

# AMPD INSTALLATION GUIDE





# MENU

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



Legal & Safety



System Diagram



Installation

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# 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.



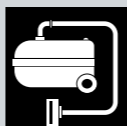
### Calibration

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



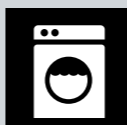
### Clean seed

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.



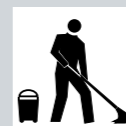
### Laundry

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.





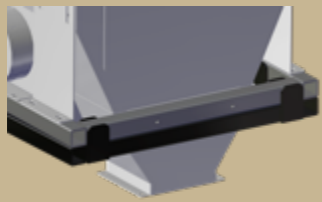
# SYSTEM DIAGRAM

## AMPD LIQUID ONLY ASSEMBLY, REF.

Dry Weight  
**719.7 LBS [326 KG]**

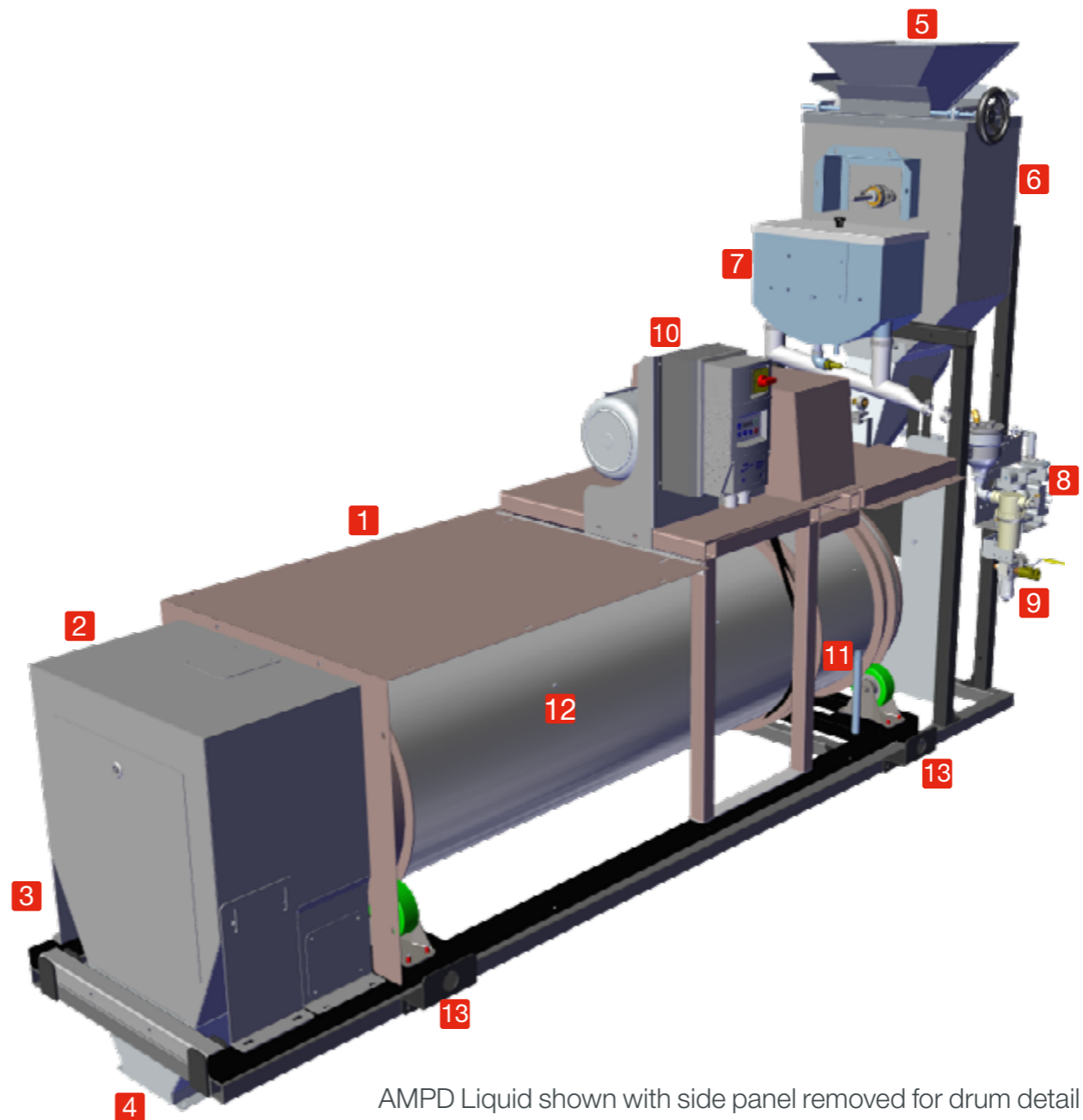
Service Required  
**17.1A/1PH /  
10.8A/3PH**

Capacity  
**up to 6.8 MT/hr**



Be mindful that the seed discharge assembly hangs down below the bottom of the frame, as shown.

- 1 Drum Guard Panels
- 2 Dog House
- 3 Dust Evac Port
- 4 Seed Discharge
- 5 Seed Inlet Hopper
- 6 Treating Head
- 7 Chemical Metering Tank
- 8 Positive Pressure System (PPS)
- 9 Air Filter Regulator
- 10 VFD Drum Drive Inverter
- 11 Adjustable Frame Angle
- 12 Stainless Steel Mixing Drum
- 13 Lifting Lugs (4)



AMPD Liquid shown with side panel removed for drum detail only, ref.



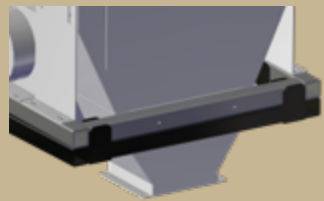
## AMPD POWDER ONLY ASSEMBLY, REF.

Dry Weight  
**675.13 LBS**  
**[306 KG]\***

Service Required  
**17.1A/1PH /**  
**10.8A/3PH**

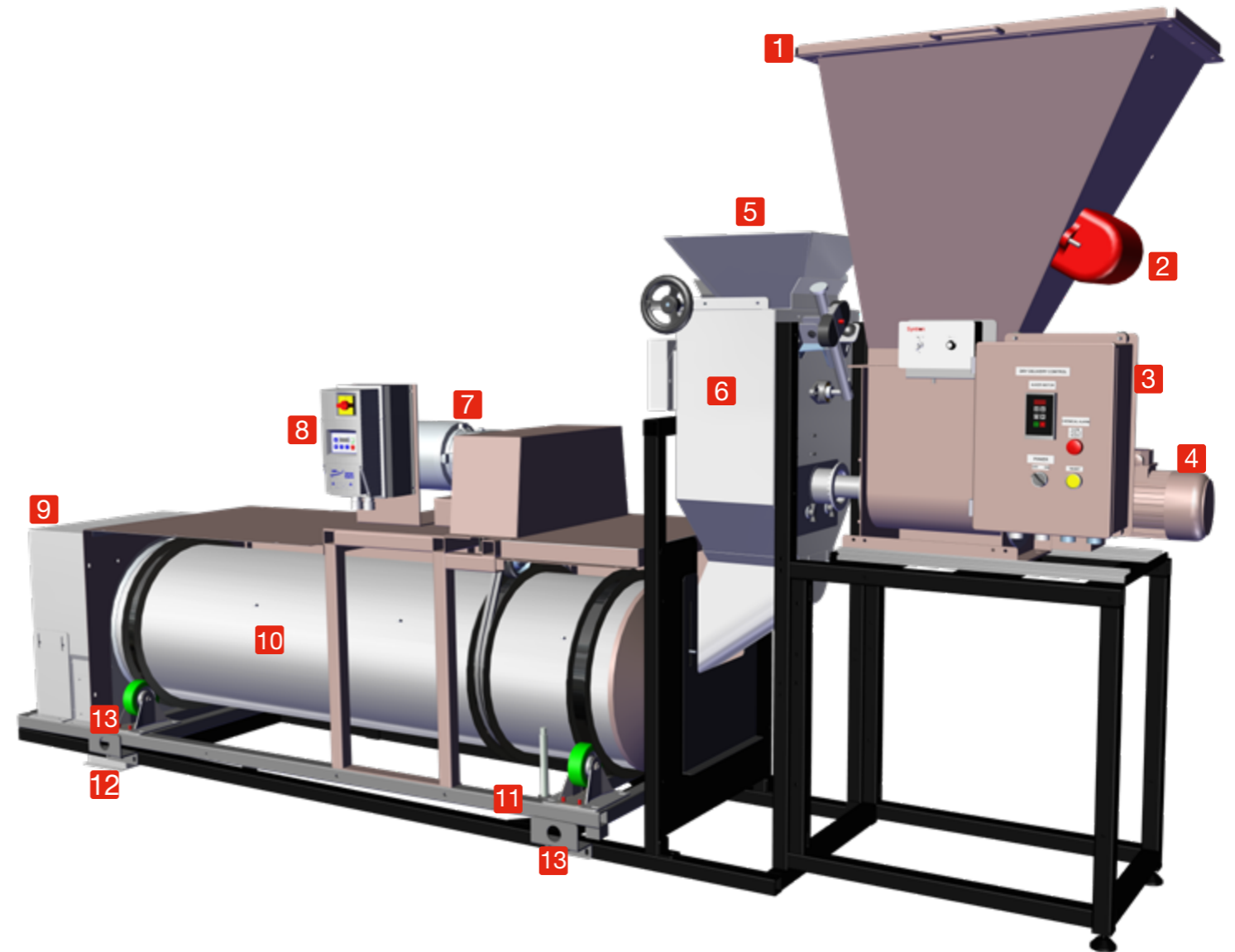
Capacity  
**up to 6.8 MT/hr**

\*Dry deliveryw/ hopper:  
317.44 LBS [145 KG]



Be mindful that the seed discharge assembly hangs down below the bottom of the frame, as shown.

- 1 Powder Hopper
- 2 Vibrator
- 3 Powder Control
- 4 Auger Motor
- 5 Seed Inlet Hopper
- 6 Treating Head
- 7 Drum Motor
- 8 Dum VFD Inverter
- 9 Dog House
- 10 Stainless Steel Mixing Drum
- 11 Adjustable Frame Angle
- 12 Seed Discharge
- 13 Lifting Lugs (4)



AMPD with Powder shown with side panel removed for drum detail only, ref.





# INSTALLATION

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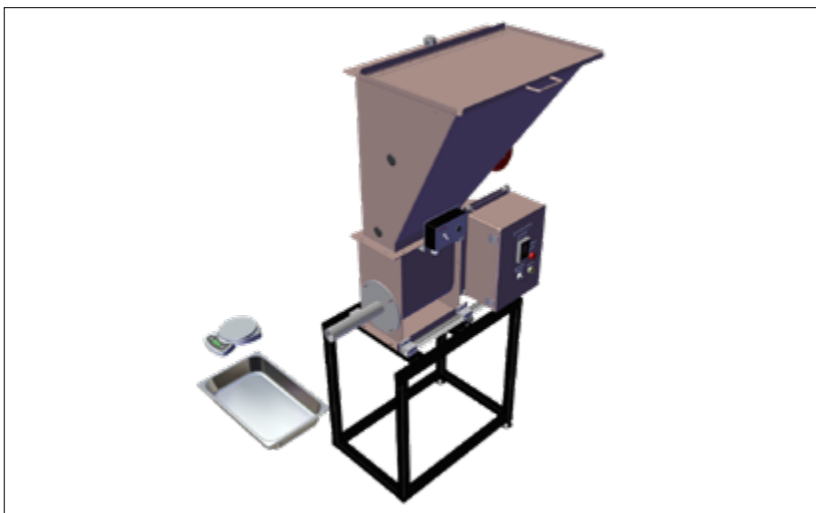
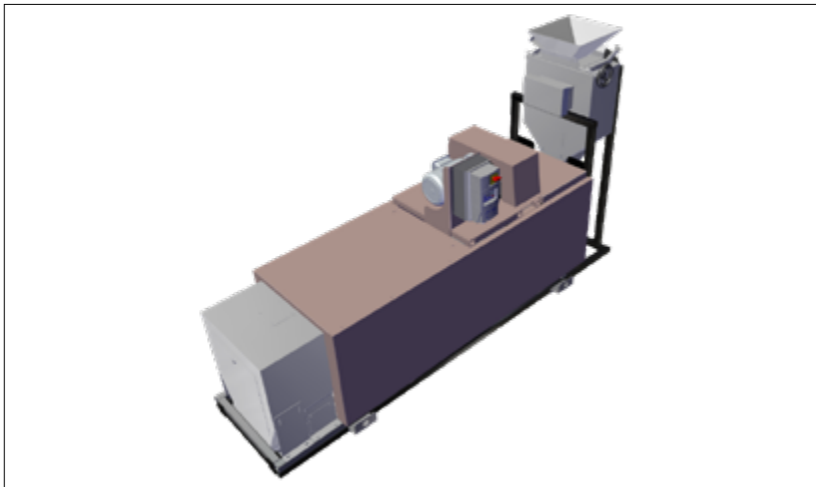
TIP: several basic requirements are necessary to ensure proper equipment installation. Read through and understand this manual.



## Arrival/Inspection

The Treater Assembly ships crated on a pallet (powder assembly shipped/crated separately).

- Remove all components and check for damage that may have occurred during shipping.
- Report any damage **IMMEDIATELY!**



## Powder Feeder

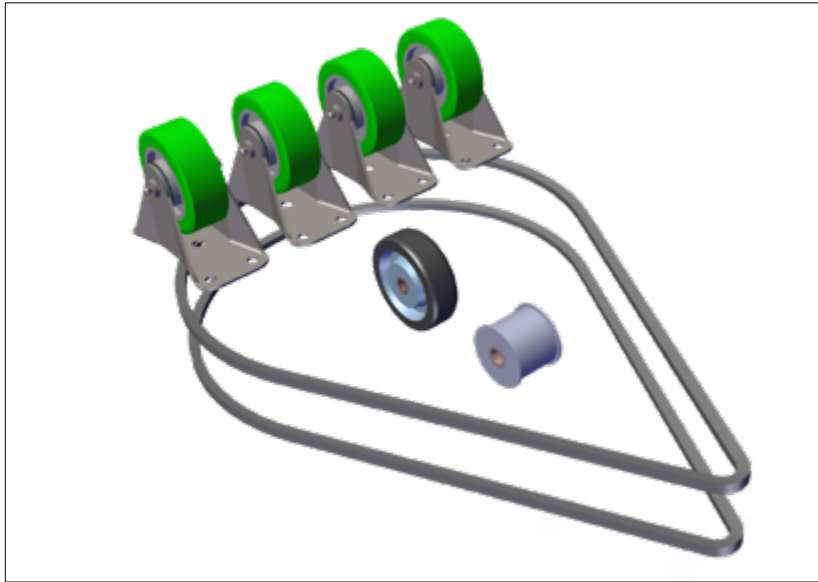
The Powder Feeder assembly with accessories ships crated on a pallet separately from the Treater Assembly.

- Two styles are available:
- DRY DELIVERYW/ HOPPER
- DRY DELIVERY
- Both require field installation.

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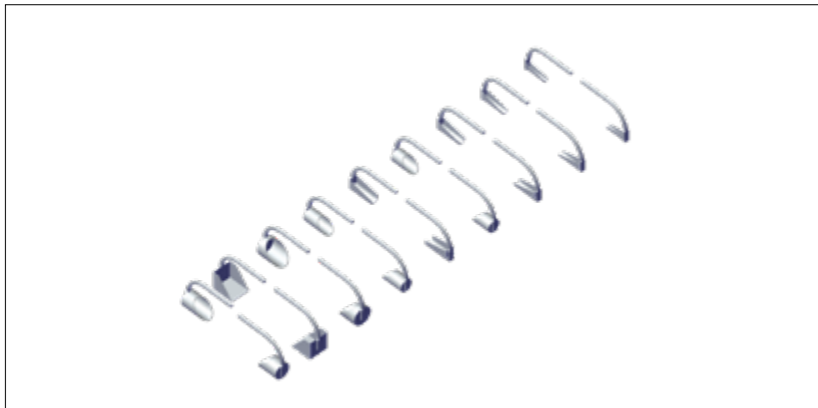
### Spare Parts Kit

Remove the Spare Parts kit 80265735 shipped with the Drum Assembly containing the following:

- Casters (4)
- Idler wheel assembly (1)
- Belt adjuster roller (1)
- Drum V-belts (2)

### Factory supplied parts

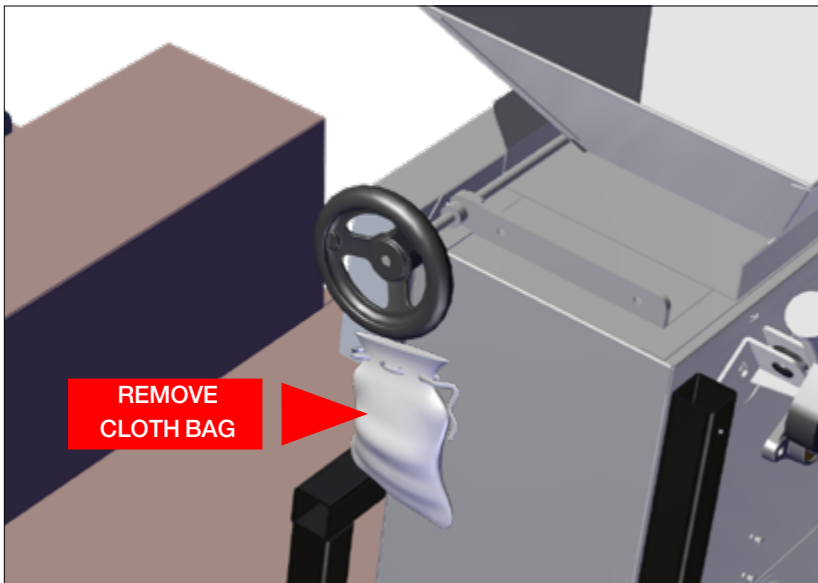
- Chemical Cups Set 04056179: two each: 2.5cc, 5cc, 7.5cc, 10cc, 12.5cc, 15cc, 25cc, 30cc.
- Allen wrench one each: 3/32, 1/8, 5/32, 3/16 & 7/32.
- Spare Parts Kit (1)
- Quarter-turn Key, 7mm (1)
- Spray Nozzles, one each: 8015, 8006 & 8030.



### Chemical Cups Set - Liquid System Only

Remove the Chemical Cups Set 04056179 shipped in the Inlet of the Treating head:

- 2.5cc (2)
- 5cc (2)
- 7.5cc (2)
- 10cc (2)
- 12.5cc (2)
- 15cc (2)
- 25cc (2)
- 30cc (2)



### Hardware Kit

Remove the cloth bag attached to the hand wheel containing the following hardware:

- Quarter turn key (1) - for doghouse door
- Allen wrenches (1 set)
- Spray tips (1 set) - for liquid systems

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### Required installation tools

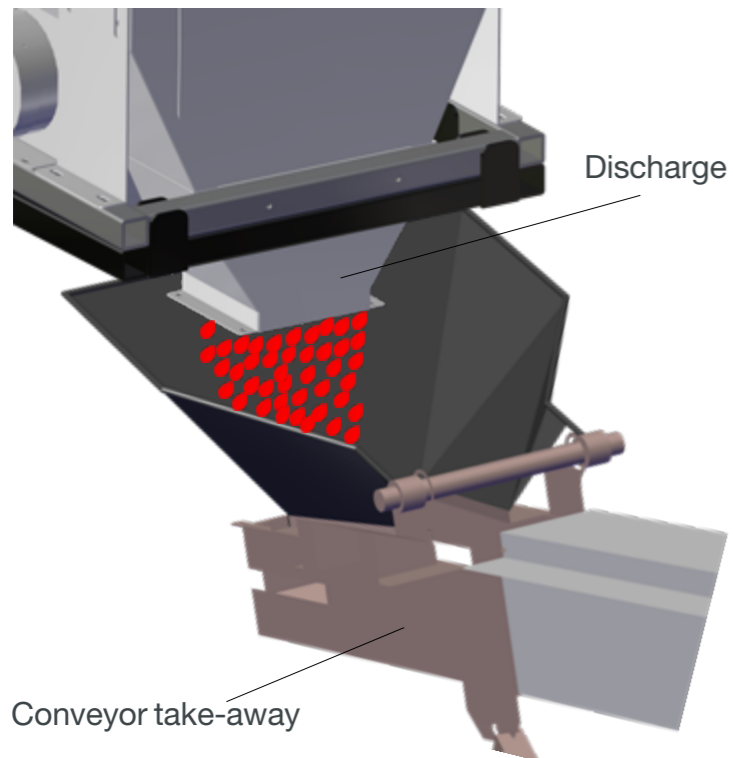
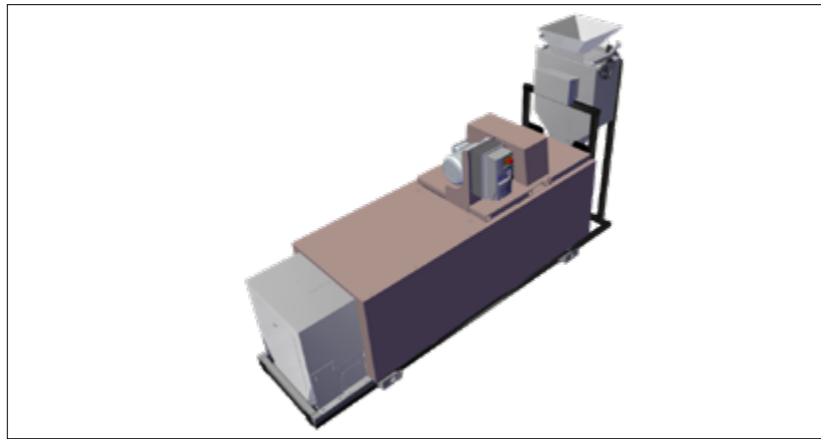
- Forklift / material handling device
- 3/4" Socket Head Wrench (2)
- 5/16" Socket Head Wrench (1)
- 1/2" Socket Head Wrench (2)
- 7/8" Socket Head Wrench (2)
- Slotted Screwdriver (1)

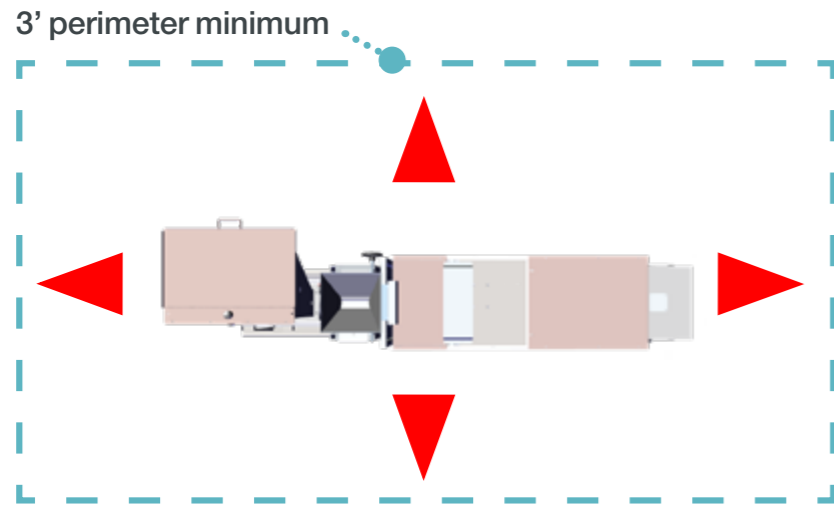
### Drum, Head & Frame Assembly

**Step 1:** Use a 3/4" socket head wrench to remove the 1/2" shipping bolts connecting the Drum, Frame & Head Assembly to the shipping pallet.

- Keep in mind the discharge end of the machine hangs lower than the frame!
- Final location must have in place the ability to raise the entire machine up off the floor to allow for conveyor take-away mechanism beneath the discharge.

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AMPD Powder System Top View, ref.

**Step 2:** Use proper rigging and lifting techniques to ensure safety when lifting the Drum & Frame Assembly off the shipping pallet and place it in the desired location.

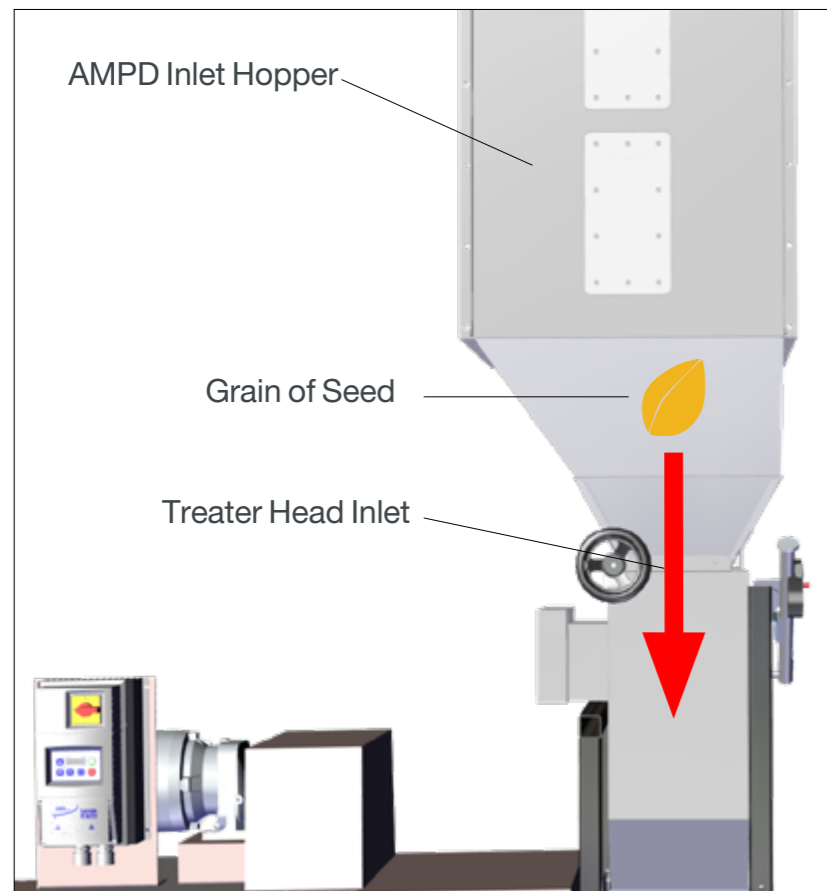
- The ideal location of the machine is inside a building on a concrete floor.

**Locate the Treater on a solid, flat vibration-free surface and fasten down with anchors.**

- The recommended location for all components of the treating system should be on one single floor.

**Plan accordingly!**

- The Treater must be easily accessible to electrical power supply and compressed air.
- Allow access to the treater from all sides for the purpose of operation, adjustments, maintenance and clean-up.



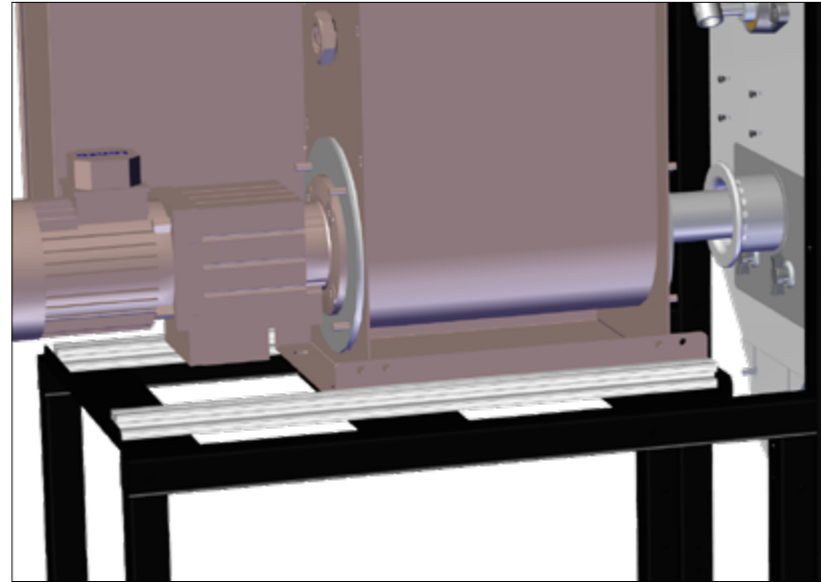
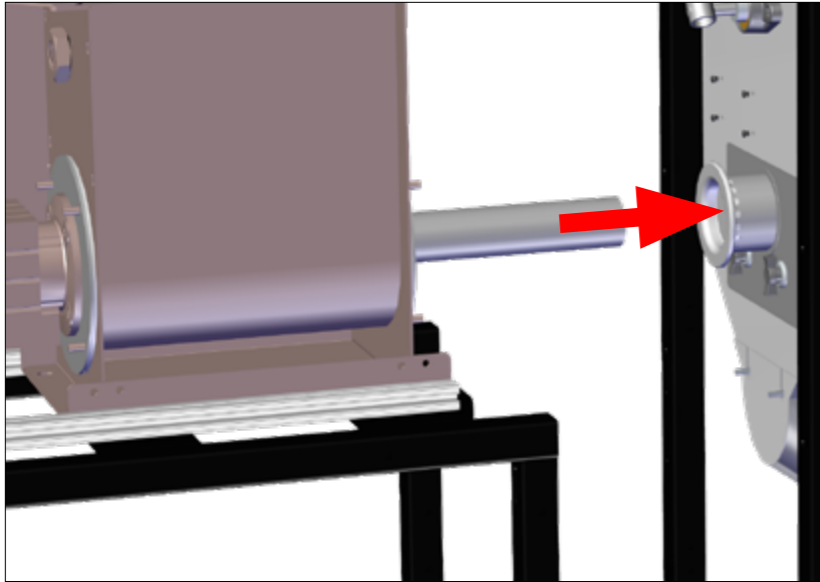
AMPD Powder System with Inlet Hopper, ref.

**Step 3:** Mount the AMPD Inlet Hopper (shown left) directly above the Treater Head Inlet.

- The Treater Head Inlet is equipped with a manual OPEN/CLOSE seed gate, for flow control.
- It is important to maintain a vertical line of product flow from the inlet hopper to the treating head!

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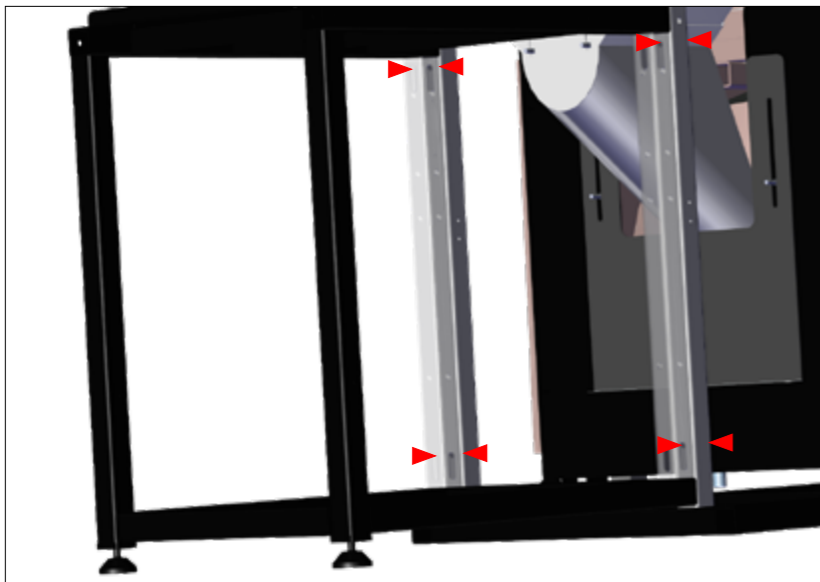




## AM/PD DRY DELIVERY W/ HOPPER

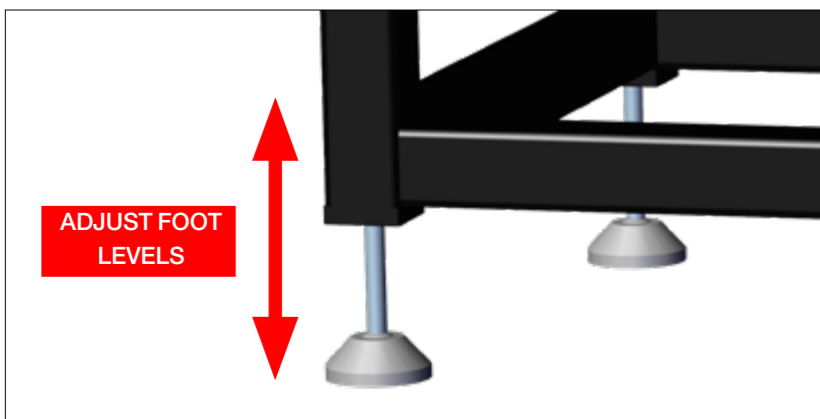
**Step 1:** Slide the Powder Assembly up against the backside of the Treater Frame.

- Insert the Powder Tube into the 80mm Rubber Plug on the Weigh pan Housing until the Powder Assembly Frame is against the Treater Frame.



**Step 2:** Fasten the Powder Assembly to the Treater frame.

- Use a 1/2" socket head wrench and four pair of factory supplied 5/16" hardware to fasten the Powder Assembly to the Drum Frame in this order:
- Bolt+flat washer+[frame]+lock-washer+nut.
- Securely tighten in place.

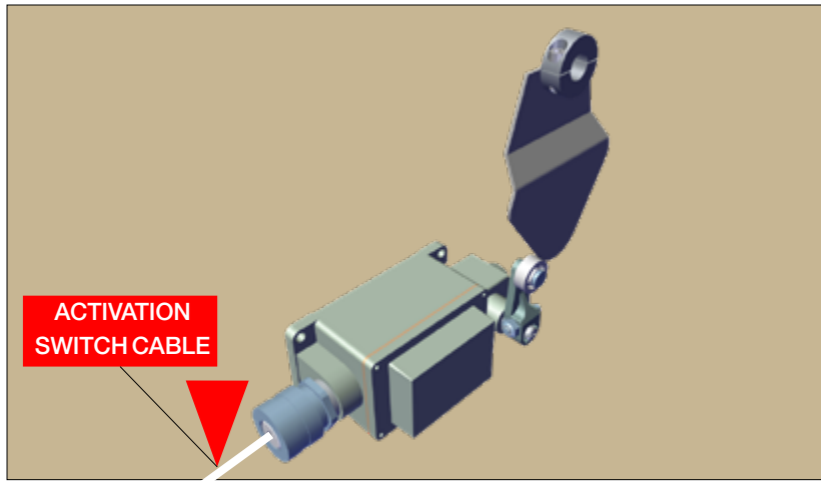


**Step 3:** Use foot levels on the bottom of the Powder Assembly frame to adjust height for proper alignment.

- Turn **IN** to shorten, **OUT** to lengthen.
- This helps keep the Powder Assembly level.

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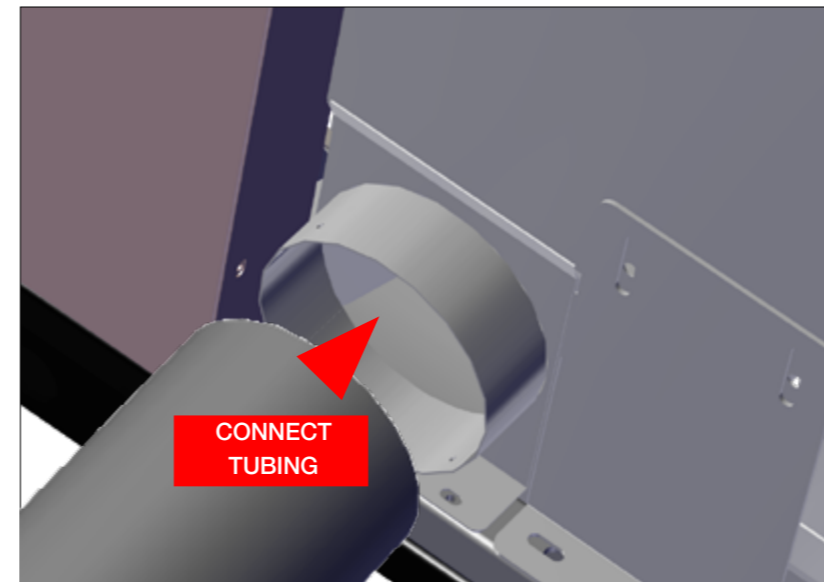
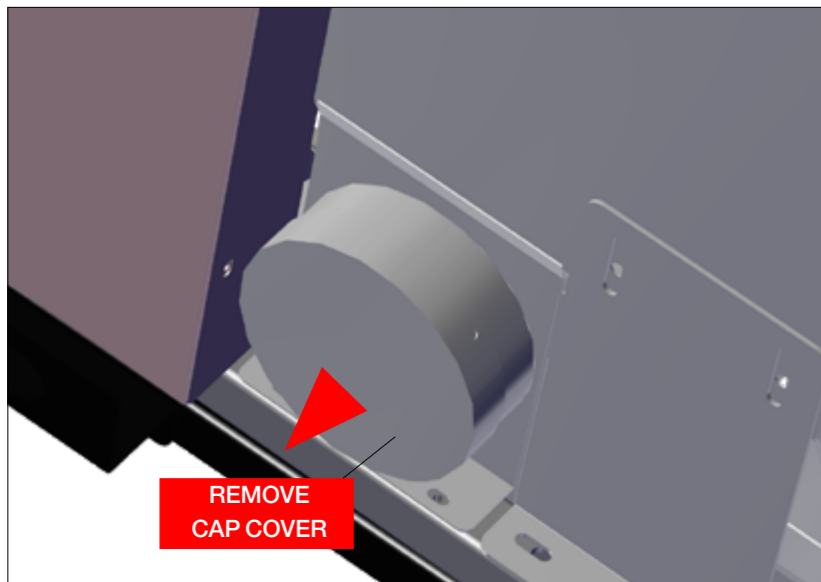




**Step 4:** Ensure a licensed electrician connects the Powder Activation Switch cable (white wire) to the Powder Control Box.



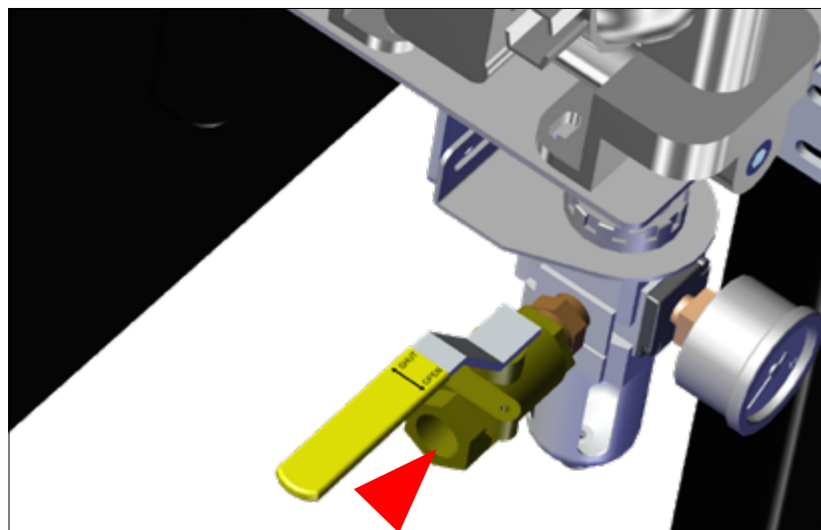
**Warning!** Ensure a licensed electrician wires motors, following the National Electrical Codes for the area.



### Dust Evacuation

Use a wrench to loosen two bolts and remove the Cap Cover.

- Connect customer-supplied dust evacuation hose to the 5.75" OD port.
- Use slotted screwdriver to tighten Hose Clamp.
- 30cfm requirement.



### Compressed Air - Liquid Only

Connect customer-supplied air to the 3/8" brass ball valve on the Filter regulator Assembly, under the PPS.

- Optimum compressed air supply must be guaranteed.
- Only filtered, dry compressed air should be connected.
- The working pressure range requirement is 30-60psi.

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Note: Tanks ordered with pumping systems will be plumbed from the factory.

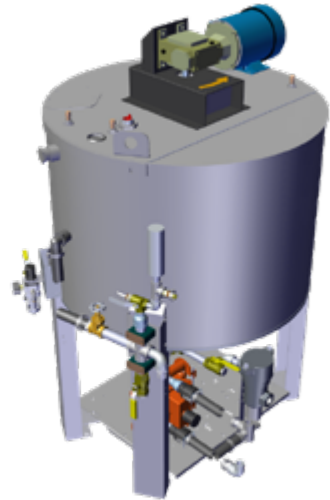


Warning! Ensure a licensed electrician wires motors, following the National Electrical Codes for the area.

### PSD Supply Tanks

**Step 1:** Use proper rigging and lifting techniques to ensure safety when lifting the tank off the shipping pallet.

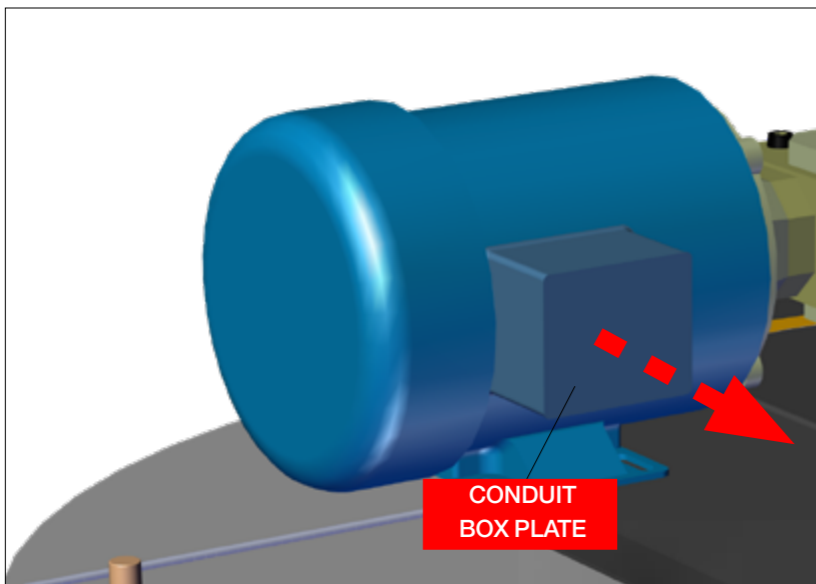
- Use the lift lugs provided.
- Place the Tank near the Treater in a spill containment.
- The Tank must be easily accessible to an electric source.

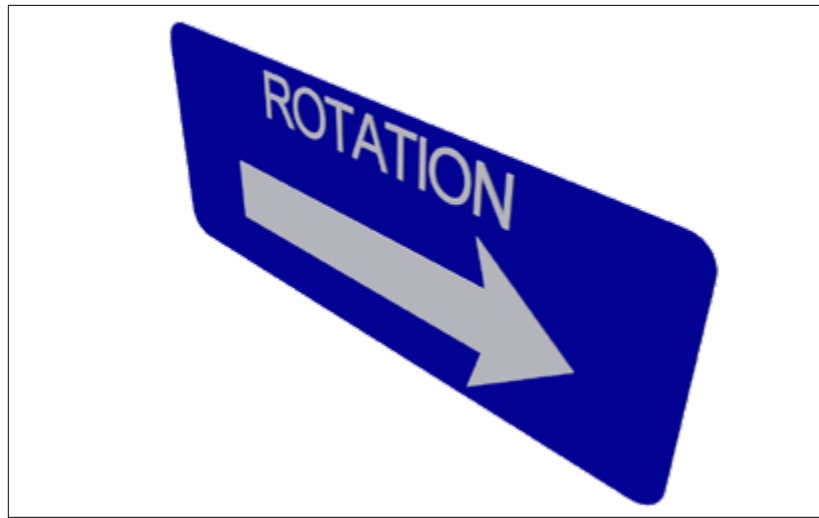


**Step 2:** Use a Phillips screwdriver to remove the conduit box plate on the Tank Agitation Motor to access the leads.

- Replace conduit box plate once connection has been made.

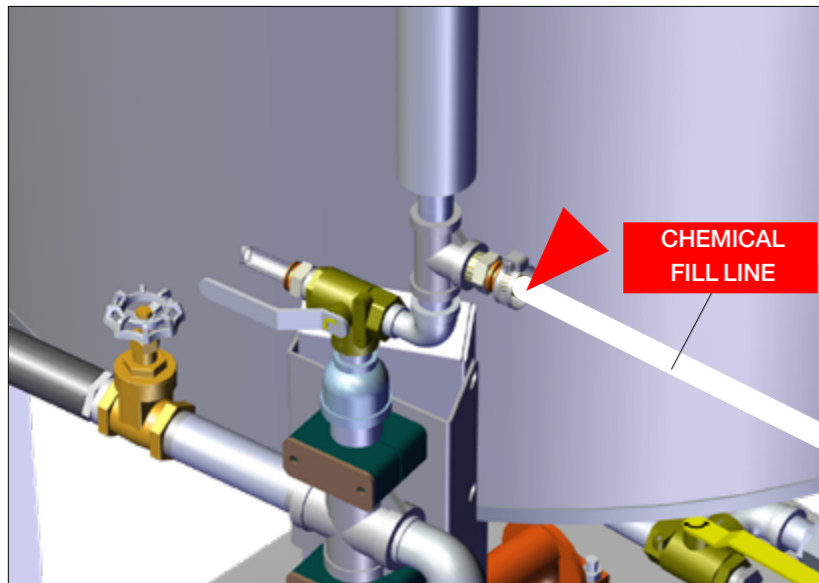
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**Step 3: Each motor must rotate in the direction the sticker on the motor indicates!**

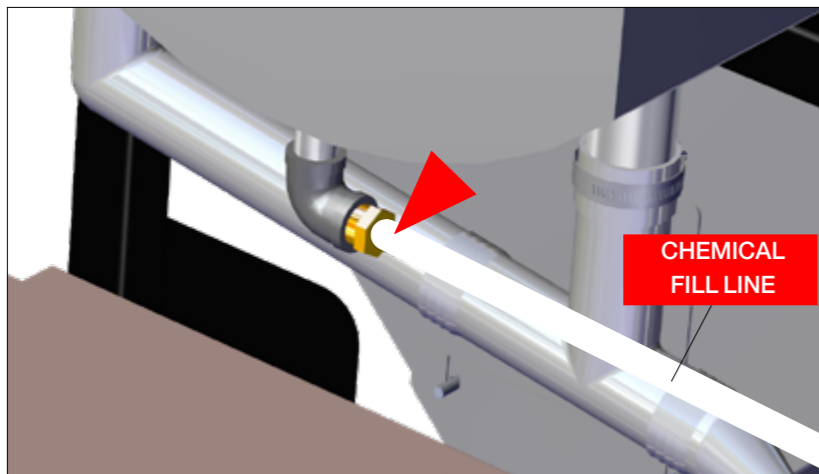
- Motors are labeled from the factory for proper motor rotation.
- Prior to initial start-up, ensure the phase-sequence of all motors is checked.
- Recommended to install a customer-supplied ON/OFF remote switch.



**Chemical Fill Line**

**Step 1: Connect one end of tubing to the hose barb fitting (part of the flow equalizer & bypass control valve assembly).**

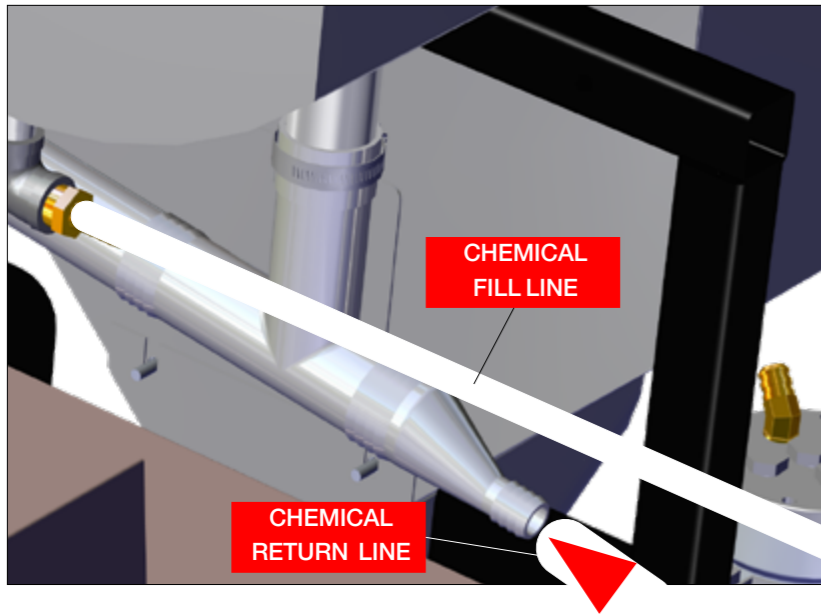
- Tubing provided from factory.



**Step 2: Connect the other end of tubing to the hose barb fitting under the AMPD metering tank.**

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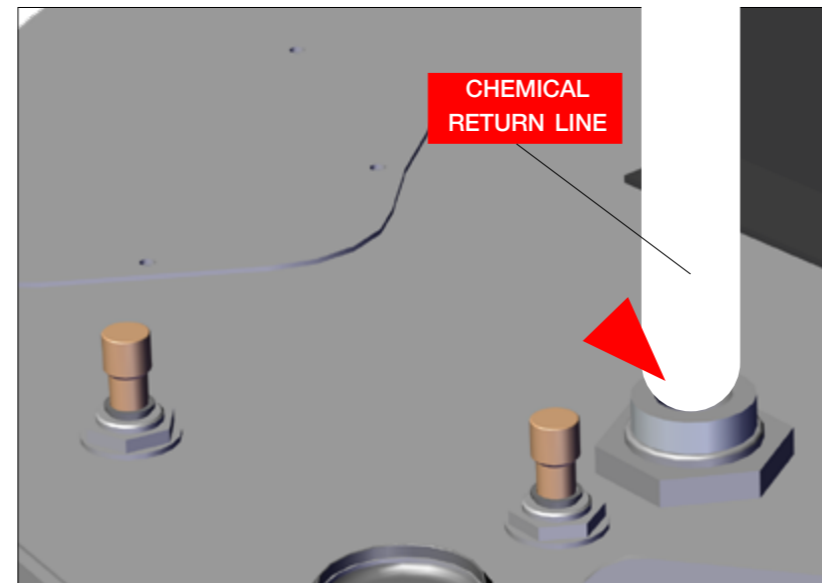
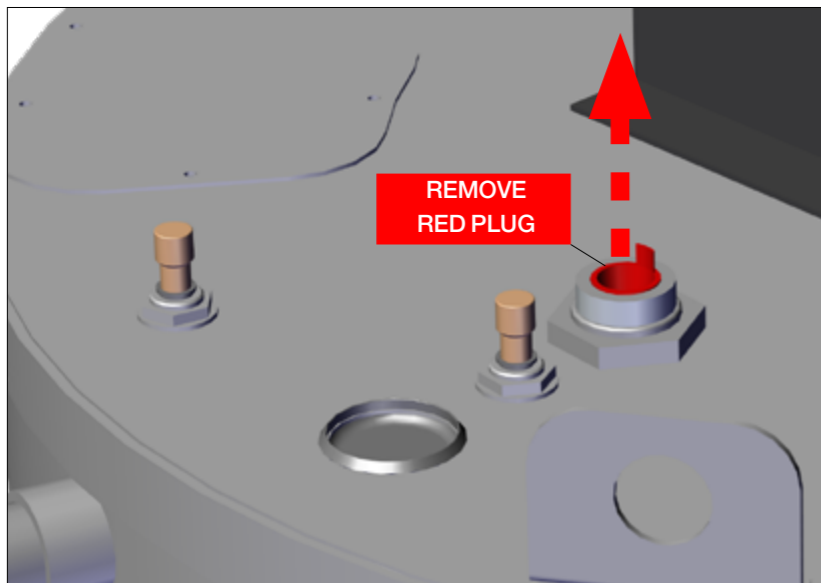
### Chemical Overflow/Return Line

**Step 1: Connect one end of tubing to the hose barb on the end of the Overflow Assembly.**

- Tubing provided from factory.
- Fasten in place with factory-supplied hose clamp.
- Use a slot screwdriver to tighten the hose clamp.



Note: Ensure the treater head is located ABOVE the chemical supply tank! This allows adequate gravity flow of chemical to the source. Avoid low spots in the lines where chemical can settle out and obstruct flow. The pump underneath the supply tank dispenses chemical up to the bottom of the metering tank. The overflow tube returns excess chemical back into the top of the supply tank. Use the flow control valve on the supply tank to control a constant and even chemical circulation to the metering tank.



**Step 2: Remove the red plug from the overflow port.**

- Insert the other end of tubing into the overflow port on the PSD Supply Tank.
- Insert the tube all the way to the bottom of the Supply Tank.

**This completes the AMPD installation process.**







**Bayer**

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

**Telephone**

+1-952-445-6868

**Toll free:**

+1-855-363-3152

**Visit us on:**

[www.seedgrowth.bayer.com](http://www.seedgrowth.bayer.com)

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