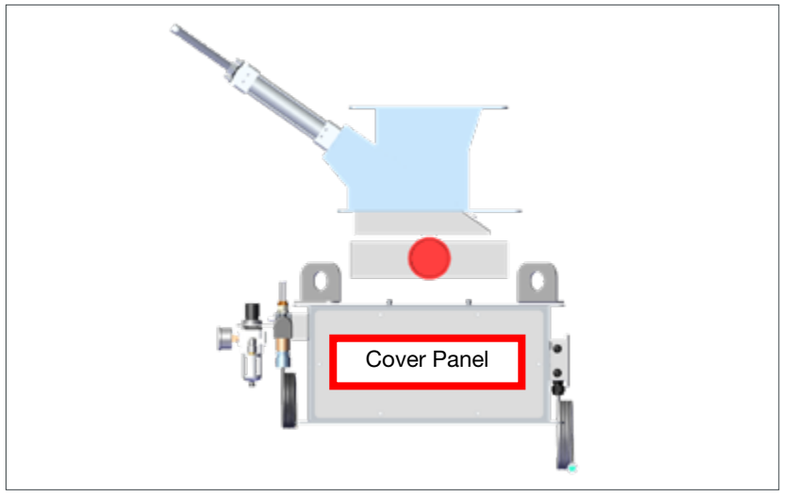
Place the 12.0” dia. Inlet Gasket on the RMOM 12.0” dia. Inlet Flange, ref.



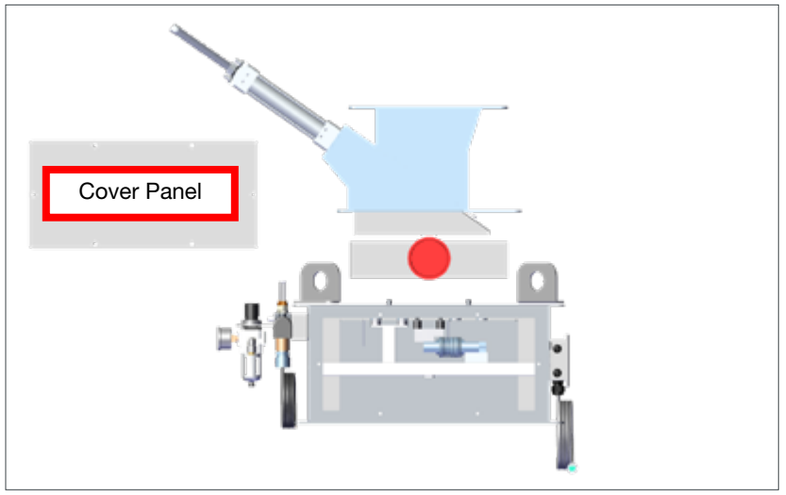
Set the BC Scale Outlet Flange on the RMOM Inlet Flange & Gasket, ref.


Fasten the BC Scale Outlet Flange and the RMOM Inlet Flanges together, ref.

BC Scale - Load Cells



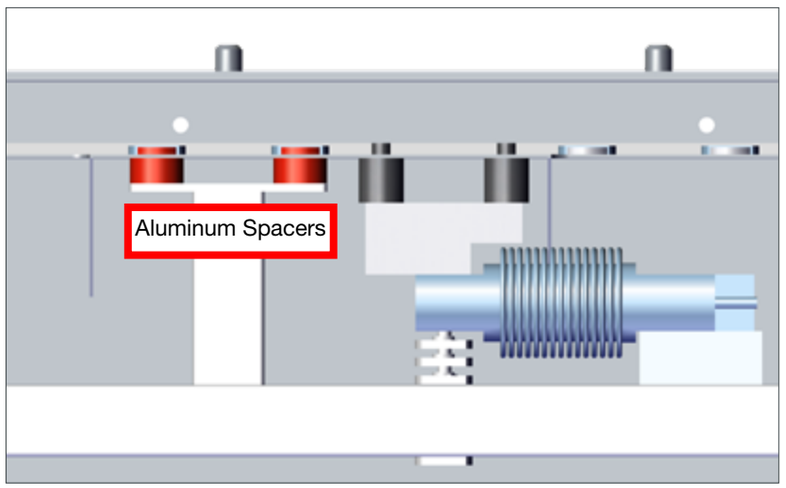
BC Scale, right side view: Cover Panel in place, ref.



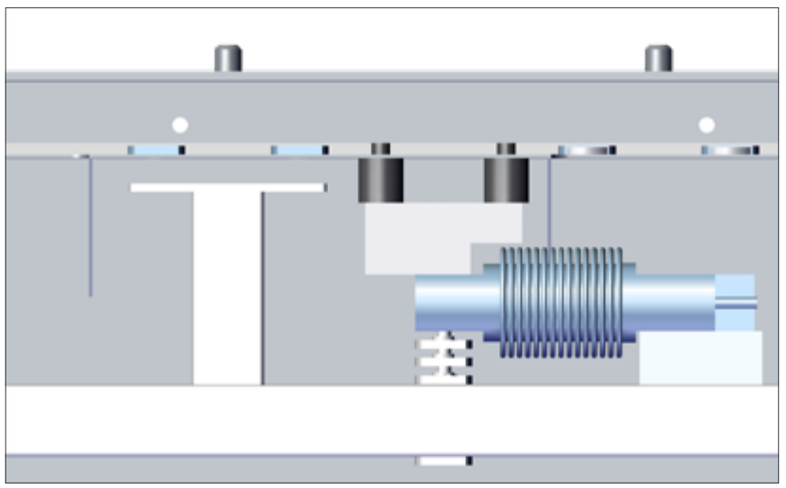
BC Scale, right side view: Cover Panel removed, ref.

Step 1: Use 3/8” wrench to remove the six (6) 10-32 locking nuts that hold the Cover Panel on the Scale Body.

- Remove the Cover Panel from the Scale Body.

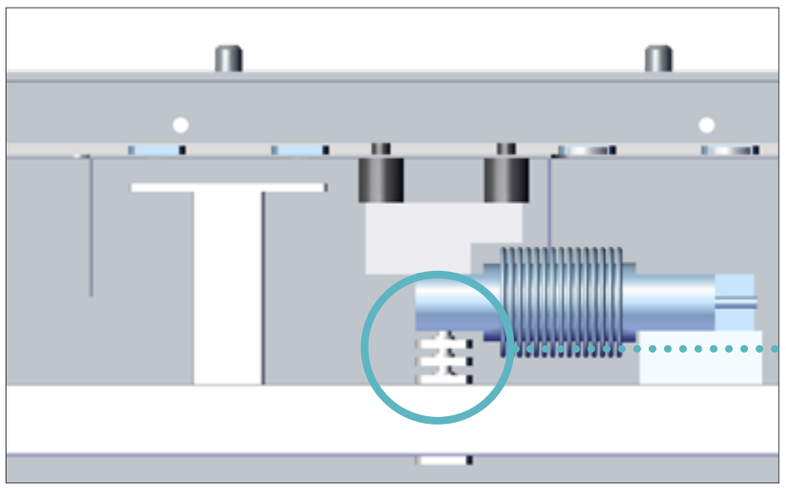


BC Scale, right side internal view: Aluminum Spacers (red) in place, ref.

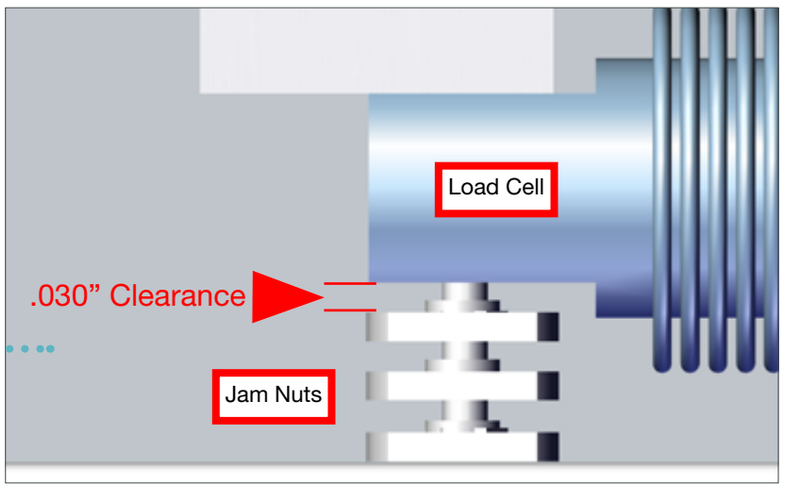


BC Scale, right side internal view: Aluminum Spacers removed, ref.

Step 2: Use 7/16” wrench to remove shipping hold down the two (2) aluminum spacers (highlighted red).



BC Scale, right side internal view: Jam Nuts underneath Load cell, ref.

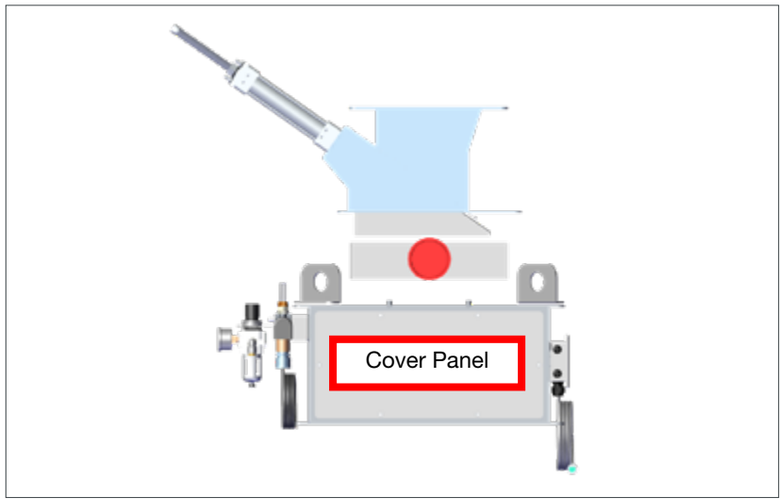


BC Scale, internal detail: Jam Nuts underneath Load cell; clearance, ref.

Step 3: Use 7/16” wrench to adjust the top jam nut underneath the Load Cell until a .030” clearance between the top of the jam nut and the bottom of the load cell is established.

- This .030” clearance is the total travel gap allowed between the bottom of the load cell and the top of the top jam nut.

Continued ➲



BC Scale, right side view: Cover Panel in place, ref.

Step 4: Replace the Cover Panel on the Scale Body.

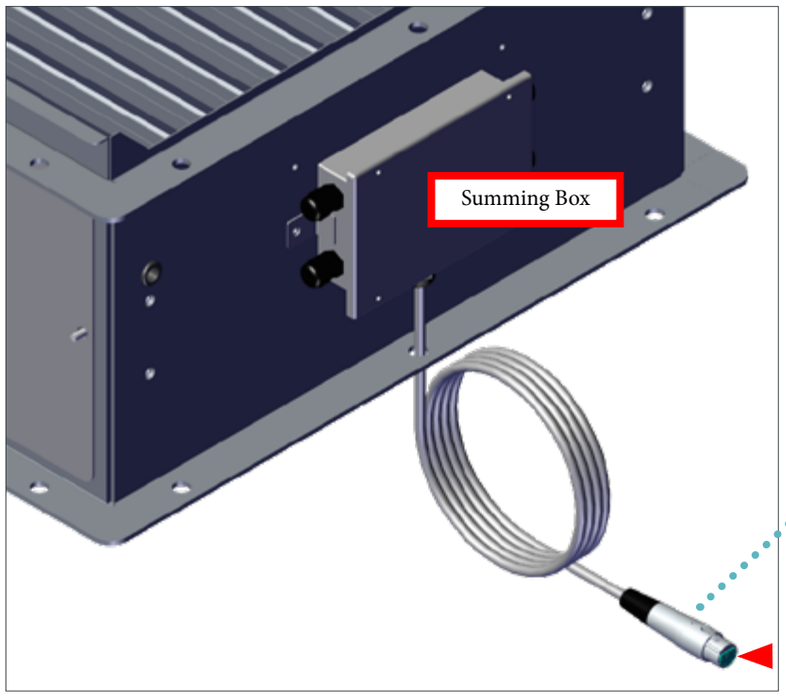
- Replace the six (6) 10-32 locking nuts.
- Use a 3/8” wrench to fasten the Cover Panel in place.

Repeat steps 1-4 on the other side of the Scale Body.

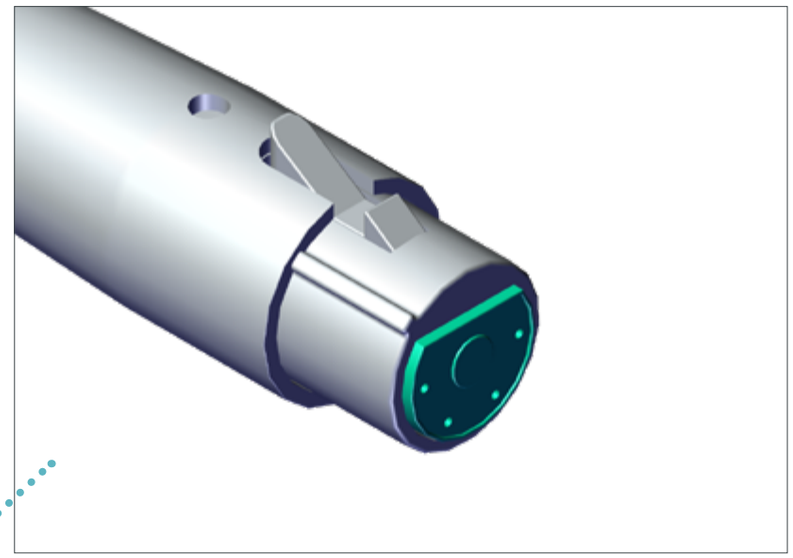
BC Scale - Electrical Connections

Step 1: Connect the BC Scale Summing Box 25 foot Cable (attached to the Summing Box on side of Scale) to the bottom of the Main Control Panel marked: SCALE.

Continued ➲

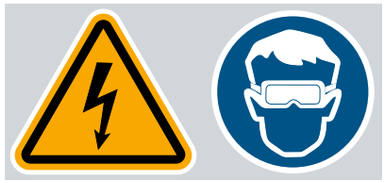


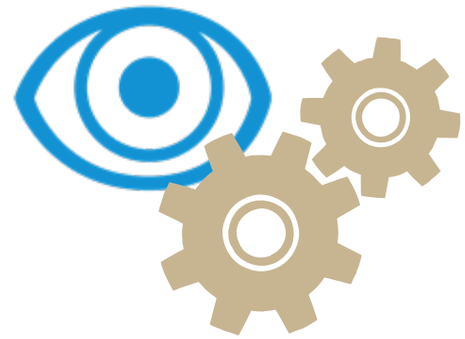
BC Scale Summing Box Load Cell 25ft Cable, ref.



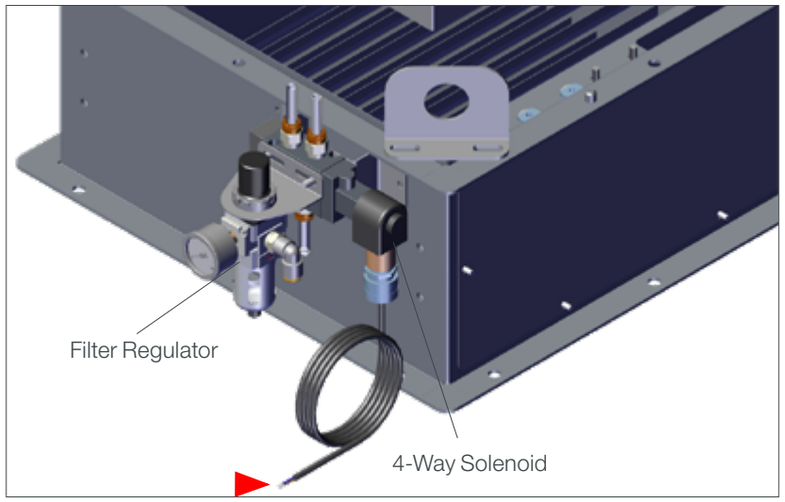
BC Scale Summing Box Load Cell 25ft Cable A4F Female 4-Pin Connector, ref.

Warning: ensure a licensed electrician wires the system following National electrical codes for the area. Refer to wiring diagrams provided inside the control panel.

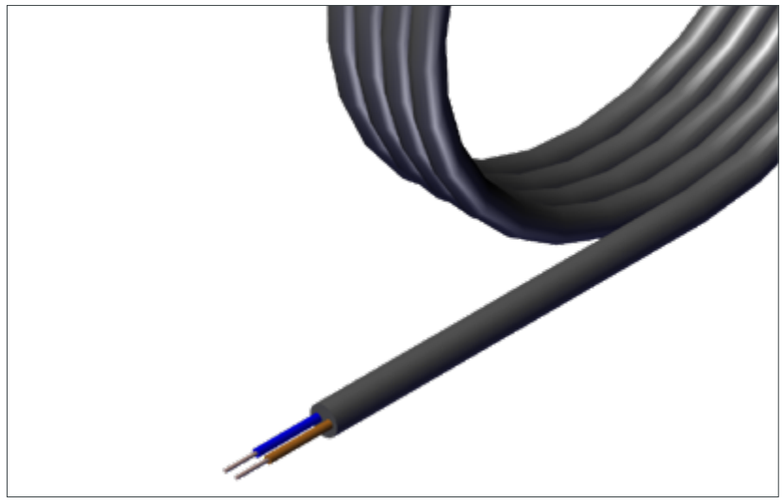




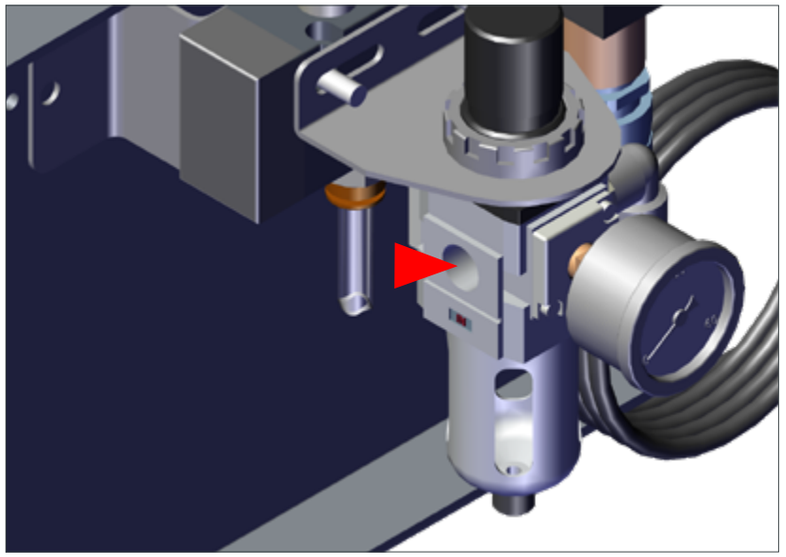
Step 2: Have a licensed electrician land the BC Scale 115V 4-Way Solenoid 25 foot Cord Leads (attached to the Solenoid Valve on side of Scale) to the Main Control Panel.



BC Scale 115V 4-Way Solenoid 25ft Cord, ref.



BC Scale 115V 4-Way Solenoid 25ft Cord Leads, ref.



BC Scale Inlet Automatic: Connect Shop Air to Air Inlet Port, ref.

BC Scale - Air Connections

Connect shop air to the Filter Regulator Air Inlet Port marked **IN**.

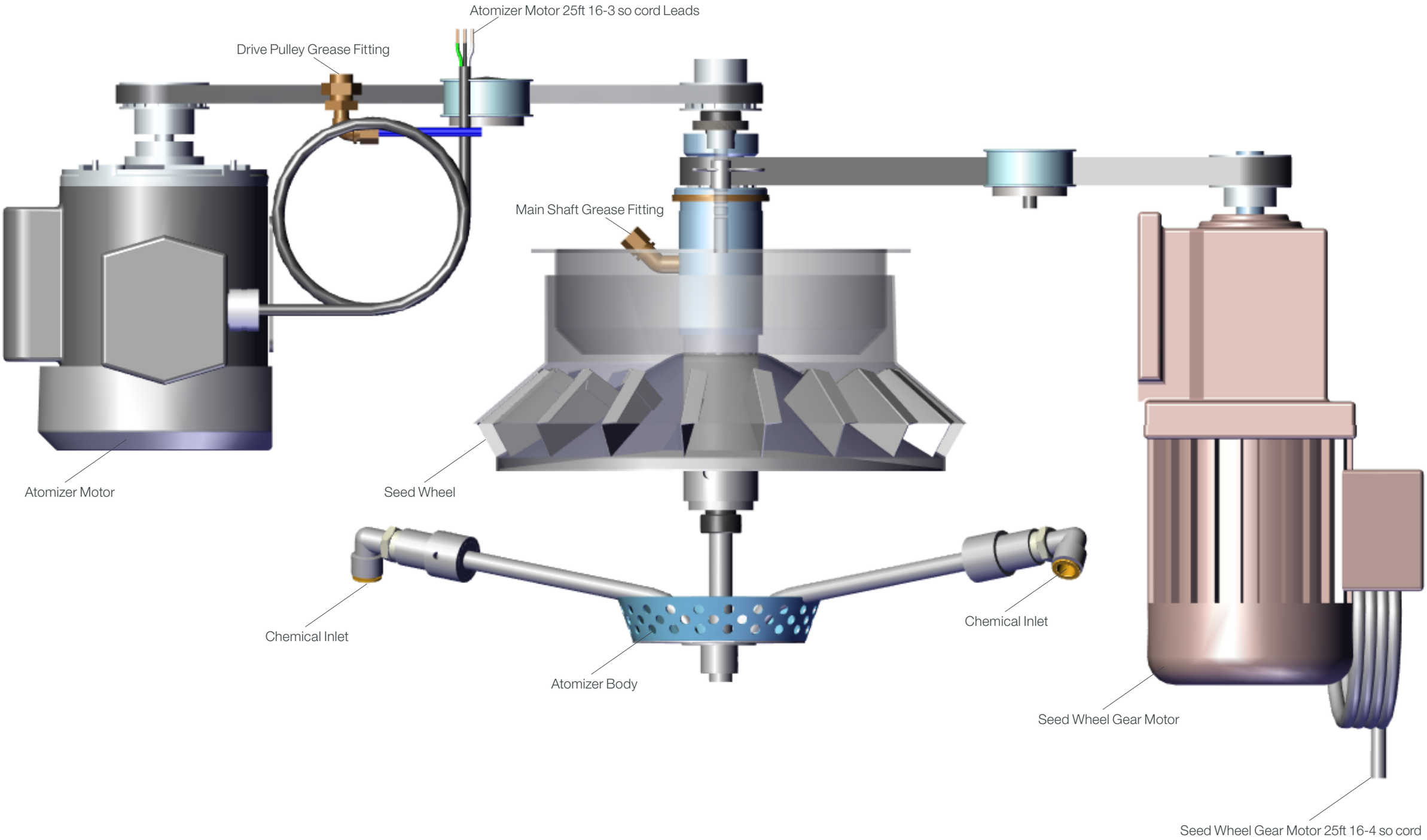
- Air consumption: 1 CFM @ 80PSI

Continued ➲

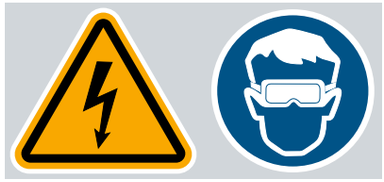
BC Scale Installation Suggestions

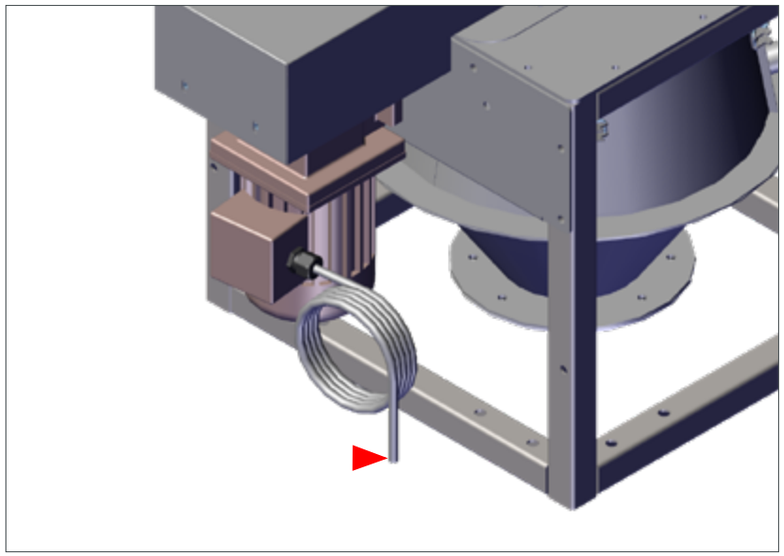
- Ensure the load cell & communication cables are as far away from AC voltage lines as possible.
- When installing the BC Scale, do not use rigid connections in an area that has vibration.
- The controller must be inside a building with a minimum heat of 40° F.
- Cell phones and 2 way radios can cause noise interference problems.
- Connect a dust evacuation system to the BC Scale (the ports plugged with red caps on both sides of the unit).
- Always check and clean out the catcher box and basket for debris.

RMOM CUTAWAY VIEW DETAIL, REF.

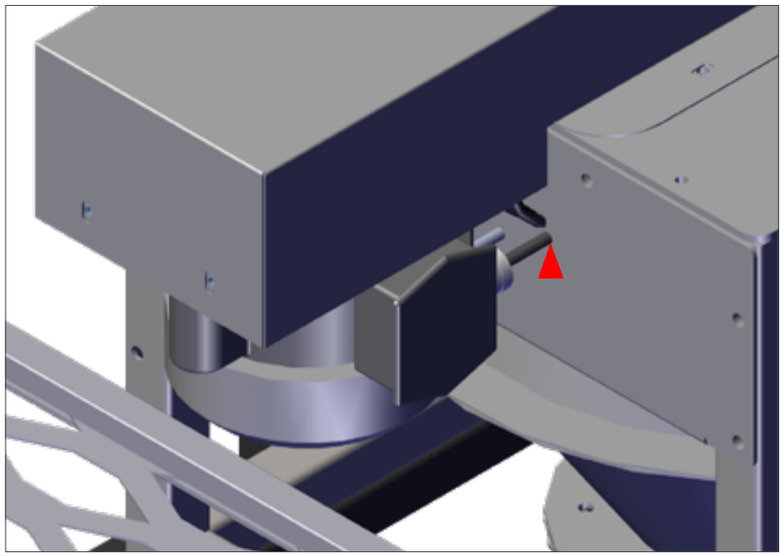


Warning: ensure a licensed electrician wires the system following National electrical codes for the area. Refer to wiring diagrams provided inside the control panel.





Seed Wheel .41 HP/60hz inverter duty gear motor w/ 25ft 16-4 so cord, ref.



Atomizer 1/4 HP/115v-230v/1ph/60hz Motor w/ 25ft 16-3 so cord, ref.

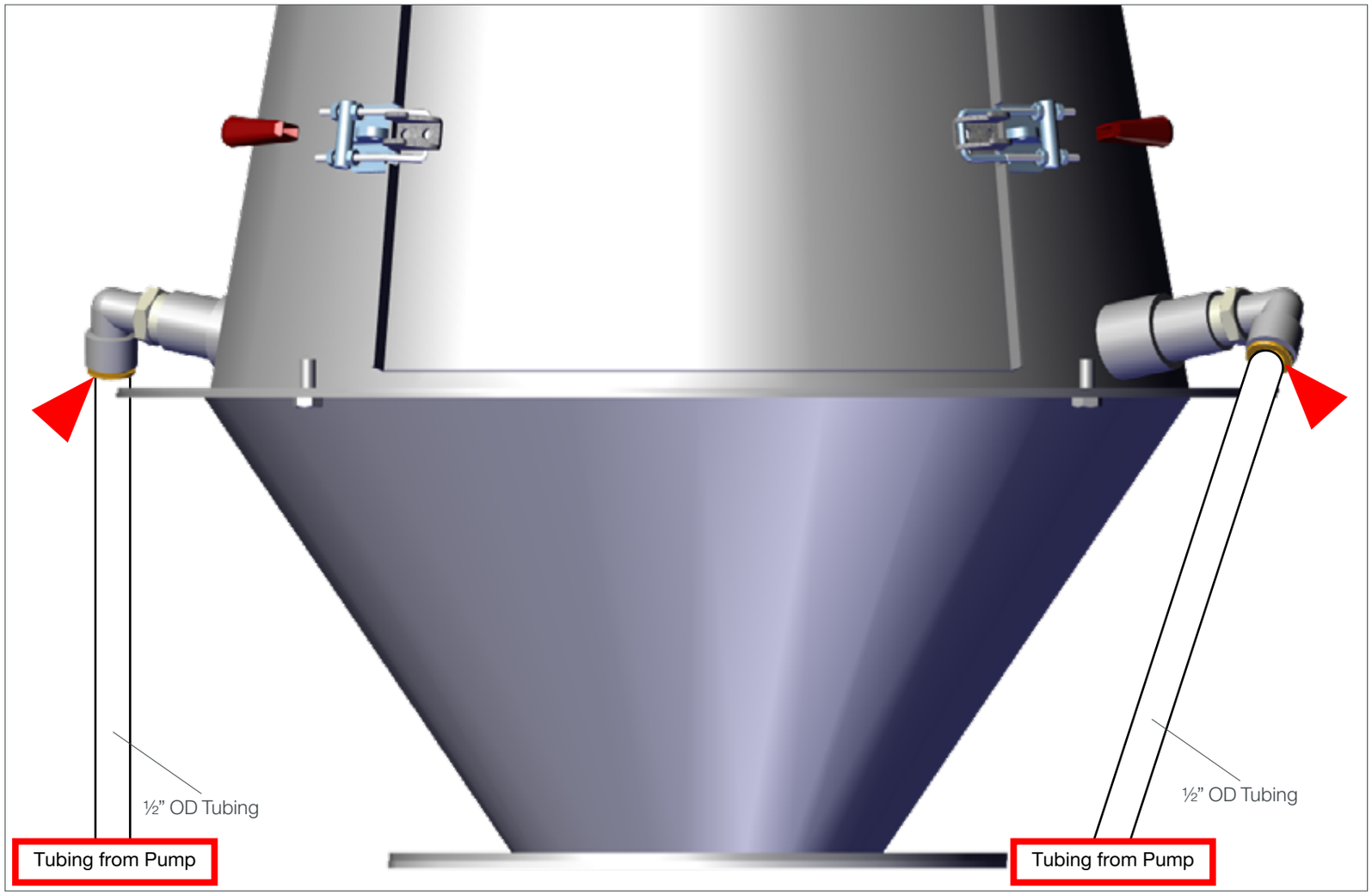
RMOM - Electrical Connections

Land the RMOM Seed Wheel and Atomizer motor leads to the Main Control Panel.

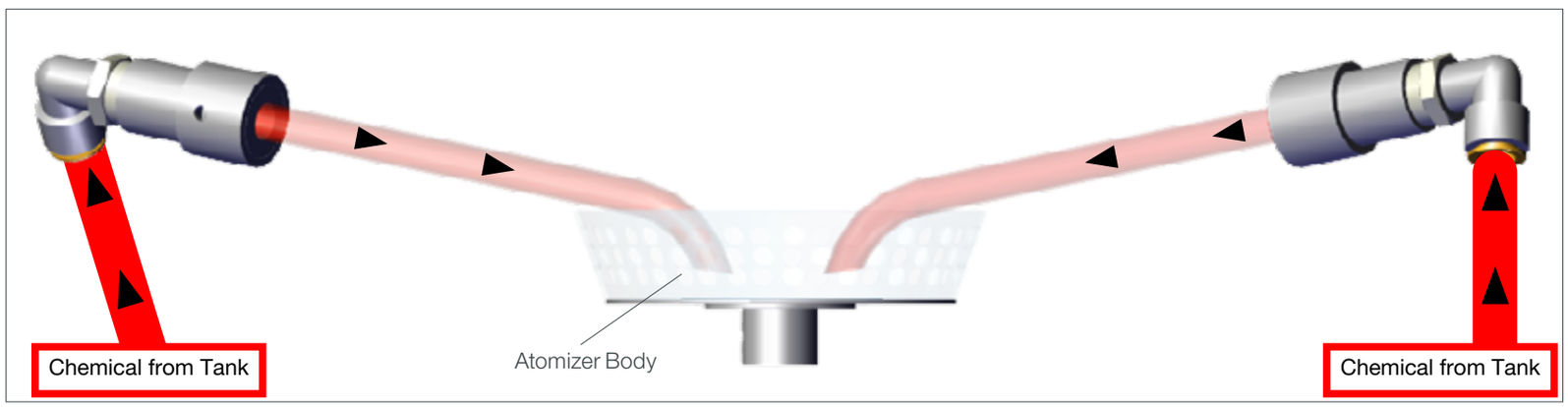
- Motor rotation is indicated by arrow stickers on the Motors.

Continued ➲

Tip: Prior to initial start-up, the phase-sequence of all motors must be checked. Ensure both motors are properly fused and wired. Both motors should operate in the same direction. Motor rotation is indicated by arrow stickers on the Motors.



RMOM Chemical Inlets (2), ref.



RMOM internal view: chemical flow from supply tank and pumping system, ref.

RMOM - Chemical Treatment Connections

Insert one end of factory supplied 1/2" OD tubing into each of the Chemical Inlet press lock fittings (right & left).

- Cut to fit the other ends of the tubing and connect them to the Pumps.
- There must be two treatment lines feeding into the RMOM Atomizer!
- Ensure Treatment lines are as straight as possible, with no 90° turns or sagging low spots.
- If using a single treatment line from a supply tank, tee it off at a minimum of three feet below the RMOM and plumb two supply lines from it up to the two RMOM inlet ports.

This completes the BC Scale & RMOM Installation section.

Caution! Support for the RMOM frame is required when electronic valves are mounted on the treatment lines. If the RMOM is used with an automated unit, an electric solenoid valve should be used to prevent treatment lines from self-draining.

PPS & STATIC MIXER

Required installation tools

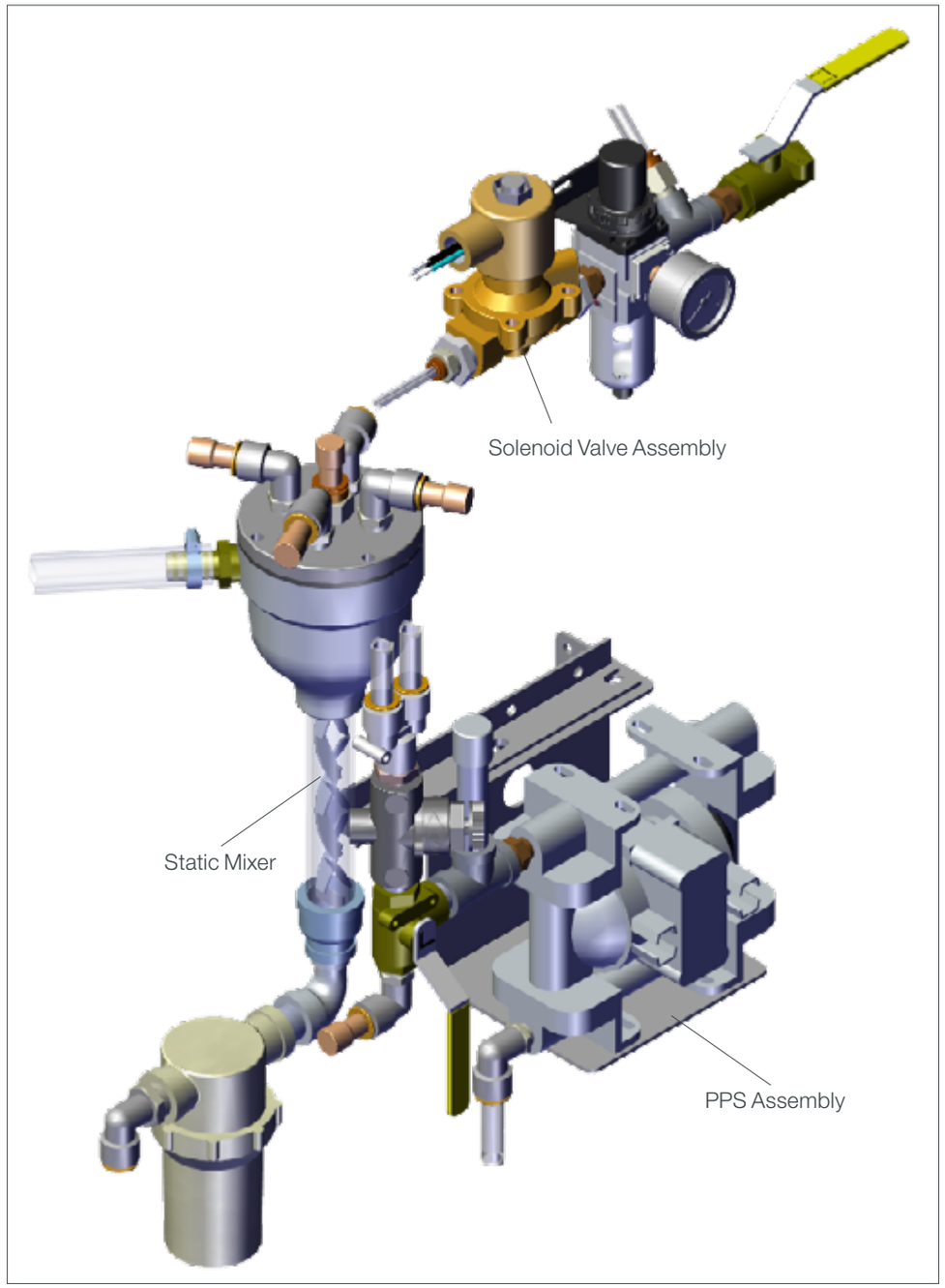
- Material Handling Device
- 9/16” Socket (1)
- 1/2” Socket (1)
- 3/8” Socket (1)
- 7/16” Wrench (1)
- Feeler Gauge

PPS w/Static Mixer Option

Remove the PPS w/ STATIC MIXER OPTION from the packaging.

Continued ➲

Note: Positive Pressure System will be referred to as PPS throughout the manual.



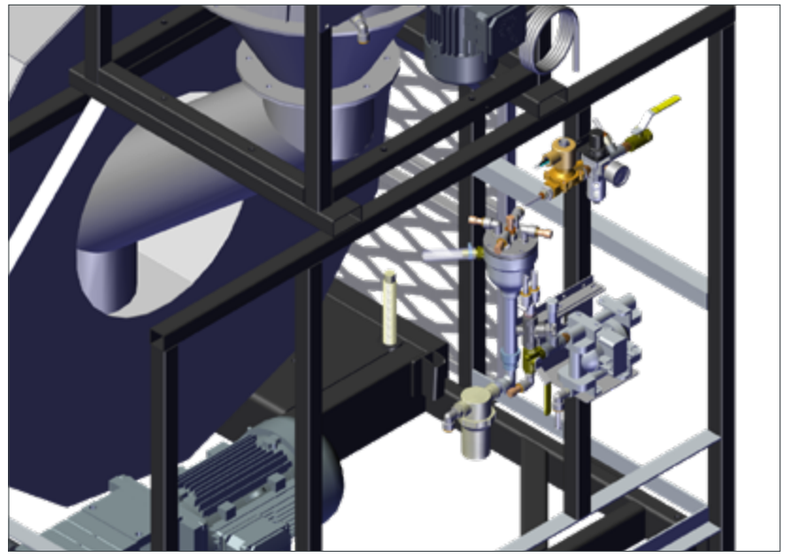
PPS w/Static Mixer Option Installation

Locate the PPS and Solenoid Valve Assemblies on the outside of the RMOM Frame for easy access, as shown below.

- Allow ample room between the PPS and the Solenoid Valve Assembly and the RMOM Frame.

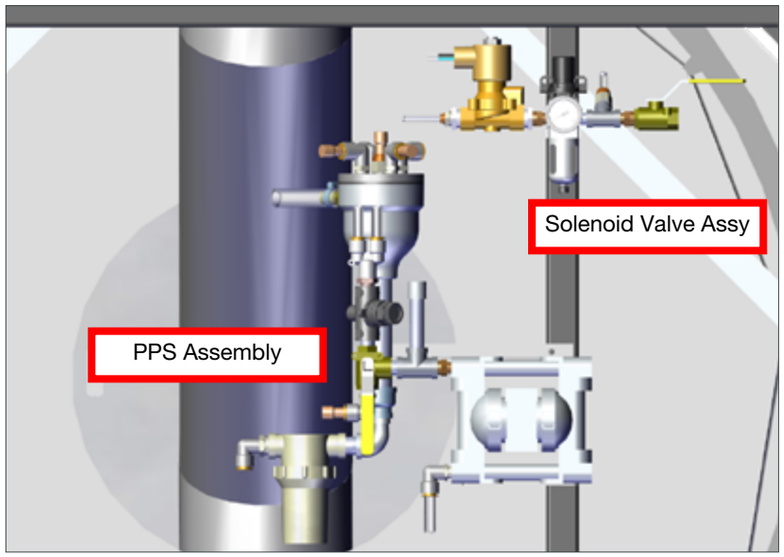
Step 1: Fasten the Solenoid Valve Assembly to the RMOM frame:

- Remove the Regulator Bracket from the Solenoid Valve Assembly by loosening the Locking Ring on the Regulator Bracket.
- Locate and mark hole locations for the Regulator Bracket near at the top of the RMOM frame, as shown below.
- Drill two holes in the frame.
- Fasten the Regulator Bracket to the RMOM frame.
- Replace the Solenoid Valve Assembly on the mounted Regulator Bracket and tighten the Locking Ring on the Regulator Bracket.

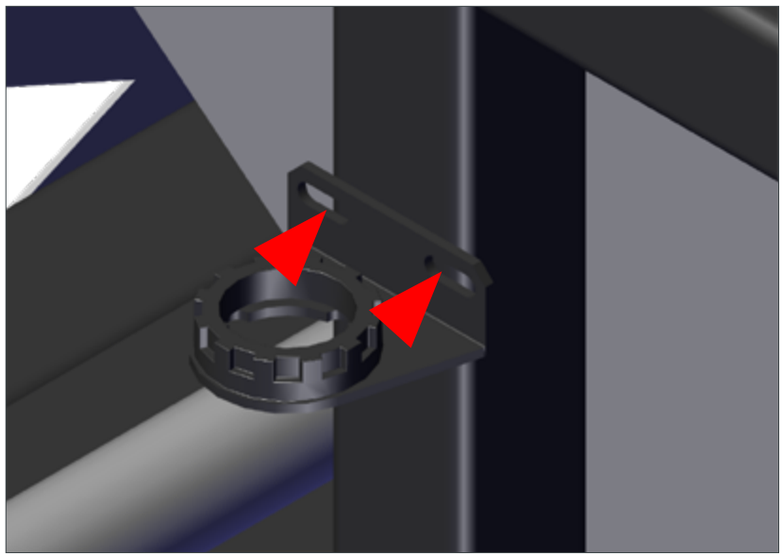


Solenoid Valve and PPS Assembly installed on the RMOM frame, ref.

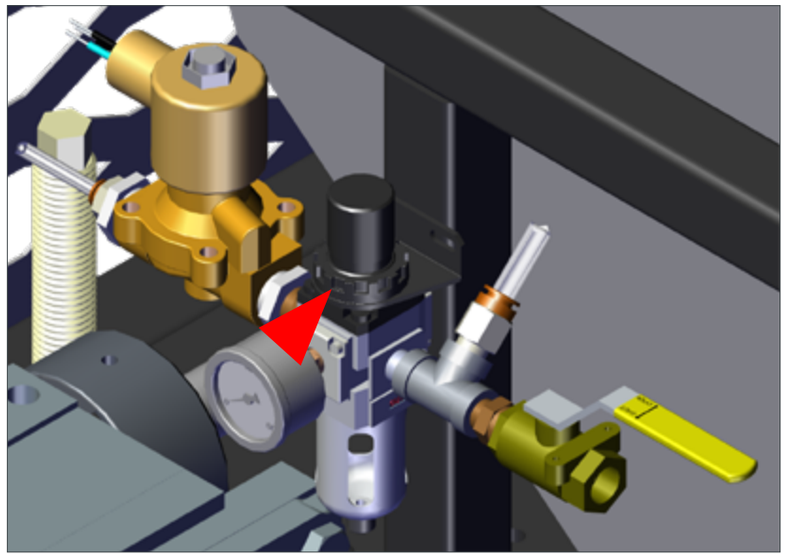
Continued ➲



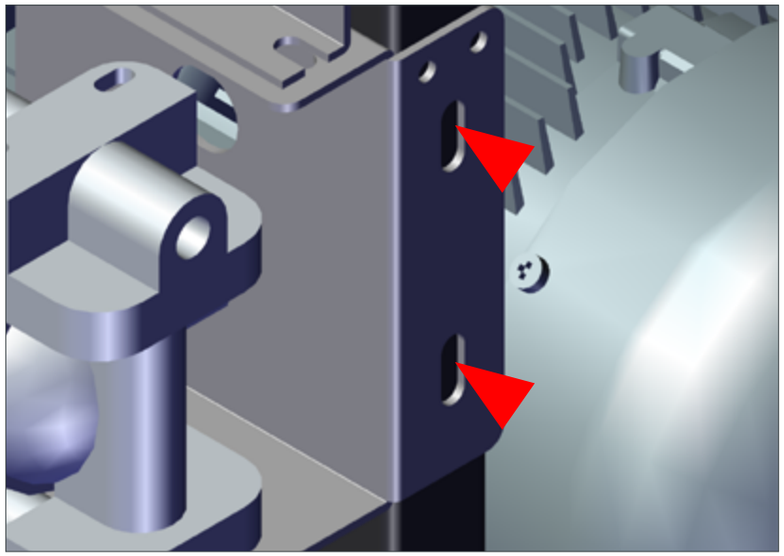
Spacing and location of the Solenoid Valve Assembly and the PPS Assembly, ref.



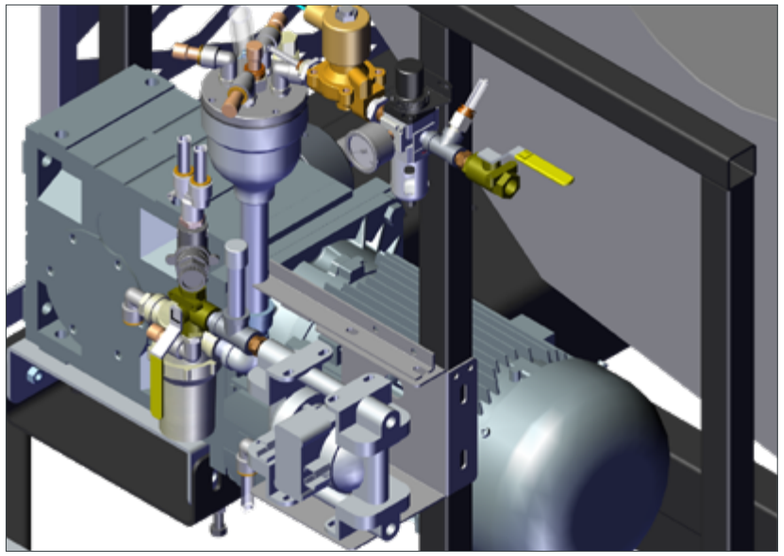
Locate and fasten the Regulator Bracket to the RMOM frame, ref.



Replace the Solenoid Valve Assembly on the mounted Regulator Bracket, ref.



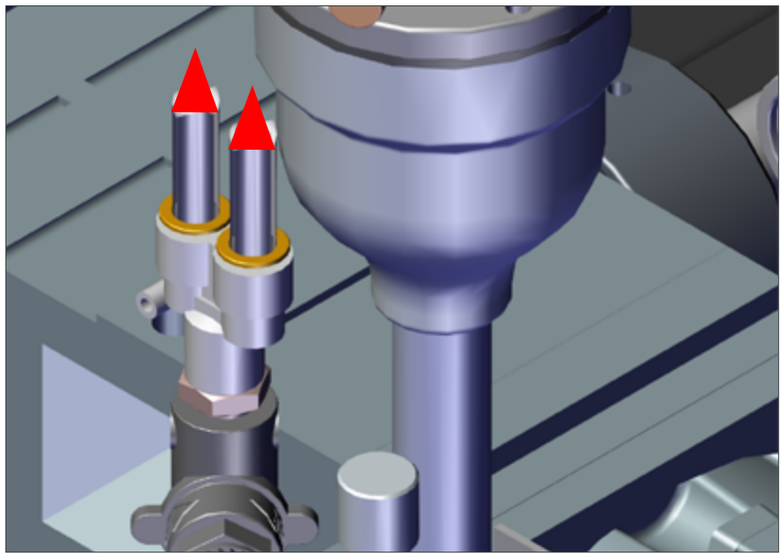
Locate and fasten the PPS Assembly Pump Bracket onto the RMOM frame, ref.



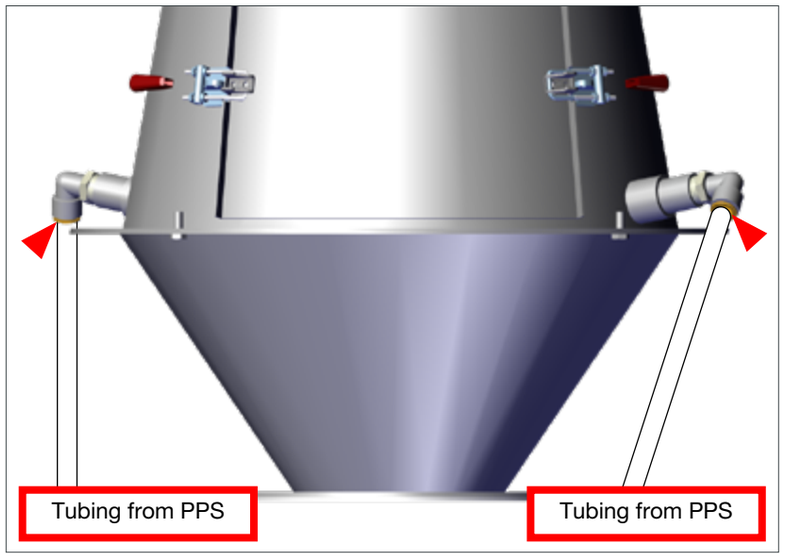
Solenoid Valve and PPS Assembly installed on the RMOM frame, ref.

Step 2: Fasten the PPS Assembly to the RMOM frame:

- Locate the PPS Assembly in the middle of the RMOM frame underneath the Solenoid Valve Assembly.
- Drill two holes in the frame.
- Fasten the PPS Assembly Pump Bracket to the RMOM frame.



Connect Tubing from the PPS Assembly to the RMOM Chemical Inlets, ref.



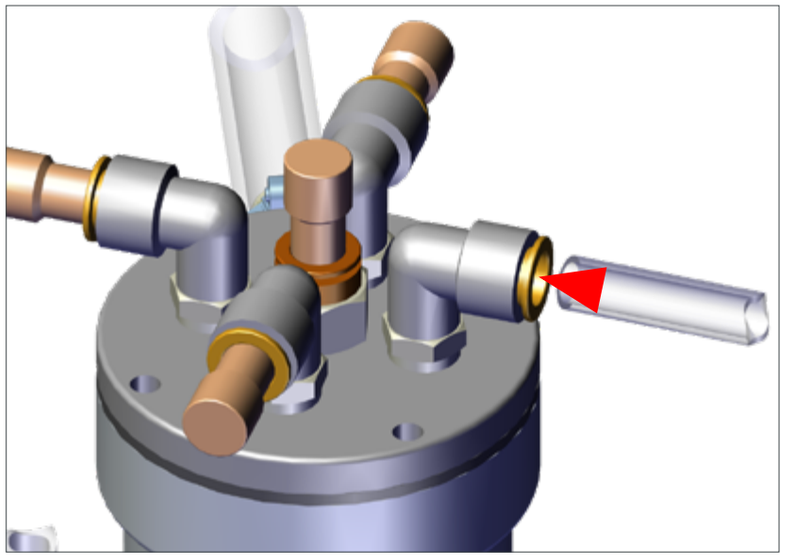
Connect Tubing from the PPS Assembly to the RMOM Chemical Inlets, ref.

Plumbing and Electrical Connections

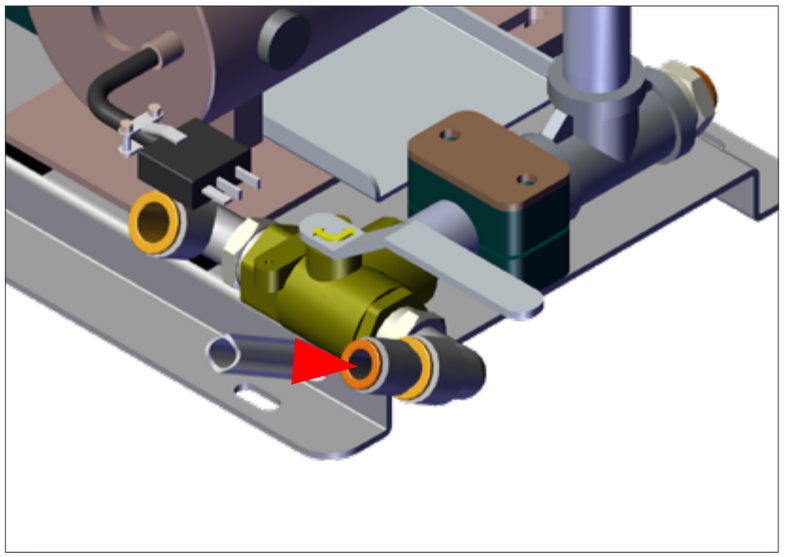
Step 1: Connect the PPS Chemical Tubing to the RMOM Chemical Inlet fittings:

- Insert one end of factory supplied 1/2" OD tubing into each of the PPS Branch "Y" press lock fittings (right & left).
- Cut to fit the other ends of the tubing to the RMOM Chemical Inlet press lock fittings (right & left).
- **There must be two treatment lines feeding into the RMOM Atomizer!**

Continued ➲



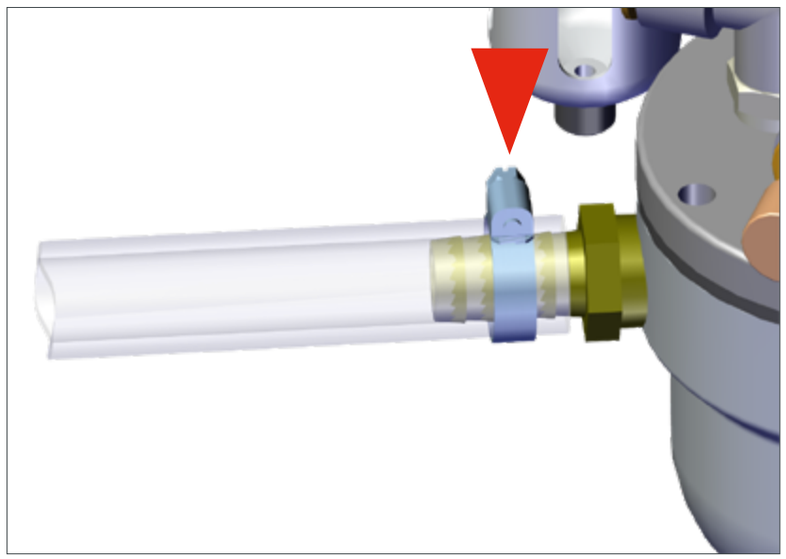
Connect 1/2” Tubing to PPS Assembly Chemical Inlet Press Lock Fitting, ref.



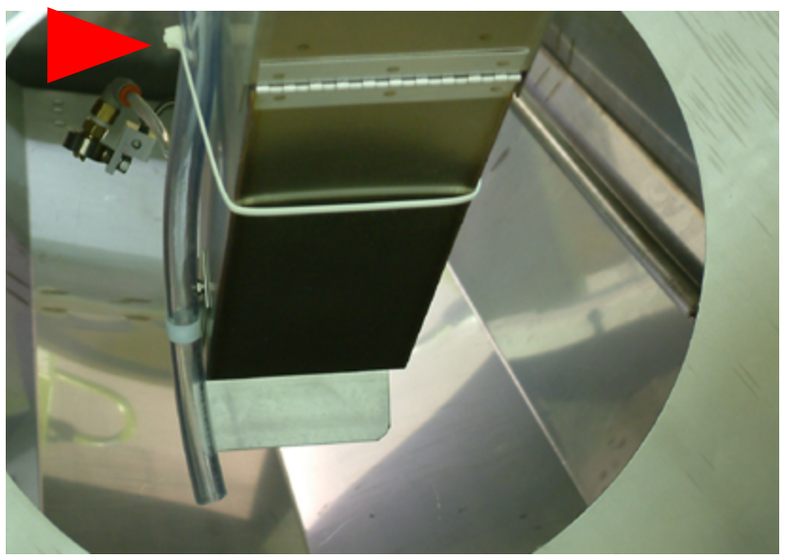
Connect other end of 1/2” Tubing to Dosing Pump Outlet Press Lock Fitting, ref.

Step 2: Connect the PPS Treatment Line to the Dosing Pump:

- Insert one end of factory supplied 1/2” OD tubing into the PPS Chemical Inlet press lock fitting.
- Cut to fit the other end of the tubing to the Dosing Pump Chemical Outlet press lock fitting.
- If multiple Pumps are used (up to five), remove the PPS Chemical Inlet Fitting Plugs and connect additional Treatment lines.



Connect 5/8” ID Clear Vinyl Tubing to PPS Cup 5/8” Hose Barb Fitting, ref.



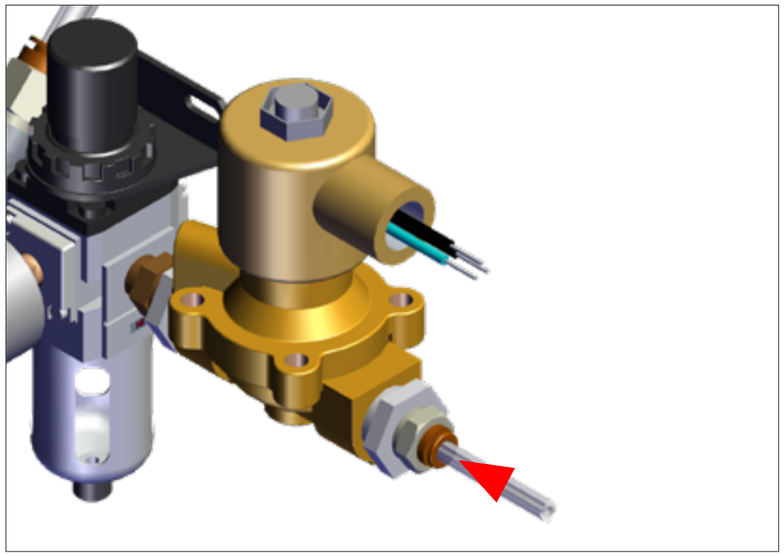
Connect 5/8” ID Clear Vinyl Tubing from PPS Cup to Seed Transition in Drum, ref.

PPS Overflow Tube to Seed Transition

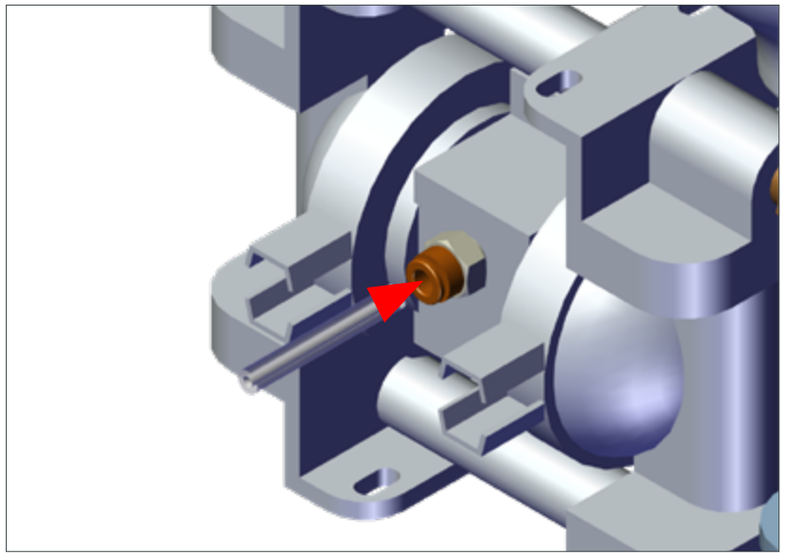
Connect the Overflow Tube to PPS:

- Connect one end of factory supplied 5/8” ID tubing onto the PPS Cup 5/8” Brass Hose Barb Fitting.
- Use a slot screwdriver to tighten the Hose Clamp in place.
- Cut to fit the other end of the 5/8” tubing to the Drum Seed Transition.
- Use factory supplied zip ties to hold the Overflow tube in place on the Drum Seed Transition.

Continued ➲



Connect Pneumatic Tubing to Solenoid Valve Press Lock Fitting, ref.

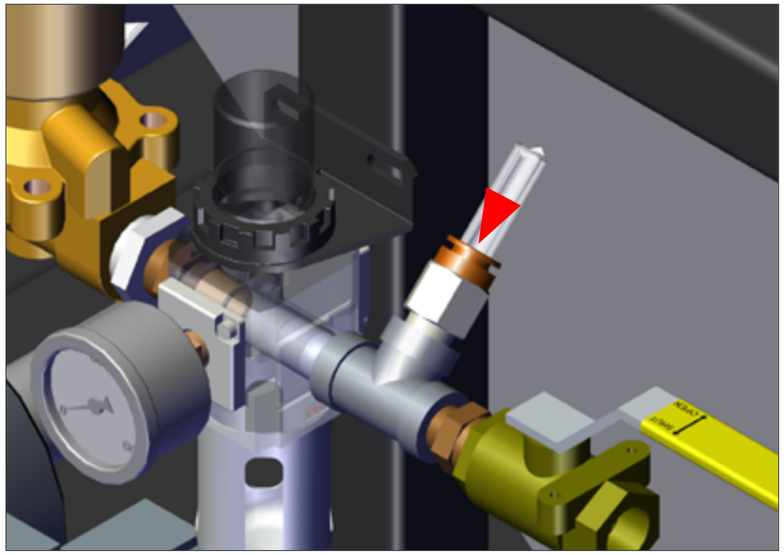


Connect other end of Pneumatic Tubing to PPS Housing Press Lock Fitting, ref.

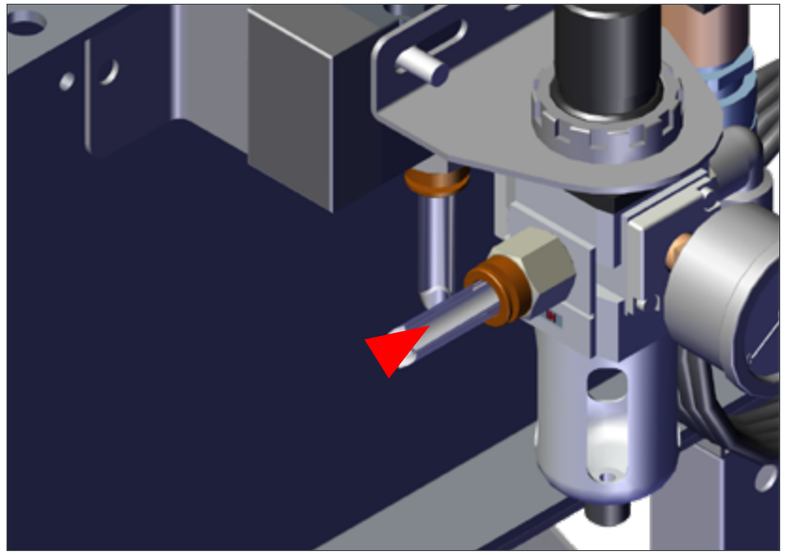
PPS Pneumatic Tubing

Connect the Overflow Tube to PPS:

- Connect one end of factory supplied Pneumatic Tubing into the Solenoid Valve Press Lock Fitting.
- Cut to fit the other end of the Pneumatic Tubing to the backside of the PPS Housing Press Lock Fitting.



Connect 3/8” LDPE Tubing to Solenoid Regulator Press Lock Fitting, ref.



Connect 3/8” LDPE Tubing to BC Scale Regulator Press Lock Fitting, ref.

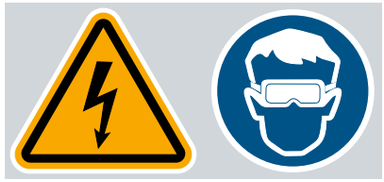
PPS Pneumatic Tubing

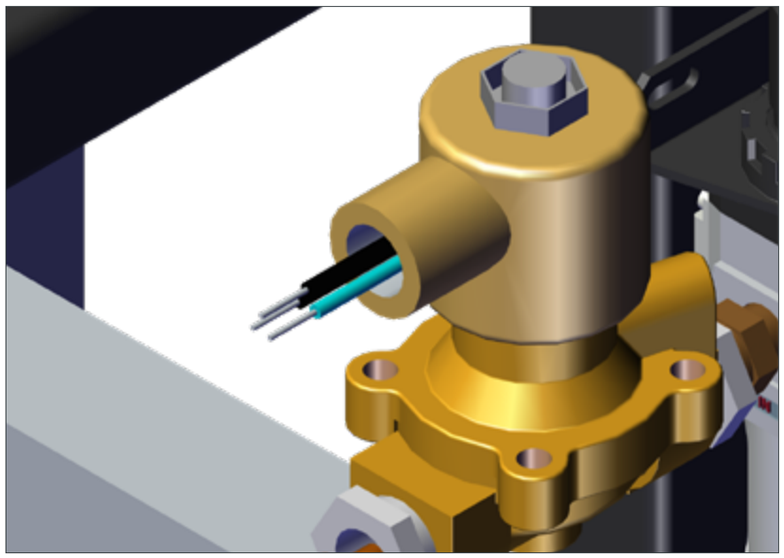
Connect the Overflow Tube to PPS:

- Connect one end of factory supplied 3/8” OD LDPE Tubing into the Solenoid Valve Regulator Press Lock Fitting.
- Cut to fit the other end of the 3/8” OD LDPE Tubing into the BC Scale Filter Regulator Press Lock Fitting.

Continued ➲

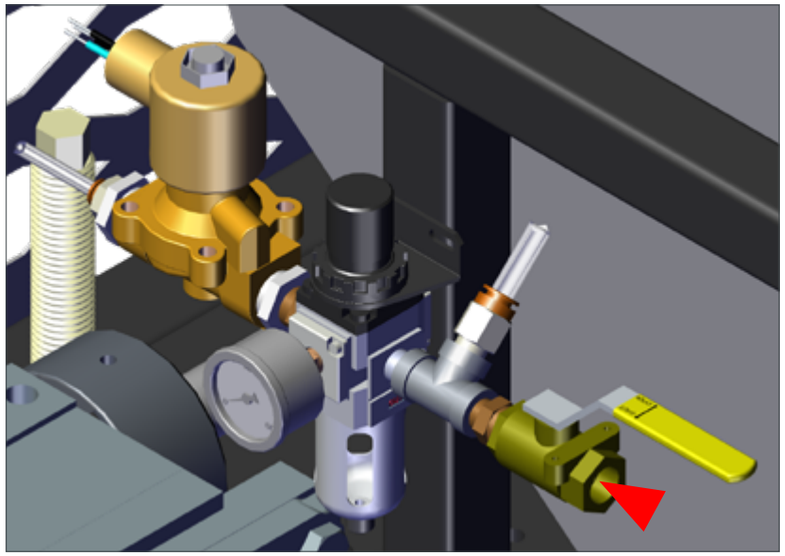
Warning: ensure a licensed electrician wires the system following National electrical codes for the area. Refer to wiring diagrams provided inside the control panel.





Solenoid Valve

Ensure a licensed Electrician lands the Solenoid Valve Wire Leads to the GLCPS Control.



Compressed Air Supply

Connect shop air to the 3/8”NPT 2-Way Brass Ball Valve.

- Air consumption: 1 CFM @ 80PSI

This completes the PPS & Static Mixer Installation section.

WEIGH BELT & RMOM

Required installation tools

- Material Handling Device
- 9/16” Socket (1)
- 1/2” Socket (1)
- 3/8” Socket (1)
- 7/16” Wrench (1)
- Feeler Gauge
- Drill Bit Index
- Phillips Screwdriver
- Flat Screwdriver
- Tubing Cutter

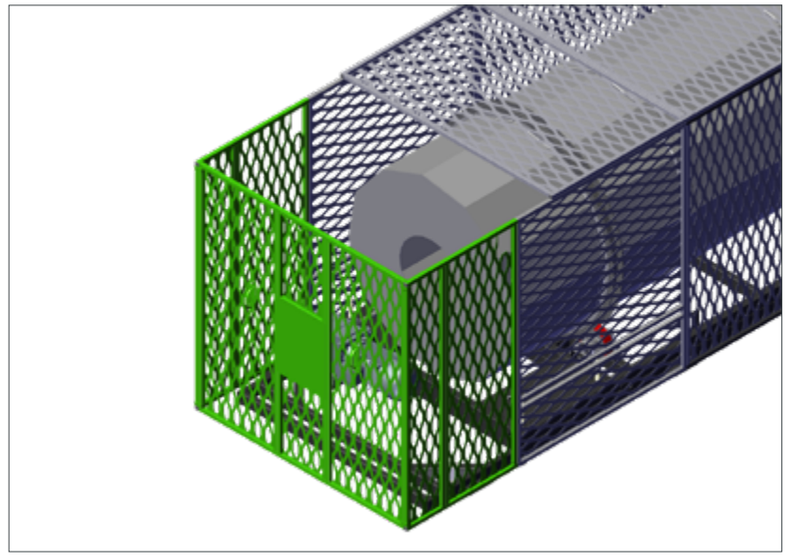
Drum Cage Kit Removal

Remove the Inlet End Guard sections from the Drum & Frame Assembly Lower Frame.

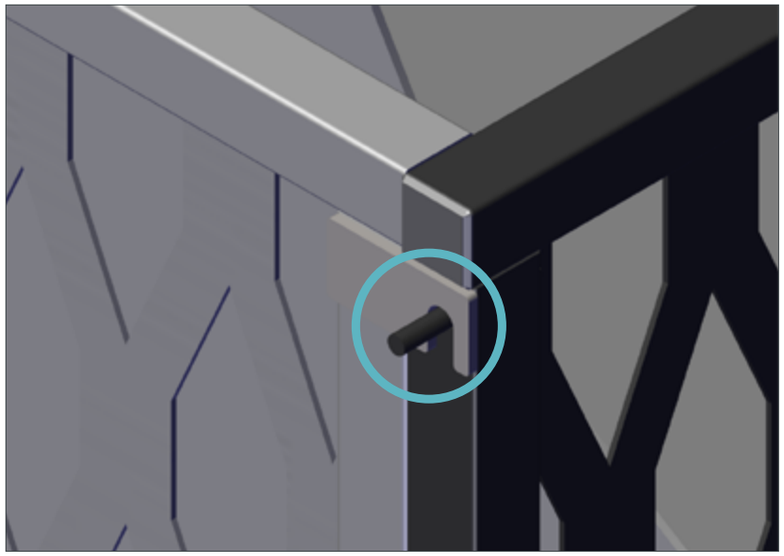
Continued ➲

Note: Rotary Mist-O-Matic® will be referred to as RMOM throughout the manual.

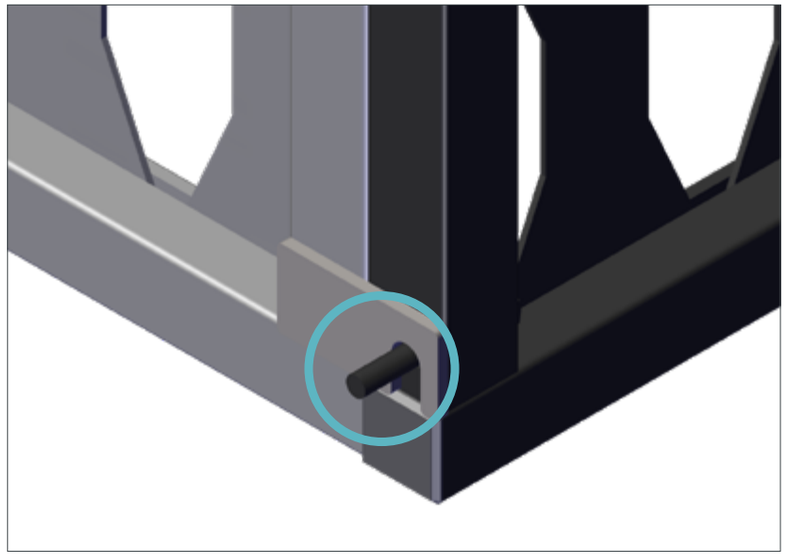
Drum Inlet End Cage, ref.



Remove the highlighted portion of the Drum Inlet End Cage, ref.



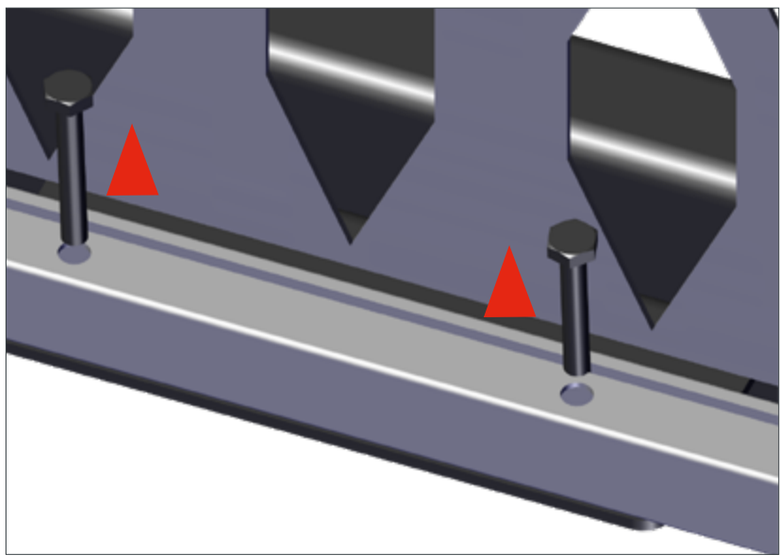
Drum Inlet End Cage Top Corners, ref.



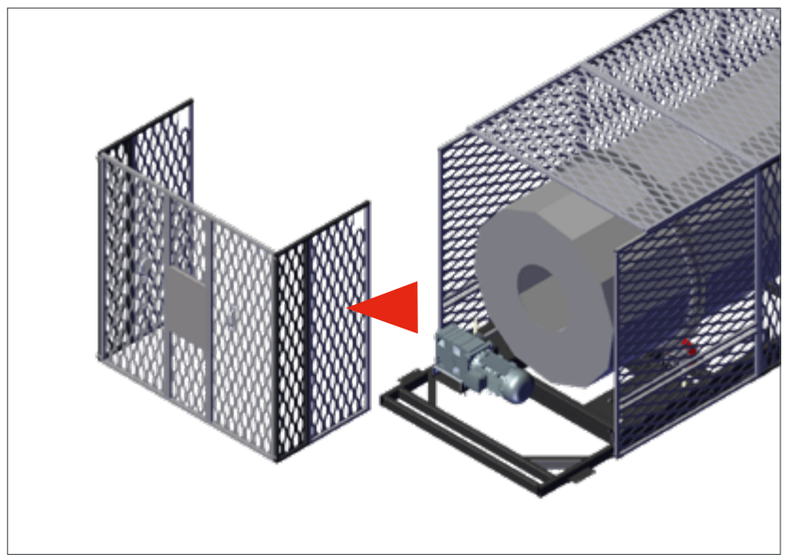
Drum Inlet End Cage Bottom Corners, ref.

Step 1: Use 7/16” wrench to remove bolts that connect the Drum Guard Kit to the Drum frame.

- They are located on both sides along the top and bottom corners of the Drum Cage.



Remove Drum Inlet Side Cage Guards from Drum Frame, ref.



Drum Inlet End Cage Guards Removed from Drum Frame, ref.

Step 2: Use 7/16” wrench to remove bolts that connect the Drum Guard Kit to the Drum frame.

- They are located along both sides of the bottom of the Drum Cage.

Step 3: Remove and set the Drum Cage sections aside to re-attach later.

Continued ➲

Note:
RMOM Assembly Dry Weight: 200 LBS.

RMOM Assembly

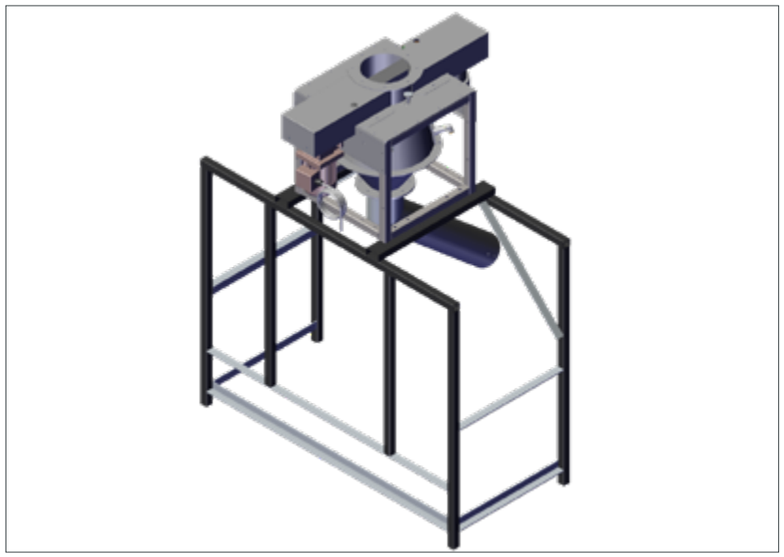
Step 1: Remove the RMOM Assembly from the shipping pallet.

Step 2: Use 7/16” wrench to remove shipping hold down hardware from the RMOM Frame.

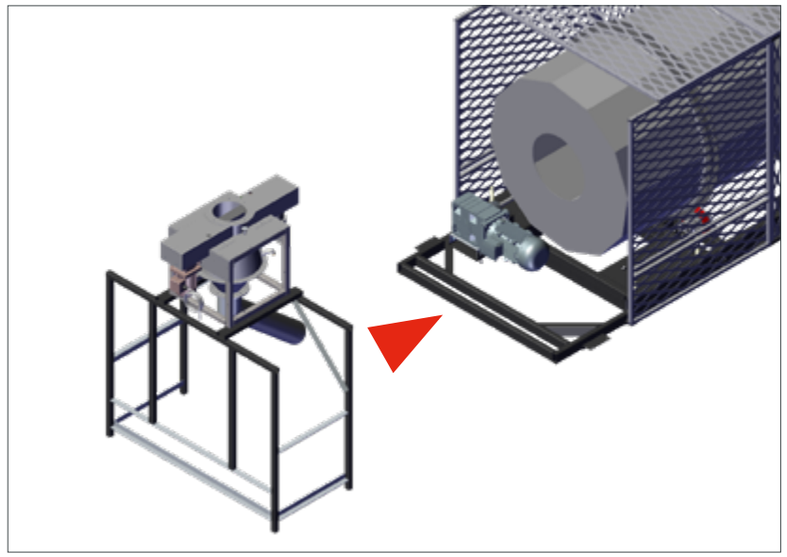
Step 3: Use proper rigging and lifting techniques to remove the RMOM Assembly off the shipping pallet and set it right up to the Drum outside the Drum Lower Frame (highlighted red below).

- The seed Transition fits inside the Drum opening.

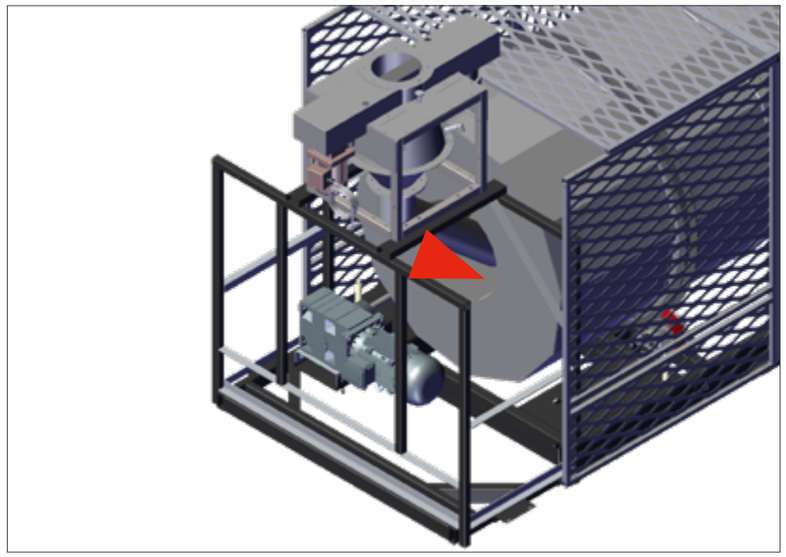
Continued ➲



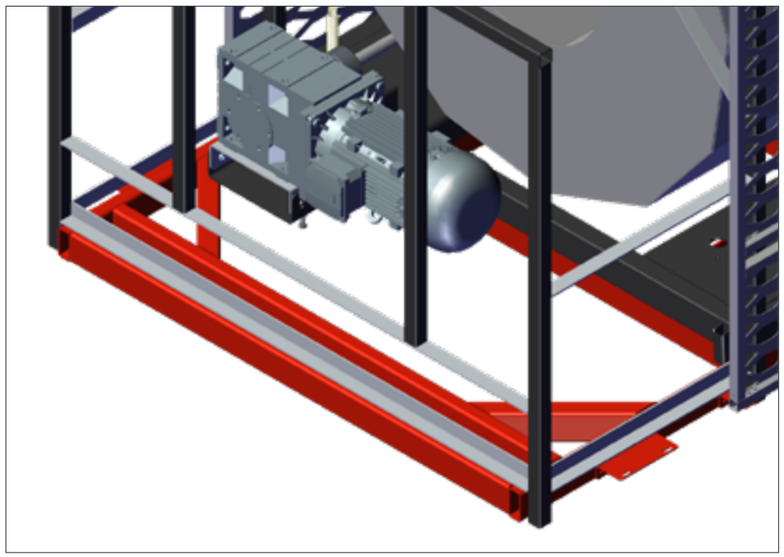
RMOM Assembly and Transition ship mounted on Frame, ref.



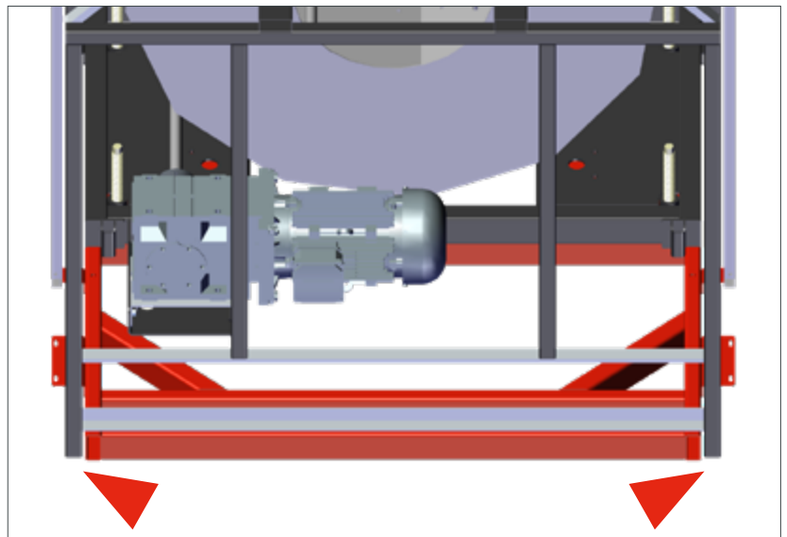
Place the RMOM Frame up to the Drum & Frame Assembly, ref.



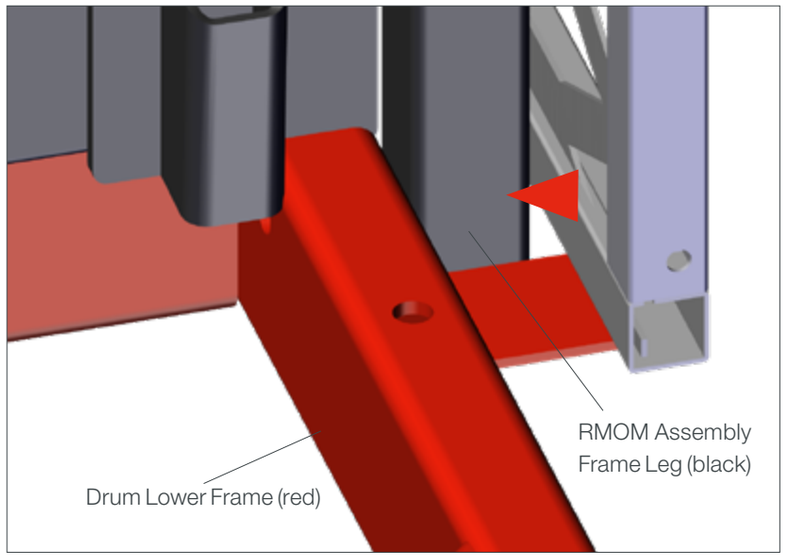
RMOM Assembly Installed; Transition fits in the Drum opening, ref.



Drum Frame (red); RMOM Assembly Frame sits Outside the Drum Frame, ref.

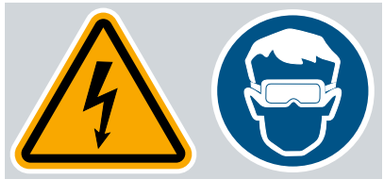


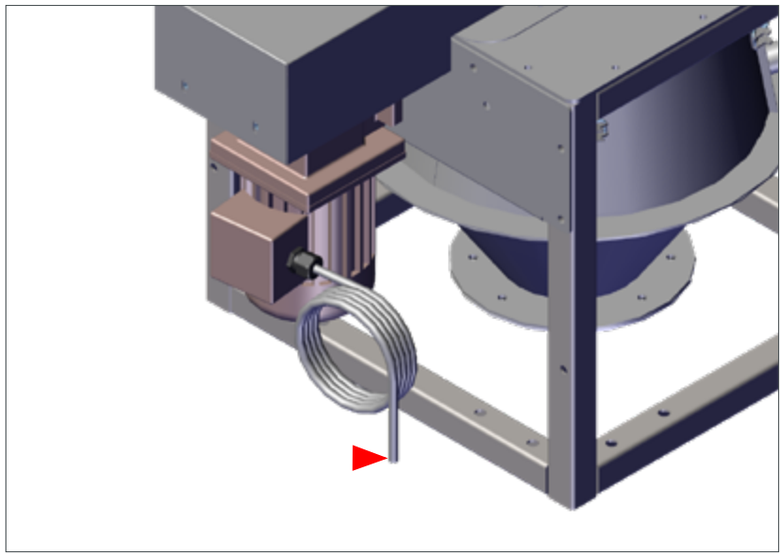
End View: RMOM Assembly Frame sits Outside the Drum Frame, ref.



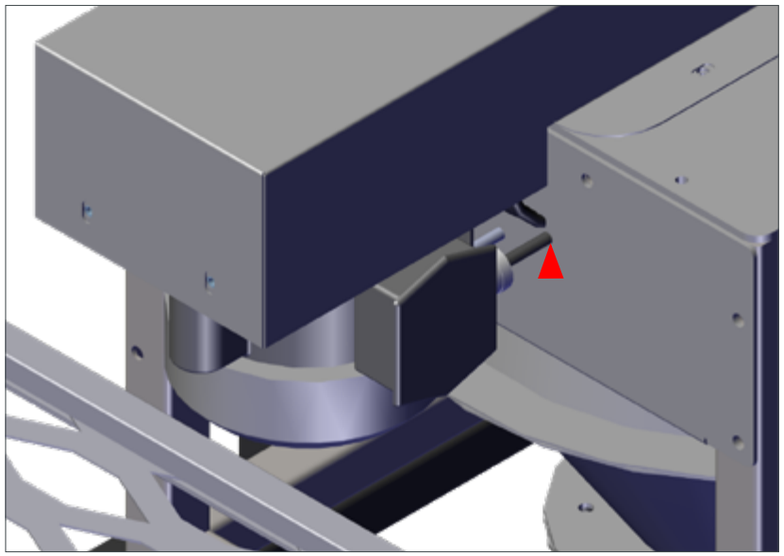
Detail: corner view of RMOM Assembly Frame sits Outside the Drum Frame, ref.

Warning: ensure a licensed electrician wires the system following National electrical codes for the area. Refer to wiring diagrams provided inside the control panel.





Seed Wheel .41 HP/60hz inverter duty gear motor w/ 25ft 16-4 so cord, ref.



Atomizer 1/4 HP/115v-230v/1ph/60hz Motor w/ 25ft 16-3 so cord, ref.

RMOM - Electrical Connections

Land the RMOM Seed Wheel and Atomizer motor leads to the Main Control Panel.

- Motor rotation is indicated by arrow stickers on the Motors.

Continued ➲

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Tip: Prior to initial start-up, the phase-sequence of all motors must be checked. Ensure both motors are properly fused and wired. Both motors should operate in the same direction. Motor rotation is indicated by arrow stickers on the Motors, as shown below.

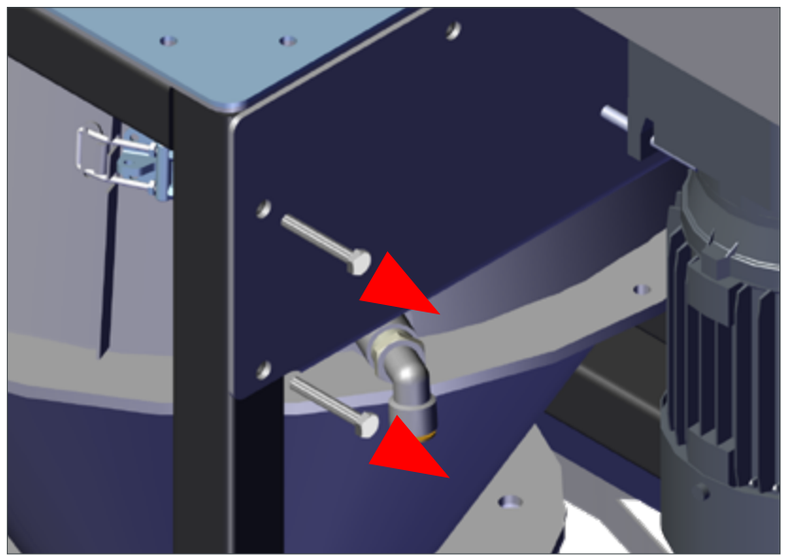
Static Mixer Assembly

Step 1: Remove the existing hardware from the upper left hand corner of the RMOM.

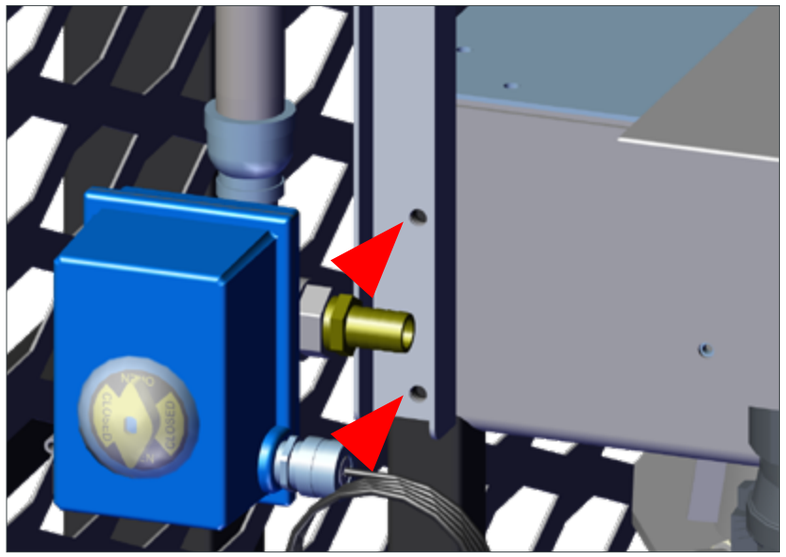
Step 2: Align the bottom two (2) holes on the Static Mixer Valve Mount with the holes on the RMOM.

Step 3: Replace the hardware and fasten the Static Mixer Valve Mount to the RMOM.

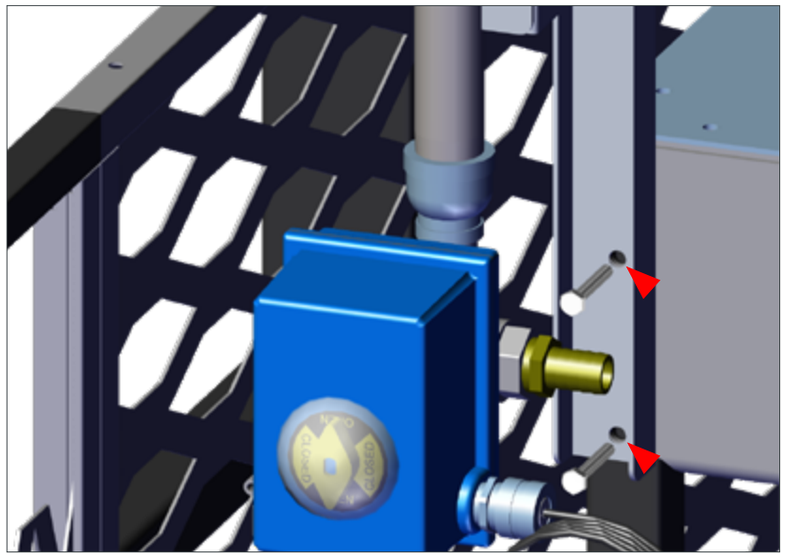
Continued ➲



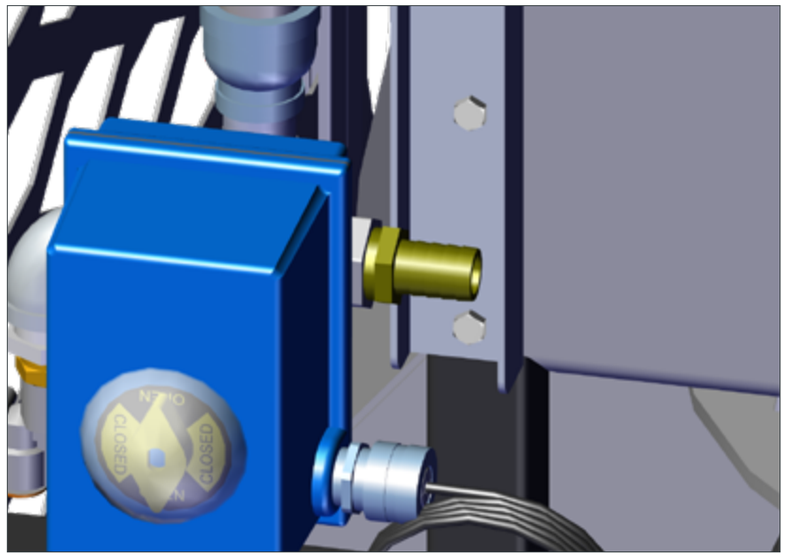
Remove the existing hardware from the RMOM, ref.



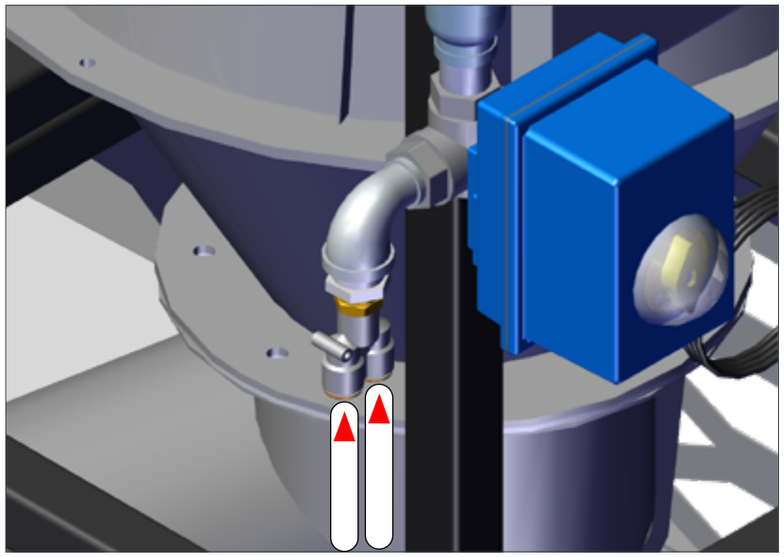
Align Static Mixer Valve Mount with RMOM holes, ref.



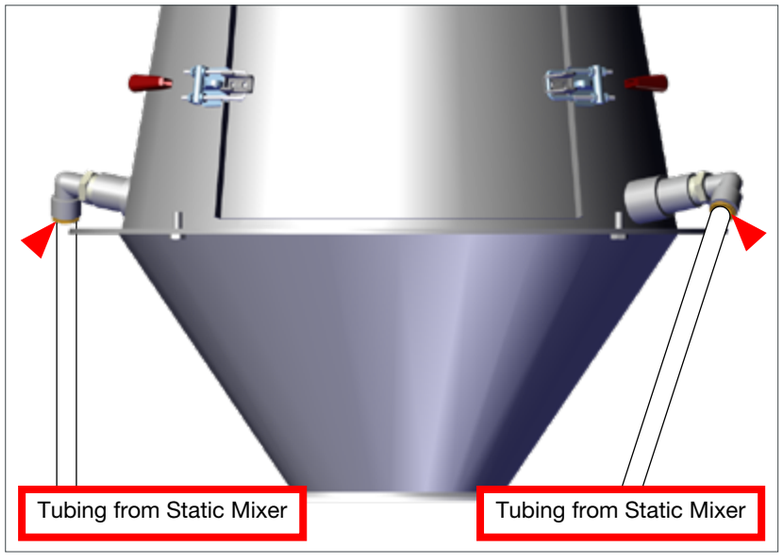
Replace hardware and fasten the Static Mixer Valve Mount to the RMOM, ref.



Static Mixer Assembly installed on the RMOM, ref.



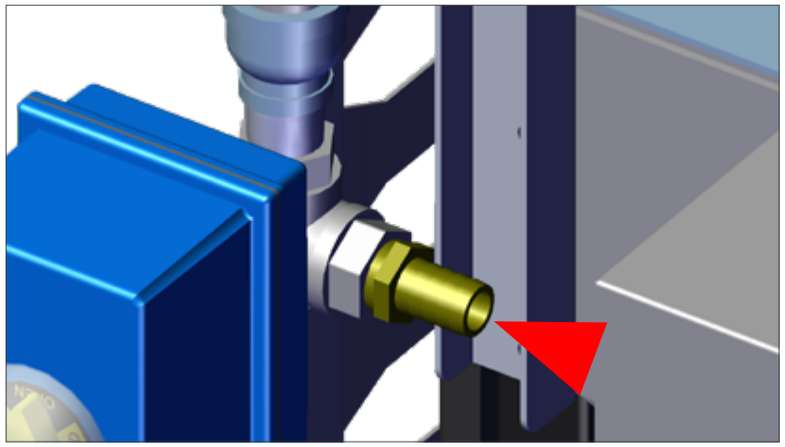
Insert Tubing in the Static Mixer Branch “Y” Press Lock Fittings, ref.



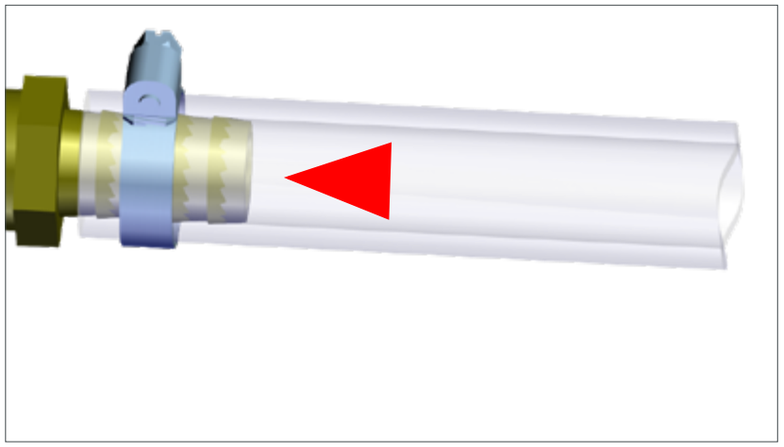
Insert Tubing from the Static Mixer to the RMOM Chemical Inlets, ref.

Step 4: Connect the Static Mixer Treatment Tubing to the RMOM Chemical Inlet fittings:

- Insert one end of factory supplied 1/2” OD tubing into each of the Static Mixer Branch “Y” press lock fittings (right & left).
- Cut to fit the other ends of the tubing to the RMOM Chemical Inlet press lock fittings (right & left).
- **There must be two treatment lines feeding into the RMOM Atomizer!**



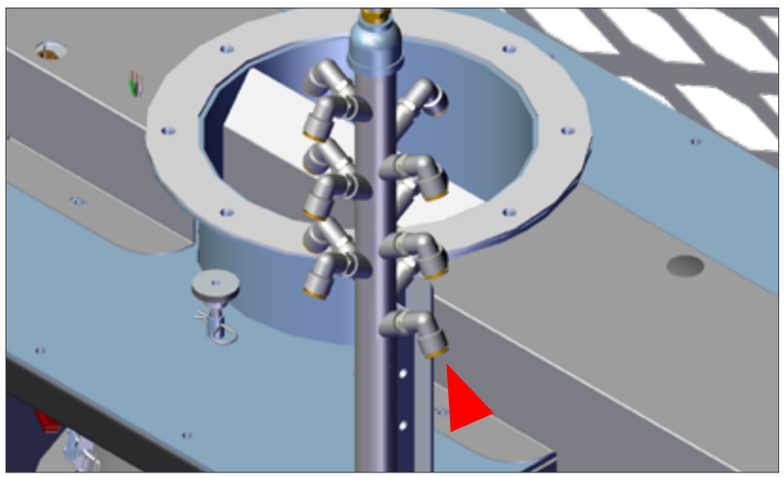
Connect 3/4” ID Clear Vinyl Tubing to Static Mixer 3/4” Hose Barb Fitting, ref.



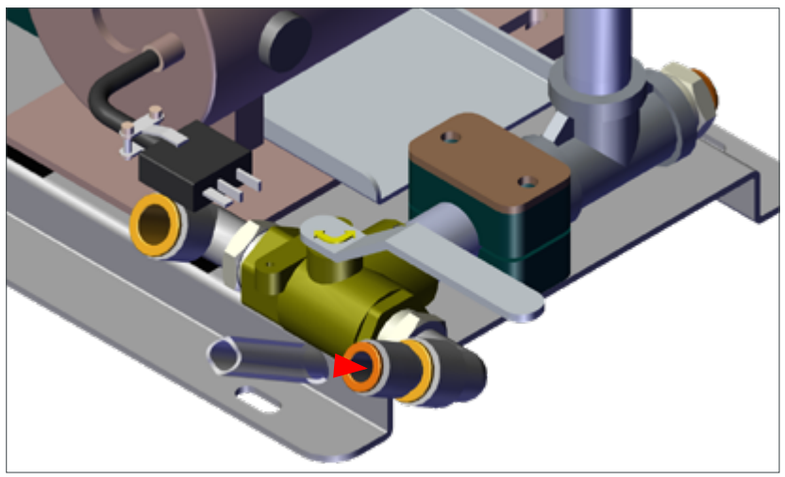
Slide #10 Hose Clamp on 3/4” ID Clear Vinyl Tubing first before connecting, ref.

Step 5: Connect one end of factory supplied 3/4” clear vinyl tubing with #10 hose clamp onto the Static Mixer 3/4” Brass Hose Barb Fitting.

- First, slide a #10 Hose Clamp onto on end of the 3/4” clear vinyl tubing.
- Slide the 3/4” clear vinyl tubing with #10 Hose Clamp onto the Static Mixer 3/4” Hose Barb Fitting.
- Use a slot screwdriver to tighten the #10 Hose Clamp in place.
- Cut to fit the other end of the 3/4” clear vinyl tubing to the Gray Water Tank.



Insert 1/2” Tubing in each Static Mixer Chemical Inlet Press Lock Fitting, ref.

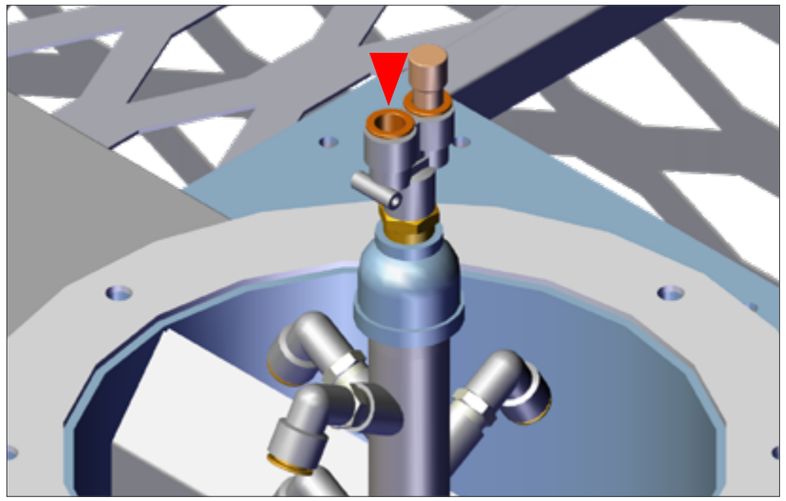


Insert other end of 1/2” Tubing to Dosing Pump Outlet Press Lock Fitting, ref.

Step 6: Connect the Statix Mixer Treatment Lines to the Dosing Pumps (up to twelve):

- Insert one end of factory supplied 1/2” OD tubing into the Static Mixer Chemical Inlet press lock fittings.
- Cut to fit the other end of the tubing to each Dosing Pump Chemical Outlet press lock fitting.

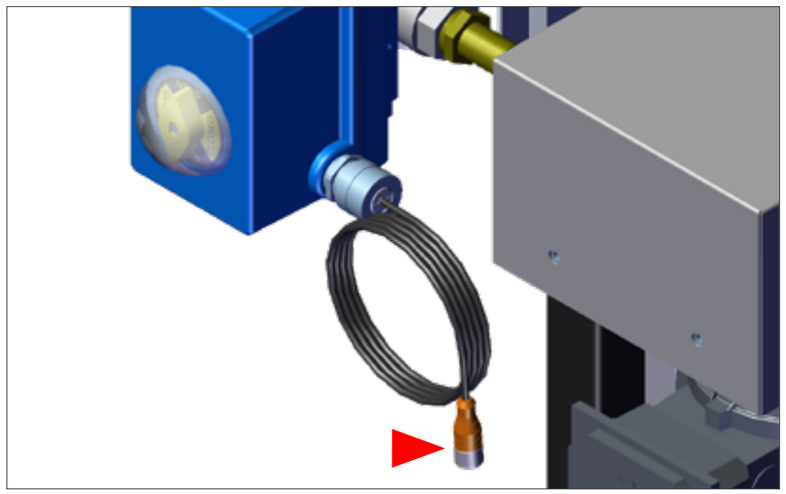
Continued ➲



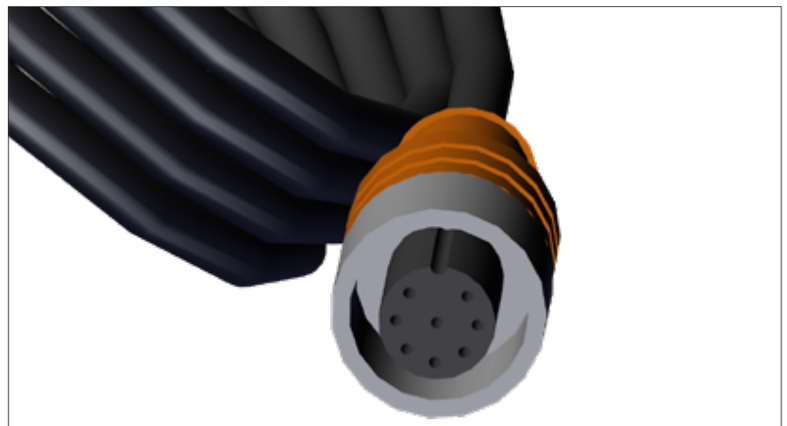
Insert 1/2” Tubing in the top Static Mixer water Inlet Press Lock Fitting, ref.

Step 7: Connect Chemical Treatment Line and Rinse Line to the Static Mixer:

- Insert one end of factory supplied 1/2” OD tubing into the top Static Mixer press lock fitting.
- Cut to fit the other end of the tubing to the water source press lock fittings.



Connect the Actuator 8-Pin Female Connector to the Control Panel, ref.



Actuator 8-Pin Signal Cable Detail, ref.

Step 8: Connect the Static Mixer Actuator 8-pin Signal Cable to the Control Panel.

Continued ➲

Weigh Belt Support Frame

Step 1: Remove the Weigh Belt Support Frame from the shipping pallet.

Step 2: Use 7/16” wrench to remove shipping hold down hardware from the Support Frame.

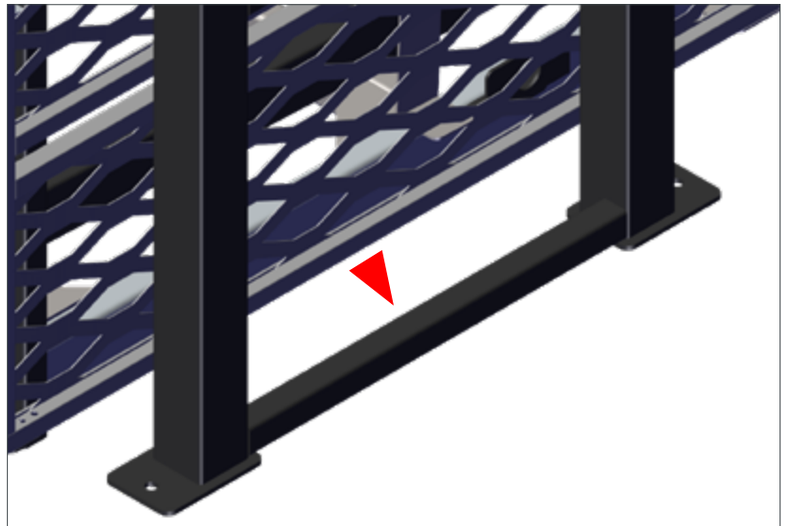
Step 3: Use proper rigging and lifting techniques to remove the Weigh Belt Support Frame off the shipping pallet and set it over and outside the Drum Cage Kit.

Note:
Weigh Belt Support Frame Dry Weight:
261.77 LBS. [119 KG]

Continued ➲

Weigh Belt Support Frame, ref.

Weigh Belt Support Frame set in place over the Drum Cage Kit, ref.



Weigh Belt Support Frame sits outside the Drum Cage Kit detail, ref.

Note:
Weigh Belt Dry Weight: 750 LBS.

Weigh Belt

Step 1: Remove the Weigh Belt from the shipping pallet.

Step 2: Use 7/16” wrench to remove shipping hold down hardware from the Weigh Belt.

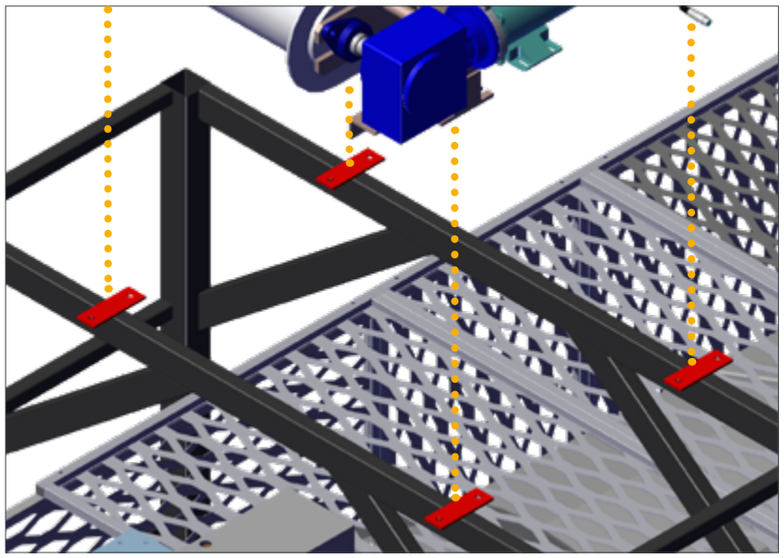
Step 3: Use proper rigging and lifting techniques to remove the Weigh Belt off the shipping pallet and set it on top of the Support Frame Tabs (shown red below).

Caution! Use extreme caution when setting the Weigh Belt on top of the Support Frame! This is a potential tipping hazard, since the Support Frame has not yet been anchored to the floor. Further adjustments need to be made prior to anchoring the Support Frame in place.

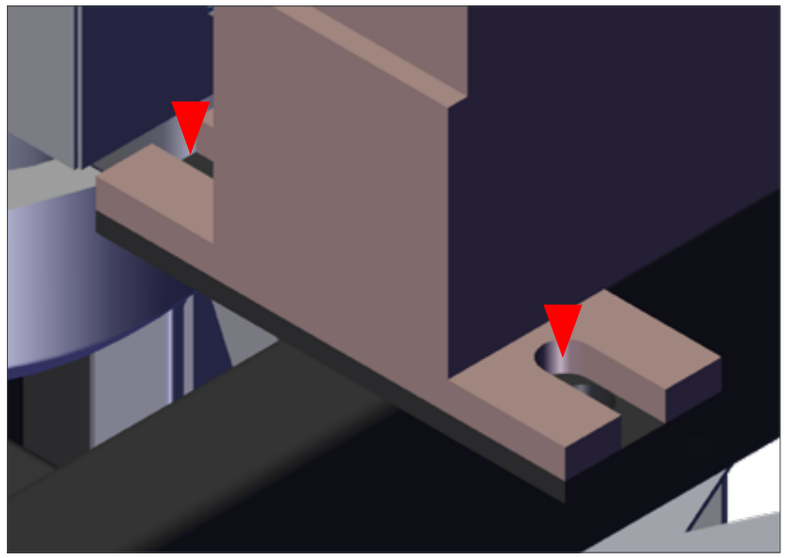
Step 4: Fasten the Weigh Belt Feet to the Support Frame Tabs.

Note: Keep rigging fastened to the Weigh Belt to make moving the Weigh Belt and adjoined Support frame easier until final adjustments have been made.

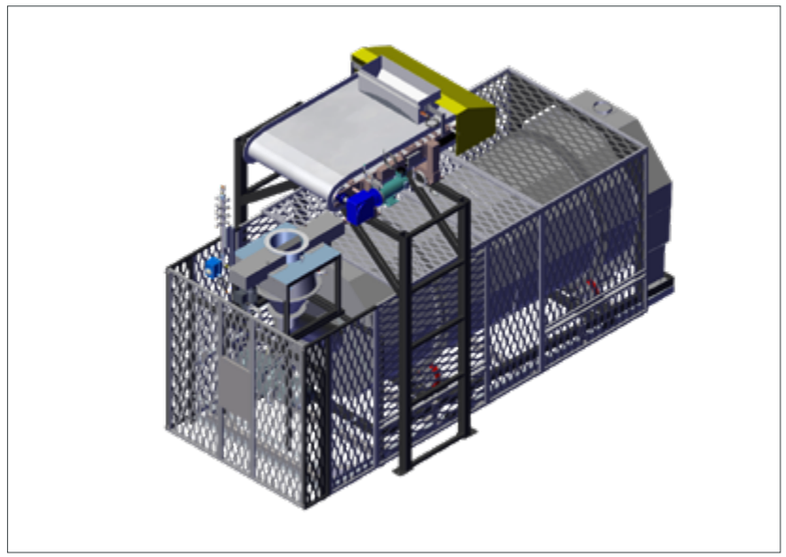
Continued ➲



Weigh Belt Support Frame Tabs (red), ref.



Set the Weigh Belt in place on Weigh Belt Support Frame Tabs detail, ref.



Weigh Belt installed on the Support Frame, ref.

Note:
Dust Evacuation Assembly Dry Weight:
133.8 LBS.

Weigh Belt Dust Evacuation Assembly

Step 1: Remove the Dust Evacuation Assembly from the shipping pallet.

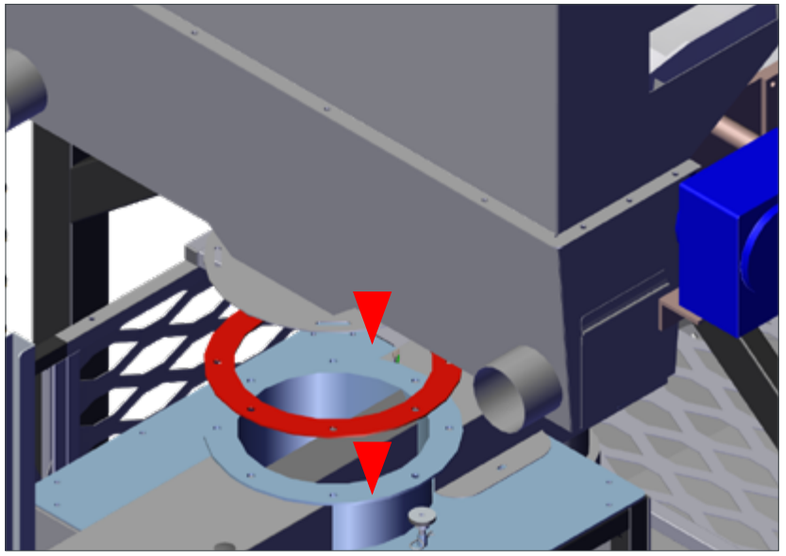
Step 2: Use 7/16” wrench to remove shipping hold down hardware from the Dust Evacuation Assembly.

Step 3: Use proper rigging and lifting techniques to remove the Dust Evacuation Assembly off the shipping pallet and set it on the Weigh Belt.

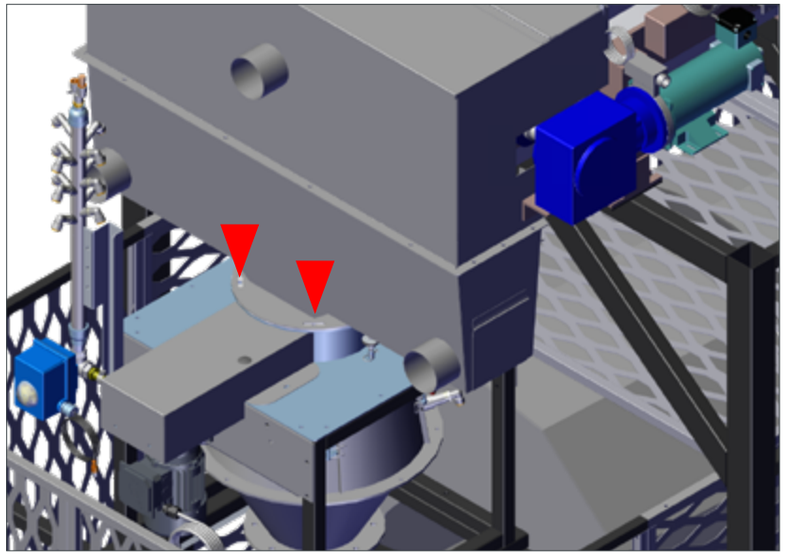
Step 4: Align the Dust Evacuation Assembly Outlet Flange bolt pattern with the RMOM Inlet Flange and Flange Gasket (shown red below).

Step 5: Fasten the Dust Evacuation Assembly Outlet Flange to the RMOM Inlet Flange.

Continued ➲



Align Dust Evac Outlet Flange with RMOM Gasket (red) and Inlet Flange, ref.



Set the Dust Evac Assembly on the RMOM Gasket and Inlet Flange, ref.

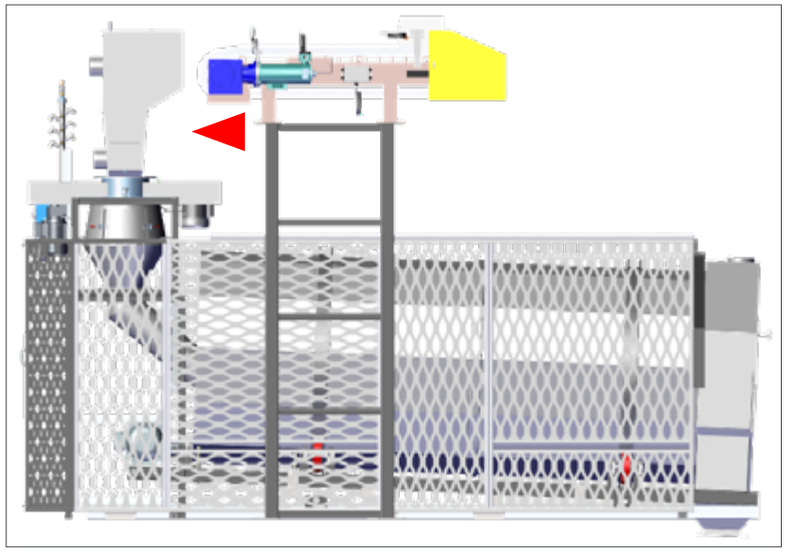
Note:
The Dust Evac Assembly is mounted to the treater (RMOM) inlet only and does not attach to the Weigh Belt.

Step 6: Use rigging to move the Weigh Belt with Support Frame up to the Dust Evacuation Assembly.

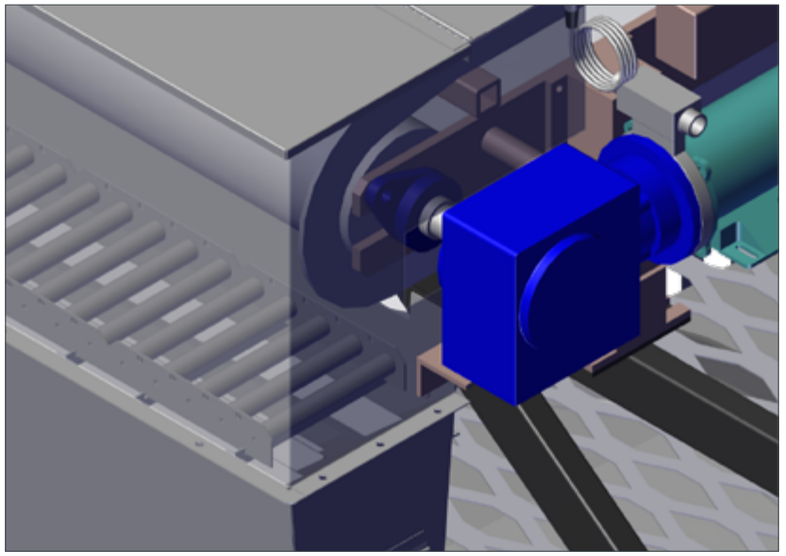
Step 7: Anchor the Weigh Belt Support Frame to the floor.

Step 8: It is now safe to remove all rigging and lifting devices from the Weigh Belt Assembly.

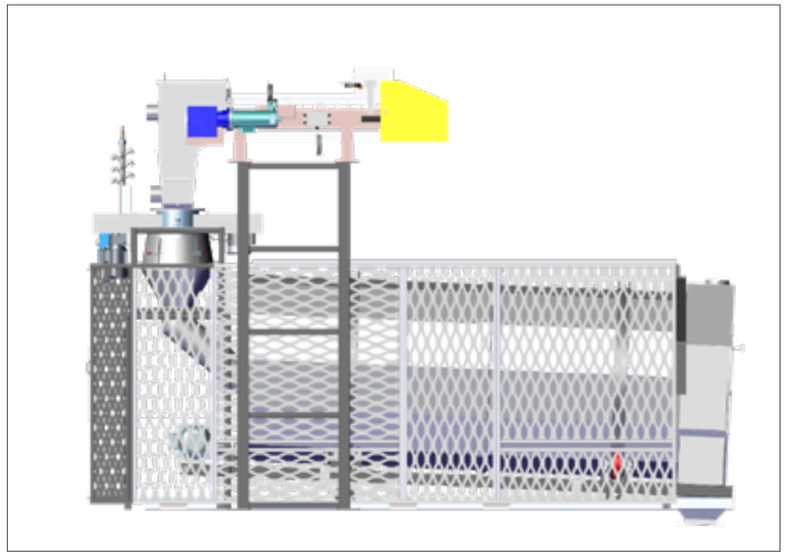
Continued ➲



Carefully move Weigh Belt and Support frame up to Dust Evac Assembly, ref.

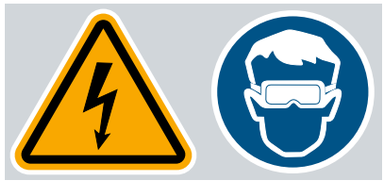


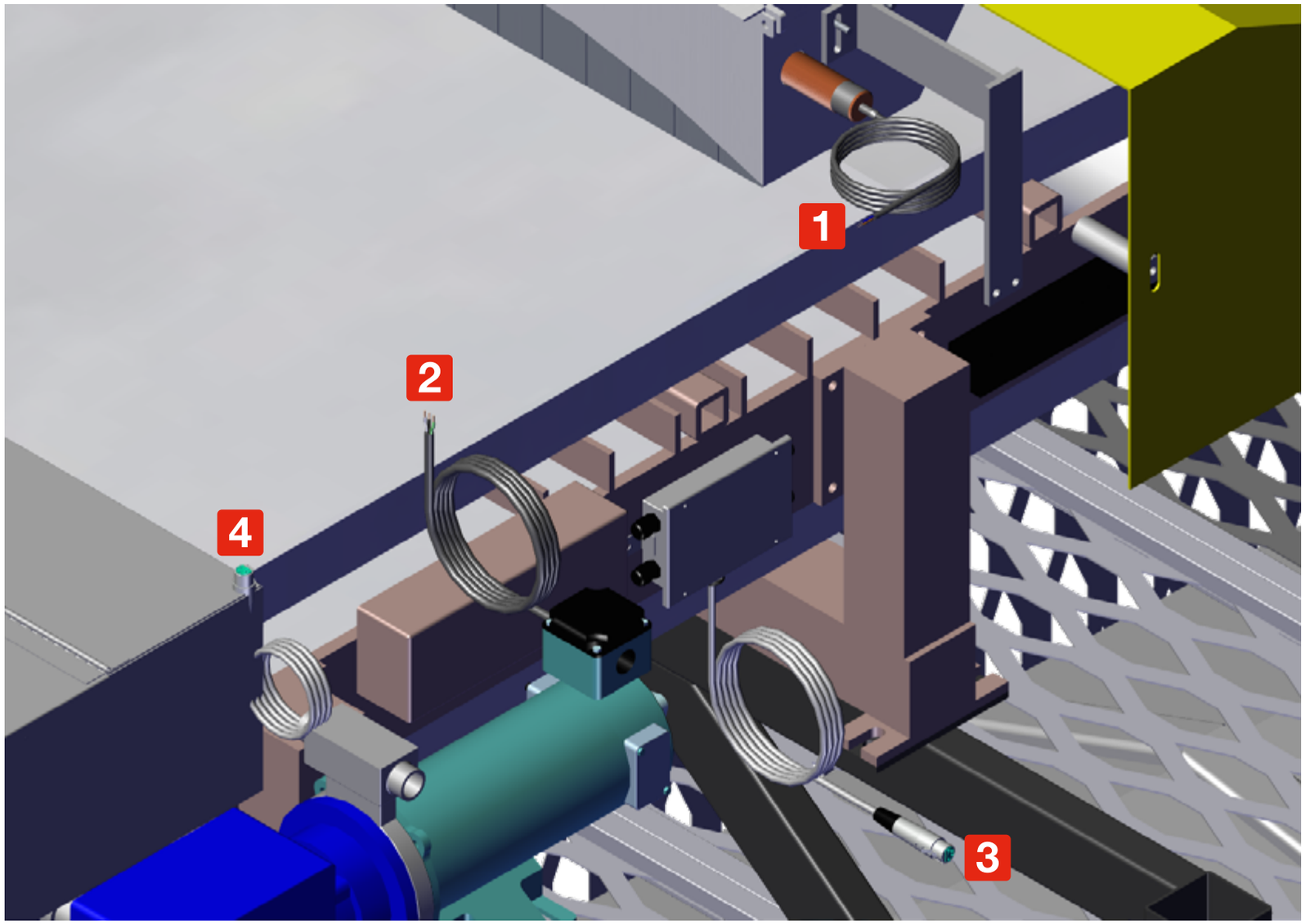
Note spacing of Weigh Belt end inside Dust Evac Assembly, ref.



Weigh Belt and Dust Evac Assembly installed, ref.

Warning: ensure a licensed electrician wires the system following National electrical codes for the area. Refer to wiring diagrams provided inside the control panel.





Weigh Belt Electrical Connections: Product Flow Sensor, Weigh Belt Motor, Weigh Belt Weight and Weigh Belt Speed, ref.

Weigh Belt - Electrical Connections

Step 1: Land wire leads to control panel #43 marked: PRODUCT FLOW SENSOR.

Step 2: Land wire leads to control panel #45 marked: WEIGH BELT MOTOR.

Step 3: Connect encoder to control panel #58 marked: WEIGH BELT WEIGHT 4-pin receptacle.

Step 4: Connect encoder to control panel #57 marked: WEIGH BELT SPEED 3-pin receptacle.

Continued ➲

Required installation tools

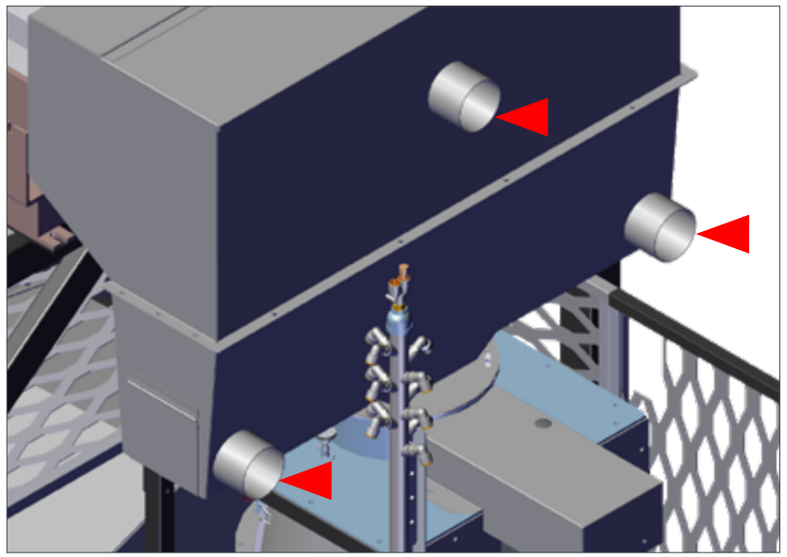
- Standard Screwdriver (flat)

Integrated Aspiration System

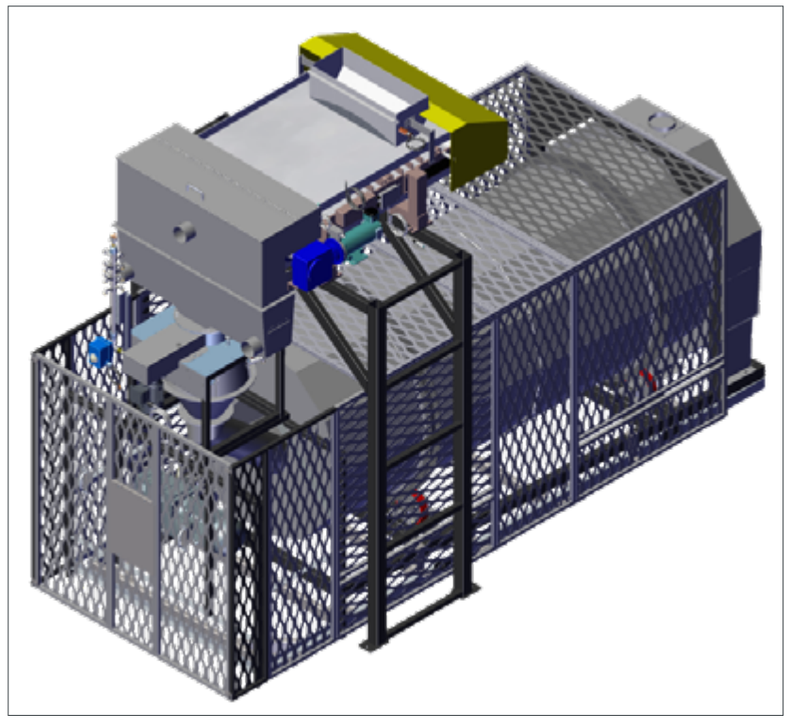
Only clean and dust-free seed should be used in the treating process.

- Connect the Dust Evacuation Assembly to a central aspiration system.
- The Weigh Belt Dust Evacuation Assembly has three (3) 4.0” dust evac ports.
- 250cfm each.

This completes the Weigh Belt & RMOM Installation section.

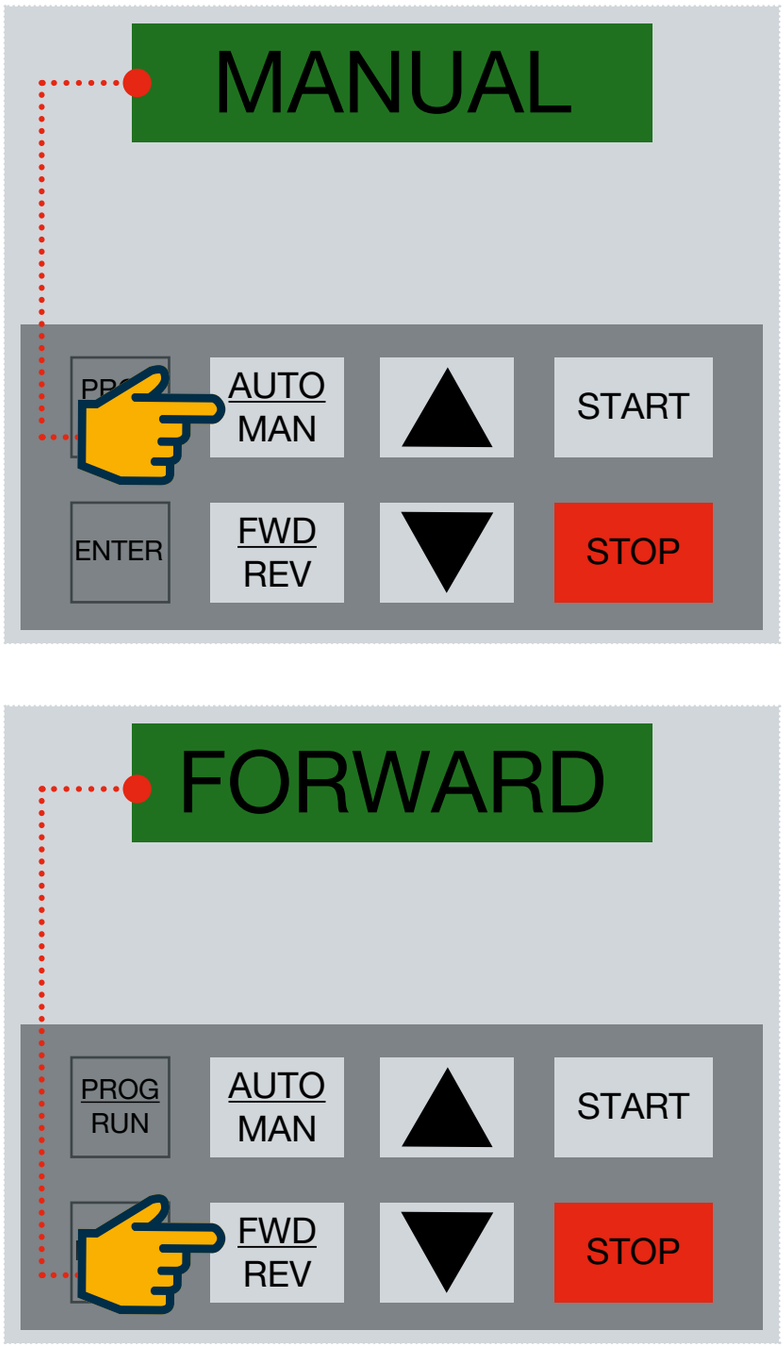


Three (3) 4.0” Dust Evac Ports, ref.



Drum with Optional Computerized Treating Head Assembly, ref.

VFD INVERTER CONTROL



Drum Operating System - VFD Micro Inverter Control

Start the Drum turning with the VFD Micro-Inverter Control.

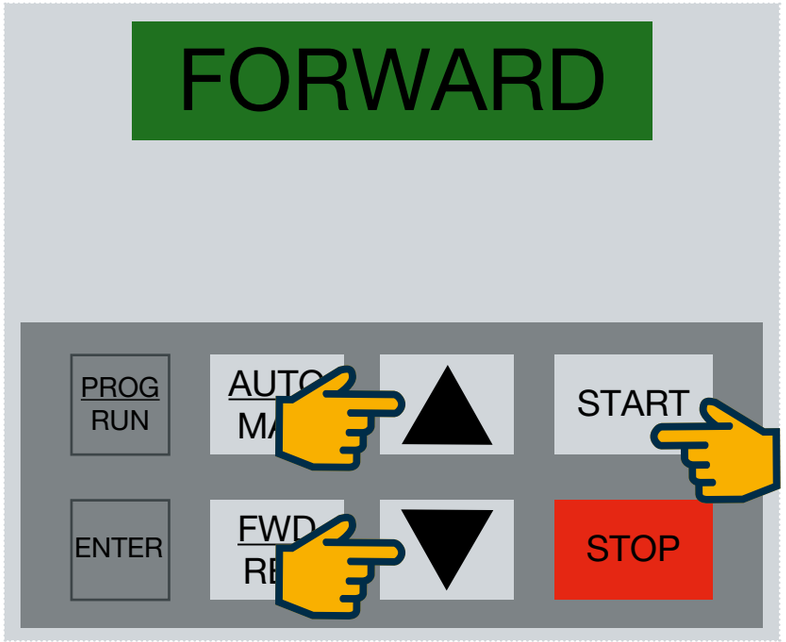
Step 1: Touch the **AUTO/MAN** button to toggle between **AUTO** and **MANUAL** modes (displays either **AUTO** or **MANUAL** in the top green window).

- Leave **MANUAL** mode selected.

Step 2: Touch **FWD/REV** button to toggle between **FORWARD** and **REVERSE** modes (displays either **FORWARD** or **REVERSE** in the top green window).

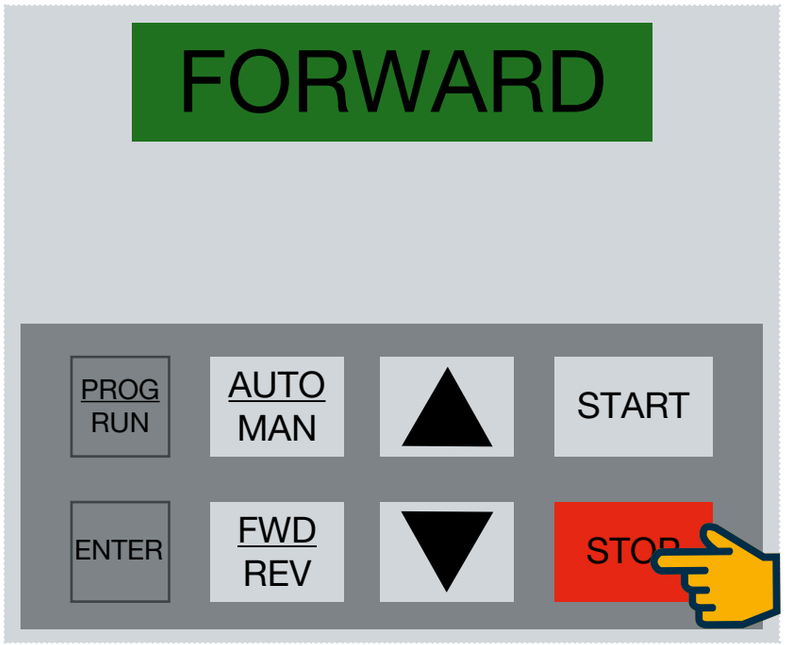
- Leave **FORWARD** mode selected.

Continued ➲



Step 3: Touch **START** button to begin Drum rotation.

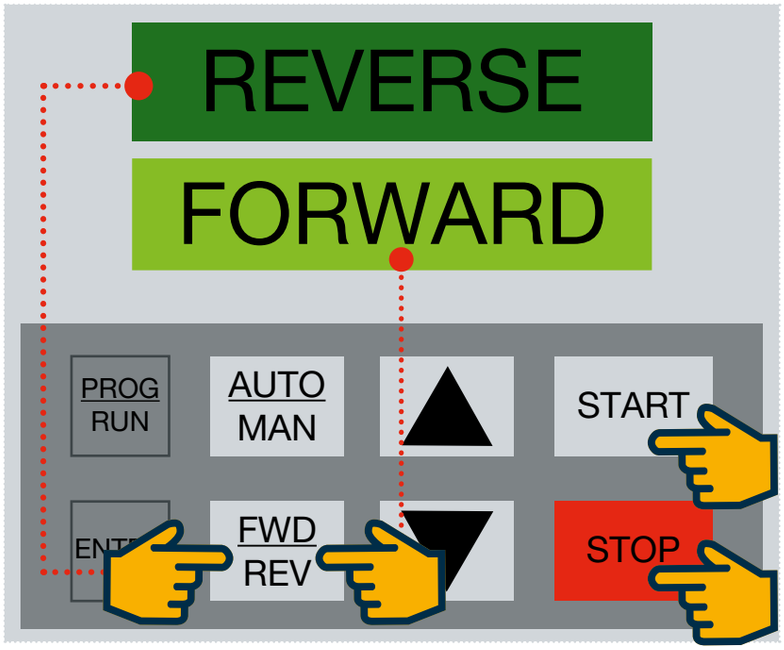
- Touch the black **UP ARROW** to **INCREASE** Drum speed, or touch the black **DOWN ARROW** to **DECREASE** Drum speed.
- The faster the Drum speed, the quicker the drum empties seed.



Step 4: Touch the **STOP** button to end Drum rotation.

- Seed should tumble in the Drum long enough for treatment products to thoroughly cover the seed, but not so long that treatment products dust off.
- Allow the Drum to rotate until all of the seed has discharged.

Continued ➲



Drum Clean out Mode

Step 5: WITH THE DRUM STOPPED (previously, Step 4)...

- Touch the **FWD/REV** graphic to change the Drum rotation direction.
- Select **REV** to run the drum in **REVERSE** for clean out.
- Touch **START** to begin drum rotation.
- When done, Touch **STOP** to end Drum rotation.
- Touch the **FWD/REV** graphic to change the Drum rotation direction back to **FORWARD**.
- Select **FWD**.

This completes the Drum VFD Micro Inverter Control section.

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