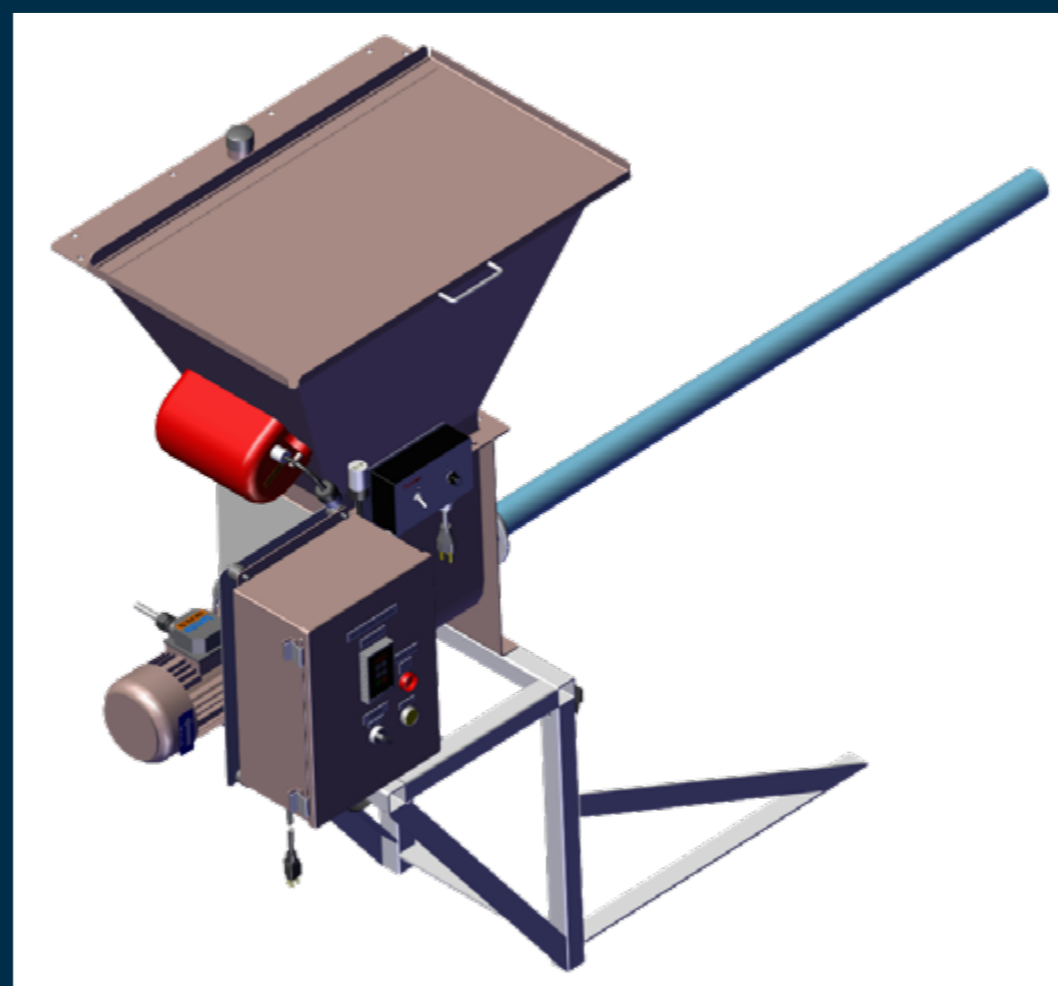




POWDER FEEDER FOR RH & DODECAGON DRUMS USER GUIDE





MENU



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



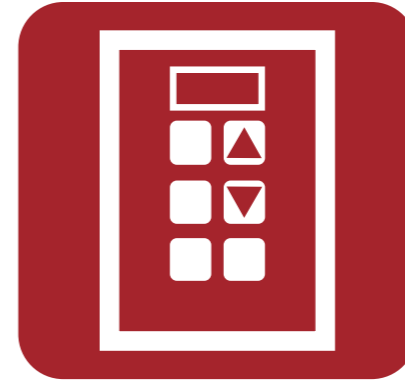
Legal & Safety



RH Drum



Dodecagon



DDS Control



Maintenance



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.



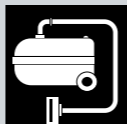
Calibration

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



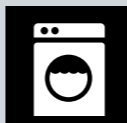
Clean seed

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



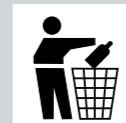
Cleaning

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



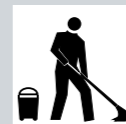
Laundry

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.



Use guards

Keep guards in place. Do not remove during operation.



Lifting

Requires two people to safely lift an item.



Lift points

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



Center of gravity

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



Tools

Required tools for installation and maintenance.



Parts

Required parts for installation and maintenance.



Tip

Calls attention to special information.



Note

Emphasizes general information worthy of attention.



Example

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

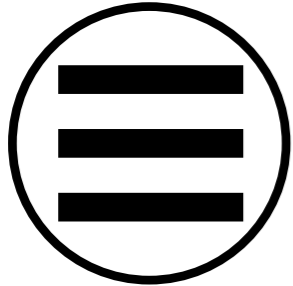




PICTOGRAMS

i

Each Signifier displayed here is specific to this User Manual.



Menu



Previous



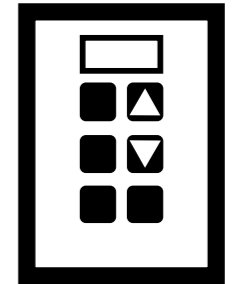
Advance



RH Drum



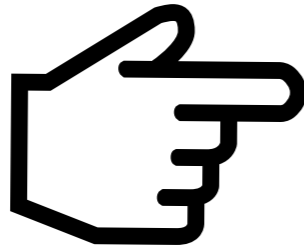
Dodecagon Drum



DDS CONTROL



Powder Feeder



Cursor Hand



Like



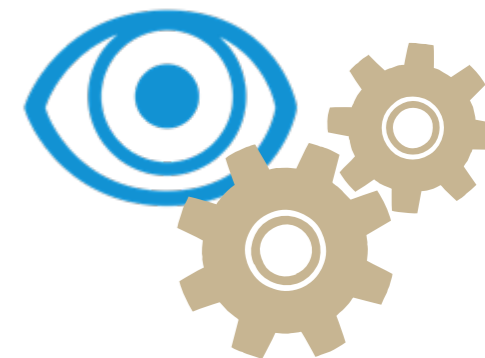


RH DRUM



Required installation tools

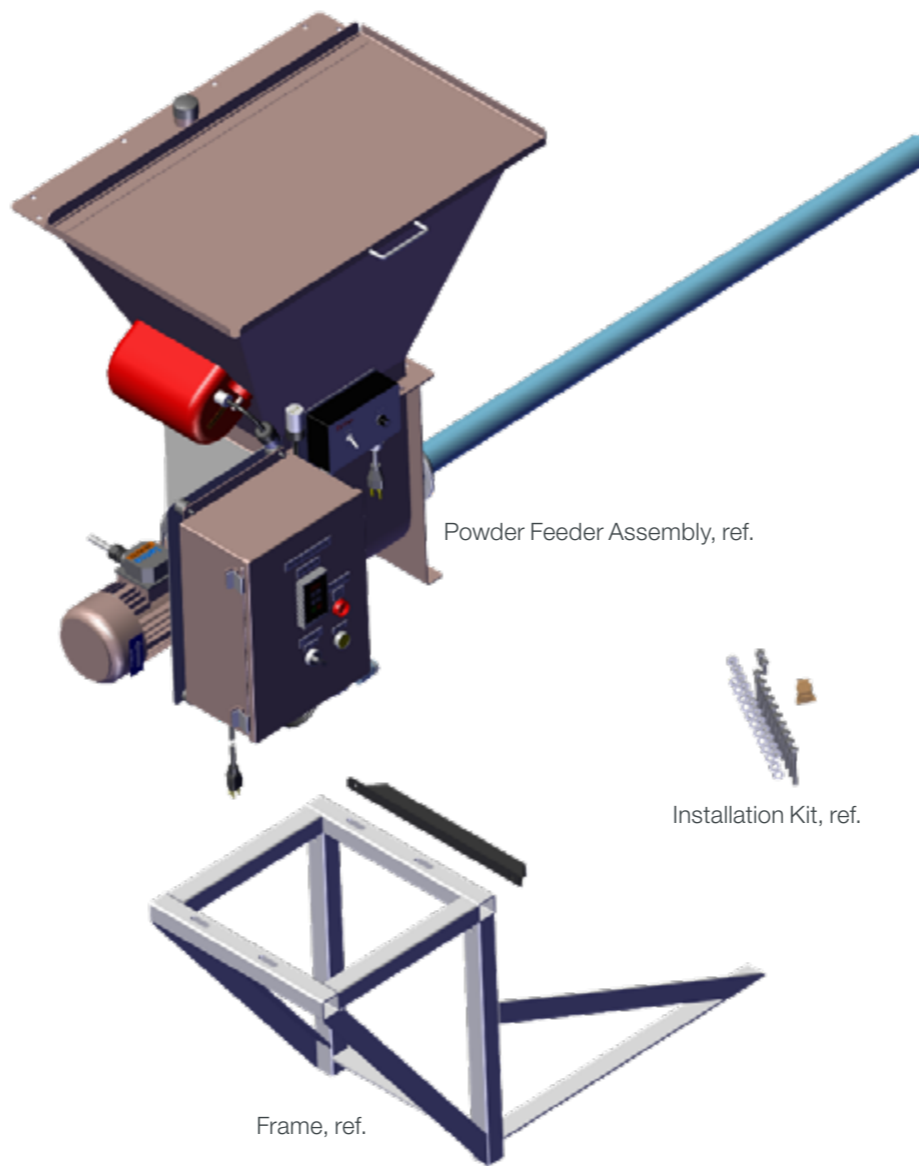
- Material Handling Device
- 1/2" Wrench (2)
- 1/2" Drill Bit Index
- Drill
- Petroleum Jelly



Optional Powder Feeder Assembly

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

Continued ➔



Fastener Kit*

Installation bag #1 (leg braces)

- 5/16-18 x .75 hex bolt - zinc (2)
- 5/16-18 x 2.00 hex bolt - zinc (2)
- 5/16-18 x 2.25 hex bolt - zinc (2)
- 5/16-18 x 2.75 hex bolt - zinc (2)
- 5/16-18 hex nut - zinc (8)
- 5/16-18 lock washer - zinc (8)
- 5/16-18 flat washer - zinc (12)

* Shipped in cloth bag



Step 1: Remove the Rubber Plug from the Doghouse.

Step 2: Apply petroleum jelly onto the backside of the Auger Tube Seal prior to inserting into the Doghouse (supplied from factory).

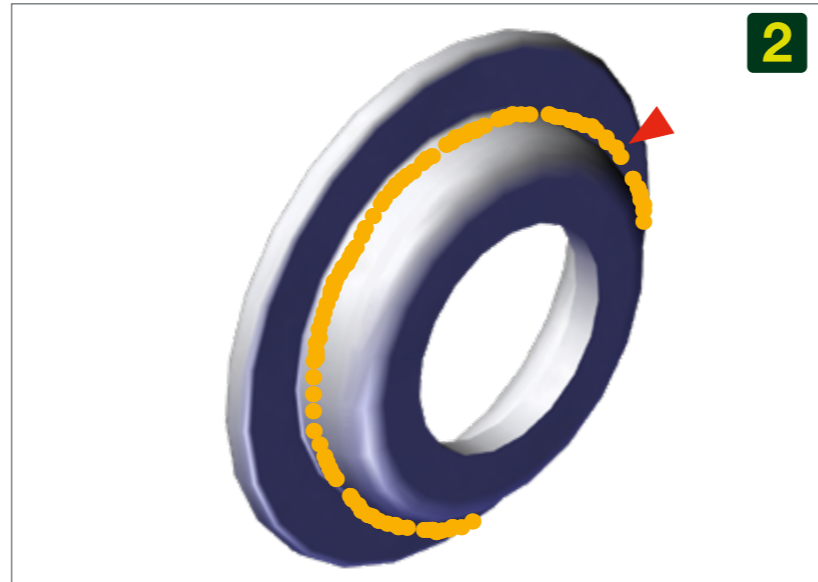
Step 3: Insert Auger Tube Seal into the Doghouse.

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

Continued ➔



Remove Rubber 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.

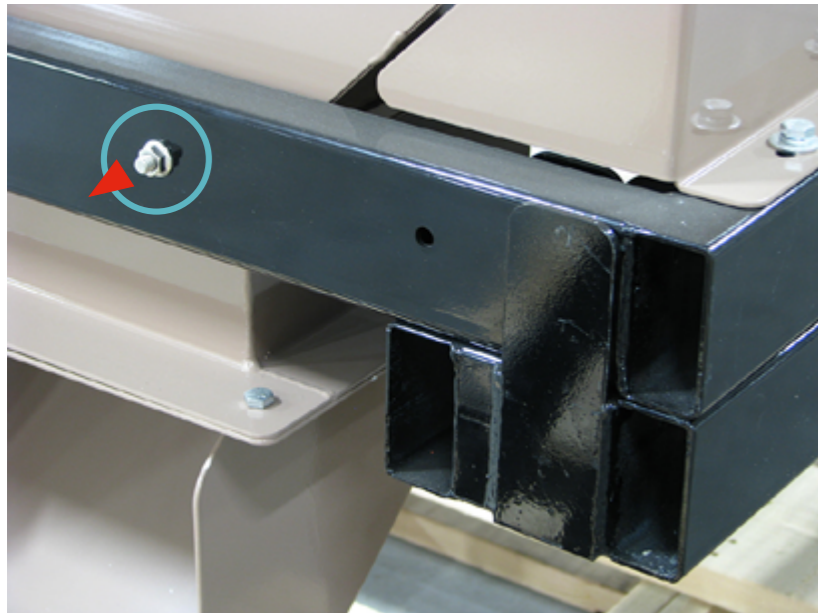


Apply Petroleum Jelly on Auger Tube Seal orifice, ref.

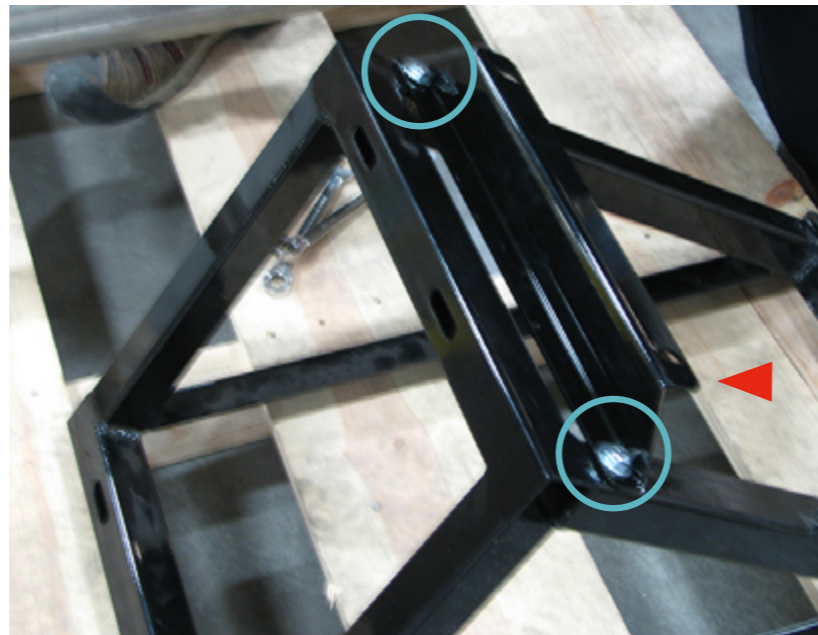




Step 5: Use ½” wrench to remove the existing 5/16-18 bolt from the bottom of the RH Drum Frame and set removed hardware aside to be used later.



Step 6: Fasten the Powder/Doghouse Bracket to the Powder Hopper Support Frame (as shown below) using two 5/16-18 x 2.25 Hex Bolts, Washers, Lock washers and Nuts in the following order: bolt+flat washer+[spacer plate+frame]+lock washer+nut. **Tighten hardware.**



Note: the orientation of the Bracket (facing down towards bottom and in relation to the slot holes on top of the Frame!

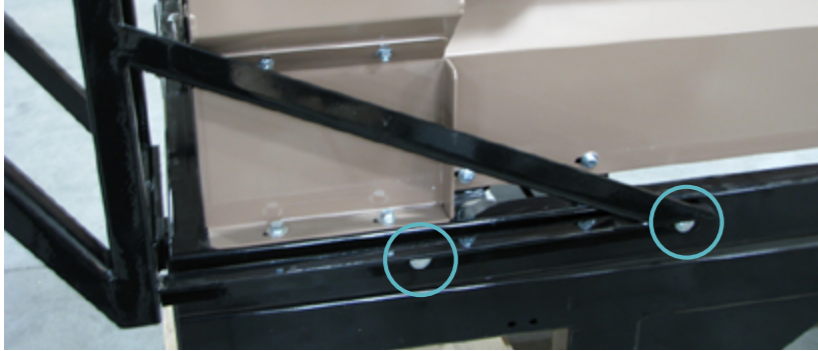
Step 7: Have one person lift and hold the Support Frame in place and another align the Support Angle with the drilled holes on the Drum Frame.

Continued ➞



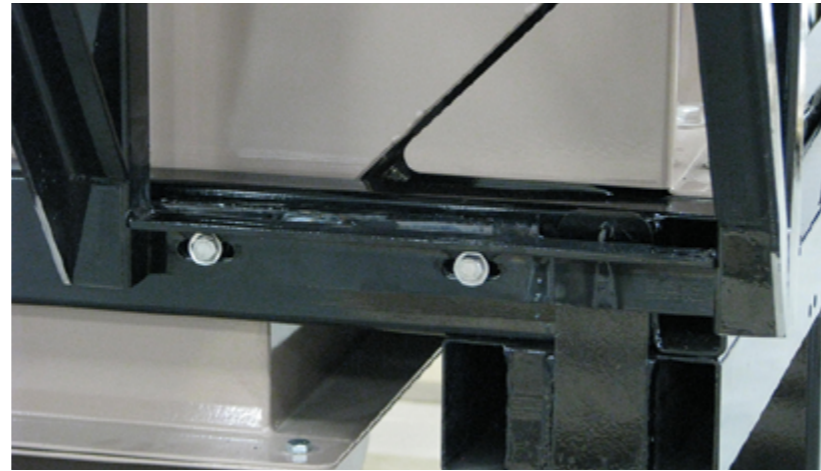
Step 8: Bolt in place with two 5/16-18 x 2.75 Hex Bolts, Washers, Lock washers and Nuts in the following order: bolt+flat washer+[frame]+lock washer+nut.

- **Hand tighten hardware in place for now.**



Step 9: Fasten the bottom of the Support Frame to the Doghouse Frame (as shown below) using one 5/16-18 x 3.00 Hex Bolt, Washer and serrated Nut on the left side and one 5/16-18 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.

- **Hand tighten hardware in place for now.**



Step 10: Use a 5/16" drill bit. Drill two 5/16" holes in the Doghouse to connect the Powder/Doghouse Bracket to the Doghouse.

- Fasten the Powder/Doghouse Bracket to the Doghouse with two 5/16-18 x .75 Hex Bolts, Washers and serrated Nut in the following order: bolt+flat washer+[bracket+doghouse]+Serrated Nut.
- Tighten securely in place.
- **Tighten all hardware used with the frame securely in place.**



Step 11: Remove shipping bolts that hold the Powder Feeder Assembly onto the pallet.

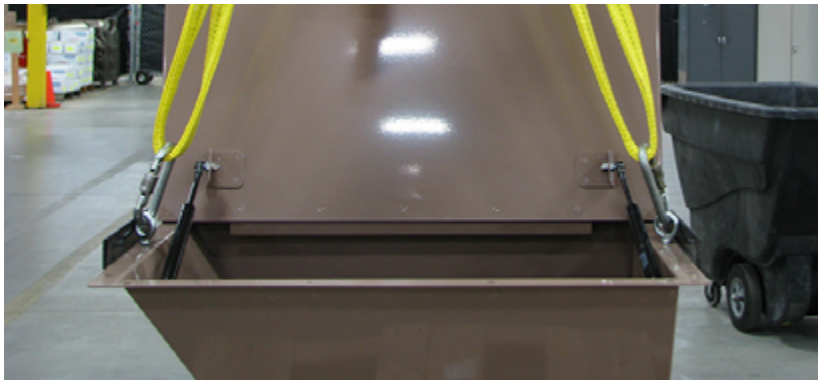
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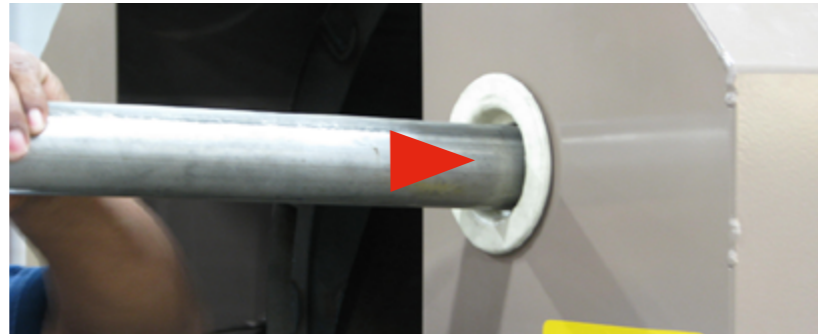
Step 12: Open the Powder Feeder Lid and connect rigging to each side.

- Use proper rigging and lifting techniques to ensure safety when installing the Powder Feeder onto the RH Drum & Frame Assembly.
- Approximate dry weight: 190lbs./ 86Kg.



Step 13: Use an overhead hoist to lift the Powder Feeder Assembly.

- Carefully insert the Auger Tube into the Auger Tube Seal on the Doghouse Door Plate.



Step 14: Connect the Powder Feeder Assembly to the Powder Hopper Support Frame using four 5/16-18 x 2.50 Hex Bolt, Washer and serrated Nut and 1/2" socket.

- Align with the four drilled holes on the Powder Body. Fasten in place with supplied hardware and in this order: bolt+flat washer+[frame]+Serrated nut.
- **Tighten securely in place.**

Continued ➡



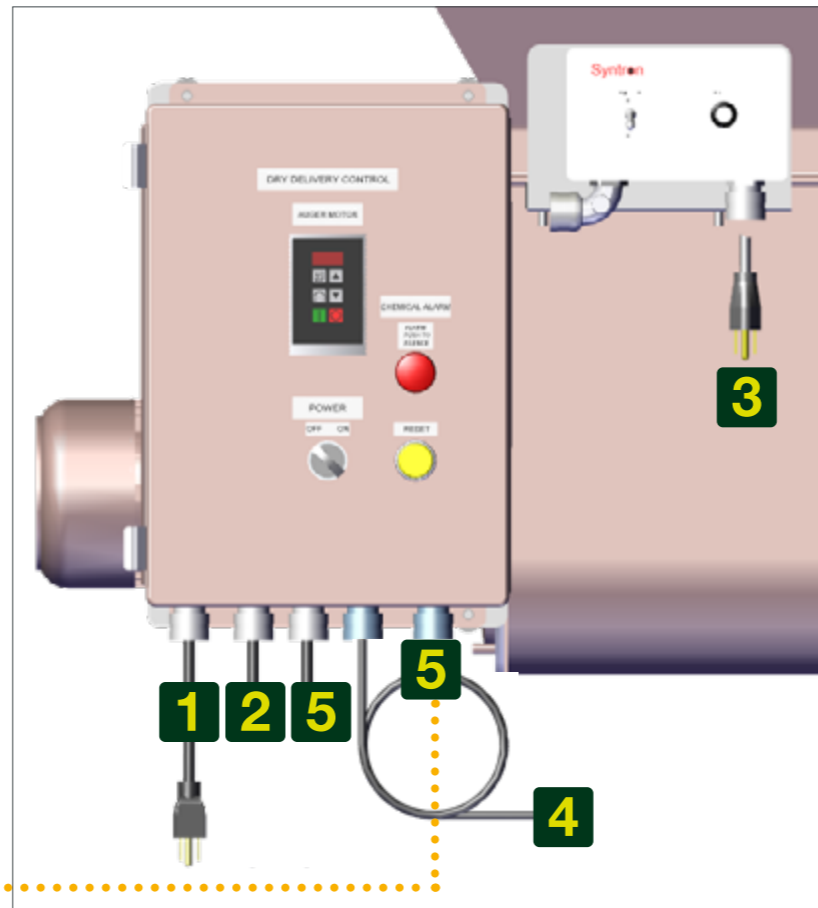
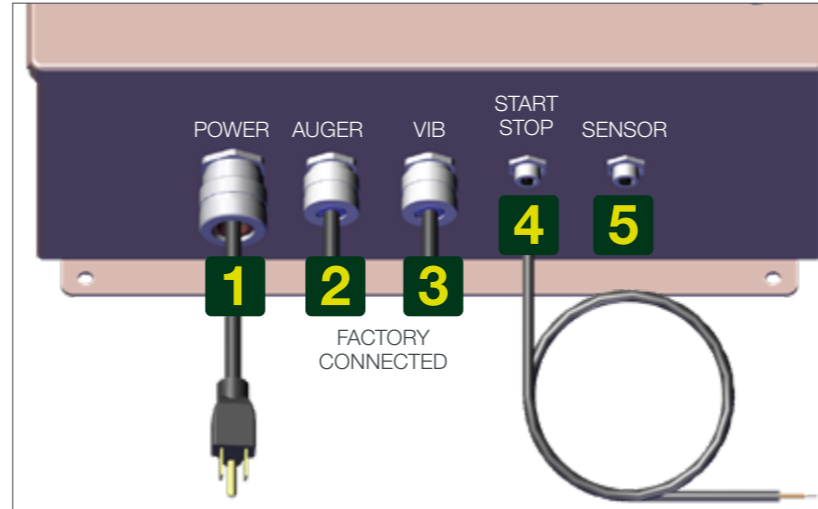
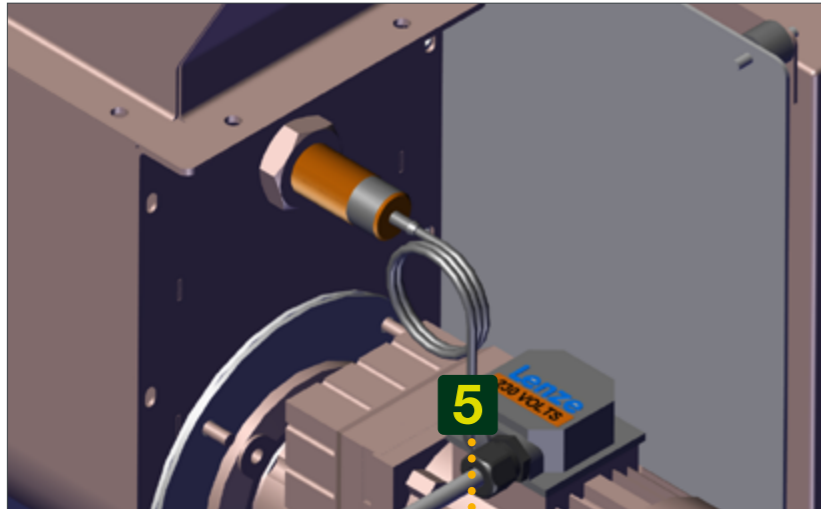
30cfm max. recommended.

Integrated Aspiration System

An exhaust unit with slide gate supplied by the customer must be connected to a central aspiration system.

A 1.5" Dust Evacuation Port is available on top of the Powder Feeder Hopper. Connect to shop aspiration system.





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.



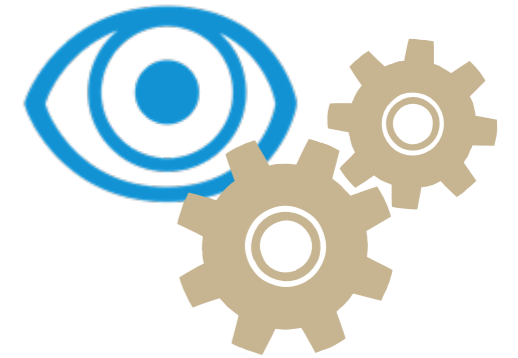


DODECAGON DRUM



Required installation tools

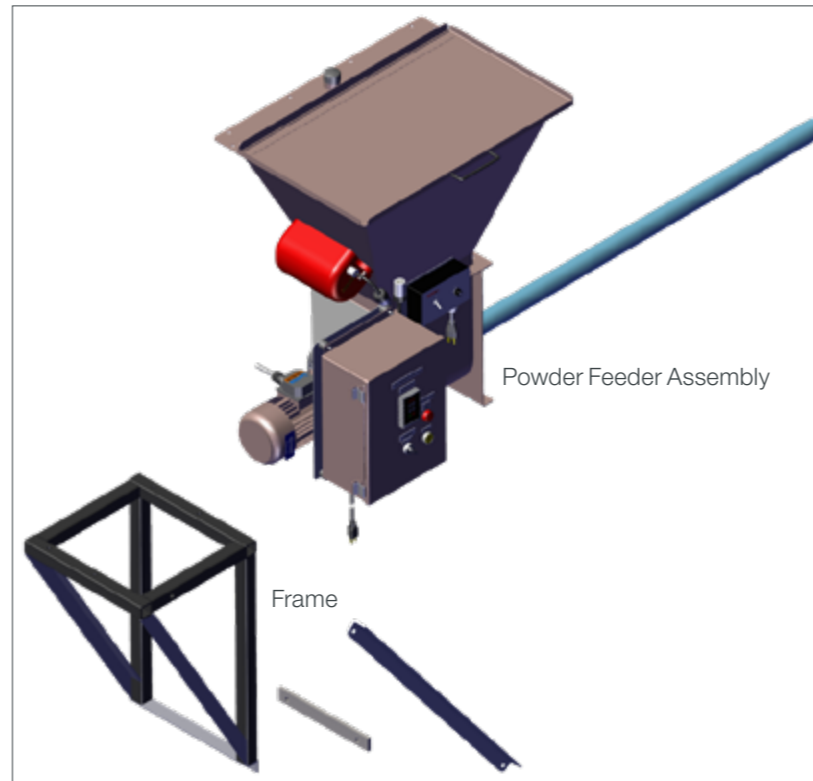
- Material Handling Device
- 9/16" Socket (1)
- Petroleum Jelly



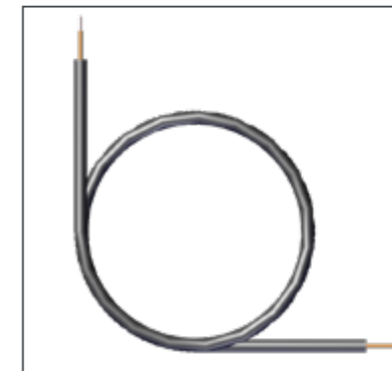
Optional Powder Feeder Assembly

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

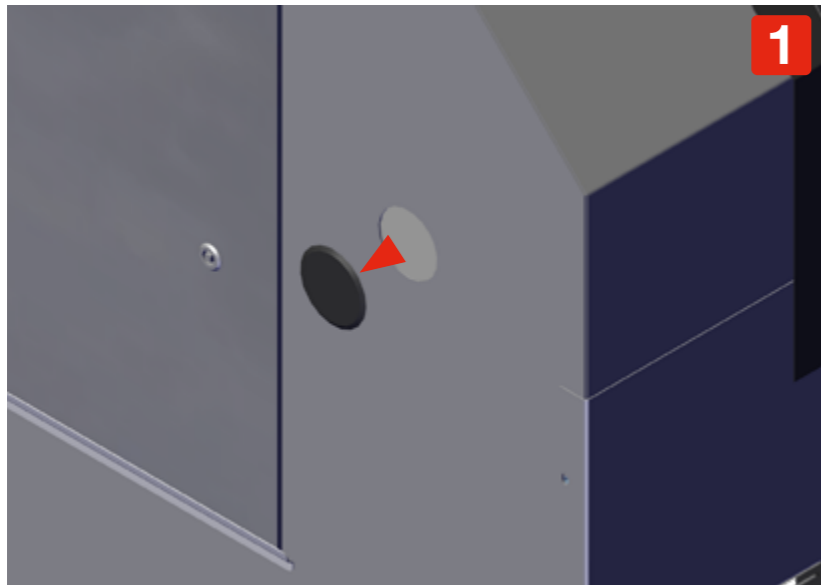
Step 1: Remove the black cap plug from the Doghouse.

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

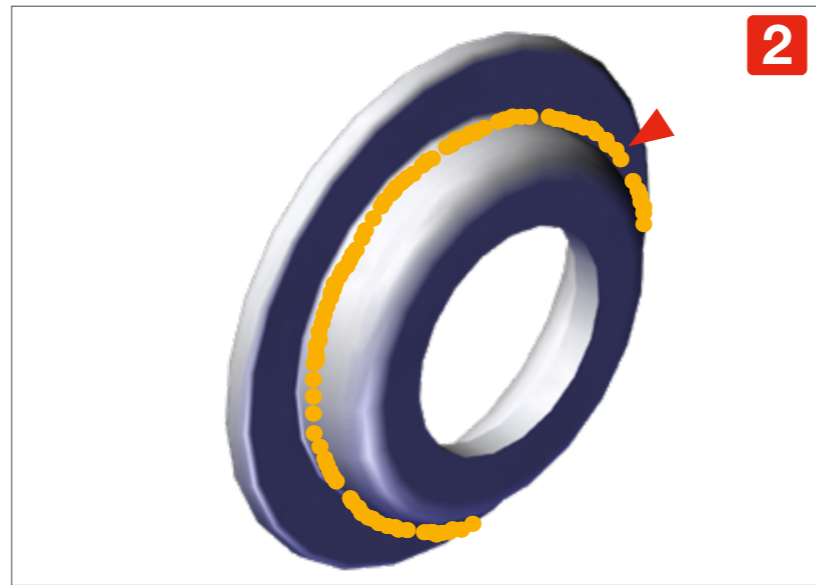
Step 3: Insert Auger Tube Seal into the Doghouse.

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

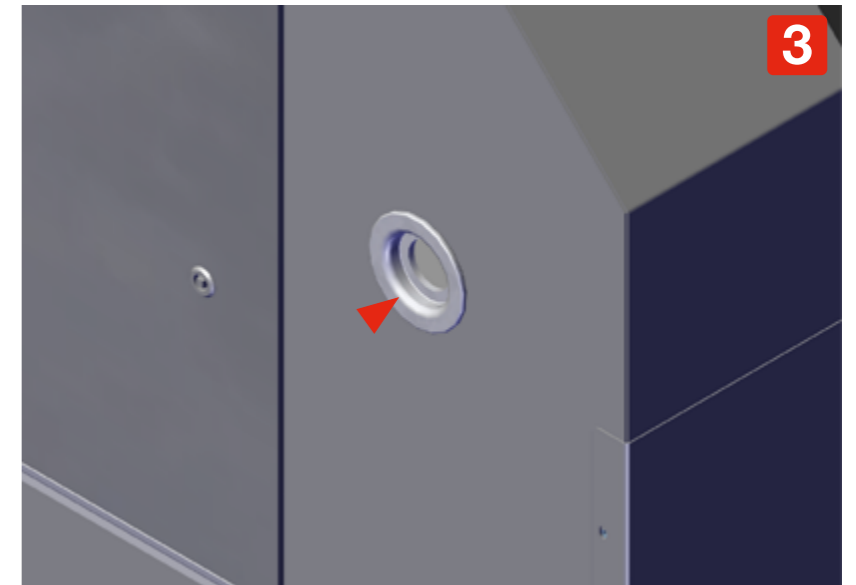
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Remove Black Cap Plug from Doghouse, ref.



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

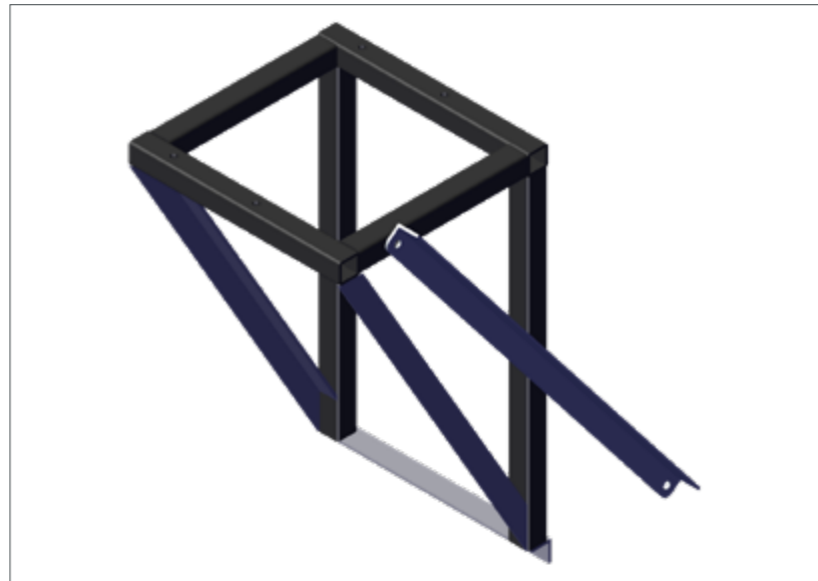
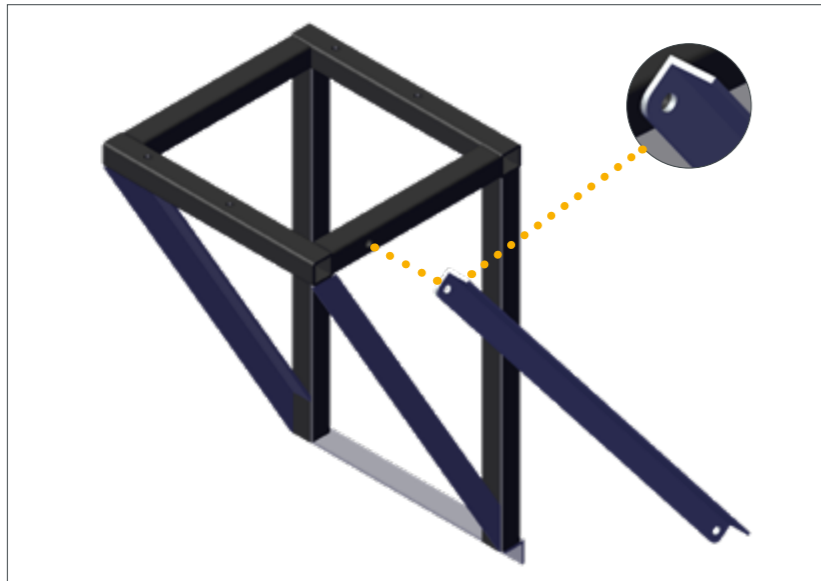


Insert the Auger Tube Seal into the Doghouse, ref.



Apply Petroleum Jelly on Auger Tube Seal orifice, ref.



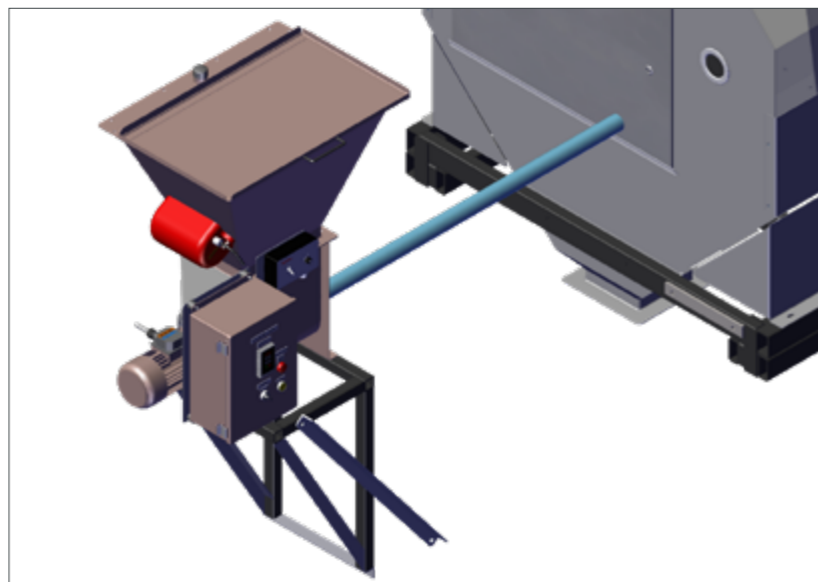
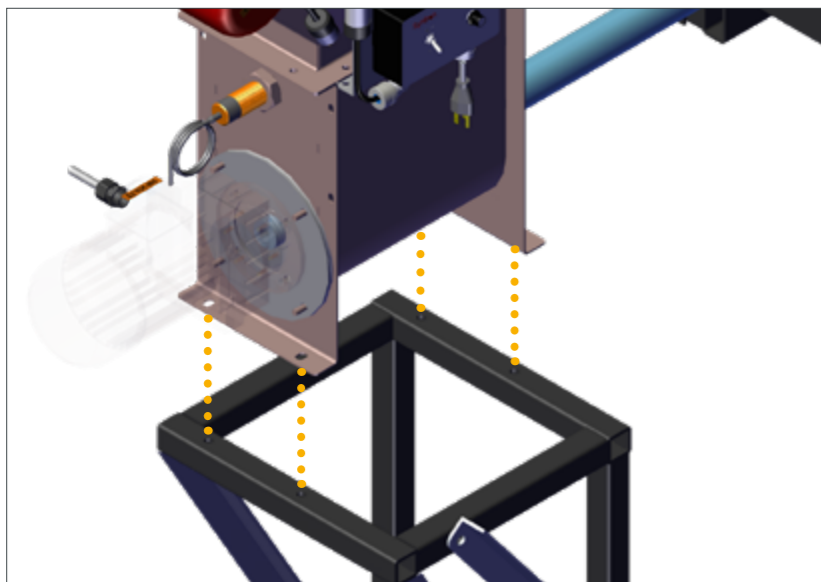


Powder Hopper Support Frame

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.

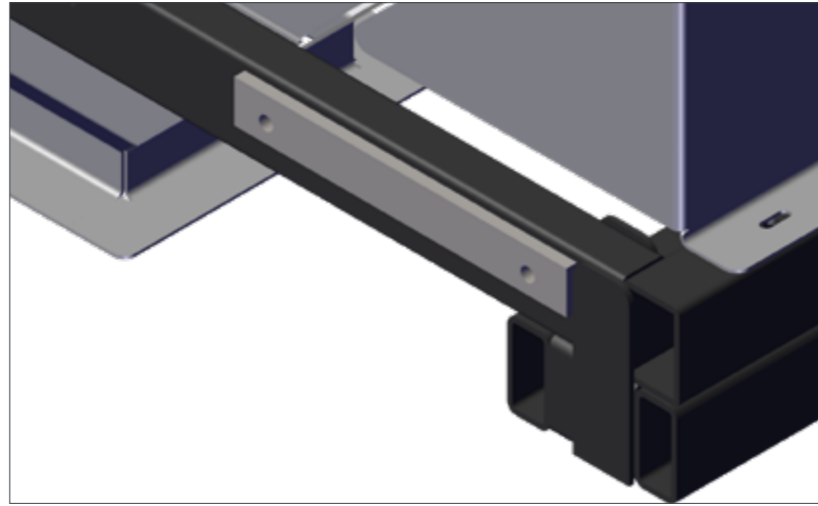
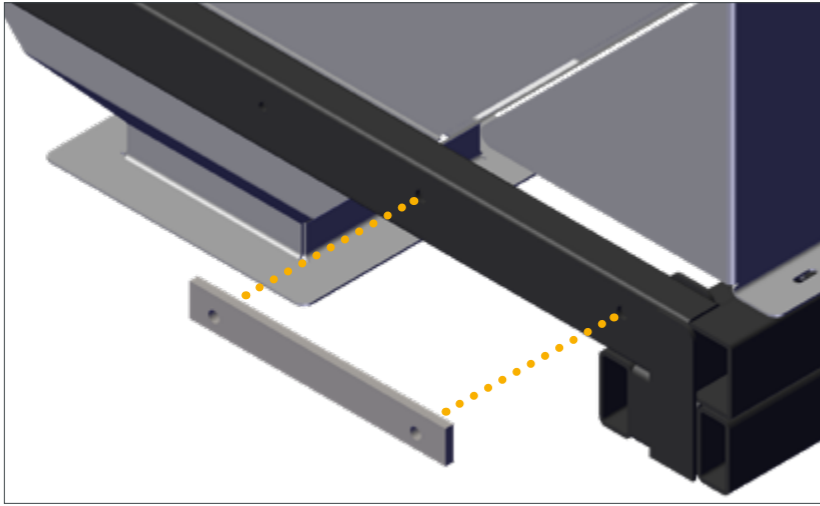
- Align the Powder Body foot mount slot holes with the Support Frame drilled holes.

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 ➡

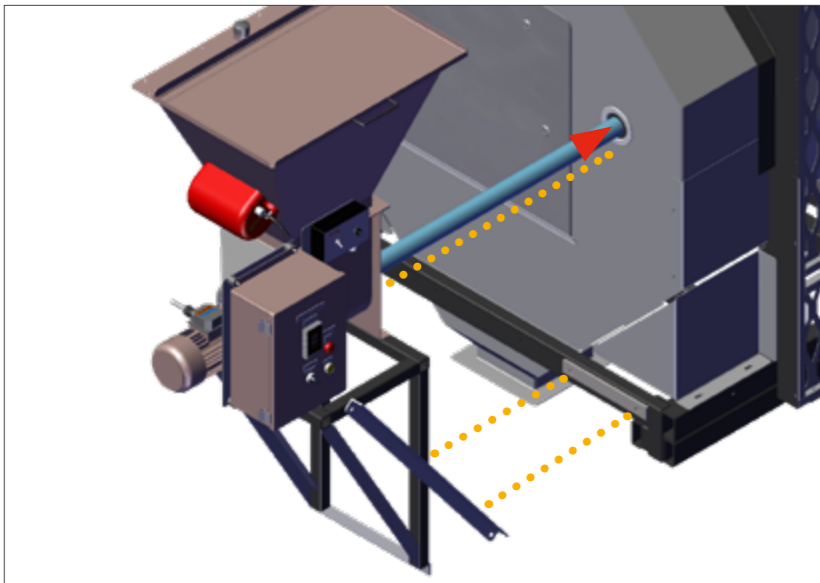




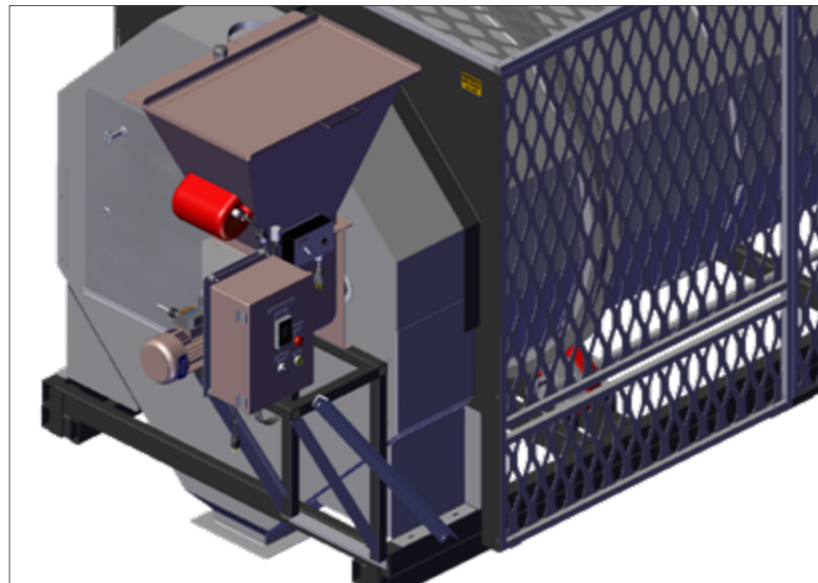
Step 3: Have one person hold the Frame Shim in place against the Drum Frame, aligned with the drilled holes, as shown left.

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.

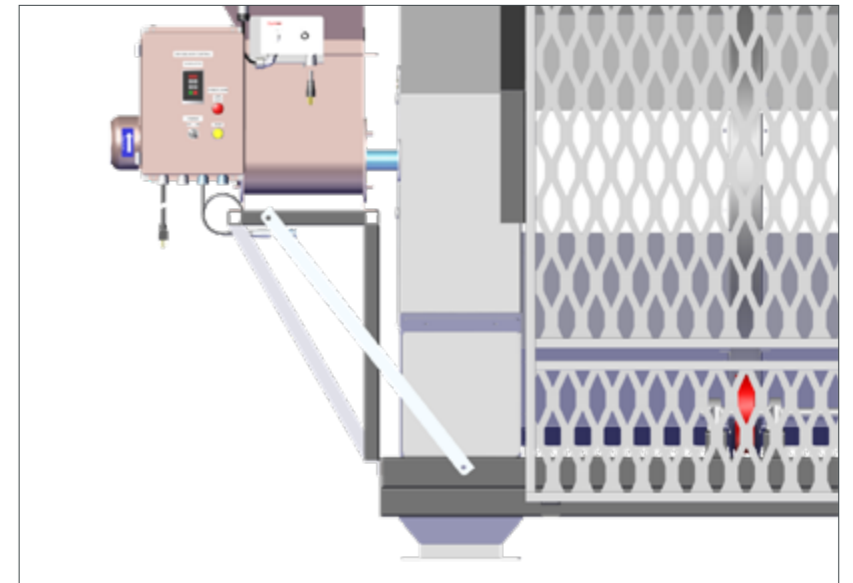
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Carefully insert Powder Feeder Assembly into the Auger Tube Seal, ref.

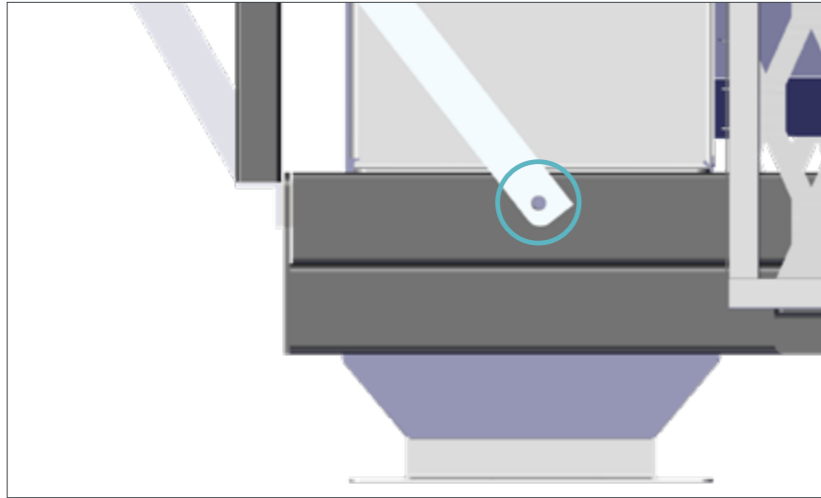


Powder Feeder Assembly installed, ref.



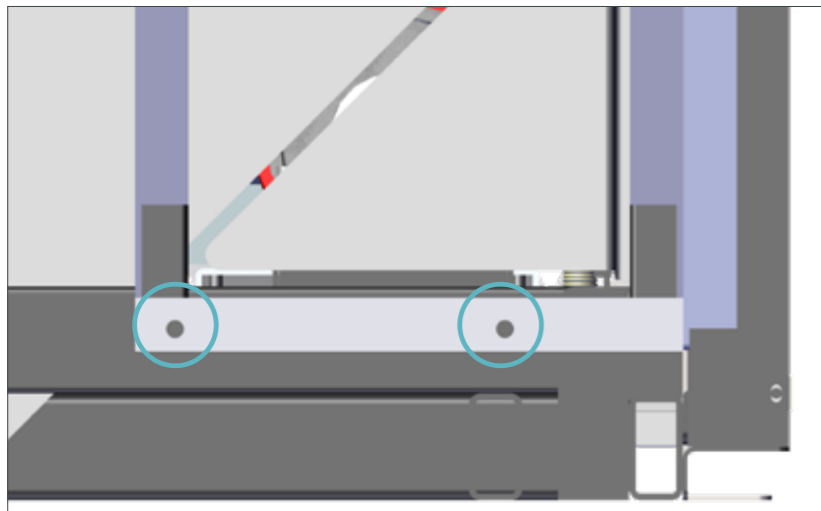
Side view of Powder Feeder Assembly installed, ref.





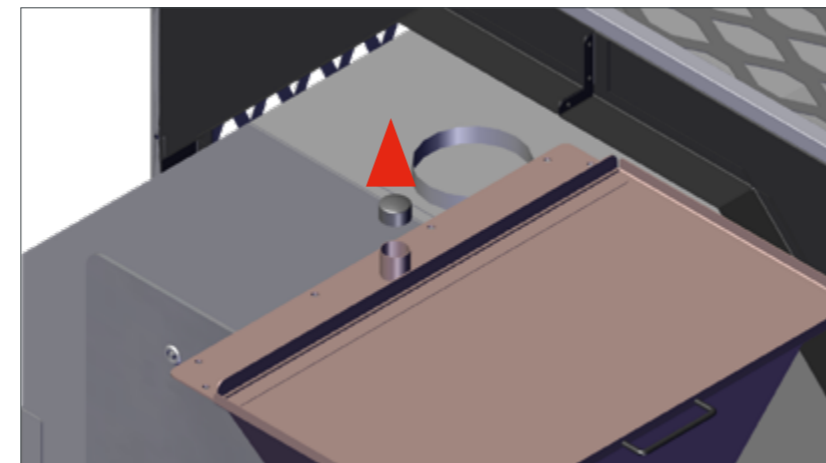
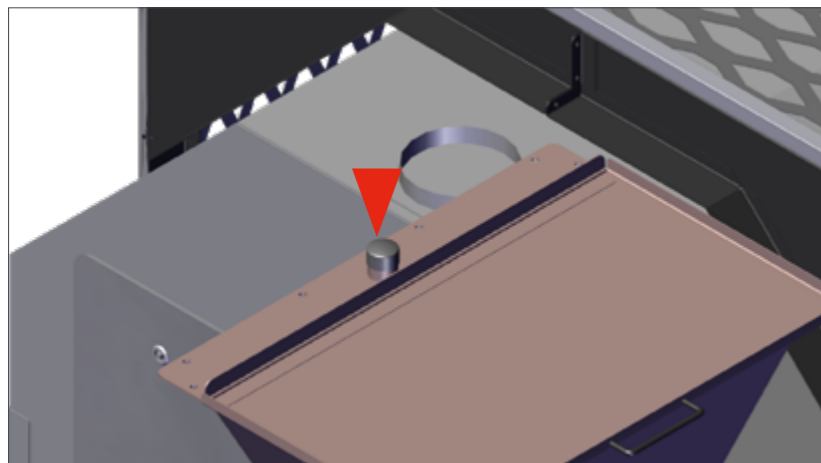
Step 5: Align the Support Angle with the drilled hole on the Drum Frame.

- 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.**

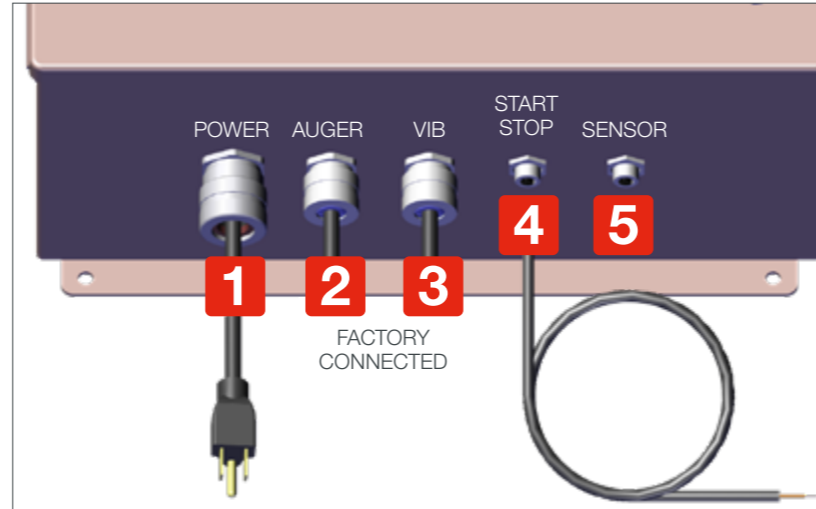
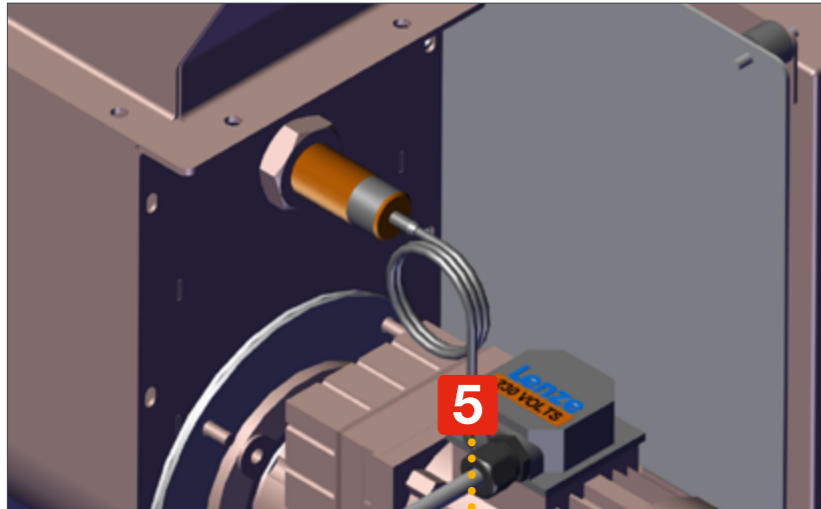


Step 7: Remove the rubber cap from the Dust Evacuation Port located on the top of the Powder Feeder Hopper.

- 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 M³/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**.

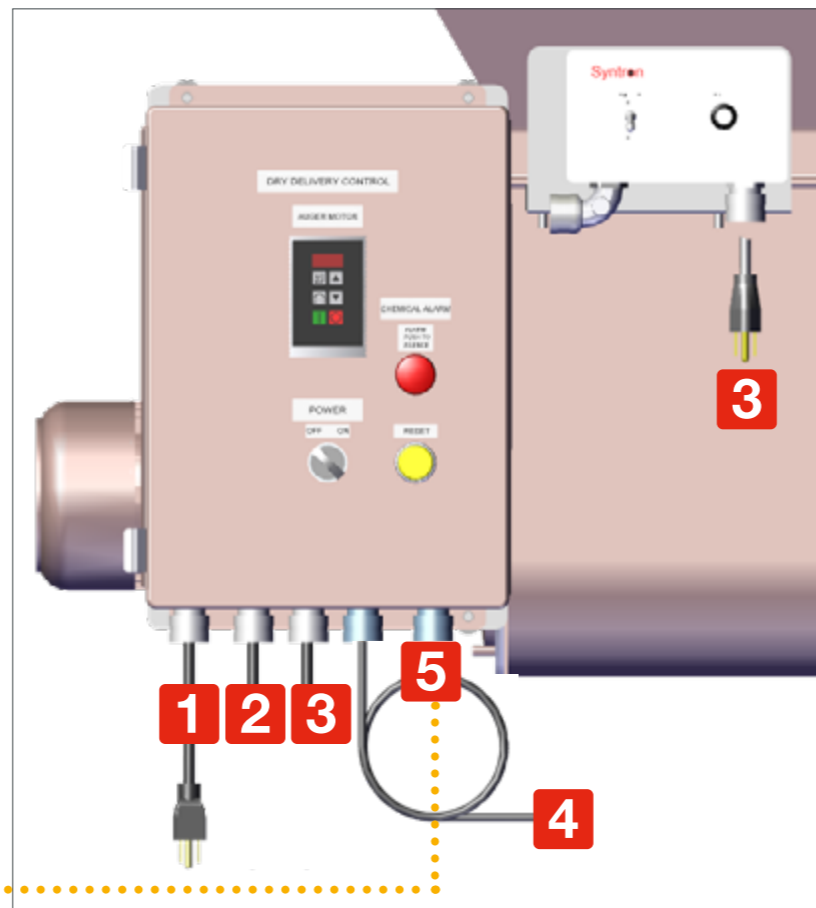
This completes the Powder Feeder Installation section.

*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

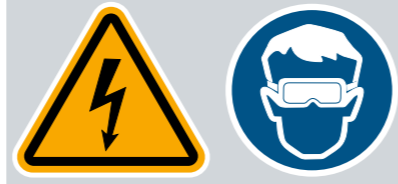




DRY DELIVERY CONTROL



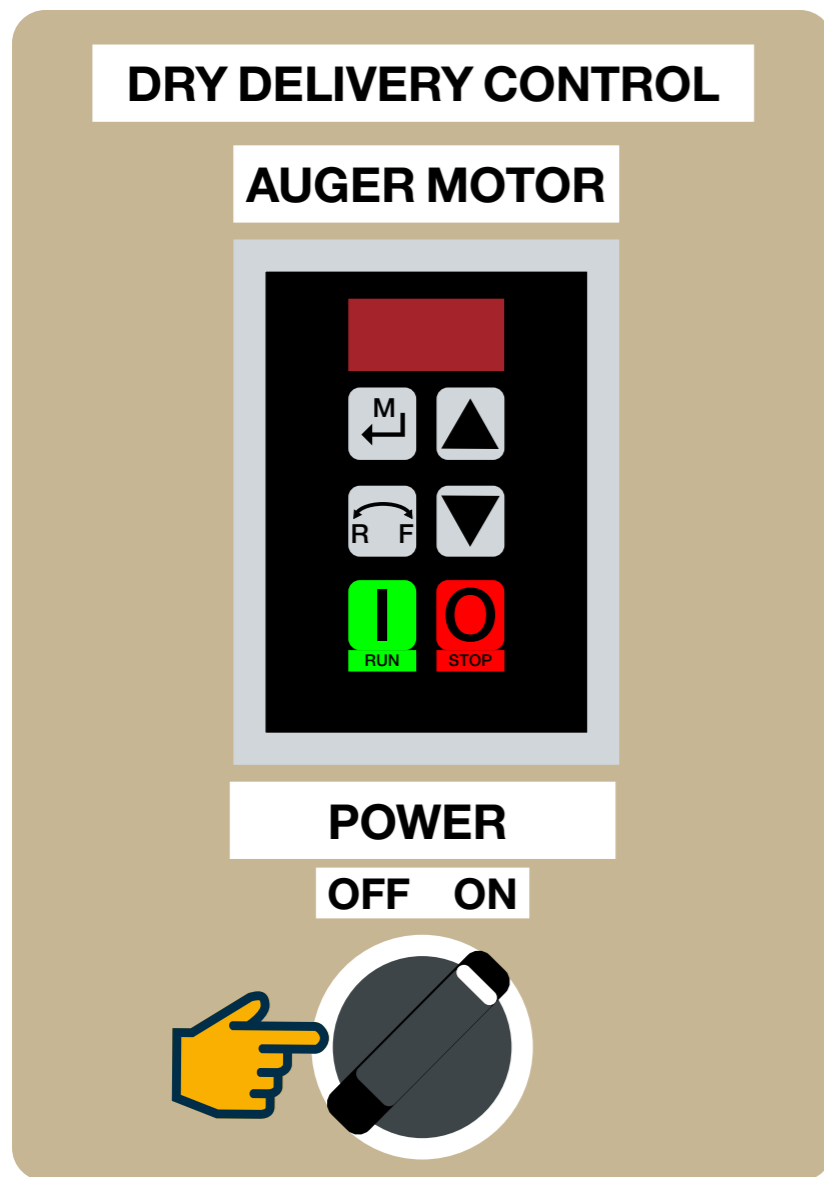
Warning! Do NOT run powder at this time!

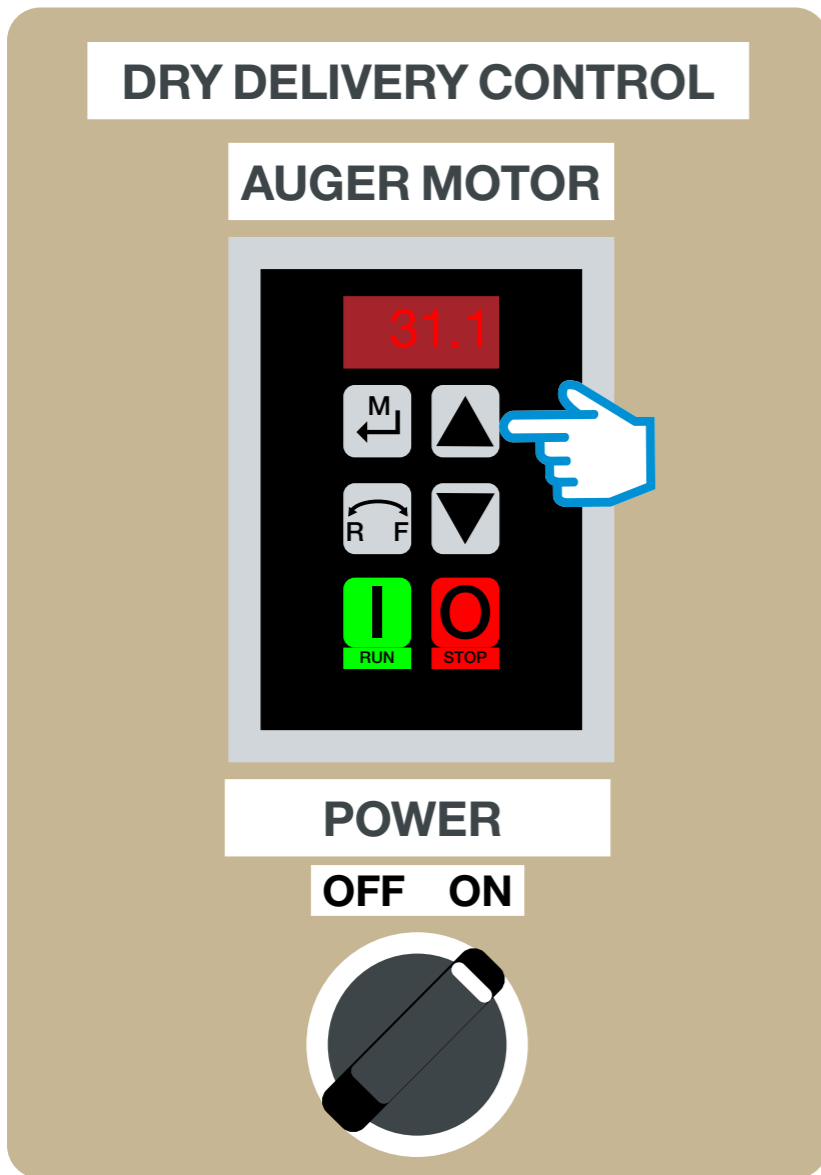


Dry Delivery Control

Step 1: Turn **ON** the Power Switch on the Dry Delivery Control Panel.

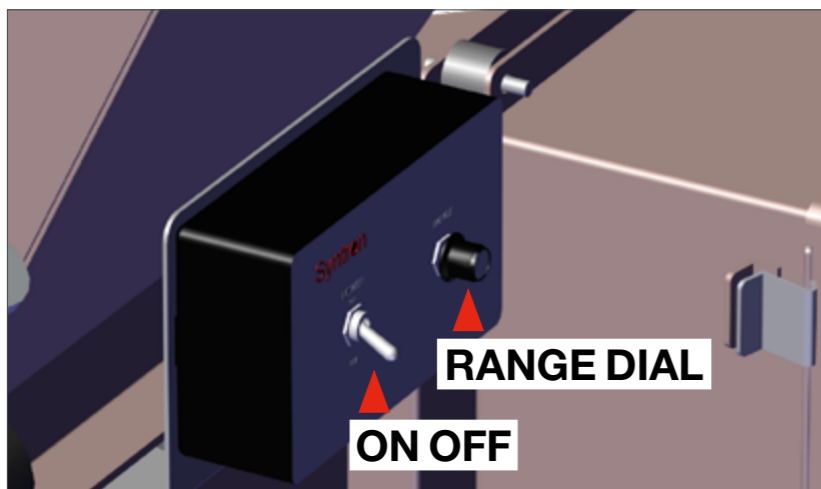
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Step 2: Press the **UP** or **DOWN** arrow buttons to **INCREASE** or **DECREASE** the speed of the auger.

- The faster the auger runs, the more product output, the slower the auger runs, the less product output.
- Adjust accordingly.



Step 3: Turn **ON** the Vibrator Power Switch for **2-3 SECONDS ONLY! DO NOT LEAVE ON, TO PREVENT POWDER FROM PACKING DOWN ON THE AUGER!**

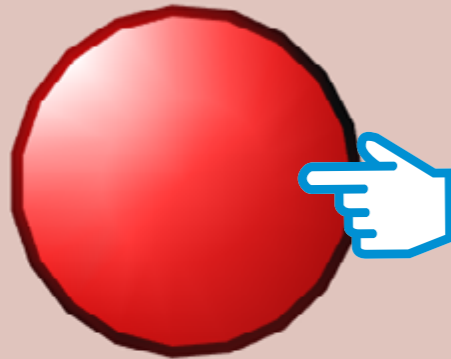
- Use the Range Dial to adjust the vibration intensity.
- Hint: a very low intensity prevents powder from packing down on the Auger and allows an even flow of product.
- Adjust accordingly.

Continued ➞



CHEMICAL ALARM

ALARM
PUSH TO
SILENCE

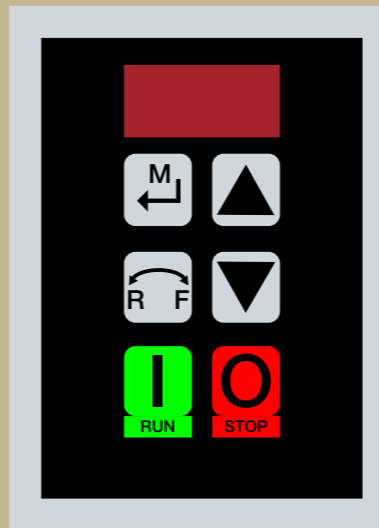


RESET



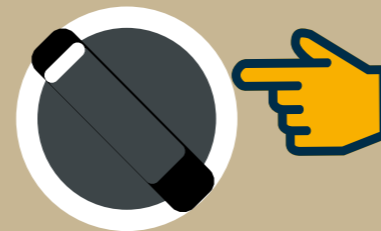
DRY DELIVERY CONTROL

AUGER MOTOR



POWER

OFF ON



Step 4: When powder product dispenses below the Hopper Sensor, an alarm will light up and sound.

- Push the red **ALARM PUSH TO SILENCE** button.
- Open the hopper lid, fill the hopper with more product, then push the yellow **RESET** button.
- This will activate the alarm and the sensor.
- Turn **OFF** the Power Switch when done treating with powder product.

This completes the Powder Operation section.





MAINTENANCE

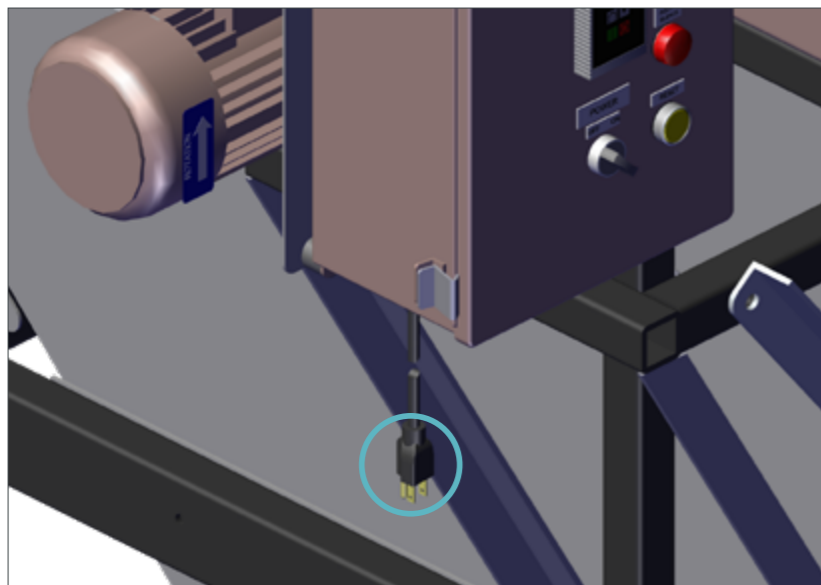


Required maintenance tools

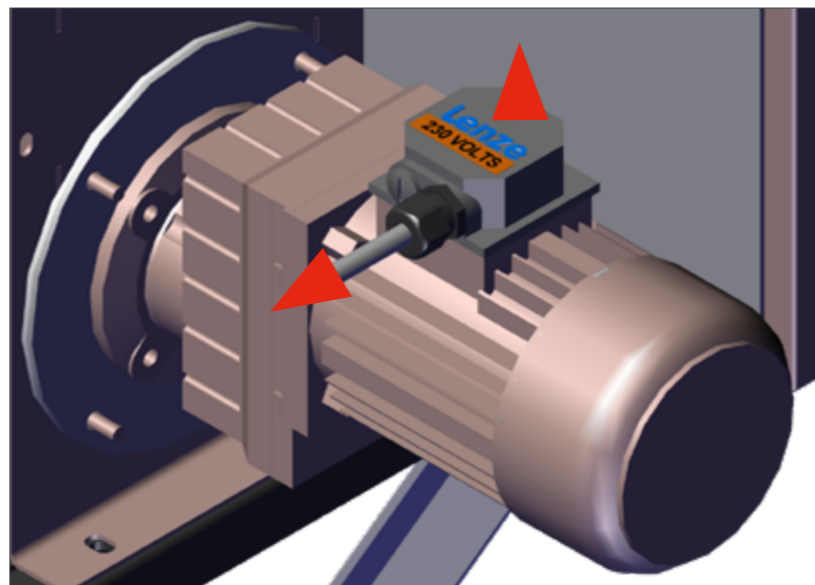
- 1/2" Wrench (1)
- Phillips Screwdriver
- Vacuum Cleaning Device
- Cleaning Rags



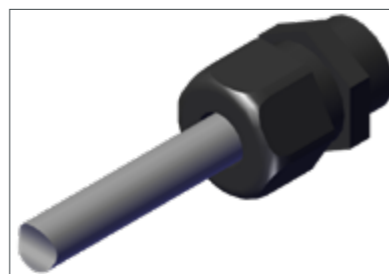
Warning: ensure a licensed electrician wires the system following National electrical codes for the area. Refer to wiring diagrams provided inside the control panel.



1. Disconnect the Dry Delivery Control Box Power Cord from power source.



2. Open Conduit Box, disconnect and remove the Power Cord



Remove Power Cord

Isolate the Power Source

Remove All Residual Energy!

Since powder absorbs ambient air moisture and solidifies if left over time, cleaning helps prevent “caking up” of powder product.

Step 1: Disconnect the Dry Delivery Control Box Power Cord from an external 230V AC power source.

Step 2: Have a licensed electrician open the Gear Motor Conduit Box and disconnect the Power Cord.

- Remove the Power Cord from the Conduit Box.

Continued ➡





Warning! Wear proper personal protective equipment when working with dust and chemicals: long sleeves, chemical resistant gloves and a face respirator.



Always use a vacuum cleaner (not compressed air) to safely clean the machine!

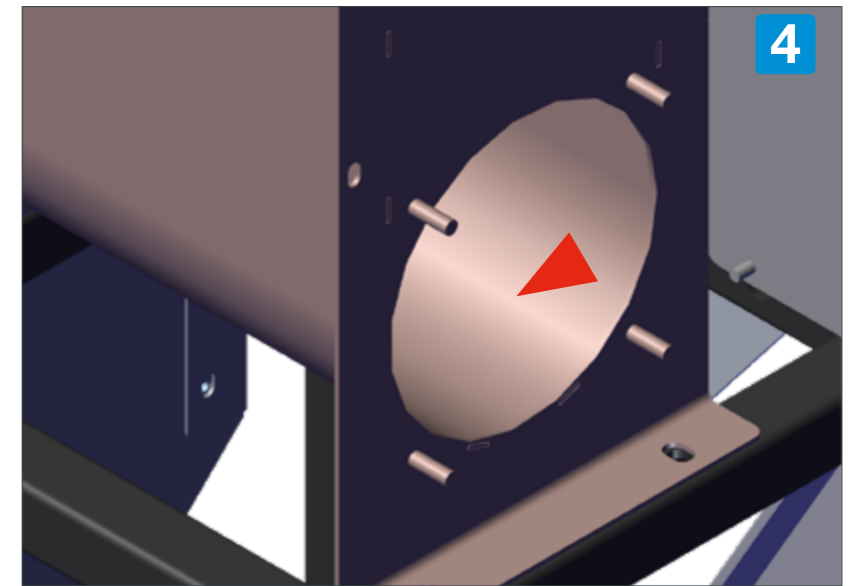
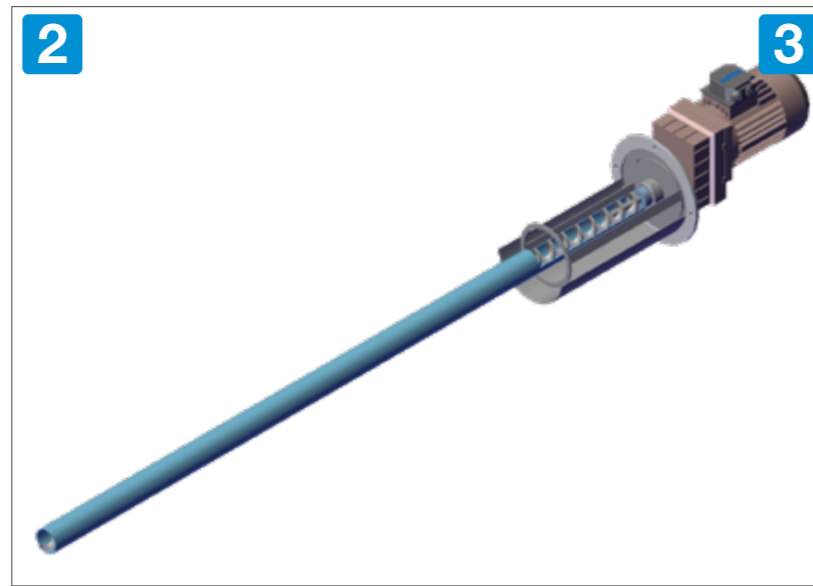
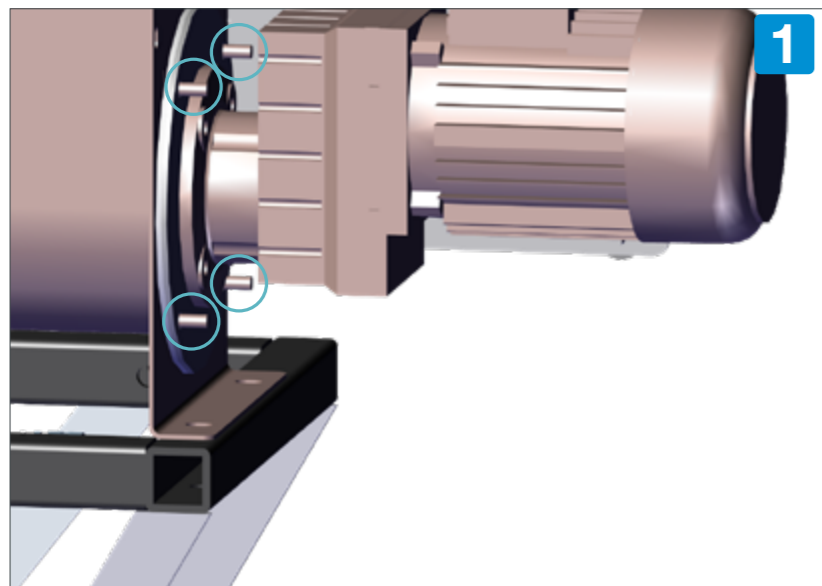
Step 1: Use 1/2" wrench to remove the four bolts that hold the Adapter Plate, Gasket and Gear Motor onto the backside of the Powder Base.

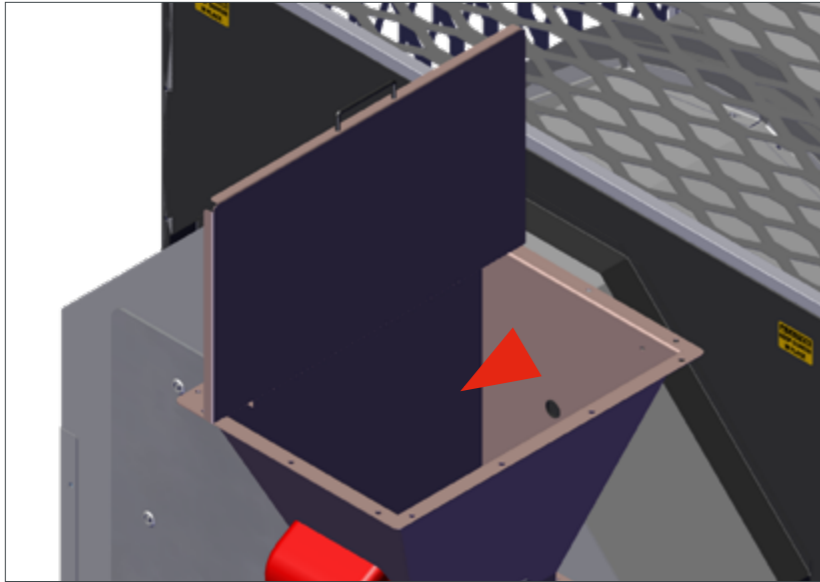
Step 2: Slide the Gear Motor (with the Auger and gasket still attached) from the Powder Body and set aside.

Step 3: Thoroughly clean the Auger Assembly of dry product and residue.

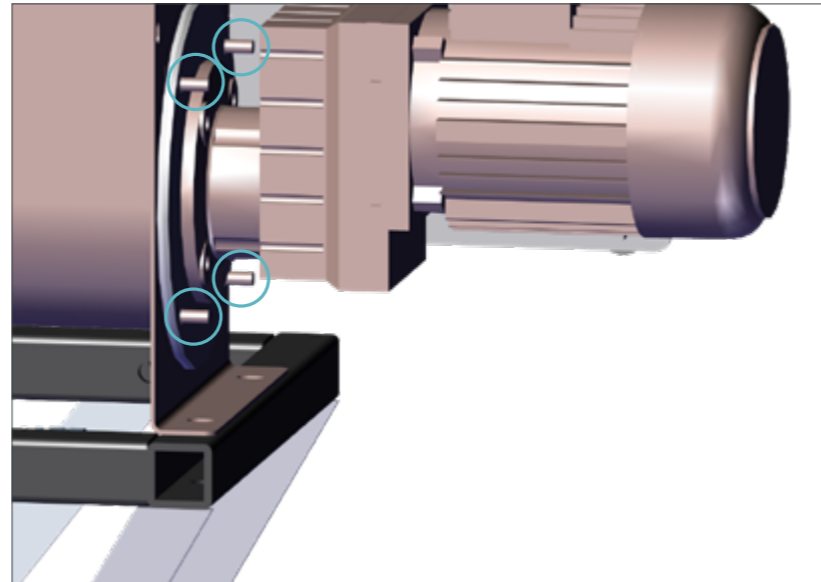
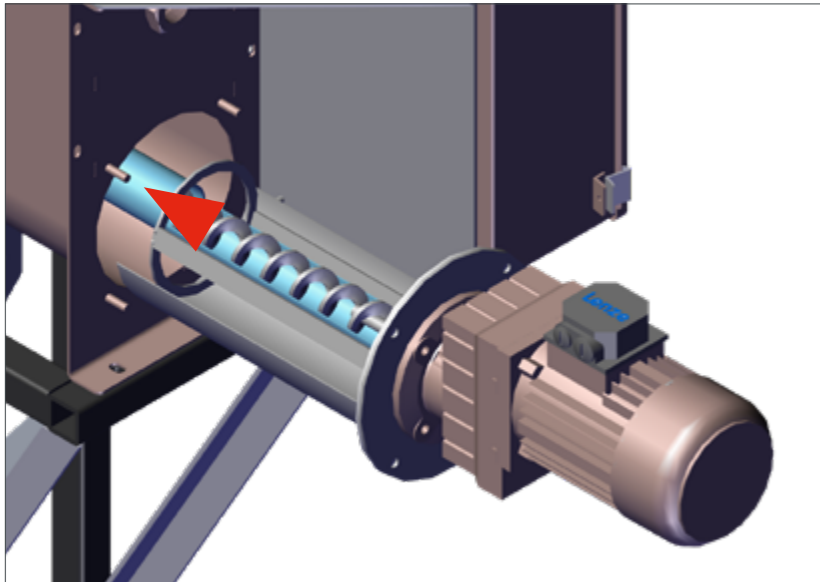
Step 4: Clean the Powder Body interior of any powder build-up.

Continued ➔





Step 5: Open the Hopper Lid and clean the interior of any powder build-up.



Step 6: Replace the Gear Motor and Auger Assembly through the Powder Body.

- Tighten hardware securely with 1/2" wrench.

Continued ➞

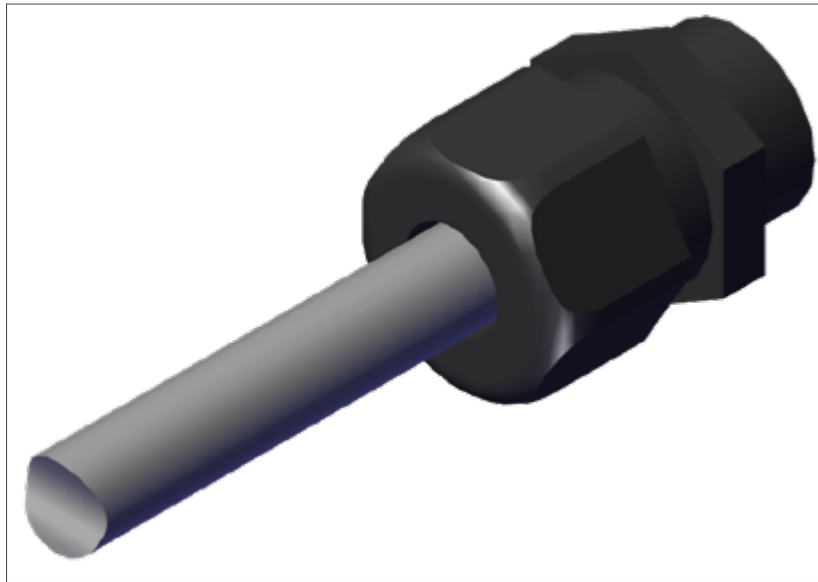


Step 7: Have a licensed electrician replace the Power Cord inside the Conduit Box and replace the Conduit Box Cover.

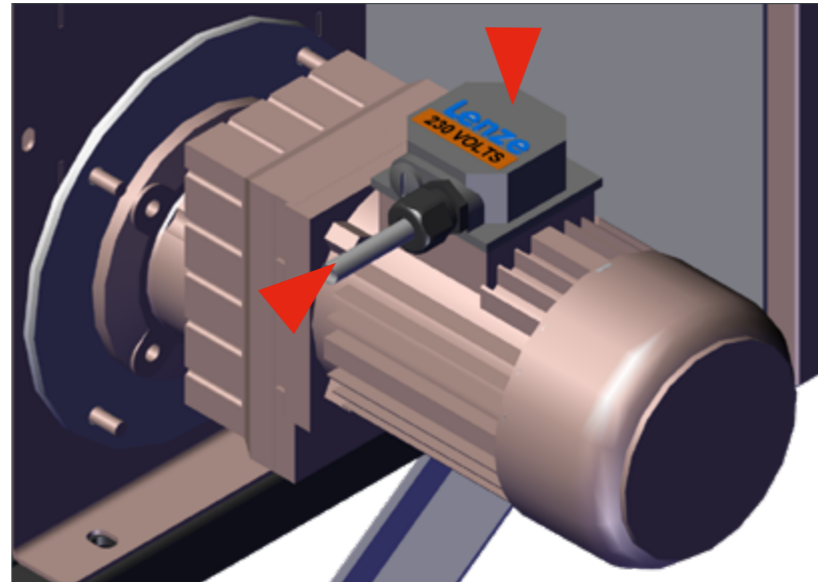
- Tighten hardware securely with a screwdriver.

Step 8: Connect the Dry Delivery Control Box Power Cord to an external 230V AC power source.

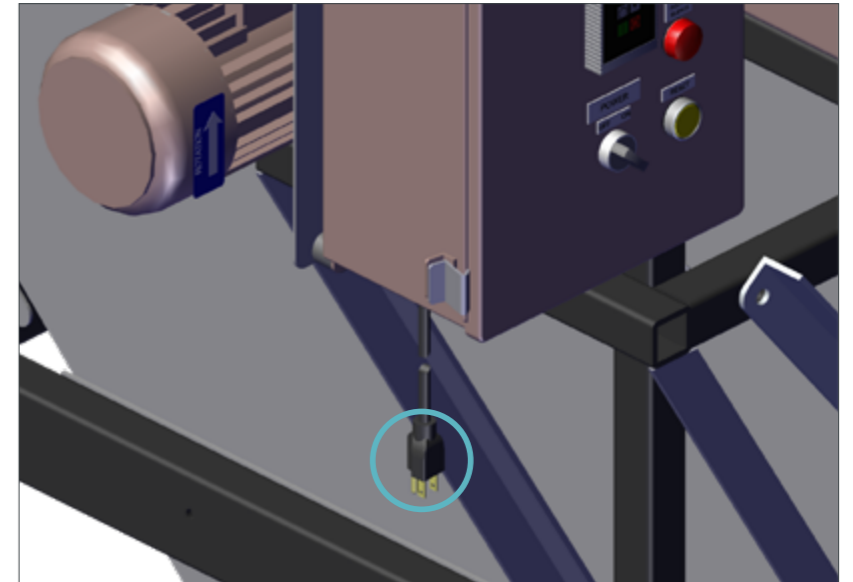
This completes the Powder Maintenance section.



7. Replace Power Cord inside the Conduit Box



7. Replace the Power Cord inside the Conduit Box and replace the Cover



8. Connect the Dry Delivery Control Box Power Cord to external power source.





Bayer

Crop Science Division
1451 Dean Lakes Trail
Shakopee, MN 5379
USA

Telephone

+1-952-445-6868

Toll free:

+1-855-363-3152

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