USER MANUAL

RH800 & 2000 COMMERCIAL INSTALLATION GUIDE

MENU

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

Legal & Safety

System Diagram

Drum & Frame

Rotary Head

4-Pump RHEZ

CBP Tanks

Calibration Kit

Flow Meter Kit

Pump Elements

Conveyor Control

Pictograms

Backlight Kit

Configuration

Powder Feeder

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.

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.

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

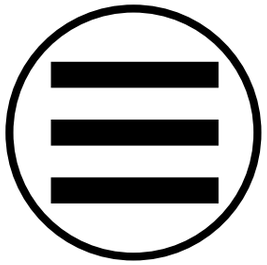
Indicates the center of gravity of the machine to help assist when rigging and lifting.

Example

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

PICTOGRAMS

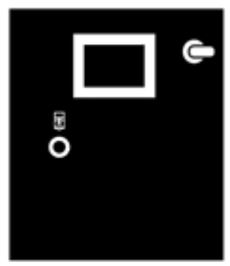
Each Signifier displayed here is specific to this User Manual.


Menu

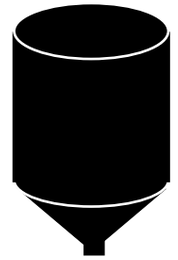

Previous

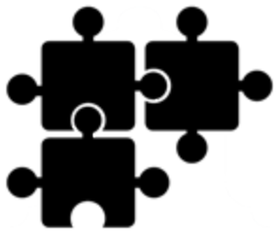

Advance


CBP Tank


4-Pump RHEZ


Pump Element

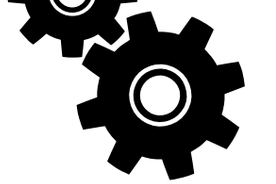

Supply Tank


System Diagram

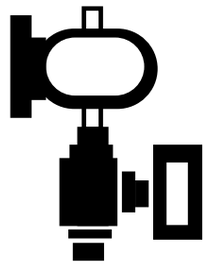

Rotary Heads

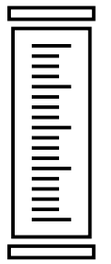

Drum & Frame

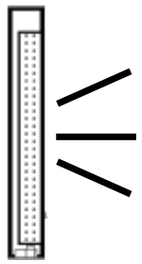

Conveyor Control

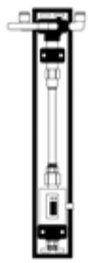

Configuration

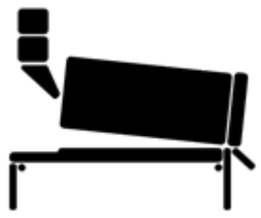

Tools

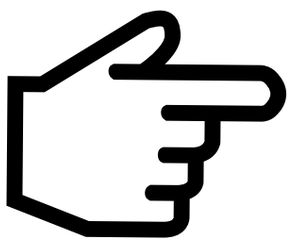

Pump


Calibration Kit


Backlight Kit


Flow Meter Kit


RH Treater


Cursor Hand


Like

SYSTEM DIAGRAM

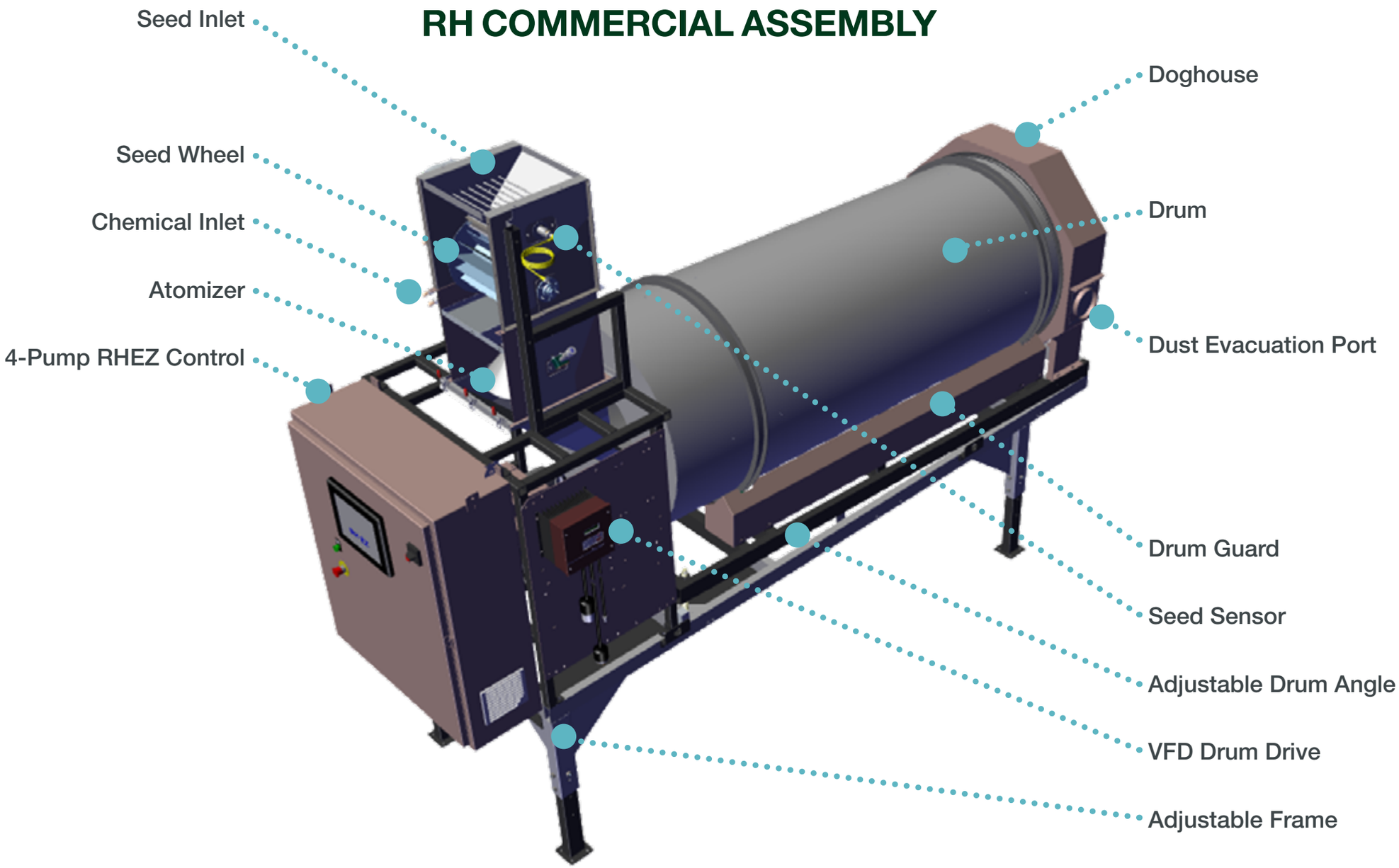
Dry Weight
(see system specifications page 5)

Service Required
(see system specifications page 5)

Capacity: (RH2000)
up to 2,700bu/hr**

Image shown in top position -
Leg height is adjustable to eight positions: 3 positions @ 4” [102] each increment

RH COMMERCIAL ASSEMBLY



**Based on soybeans

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

System Specifications

80042914 RH 800 4-pump commercial 30” drum system

- 79901194 RH 30” drum & frame assy — dry weight: 1141.87 lbs [518 kg]
- 81765243 RH 800 head to 30” drum — dry weight: 381.8 lbs [173 kg]
- 80049870 CBP 60 tank w/agit ls pump 100oz cc — dry weight: 116.24 lbs [53 kg]
- 80992564 RH basic 230v/1ph 4-pump control — dry weight: 160.00 lbs [73 kg]
- 79894651 30 gal poly inoculant tank — dry weight: 88.7 lbs [40 kg]

79908016 RH 2000 4-pump commercial 48” drum system

- 79487932 RH 48” drum & frame assy — dry weight: 1966.53 lbs [892 kg]
- 81733384 RH 2000 head to 48” drum — dry weight: 510.1 lbs [232 kg]
- 80049870 CBP 60 tank w/agit ls pump 100oz cc — dry weight: 116.24 lbs [53 kg]
- 80992564 RH basic 230v/1ph 4-pump control — dry weight: 160.00 lbs [73 kg]
- 79894651 30 gal poly inoculant tank — dry weight: 88.7 lbs [40 kg]

79879253 RH 2000 4-pump commercial 36” drum system

- 79472692 RH 36” drum & frame assy — dry weight: 1258.03 lbs [572 kg]
- 81774897 RH 2000 head to 36” drum — dry weight: 460.8 lbs [211 kg]
- 80049870 CBP 60 tank w/agit ls pump 100oz cc — dry weight: 116.24 lbs [53 kg]
- 80992564 RH basic 230v/1ph 4-pump control — dry weight: 160.00 lbs [73 kg]
- 79894651 30 gal poly inoculant tank — dry weight: 88.7 lbs [40 kg]

Inspection

RH Commercial System components ship separately:

- Treater Head Assembly (1)
- Drum & Frame Assembly (1)
- 4-Pump Control (1)
- Cone Bottom Poly (CBP) Tanks (2)

Remove all components and check for damage that may have occurred during shipping.

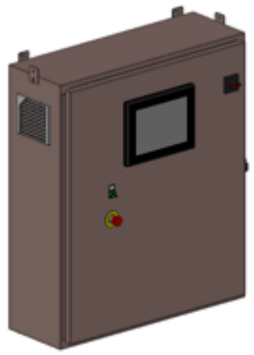
Report any damage IMMEDIATELY!

Treater Head crated

Drum & Frame wrapped

Control Panel

Wiring schematics inside the RH Control.



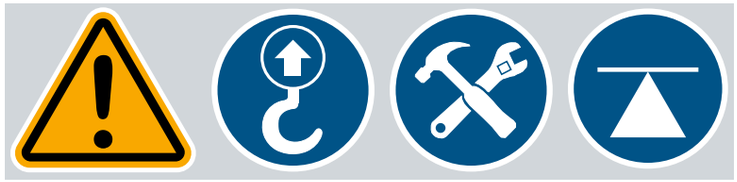
4-Pump RHEZ Control (boxed)

CBP Tanks boxed

DRUM & FRAME

Required assembly tools

- Forklift / material handling device
- Tin snips (1)
- 3/4” Socket Head Wrench (2)
- 5/16” Socket Head Wrench (1)



Drum & Frame Assembly

Step 1: Use a forklift to lift the Drum & Frame Assembly off the shipping truck.

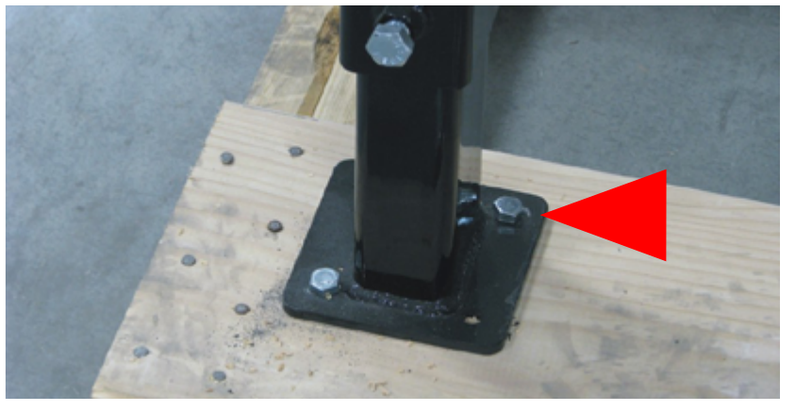
- Fork pockets are provided at the end of the Drum Frame.

Step 2: Use tin snips to cut metal bands.

- Remove the RH Basic Complete Control from underneath the Drum Frame.

Continued ➲

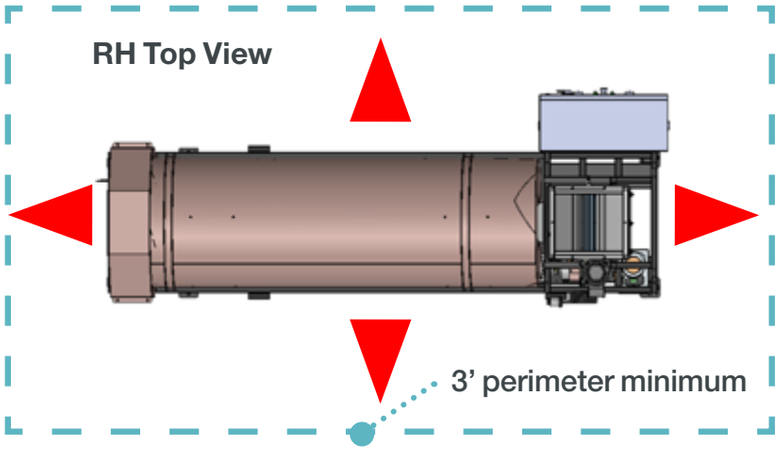
Step 3: Remove the protective covering from the Drum & Frame Assembly.



Step 4: Use a 3/4” socket head wrench to remove the 1/2” Drum Frame shipping bolts from the pallet.

Step 5: Use a forklift to lift the Drum & Frame Assembly off the shipping pallet and place it in the desired location.

Continued ➲



Plan accordingly!

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

Warning! Drum band must be removed prior to running the Drum, to prevent damage to the Drum!

Caution! Removing Drum band 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, as shown above. This will reduce the chance of banding flying out of control, causing injury. Discard used banding material responsibly.

Step 6: Use tin snips to cut the metal banding that holds the Drum down onto the Drum Frame during shipping.

Continued ➲

Integrated Aspiration

- Only clean 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.
- Recommended aspiration: 500-600cfm.
- The six inch OD connection for the exhaust unit is located on the Doghouse (discharge end of drum).

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

- Remove the Dust Collection Plate and Cover.

Step 2: Remove the Doghouse Cover.

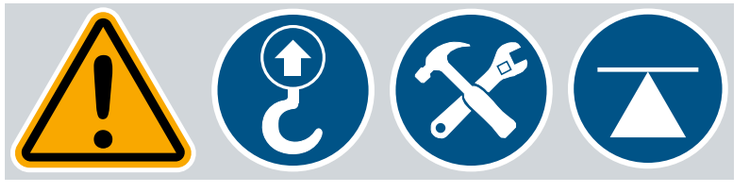
Step 3: Replace the Dust Collection Plate and securely fasten the four (4) 10-32 washers and bolts.

This completes Drum Installation.

ROTARY HEAD

Required assembly tools

- Forklift / material handling device
- 3/4” Socket Head Wrench (2)
- 5/16” Socket Head Wrench (1)
- 1/2” Socket Head Wrench (2)



Rotary Head Assembly

Step 1: Remove the plastic and crating around the Treating Head Assembly.

- Use a 3/4” socket head wrench to remove the 1/2” Treating Head Assembly shipping bolts holding the Head Assembly onto the pallet.
- Remove the Treating Head Assembly from the shipping crate.

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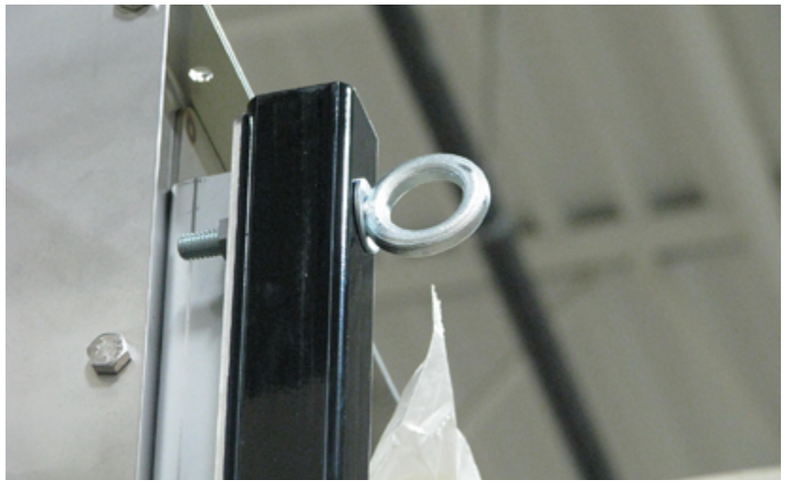
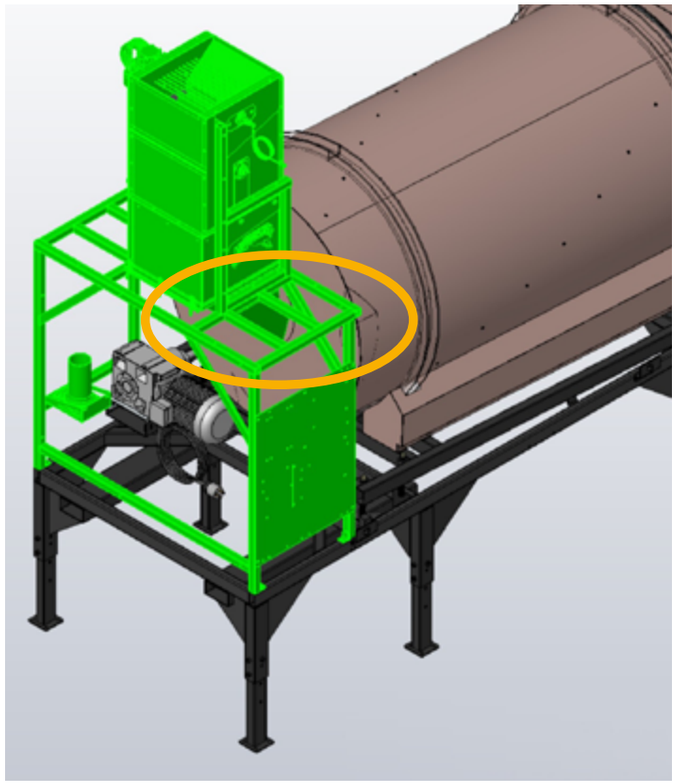


Note: to ensure proper alignment, note the Treating Head Assembly orientation! The Transition fits inside the Drum opening, as shown below.



Step 2: Use the eyelets located on top of the Treating Head Assembly Frame to properly rig and securely lift the Treating Head Assembly off the shipping pallet.

Step 3: Set the Treating Head Assembly on top of the Drum Frame.

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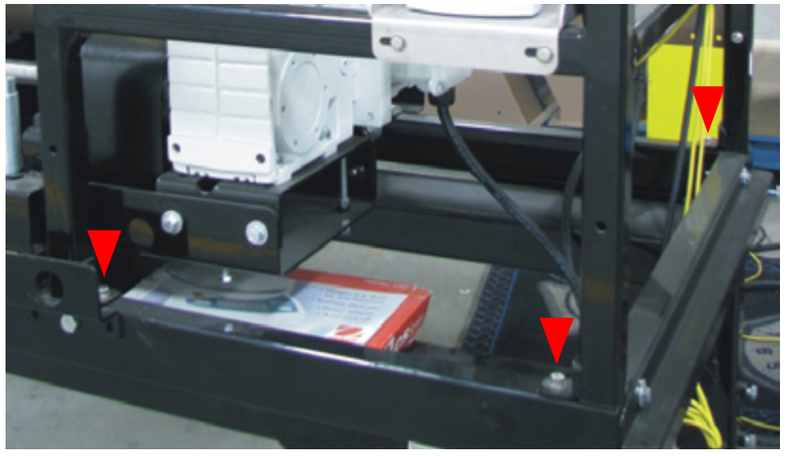
For best assembly results, use an anti-seize on all bolts.



Step 4: Use a 1/2”” socket head wrench and factory supplied 5/16” hardware to fasten the Treating Head Assembly to the Drum Frame in this order: bolt+flat washer+[frame]+lock-washer+nut.

- Tighten securely.

Optional Surge Bin

Step 1: Use a 3/4” socket head wrench to remove the 1/2” Treating Head Assembly shipping bolts.

Continued ➲

For best assembly results, use an anti-seize on all bolts.

Step 2: Use a forklift to set the Optional Surge Bin on top of the Treating Head Assembly Frame as shown below.

- Use a 1/2”” socket head wrench and factory supplied 5/16” hardware to fasten the Surge Bin to the Treating Head Assembly Frame in this order: bolt+flat washer+[frame]+lock-washer+nut .
- Tighten securely.

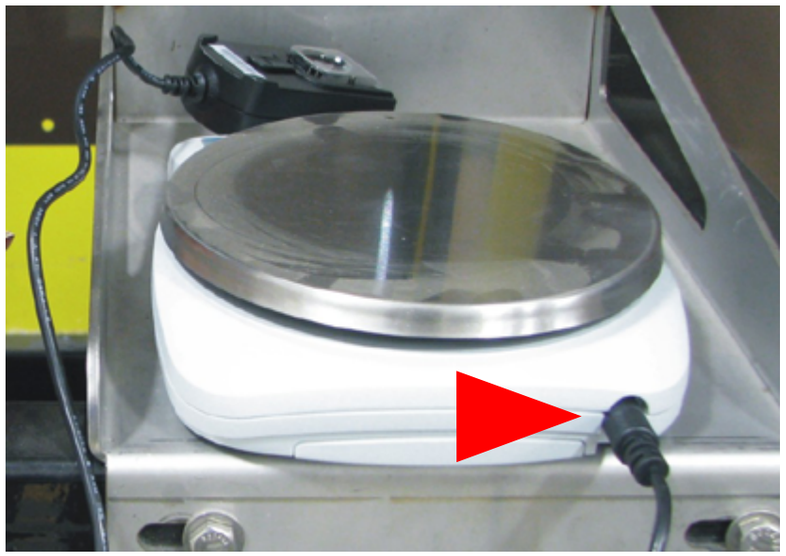
Continued ➲

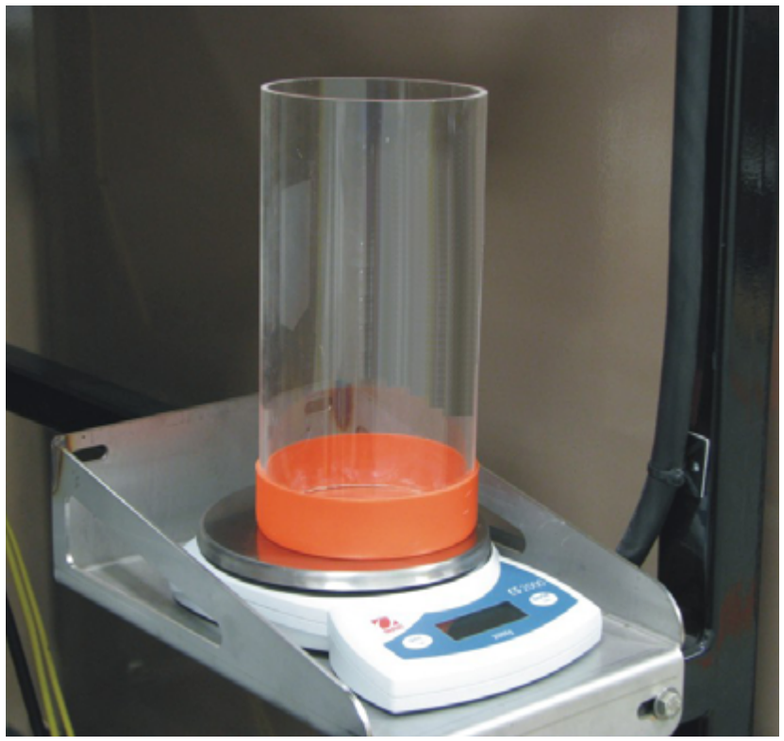
Remove the RED fork brackets once the Surge Bin is securely fastened to the Frame.

Portable Scale

Step 1: Cut the shrink wrap and remove the box of miscellaneous parts and the Portable Scale from the Treating Head Assembly frame.

- Remove the contents of the Portable Scale and Accessories from the shipping carton.





Step 2: Connect the Power Adapter to the back side of the Scale.

- Plug power cord into an external 120V AC power source.

Step 3: Set the Scale and Calibration Cylinder on the Scale Tray - connected to the Treating Head Frame.

This completes the Rotary Head and Optional Surge Bin Installation.

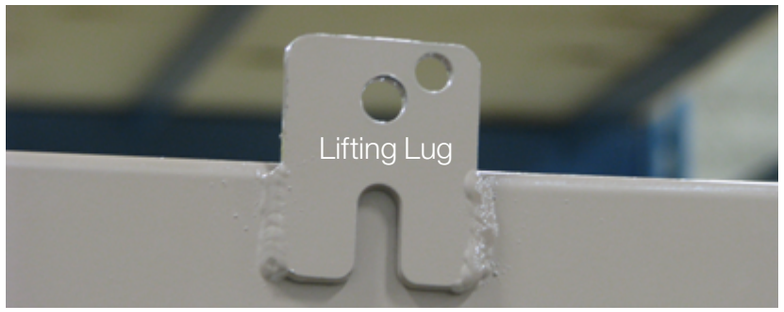
4-PUMP RHEZ CONTROL

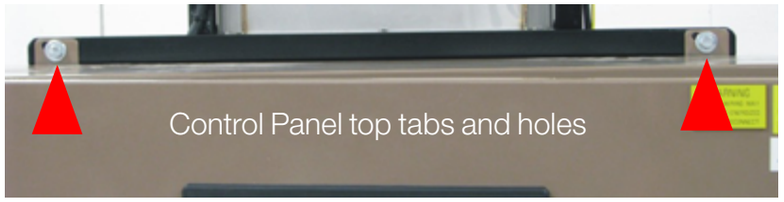
Required assembly tools

- Material handling device
- 3/4” Socket Head Wrench (2)

Note: Ensure a licensed electrician wires the system, following the National Electrical Codes for the area.

Control Panel





RH Control

Step 1: Remove the RH Control from the shipping carton and connect fasten it to the Treating Head Frame as follows.

- Use proper rigging and lifting techniques and the lifting lugs located on top of the RH Control, as shown left.

Step 2: Align the top two and bottom two holes and tabs on the Treating Head Frame with the RH Control, as shown left.

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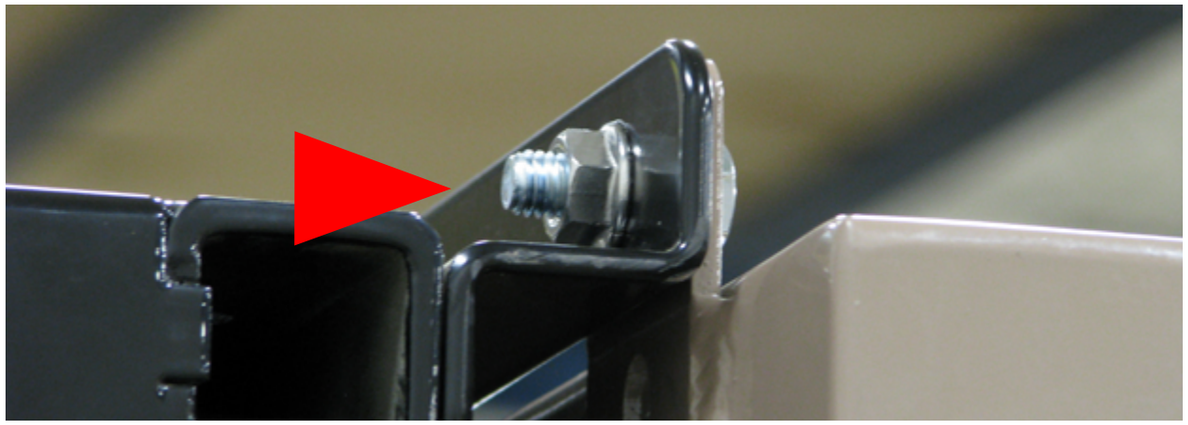
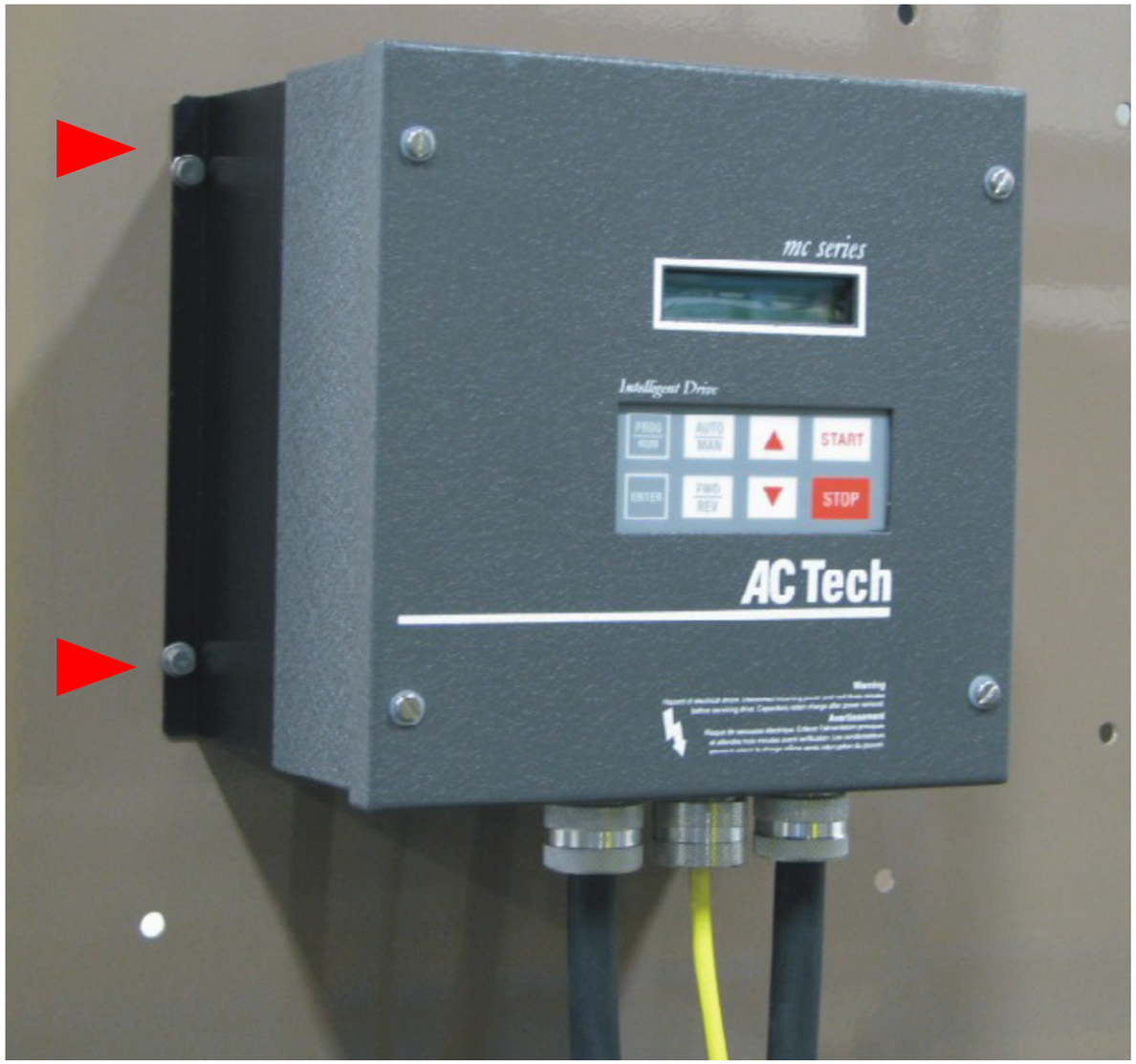


Step 3: Fasten in place with the factory supplied hardware in this order:

- bolt+flat washer+[RH Control tab+Treating Head Frame] + lock washer+nut.
- Securely tighten hardware.



VFD Drum Drive

Step 1: Fasten the VFD Drum Drive to the Mount Plate on the Treating Head Assembly Frame.

- Using the factory supplied 5/16” hardware, fasten the drum Drive in this order:
- nut+washer+[Drive Frame+Mount Plate]+lock washer+nut.
- Securely tighten hardware.

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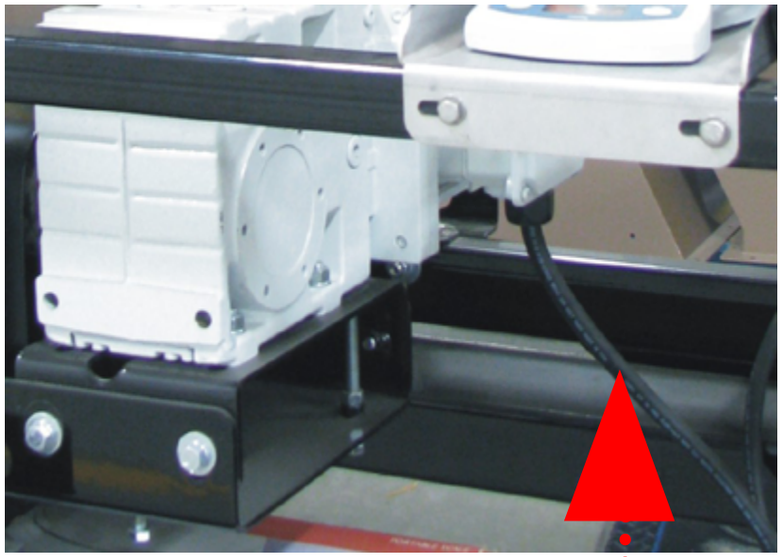

Step 2: Connect the VFD Drum Drive power cord to the 10’ Drum Gear motor power cord receptacle (4 prong twist lock connector).

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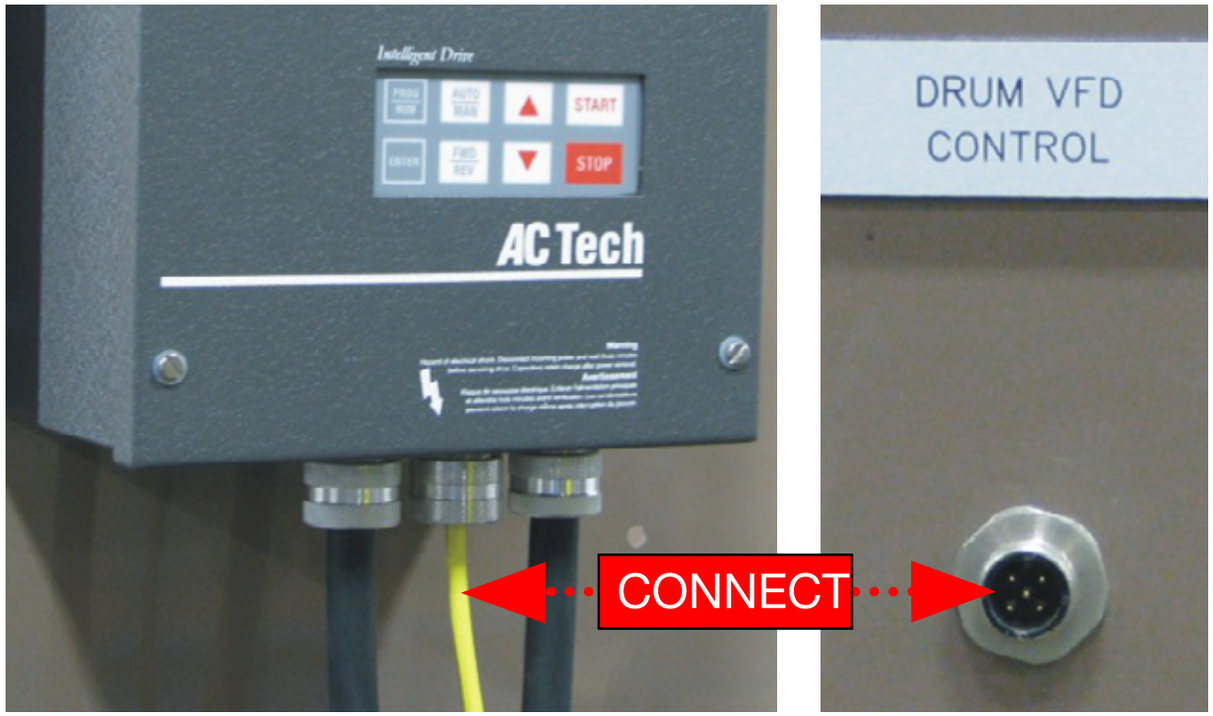
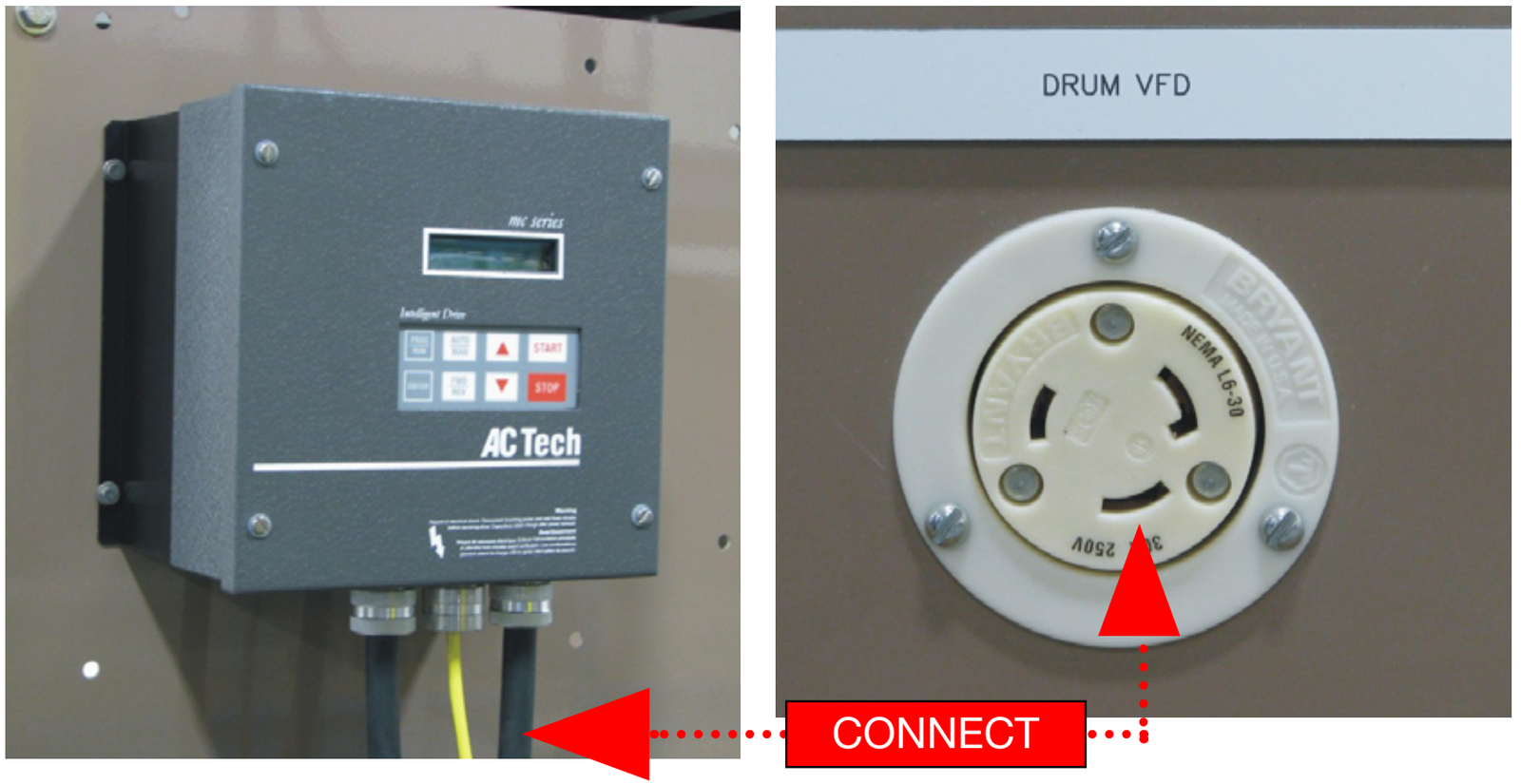
CONNECT



Step 3: Connect the VFD Drum Drive signal cable to the bottom of the RH Control receptacle marked **DRUM VFD CONTROL** (pin connect, hand tighten).



Step 3: Connect the VFD Drum Drive 10’ power cord twist lock connector to the bottom of the RH Control 3 prong receptacle marked **DRUM VFD**.

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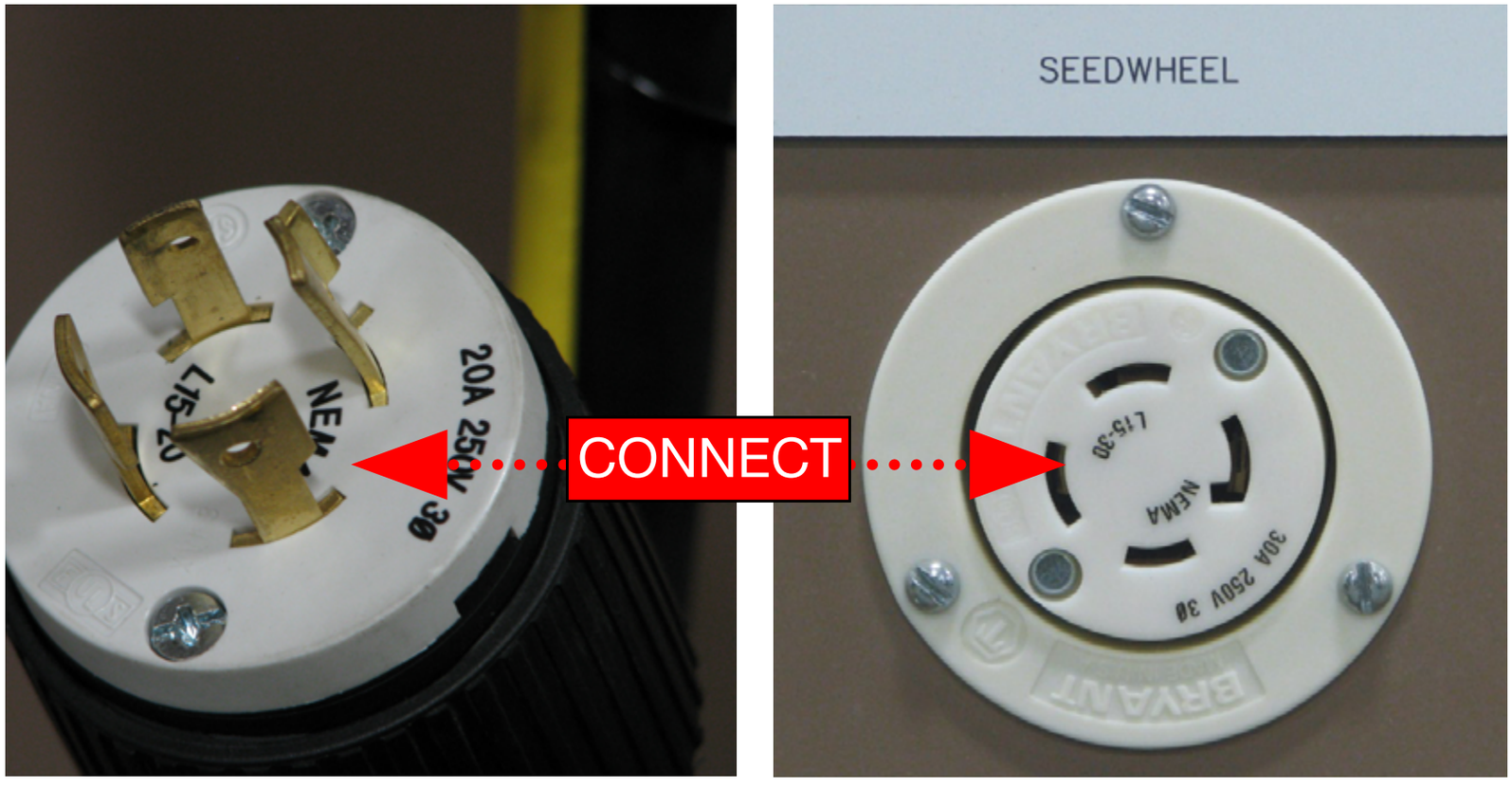
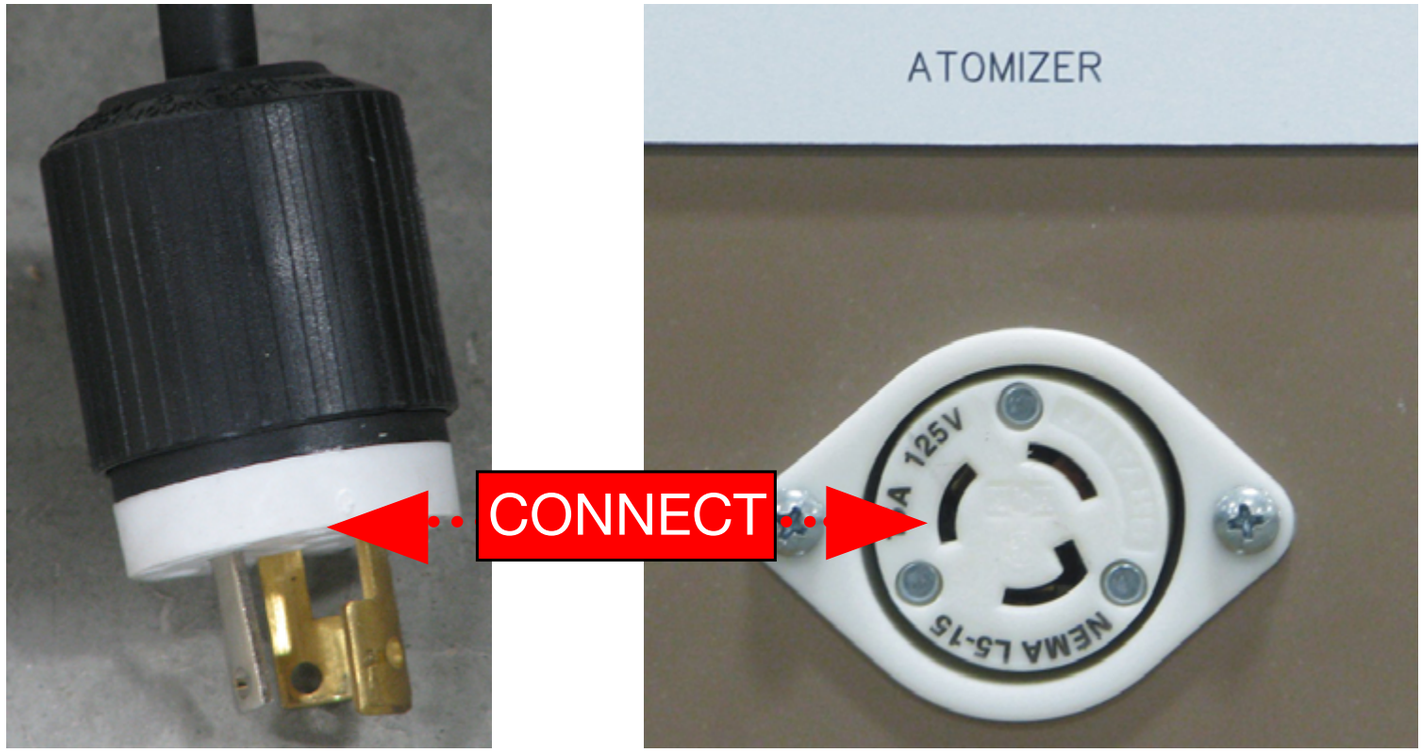


Seed Wheel Power Cord

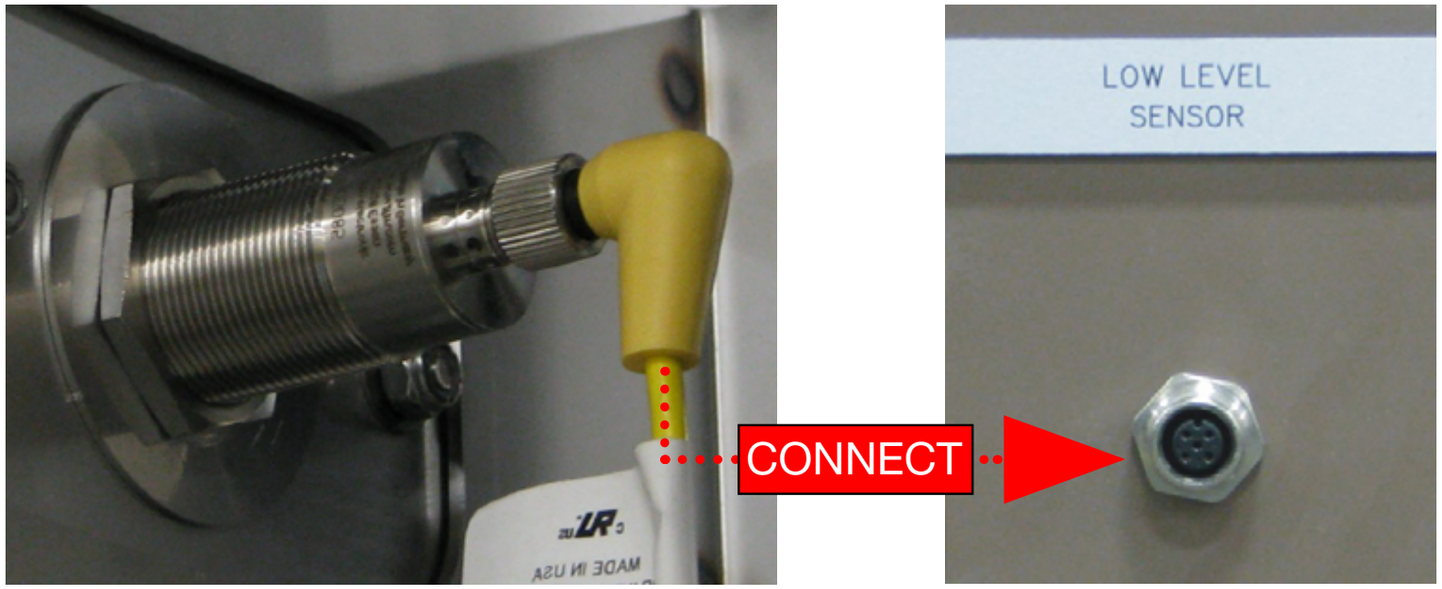
Connect the Seed Wheel 4-prong Power Cord to the bottom of the RH Control receptacle - marked **SEED-WHEEL**.



Atomizer Power Cord

Connect the Atomizer 3-prong Power Cord to the bottom of the RH Control receptacle - marked **ATOMIZER**.

Continued ➲



Hopper Sensor Cable

Connect the yellow Inlet Hopper Low Level signal cable to the bottom of the RH Control receptacle (pin connect, hand tighten) marked **LOW LEVEL SENSOR**.

This completes the Control Panel Installation.

CBP TANKS

Required assembly tools

- 7/16” Socket Head Wrench (2)
- Tubing Cutter

Chemical Tanks - Power Requirements

Remove chemical tanks from their shipping boxes and place them near the Treater Control.

- Each Tank Agitation Motor requires an external 115V AC/1ph/3FLA power source.

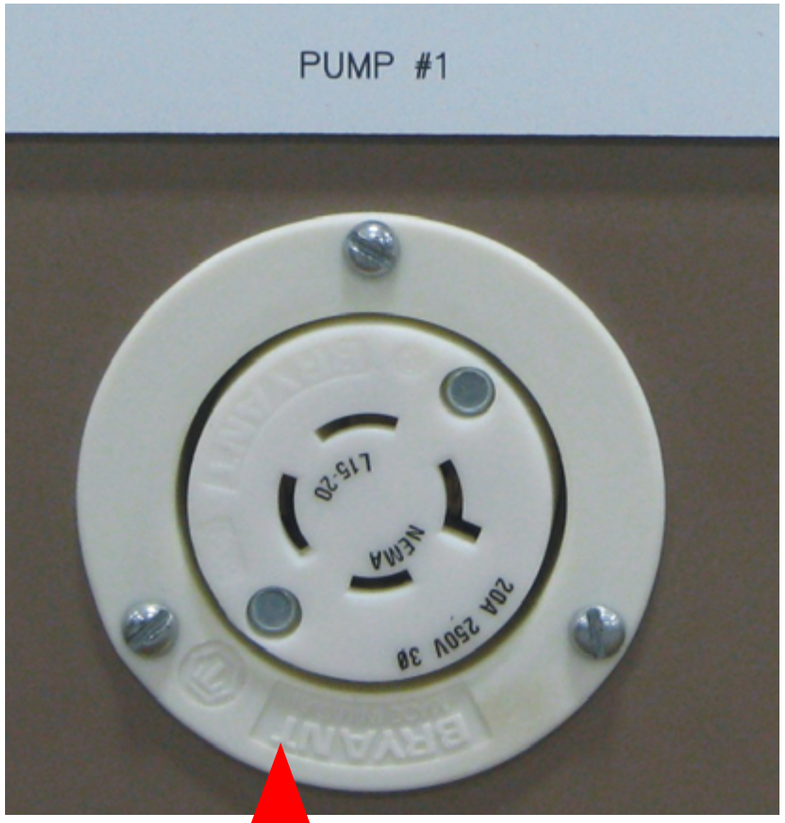
Continued ➲

Chemical Tank Pump Power Cord

Connect each Pump Power Cord (4-prong) to the bottom of the RH Control receptacle - marked **PUMP#1-4**.

- Repeat for each Tank used with the system (1-4).

This completes the CBP Tank Installation.



CONNECT

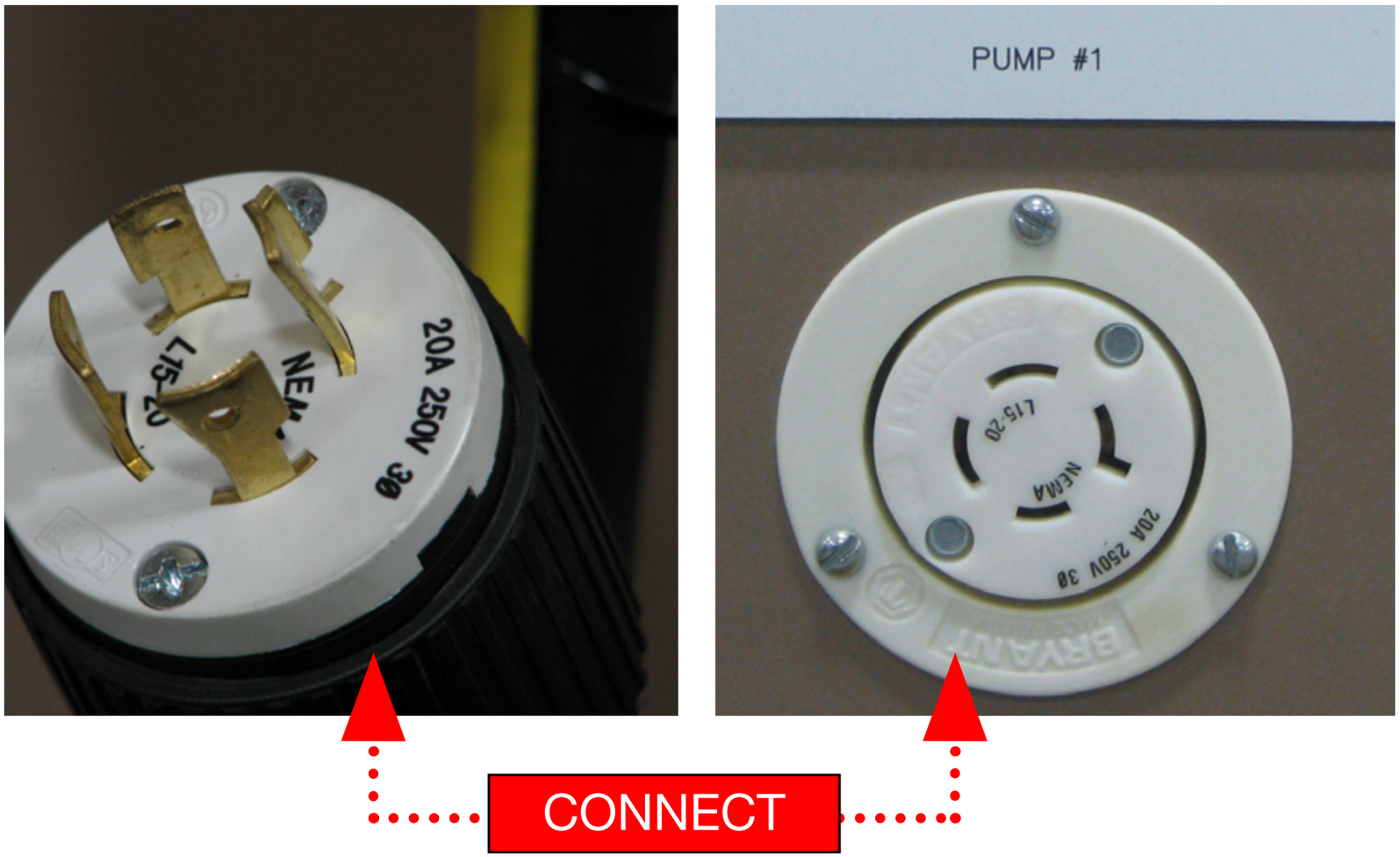
Note: refer to the **INOCULATION TANK USER MANUAL** shipped with the inoculation tank for complete installation and operation instructions.

Inoculation Tank Power Cord

Repeat the Flow Meter and Top Mount Calibration assembly steps on pages 13-16.

Connect the Pump Power Cord (4-prong) under the RH Control receptacle - marked **PUMP #1-4**. If already using four chemical Tanks, then connect the Inoculant Tank cord to an external power source.

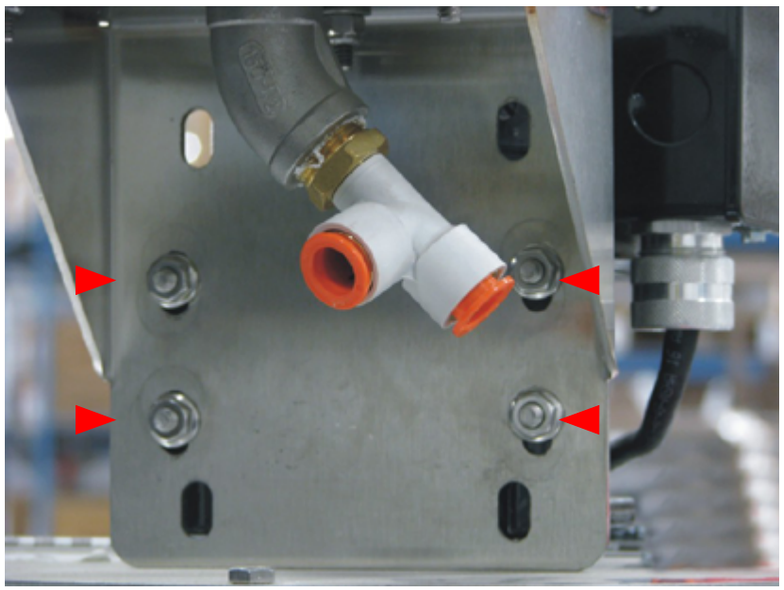
This completes the CBP Tank Installation.



CALIBRATION KIT

Required assembly tools

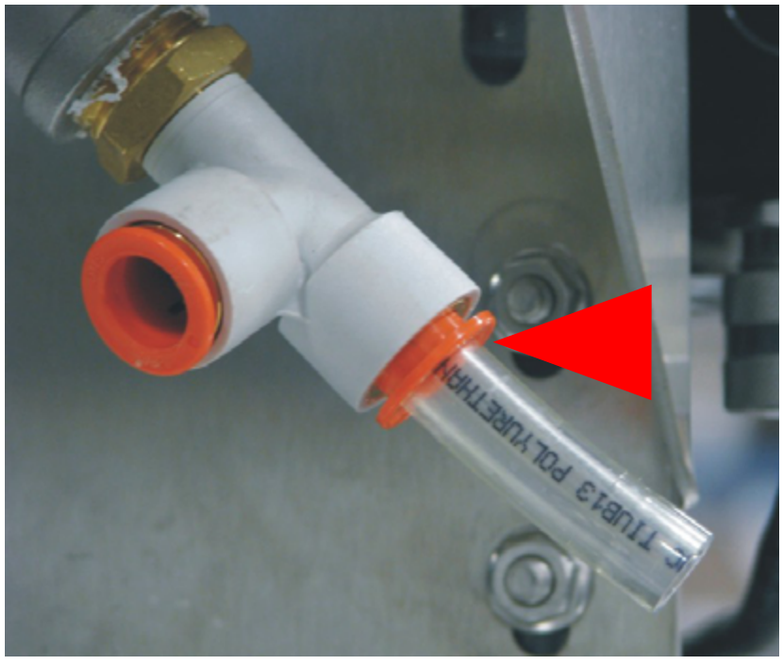
- 7/16” Socket Head Wrench (2)
- Tube Cutter



Optional Calibration Kit

Step 1: Connect the Calibration Mount Plate to the Tank Agitation Motor Base with factory supplied hardware in this order:

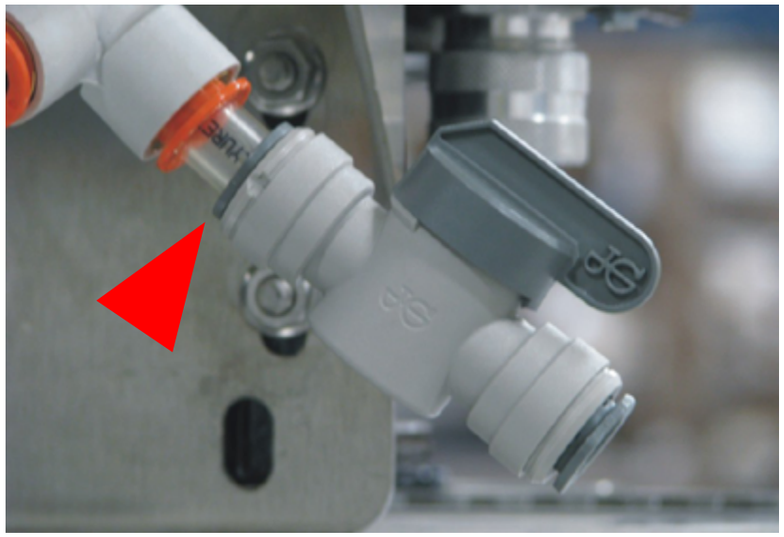
- bolt+[Tank Motor Mount + Calibration Mount Plate]+wiz nut.
- Tighten securely.



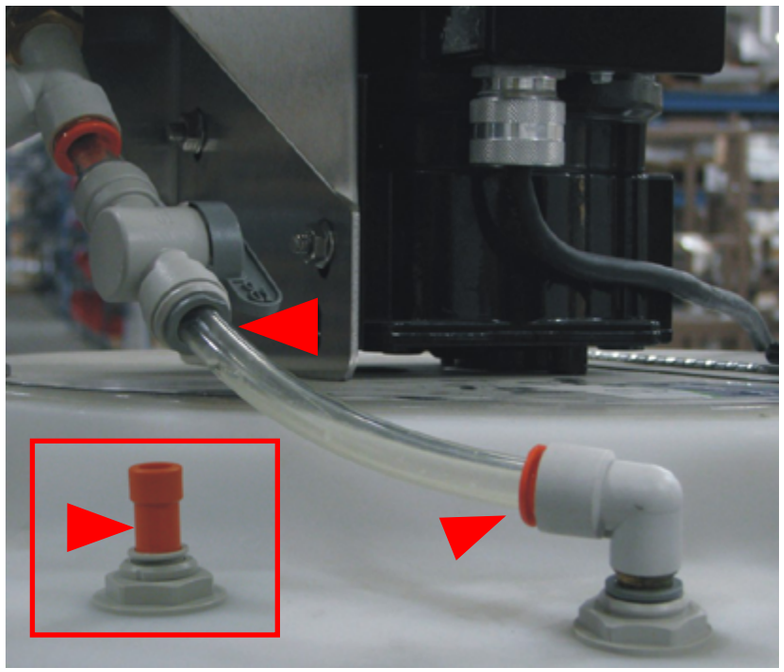
Step 2: Cut a 3” piece of 1/2” Tubing.

- Press it into the 1/2” Male Run Tee (attached to the bottom of the Calibration Cylinder) as shown.

Continued ➲



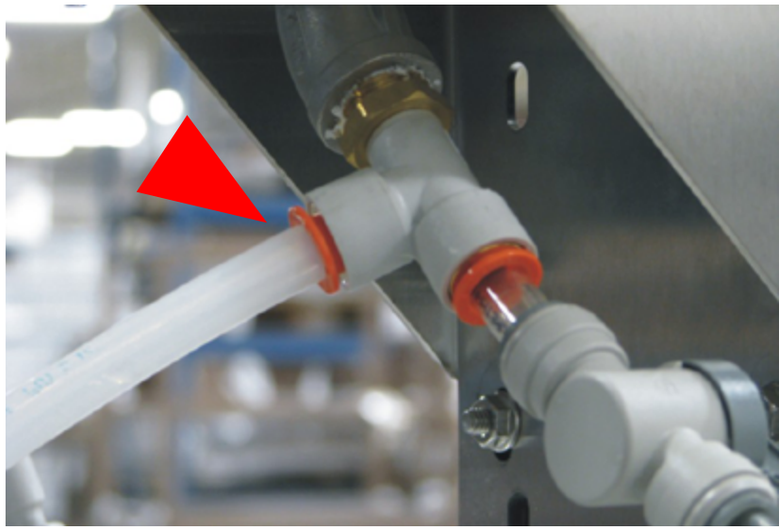
Step 3. Connect the 1/2” Plastic Shutoff Valve to the piece of 1/2” Tubing.



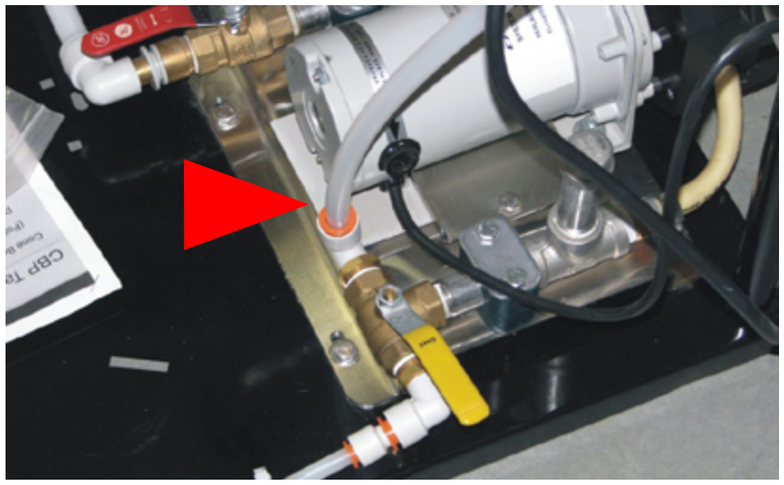
Step 4: Remove the 1/2” Calibration Port Plug from the top of the Tank.

- Cut to fit a piece of 1/2” Tubing.
- Press it into the 1/2” Plastic Shutoff Valve.
- Press the other end into the 1/2” 90° Elbow Press-lock Fitting and install on top of the CBP Tank as shown.

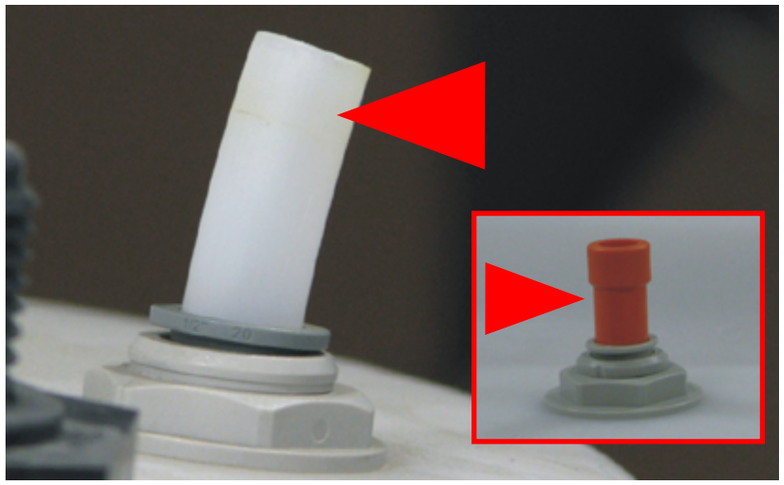
Continued ➲



Step 5: Connect one end of 1/2” Recirculation Tube to the 1/2” Male Run Tee located underneath the Calibration.



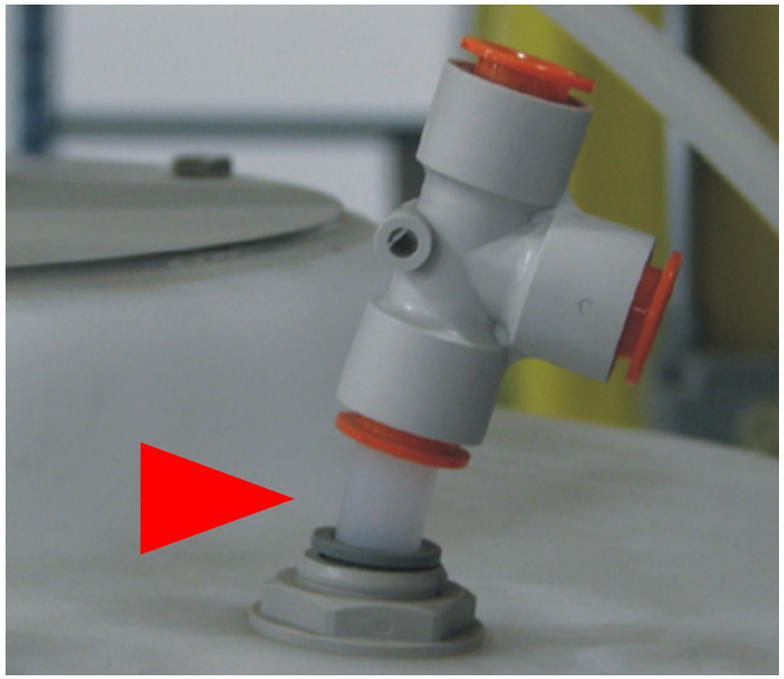
Step 6: Cut to fit and connect the other end of the Vent Tube to the Press-lock Fitting on the pump, located underneath the CBP Tank.



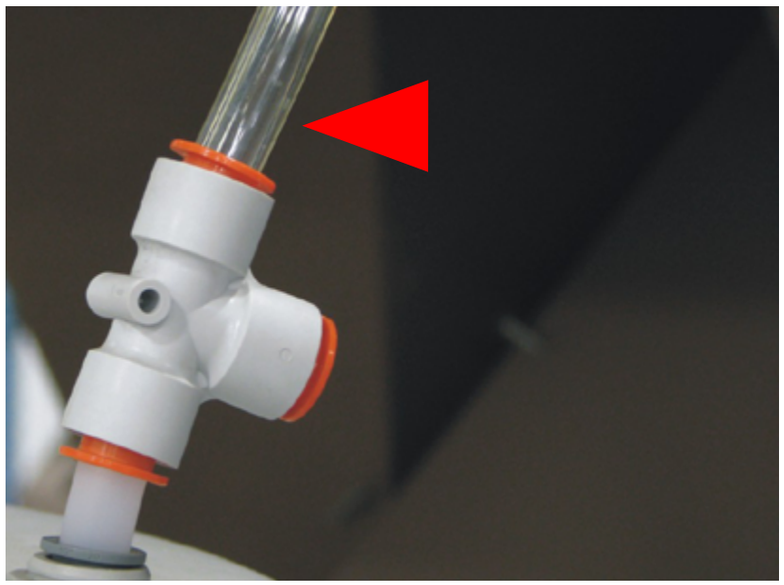
Step 7: Remove the second Vent Plug from the top of the CBP Tank.

- Cut a 2” piece of 1/2” Tubing.
- Press it into the 1/2” Vent Press-lock Fitting.

Continued ➲

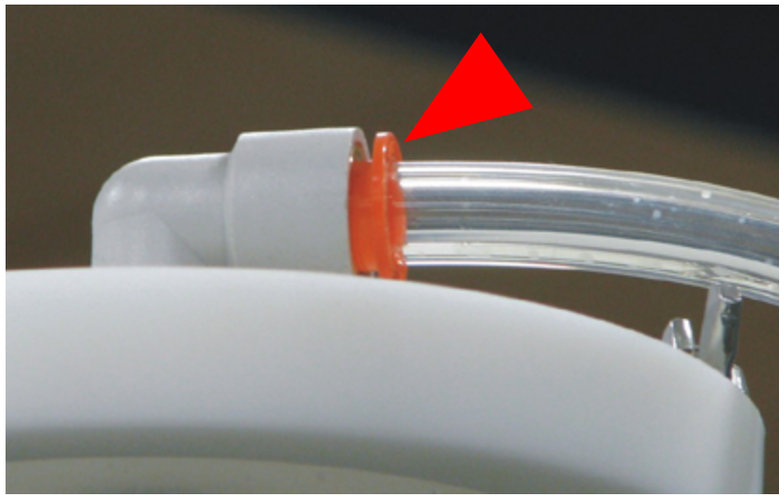


Step 8: Press the 1/2” Union Tee onto the 2” piece of tubing.

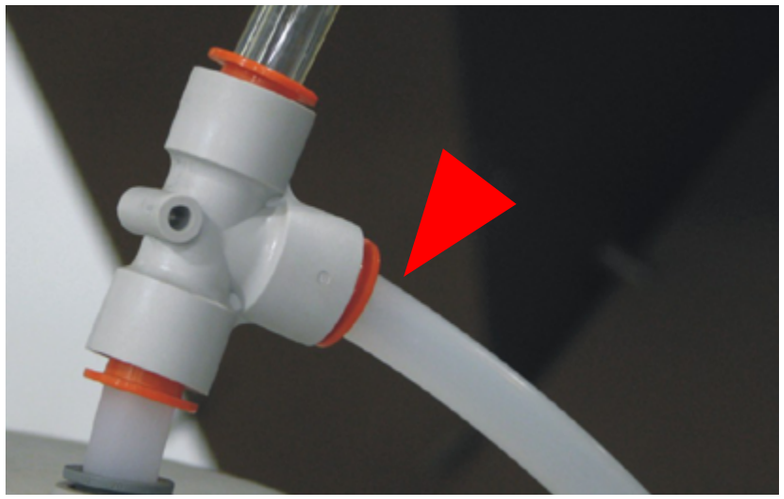


Step 9: Press the remaining 1/2” Tubing into the 1/2” Union Tee.

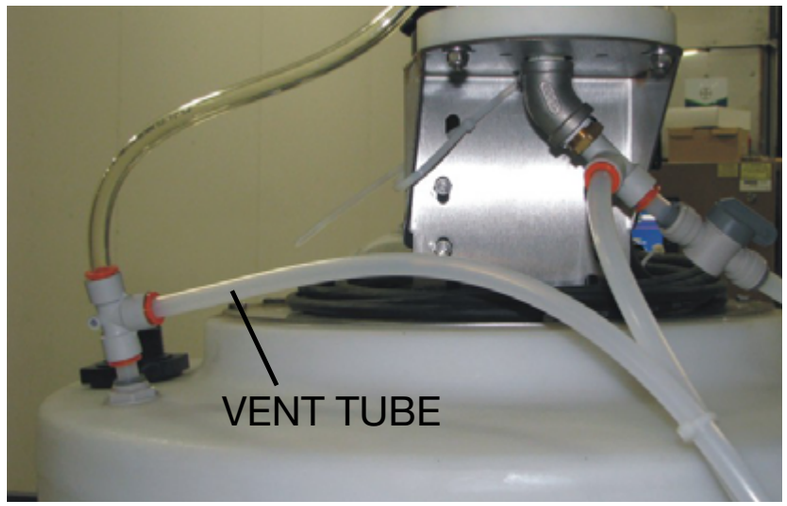
Continued ➲



Step 10: Cut to fit and connect the remaining piece of 1/2” Tubing to the 90° elbow press-lock fitting, located on top of the Calibration Tube.



Step 11: Connect one end of the 1/2” Vent Tube to the 1/2” Union Tee.



Step 12: Cut to fit and connect the other end of the Vent Tube to the 1/2” Press-lock Fitting on the pump, located underneath the Tank.

This completes the Top Mount Calibration Kit Installation.

FLOW METER KIT

Required assembly tools

- 7/16” Socket Head Wrench (2)

Note: refer to the **FLOW METER USER MANUAL** shipped with the flow meter for complete Display Box installation and operation instructions.

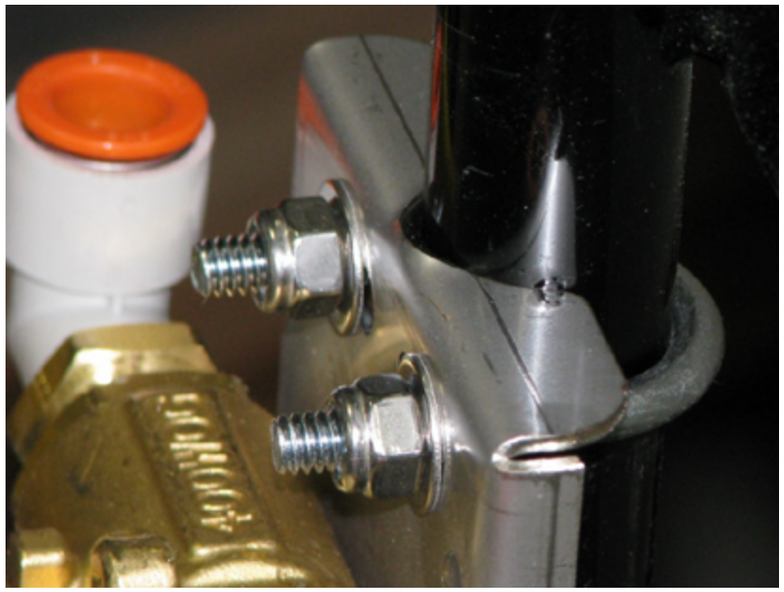
Optional Basic Flow Meter Kit

The Flow Meter Kit ships from the factory in a separate box.

Step 1: Remove from package and attach to the CBP Tank Stand.

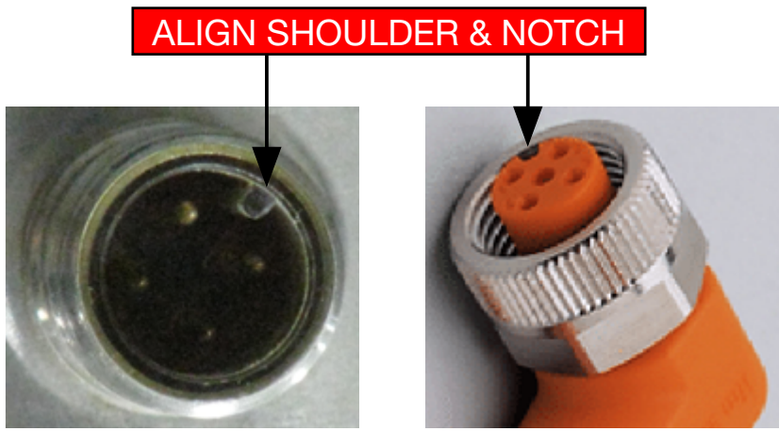
- Locate the Flow Meter Assembly in the position as shown left.

Continued ➲



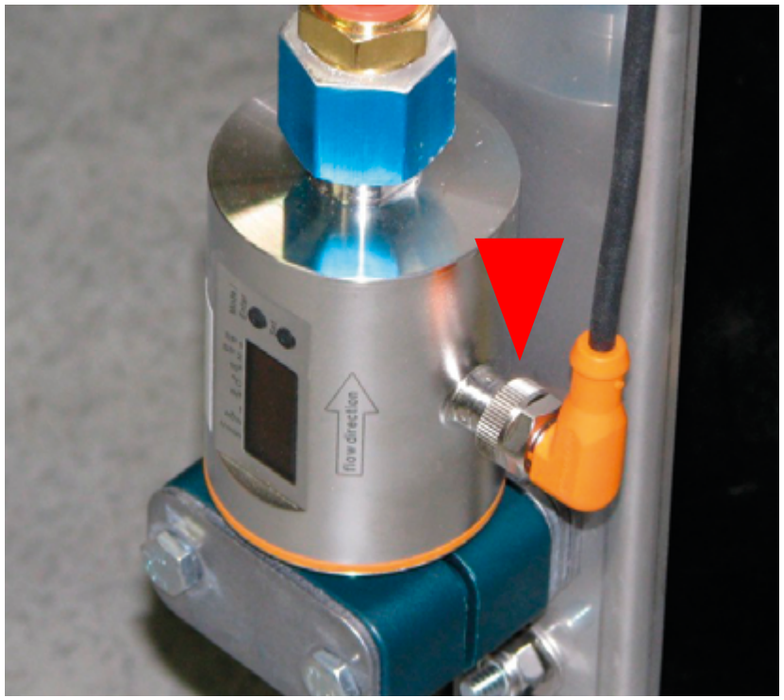
Step 2: Insert the U-bolt from behind the Tank Stand Frame and push through the Mount Plate.

- Use a 7/16” wrench to fasten in place in the following order: U-bolt+[Frame+Mount Plate]+washer+lock nut.
- Securely tighten.
- Repeat on other end of Flow Meter Assembly.



4-pin receptacle

4-pin connector



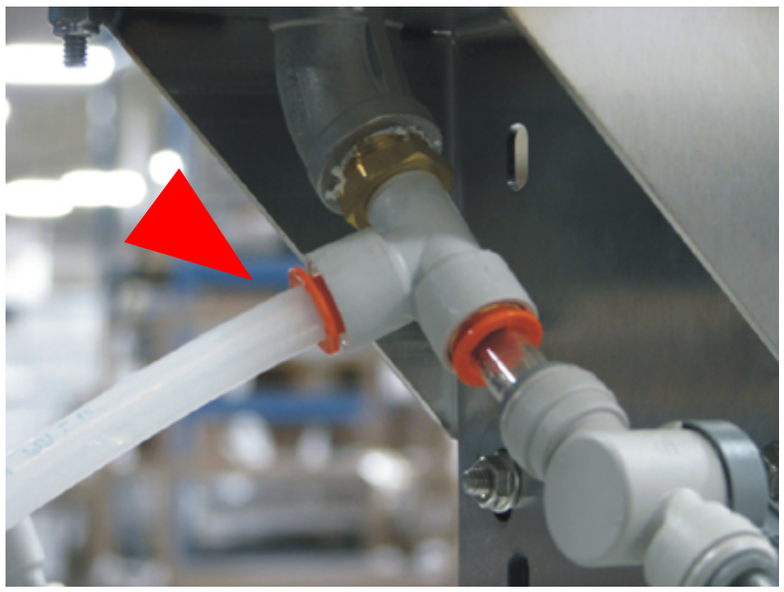
Signal cable connected to Flow Meter

Step 3: Connect the signal cable to the bottom of Flow Meter Assembly.

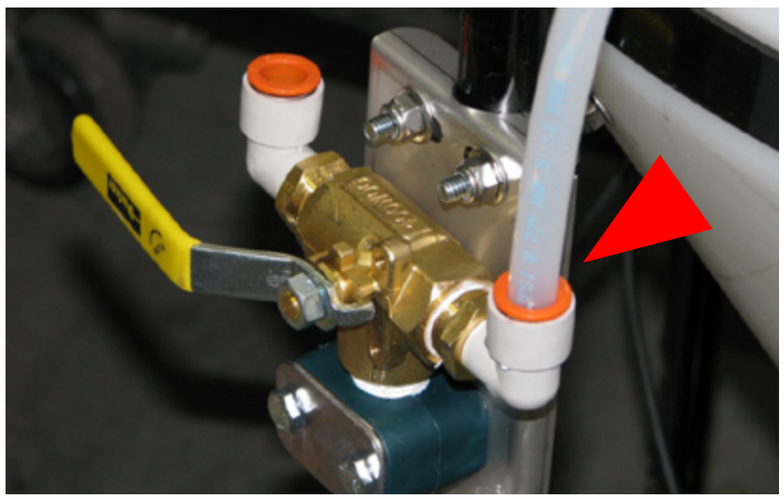
- **CAREFULLY** slide the signal cable into the receptacle.
- Align the receptacle shoulder with the connector notch (when aligned, receptacle pins will push into the connector).
- Screw the shield on tight.

Continued ➲

Step 4: Connect the other end of the signal cable to bottom of the 4-Pump Display Box.

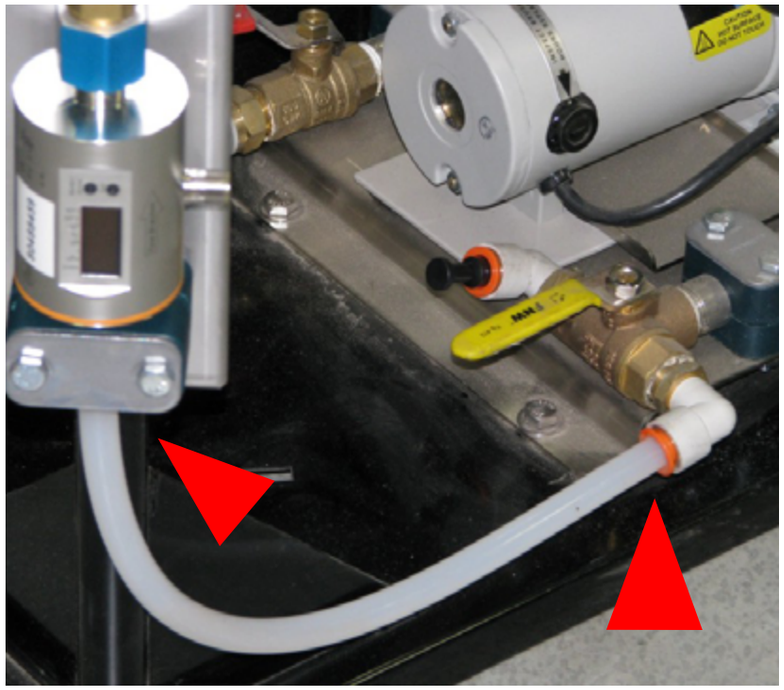


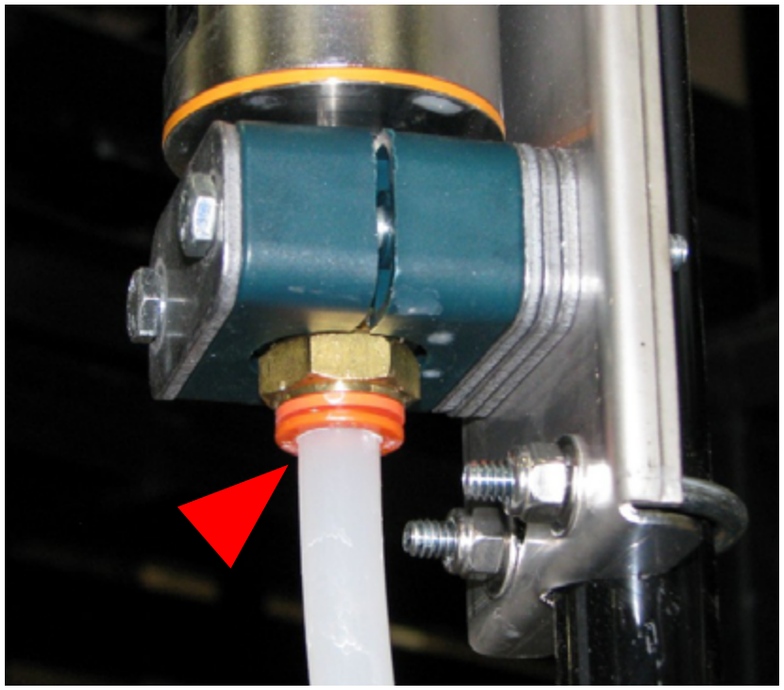
Step 5: Connect one end of the 1/2” Recirculation Tube to the 1/2” Male Run Tee located underneath the Calibration Tube.



Step 6: Connect the other end of Tubing to the 1/2” Press-lock Fitting on the Flow Meter Assembly (right side).

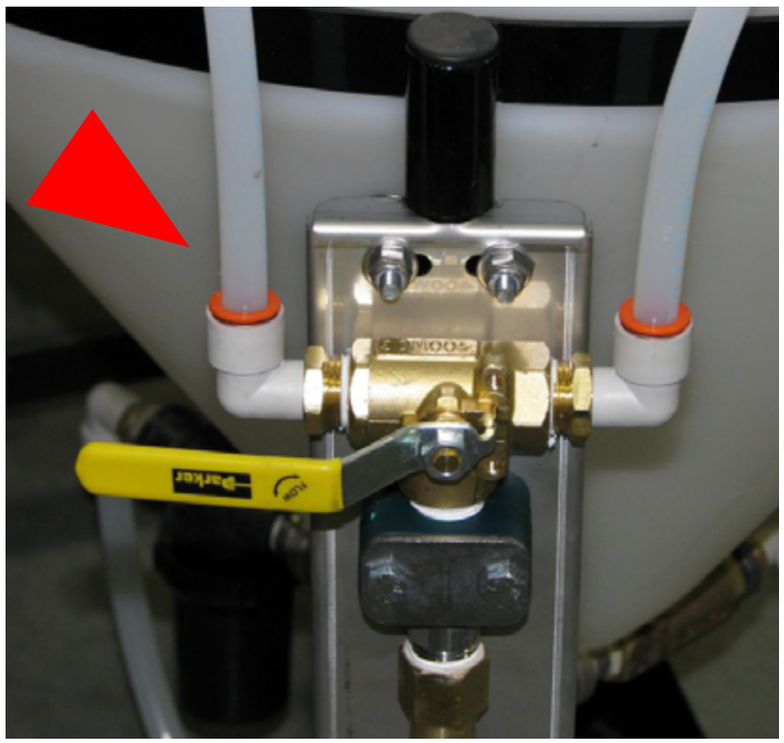
Continued ➲





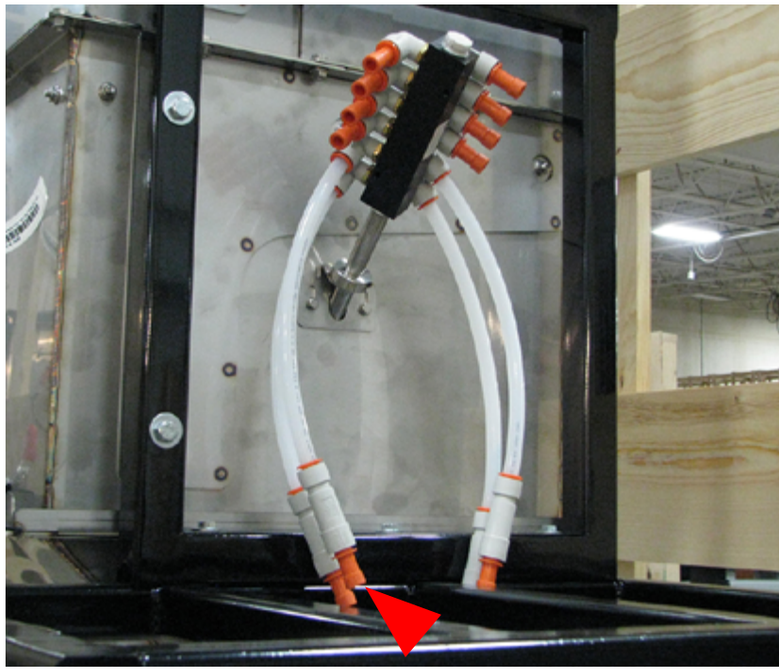
Step 7: Connect one end of the 1/2” Transfer Tube to the 1/2” Press-lock Fitting on the pump, located underneath the Tank.

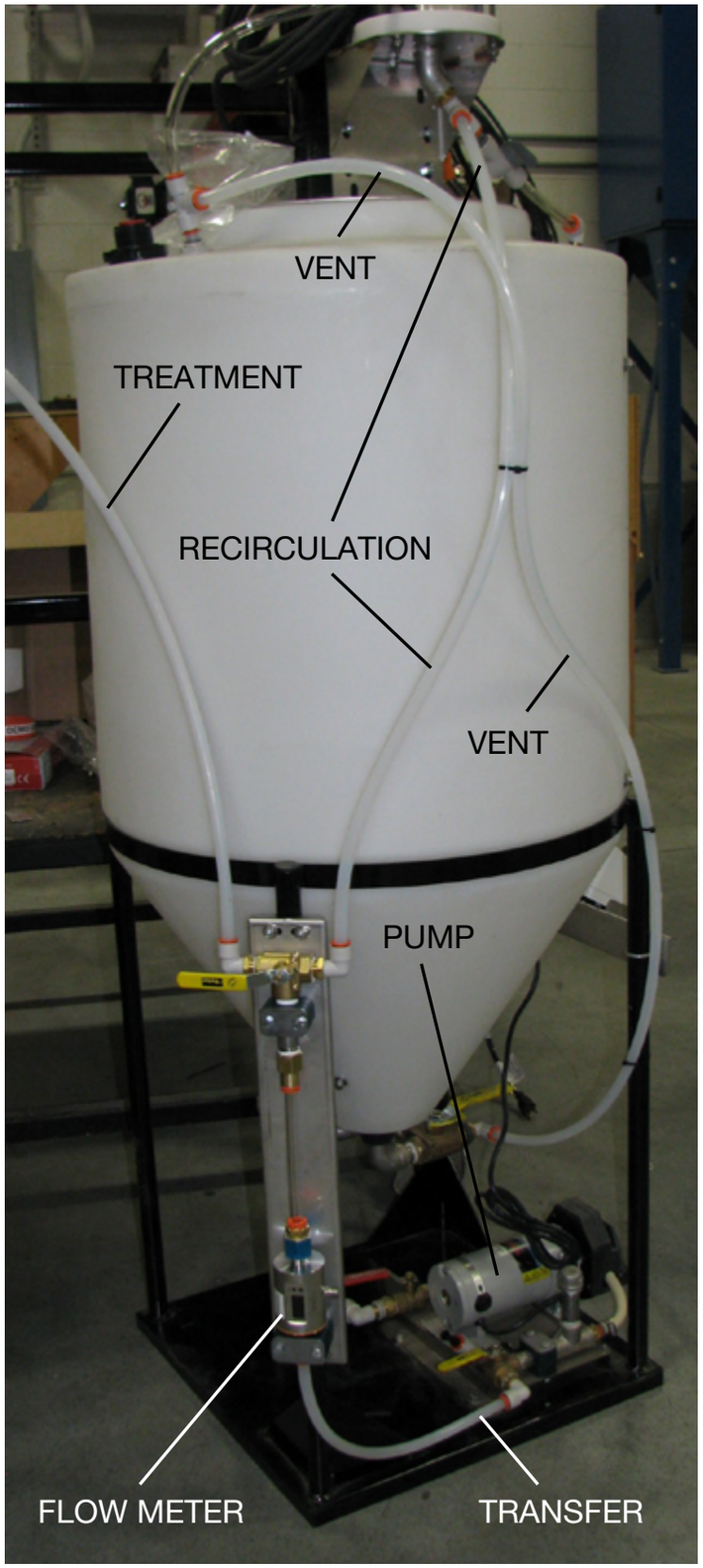
- Cut to fit and connect the other end of the Transfer Tube to the 1/2” Press-lock Fitting underneath the Flow Meter, as shown.



Step 8: Connect one end of the 1/2” Treatment Tube to the 1/2” Press-lock Fitting on the Flow Meter Assembly (left side).

Continued ➲





Example of Tank connections

Step 9: Remove a plug and insert the other end of the 1/2” Tubing into the Treater Chemical Inlet Assembly Press Lock Fitting.

This completes the Flow Meter Kit Installation.

PUMP ELEMENT CHANGE

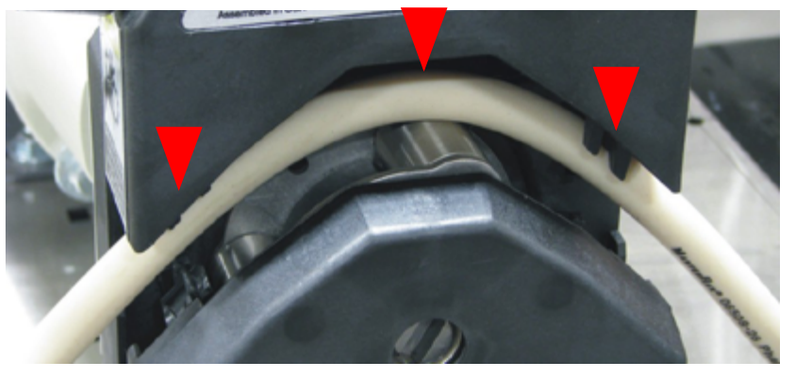
Pump Element Connection

Step 1: Use the Pump Handle to open the Pump Head.

Continued ➲

Step 2: Insert the Element press lock fitting into the Tank Elbow to the right of the Pump.

- Connect the other press lock fitting into the Pump Discharge Plumbing Assembly to the left of the Pump.



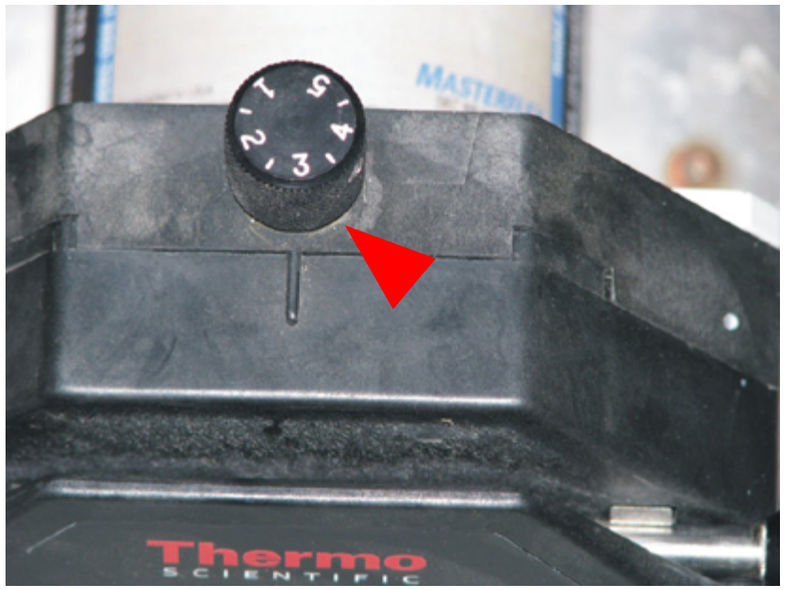
Step 3: Insert the factory supplied Pump Element onto the Pump Rollers.

- Ensure the Pump Element lays on the roller and behind the clips on the Head, as shown.

Step 4: Align the Pump Element on the Pump Head grooves to ensure a proper fit, as shown (may require two people).

Continued ➲

Step 5: Use the Pump Handle to close the Pump Head.



IP Pump Only

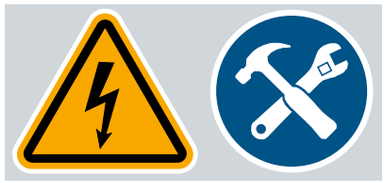
Set the Pump Head Tension Adjustment Knob to #3 setting.

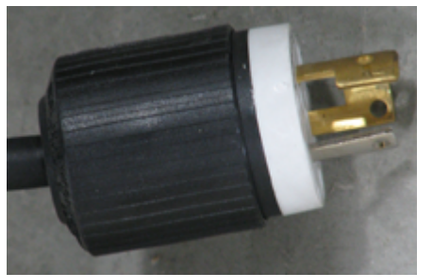
This completes the Pump Element Change procedure.

CONVEYOR CONTROL

Required assembly tools

- 7/16” Socket Head Wrench (2)





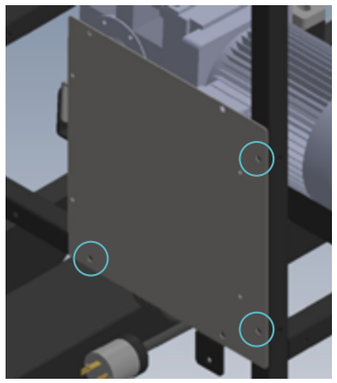
Optional Conveyor Control Kit

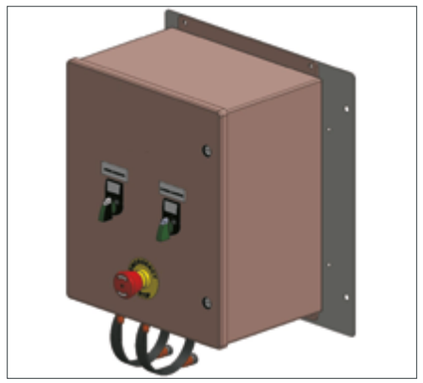
The Conveyor Control Kit ships from the factory in a separate box.

- Remove from packaging and attach to the Treater Frame.

Step 1: Two (2) Male connectors are provided with the kit (located inside the Conveyor Control).

- Wire them to the INFEED and OUTFEED conveyor wire leads.





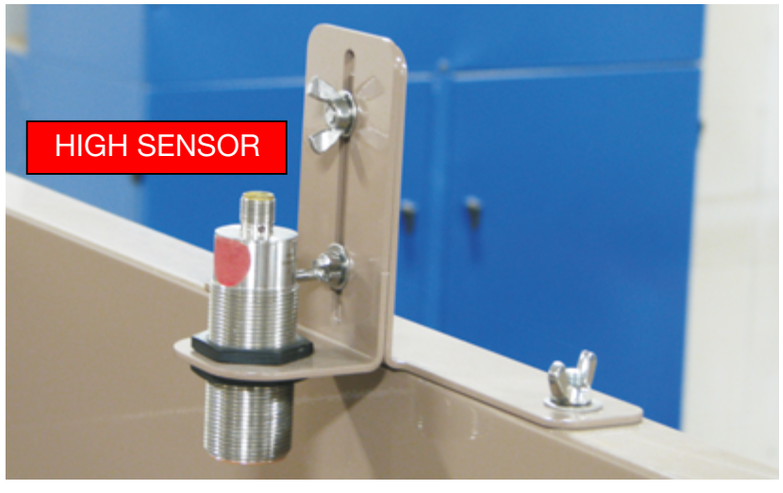
Step 2: Locate the Elevator Control on or near the treating head assembly (Elevator Control is mounted to the Mount Plate from the factory (can be remote mounted).

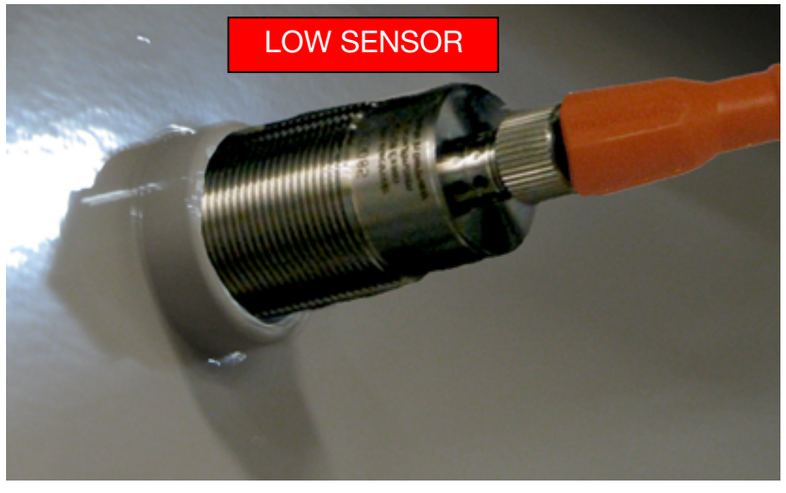
- Fasten the Plate in place using the following order: bolt+[Mount Plate+Frame]+washer+lock nut.
- Use a 7/16” Socket Head Wrench to securely tighten.

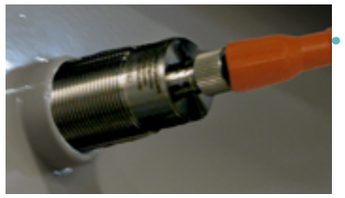
Continued ➲

Step 3: Connect the High Level Sensor Assembly to the Hopper top (pre-drilled holes).

- Use a crescent wrench to remove the plastic plug on the side of the Hopper.
- Thread in the Low Level Sensor.
- Carefully connect the High and Low Level Sensor Cables to the end of each Sensor.







LOW Level Sensor

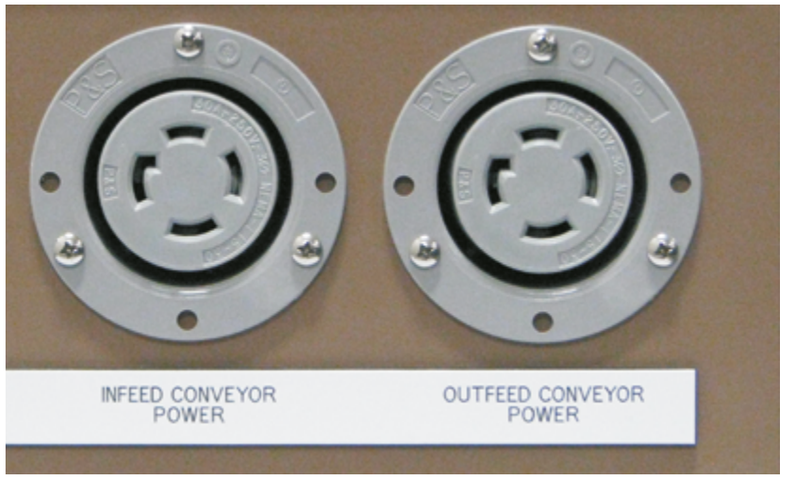
Conveyor Control bottom

HIGH Level Sensor

Step 4: Connect the High and Low level Sensor Cables to the bottom of the Conveyor Control.

- Ensure **HIGH SENSOR** (located on top of the inlet) is connected to the sensor connection on the bottom of the control box marked: **BIN HIGH SENSOR**.
- Connect **LOW SENSOR** (located on the side of the hopper) is connected to the sensor connection on the bottom of the control box marked: **BIN LOW SENSOR**.

Continued ➲



Step 5: Connect the **INLET** conveyor power cord to **INFEED** power receptacle on the bottom of the Conveyor Control.

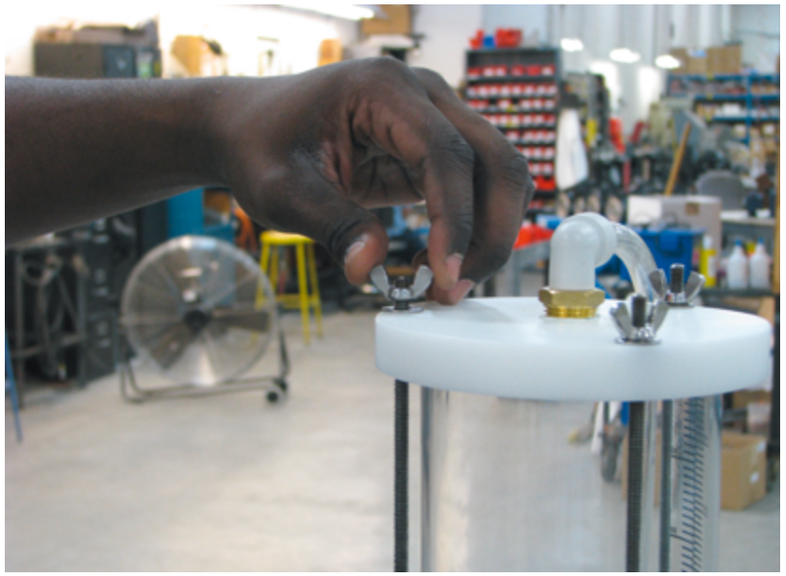
- Connect the **OUTLET** conveyor power cord to **OUTFEED** power receptacle on the bottom of the Conveyor Control.
- Ensure connectivity is correct!

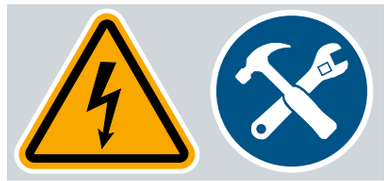
This completes the Conveyor Control Kit Installation.

BACKLIGHT KIT

Required assembly tools

- 3/4” Open Box Wrench





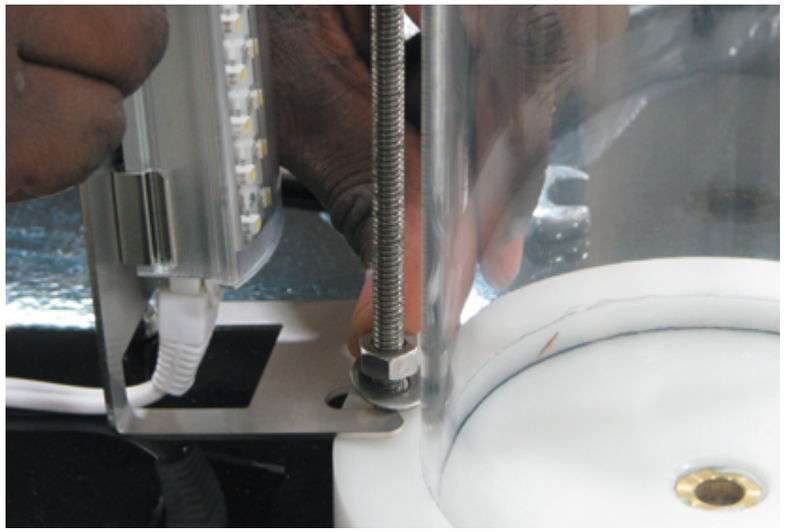
Optional Backlight Kit

Designed to backlight 100oz Top Mount Calibration Kit Cylinder. Helps improve clarity when reading chemical level through heavy viscosity during calibration.

Step 1: Remove existing wing nut from the top of the Calibration Cylinder.

Step 2: Loosen the existing lower nut connected to the same stud as previous Step 1.

Continued ➲



Step 3: Slide the Backlight Kit bracket under the lower nut and over the top stud.

Backlight Kit for 100oz Beakers

Step 4: Re-tighten the wing nut on the stud and the lower nut.

- Connect the power cord to an external 115V AC power source.

This completes the Back Light Kit Installation.

CONFIGURATION

Initiate Seed Coater Program

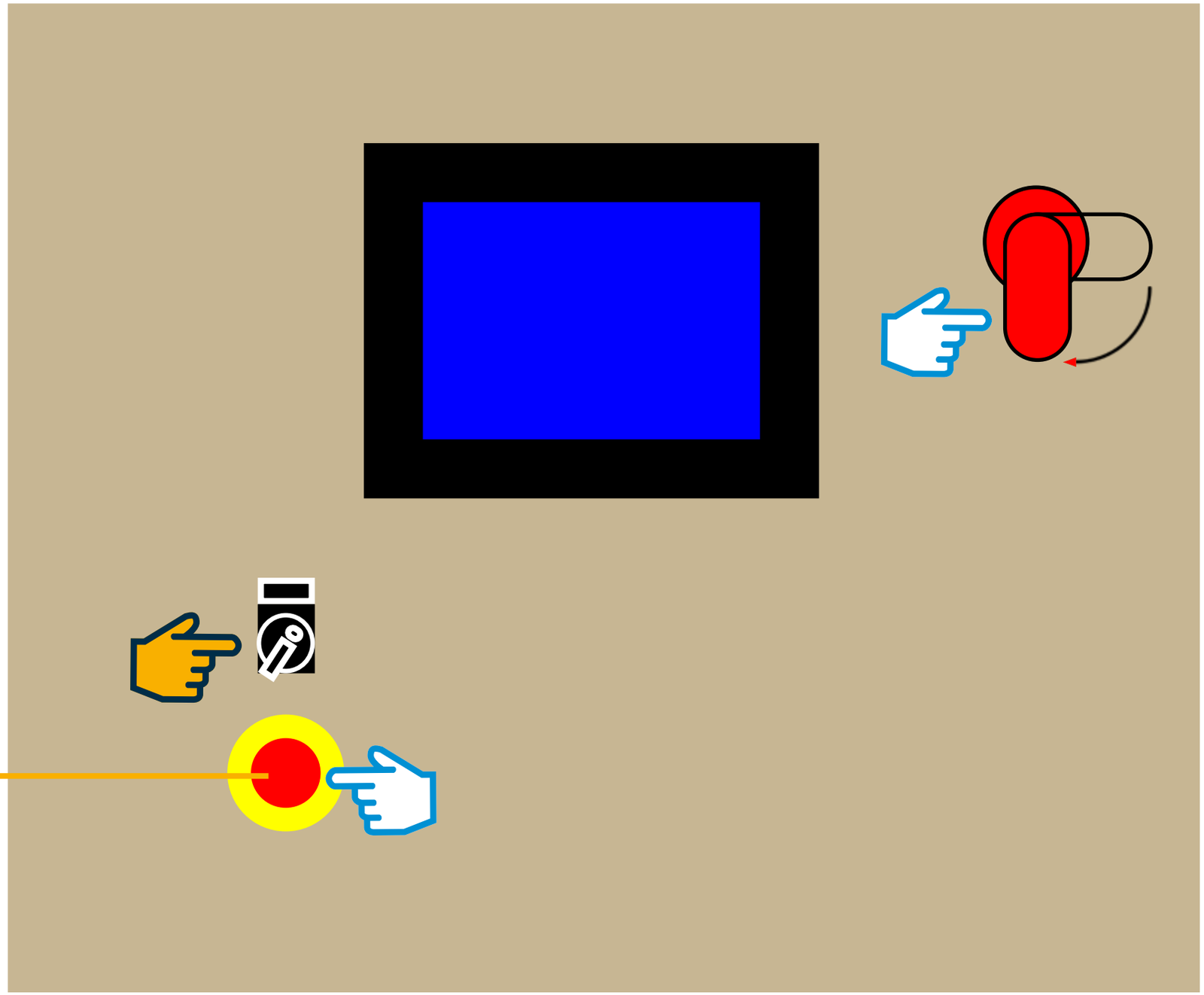
Step 1: Turn **ON** the Main Power Switch (handle in DOWN position as shown right).

Step 2: Ensure the E-STOP button is pulled **OUT** (deactivated). See note below.

Step 3: Turn **ON** the Control Power Switch Right, as shown. The HMI will initiate the program (boot up): navigates to display the **STARTUP WIZARD SCREEN ➲**

Emergency Stop Button

To release and deactivate the E-STOP button, twist the E-STOP button clockwise ↻: the E-STOP button will pop out. Release is necessary when starting up the HMI...**IT WILL NOT START IF THE CONTROL PANEL E-STOP BUTTON IS PUSHED IN (ACTIVATED).**



STARTUP WIZARD SCREEN

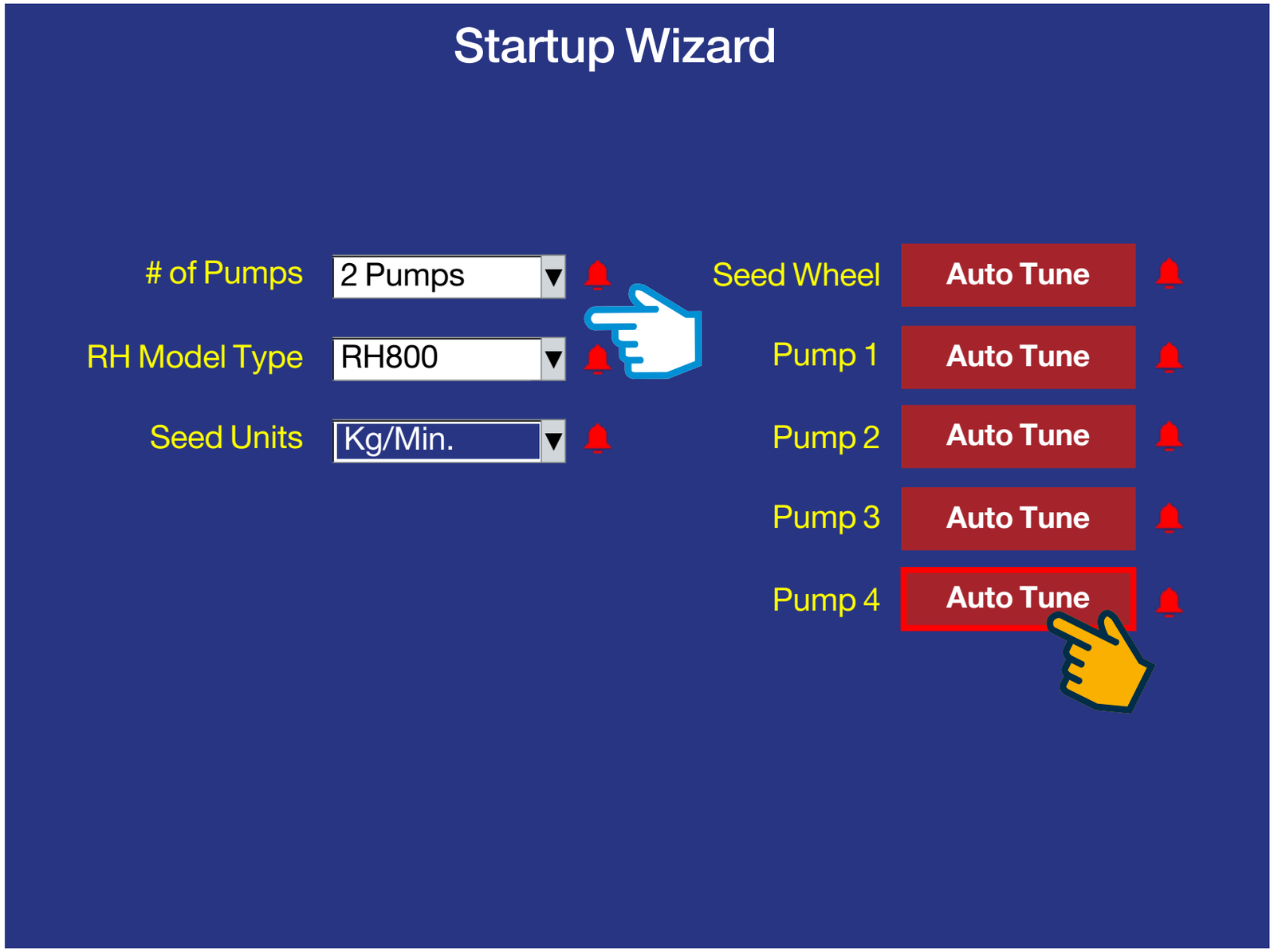
Bell graphic icons (shown, right) indicate that users need to make data selections and auto tune each device first, in order to enable them for use with the system.

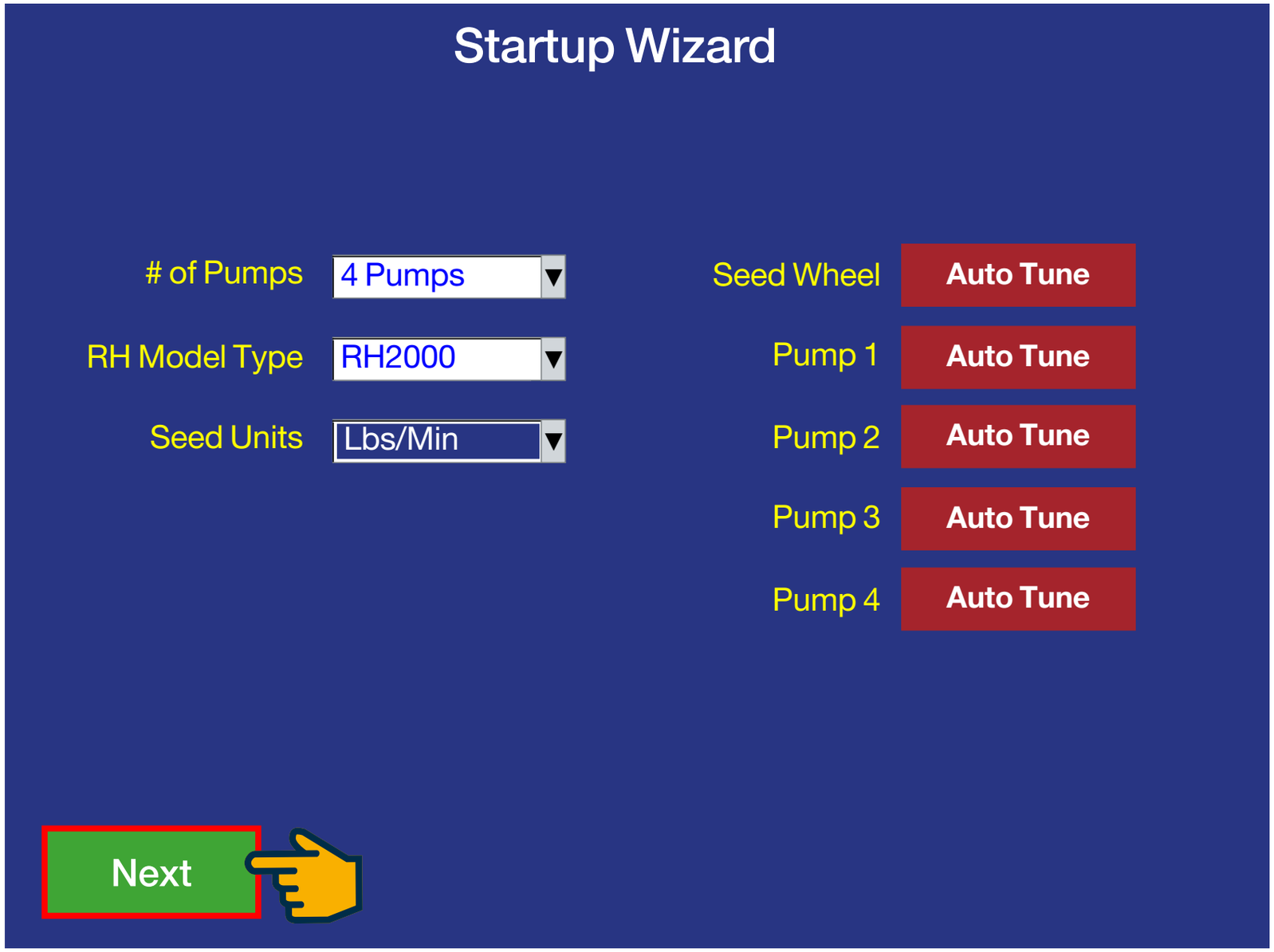
Step 1: Touch the **# of Pumps** drop down arrow: touch to select either **2 Pumps** or **4 Pumps**.

Step 2: Touch the **RH Model Type** drop down arrow: touch to select either **RH800** or **RH2000**.

Step 3: Touch the **Seed Units** drop down arrow: touch to select either **Lbs/Min** or **Kg/Min**.

Step 3: Touch each red **Auto Tune** button icon (Seed Wheel & Pump 1-4) to auto tune each device ➲





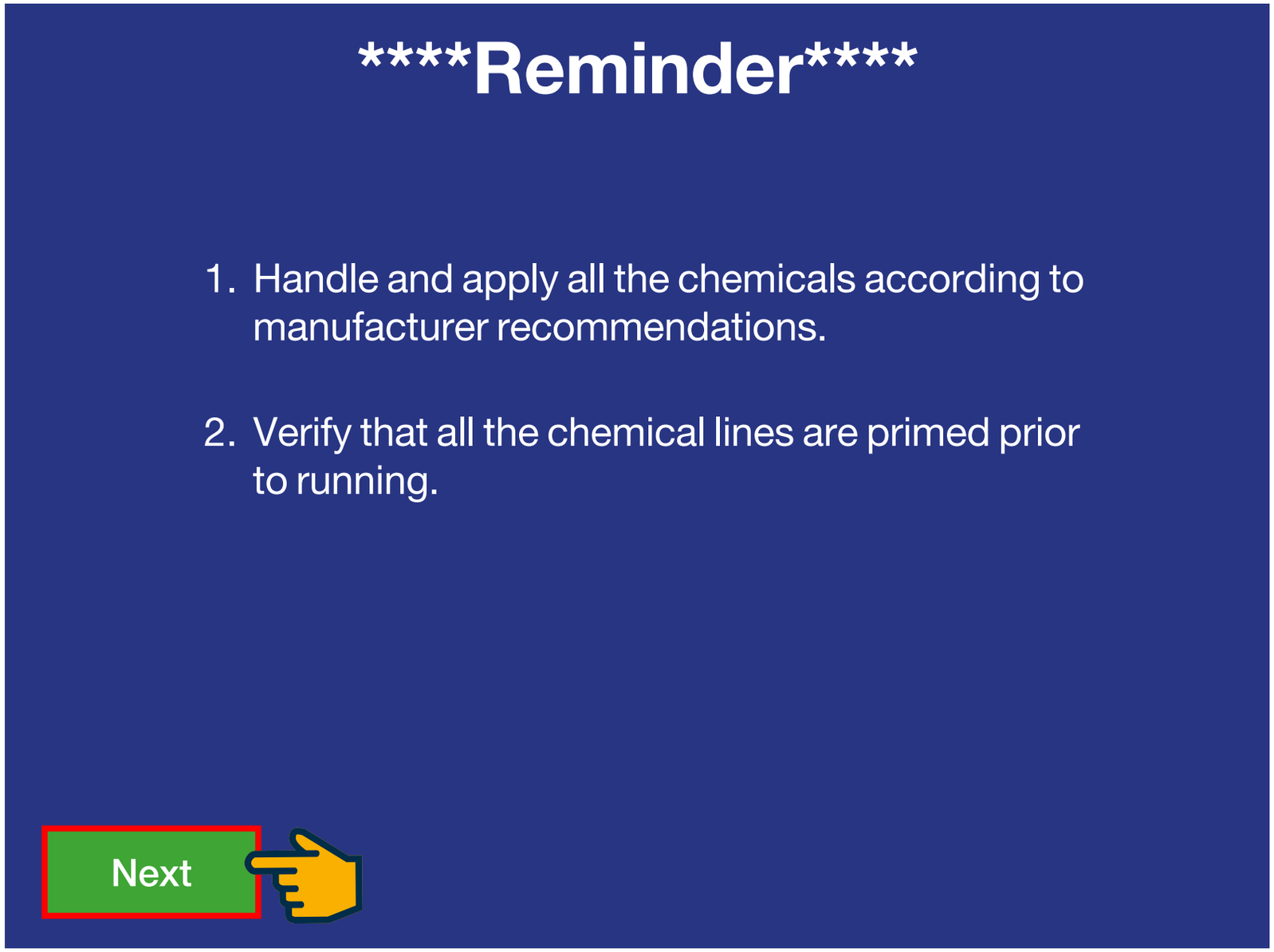
STARTUP WIZARD SCREEN

Verify that the information displayed in the data selection fields is correct. Use the drop down arrows to change selections. Notice that each red bell icon graphic is now removed after selction and auto tuning and the green **NEXT** button icon is displayed in the lower left hand corner of the screen.

Step 1: Touch the green **NEXT** button icon: navigates to the **HOME SCREEN ➲**

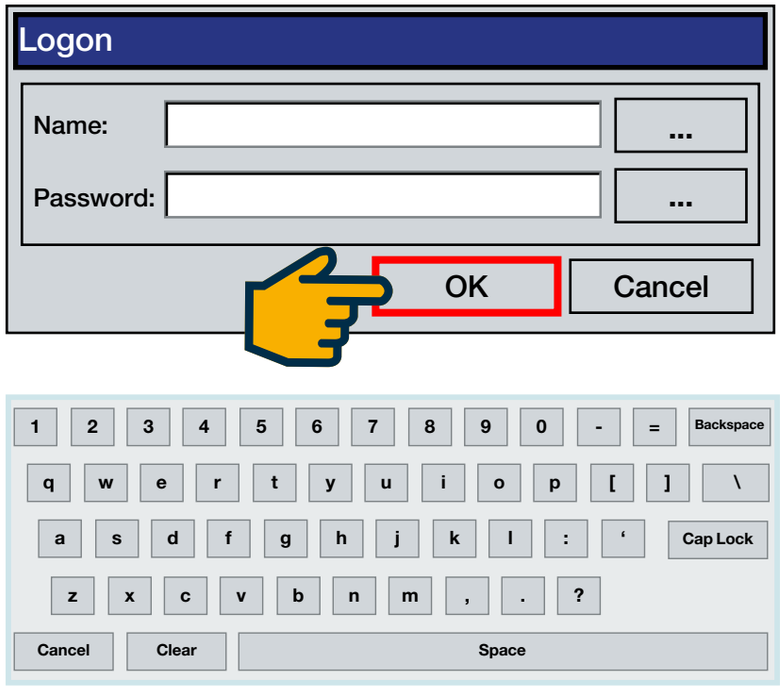
HOME SCREEN (splash screen)

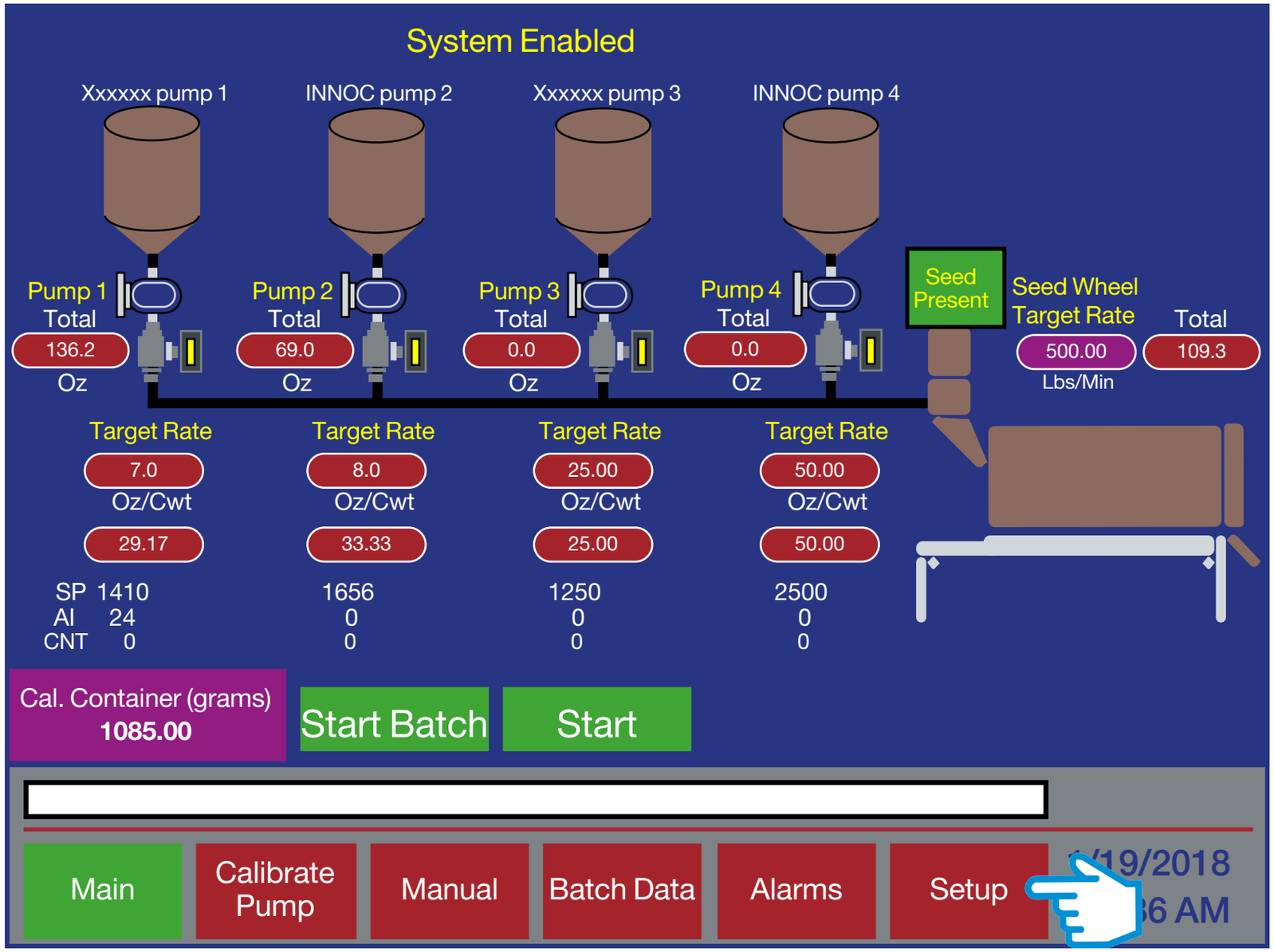
Step 1: Touch the green **NEXT** button icon: navigates to the **REMINDER SCREEN** ➲



REMINDER SCREEN

Step 1: Touch the green **NEXT** button icon: navigates to the **MAIN SCREEN** ➲





MAIN SCREEN

Step 1: Touch the red **SETUP** button icon: a **LOGON** pop-up displays (above, left) as a layer on top of the screen.

Step 2: Touch the squares with three dots on the **LOGON** pop-up: displays a keyboard to create and enter a user Name and Password; keyboard closes. This user name and password is specific to the installer.

Step 3: Touch the **OK** button icon: the **LOGON** pop-up closes and navigates to the **SETUP LOCAL SCREEN** ➲

SETUP LOCAL SCREEN

Step 1: **TREATING LOCATION**: touch field to enter city & state.

Step 2: **COMPANY**: touch field to enter name of seed retailer.

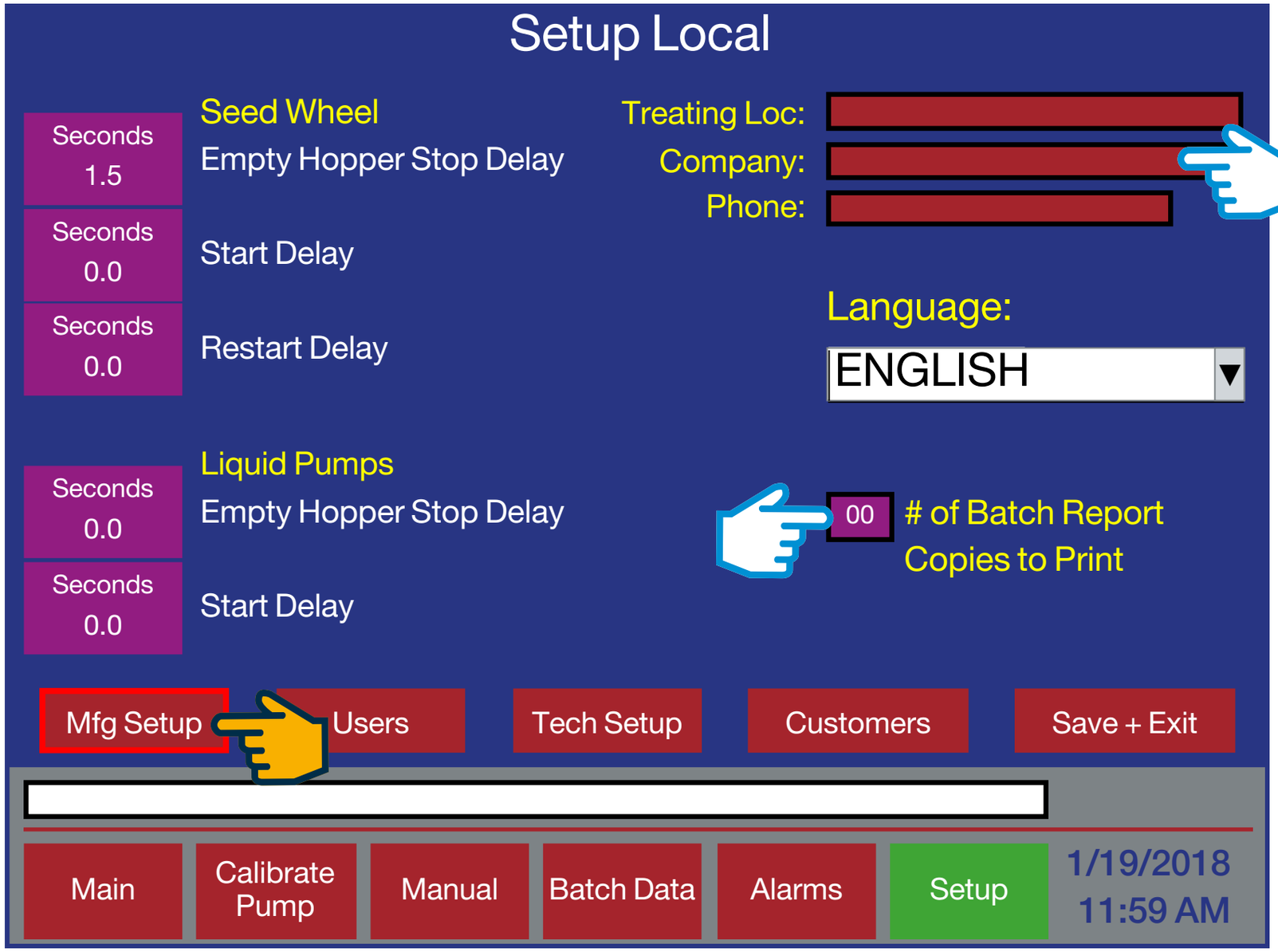
Step 3: **PHONE**: touch field to enter phone number of seed retailer.

Step 4: **# OF BATCH REPORT**: touch field to enter number of copies to print (connect printer) or leave at zero value to disable print capability.

Step 5: **SEED WHEEL & LIQUID PUMPS**: verify the factory set delay timers of the Seed Wheel & Liquid Pumps at the beginning and end of a batch run. Touch field to change the number value displayed.

Step 6: **SEED WHEEL & LIQUID PUMPS**: verify the factory set re-start delay timers of the Seed Wheel & Liquid Pumps (used to build a head of seed in the Inlet Hopper when Auto Restarting the timer). Touch field to change the number value displayed.

Step 7: Touch the **MFG SETUP** button icon: navigates to the **MFG SETUP SCREEN** ➲



MFG SETUP SCREEN

These settings are preset and are based on the **START-UP WIZARD SCREEN** (page 24). Change only if needed!

Step 1: Touch the **WHEEL VOLUME** button icon. The button will display a value: navigates to a pop-up touch pad (not shown). For the **RH 2000** enter a **1.0580** value, for the **RH 800** enter a **.4950** value. Then touch the **OK** button icon: pop-up window closes.

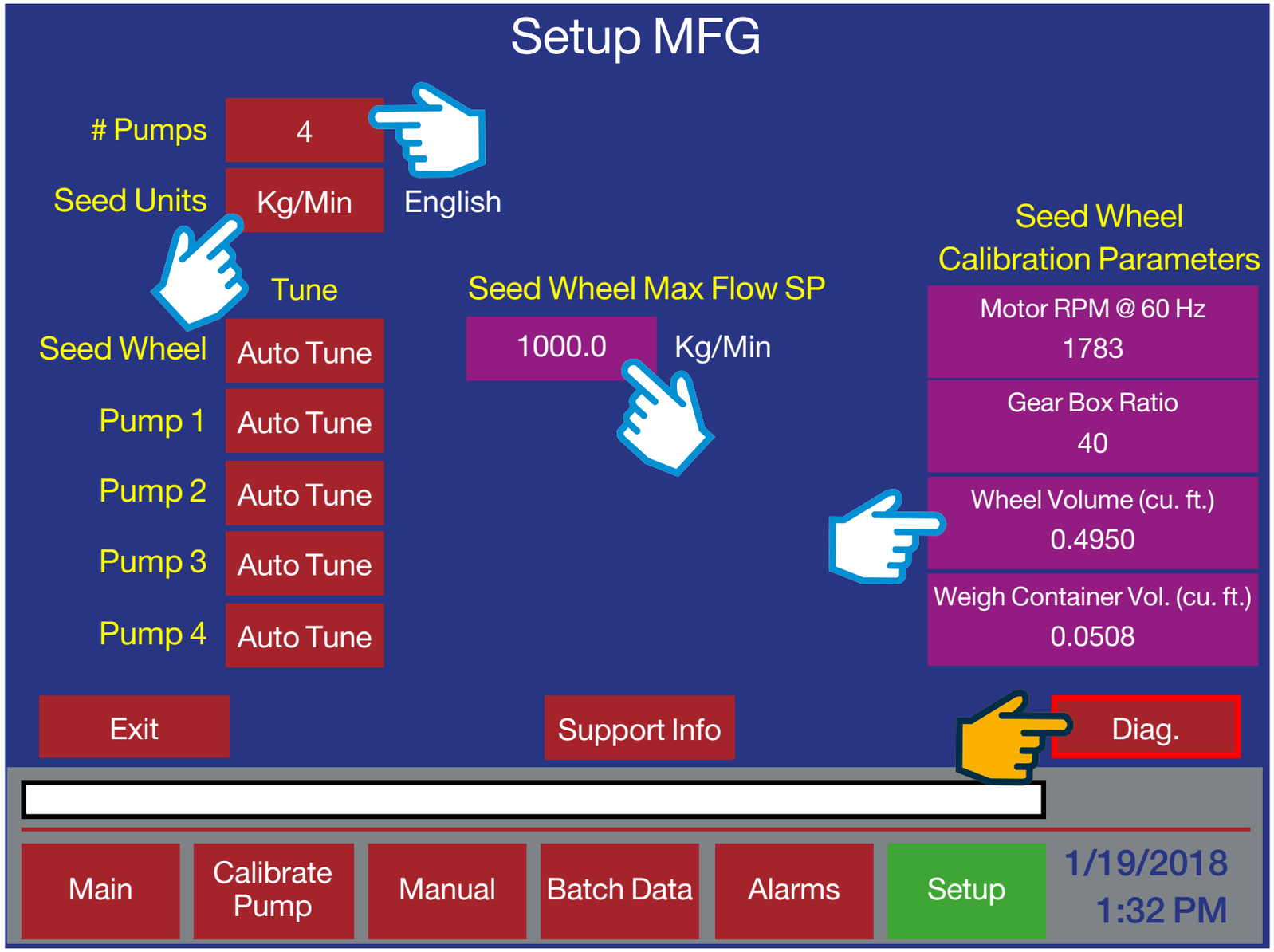
Step 2: Touch the **Kg/Min** button icon. Select either **Kg/Min** or **LBS/MIN**. The button value will toggle between the two types of unit of measure. Select one.

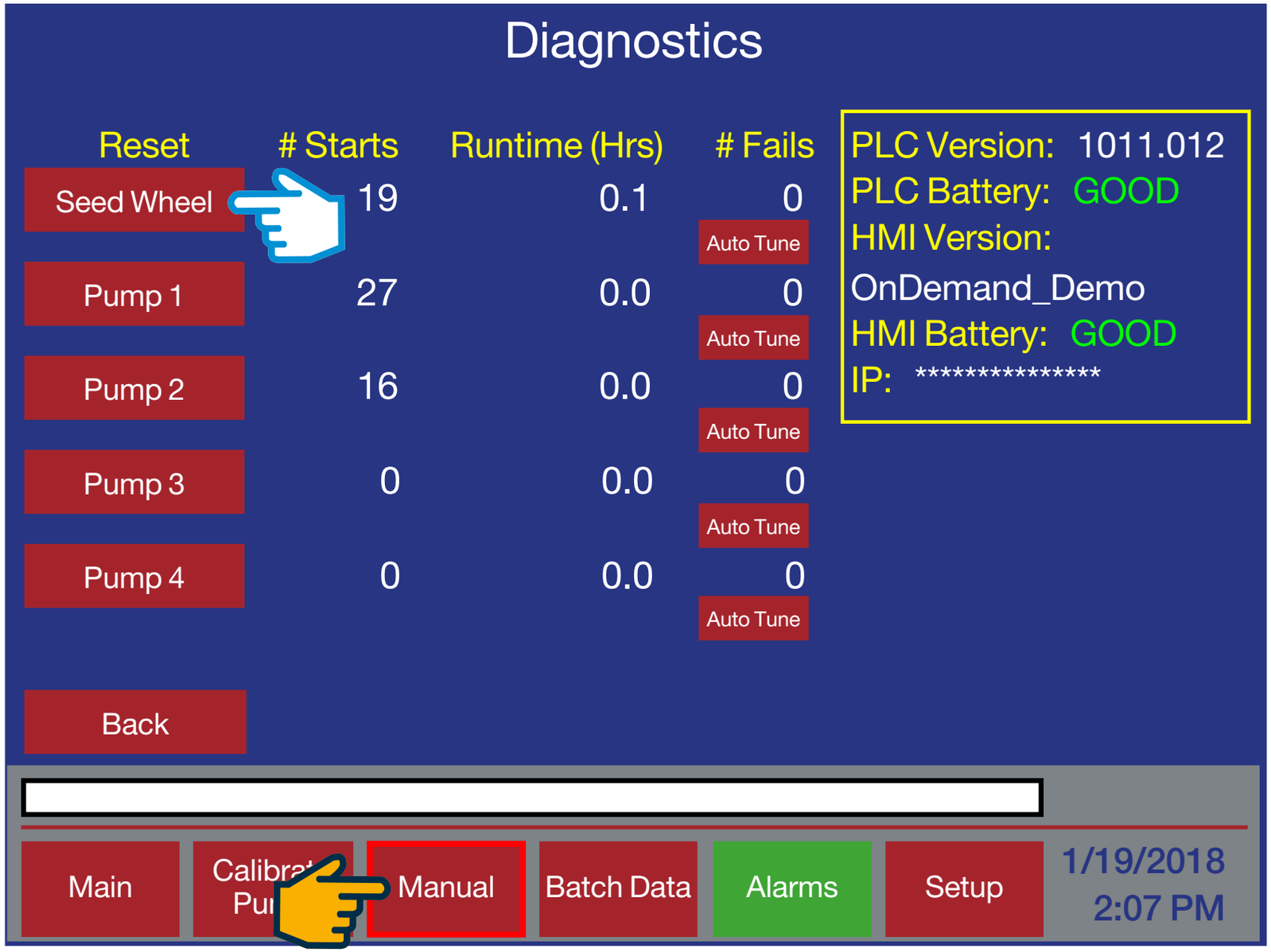
Step 3: Touch the **SEED WHEEL MAX FLOW SP** button icon: navigates to a pop-up touch pad (not shown). For the **RH2000** enter a **2100** value for **LBS/MIN** or a **2500** value for **Kg/Min**. For the **RH800** enter a **900** value for **LBS/MIN** or a **1100** value for **Kg/Min**.

Then touch the **OK** button icon. The value will display* on the **SEED WHEEL MAX FLOW SP** button: the pop-up window closes. *Display of **Kg/Min** or **LBS/MIN** value may not update until user exits/re-enters the **MFG SETUP SCREEN**.

Step 4: Touch the **# PUMPS** button icon. Select either **2 PUMP** or **4 PUMP** option. The button will toggle between **2** or **4** pumping systems. Select one.

Step 5: Touch the **DIAG.** button icon: navigates to the **DIAGNOSTICS SCREEN** ➲



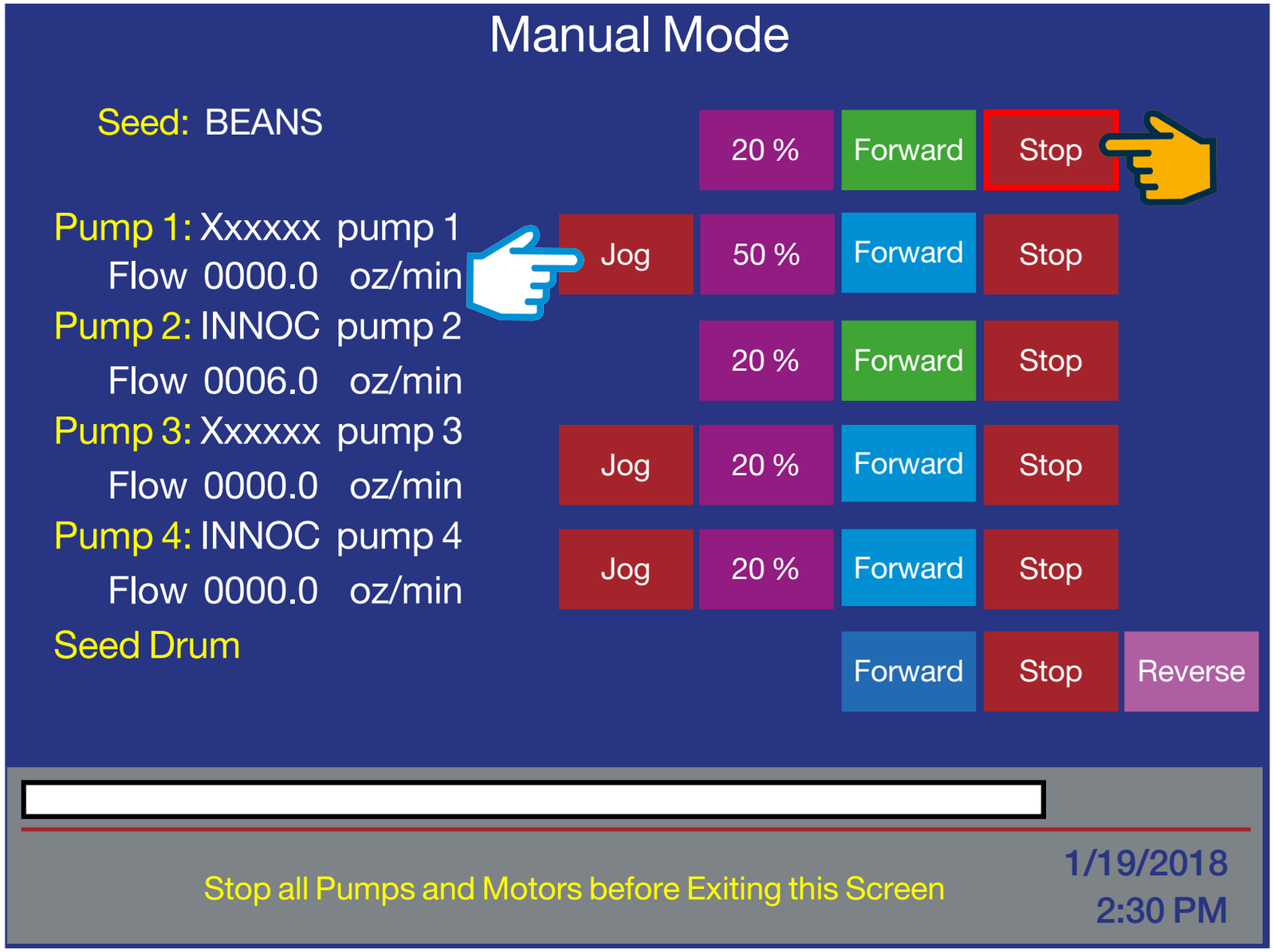


DIAGNOSTICS SCREEN

Seed Wheel or Liquid Pump run errors will be logged on the **DIAGNOSTICS SCREEN** under the **# FAILS** column (above).

Step 1: Touch the **SEED WHEEL** or **PUMP** (1-4) button icon to reset the **# FAILS** value displayed back to zero.

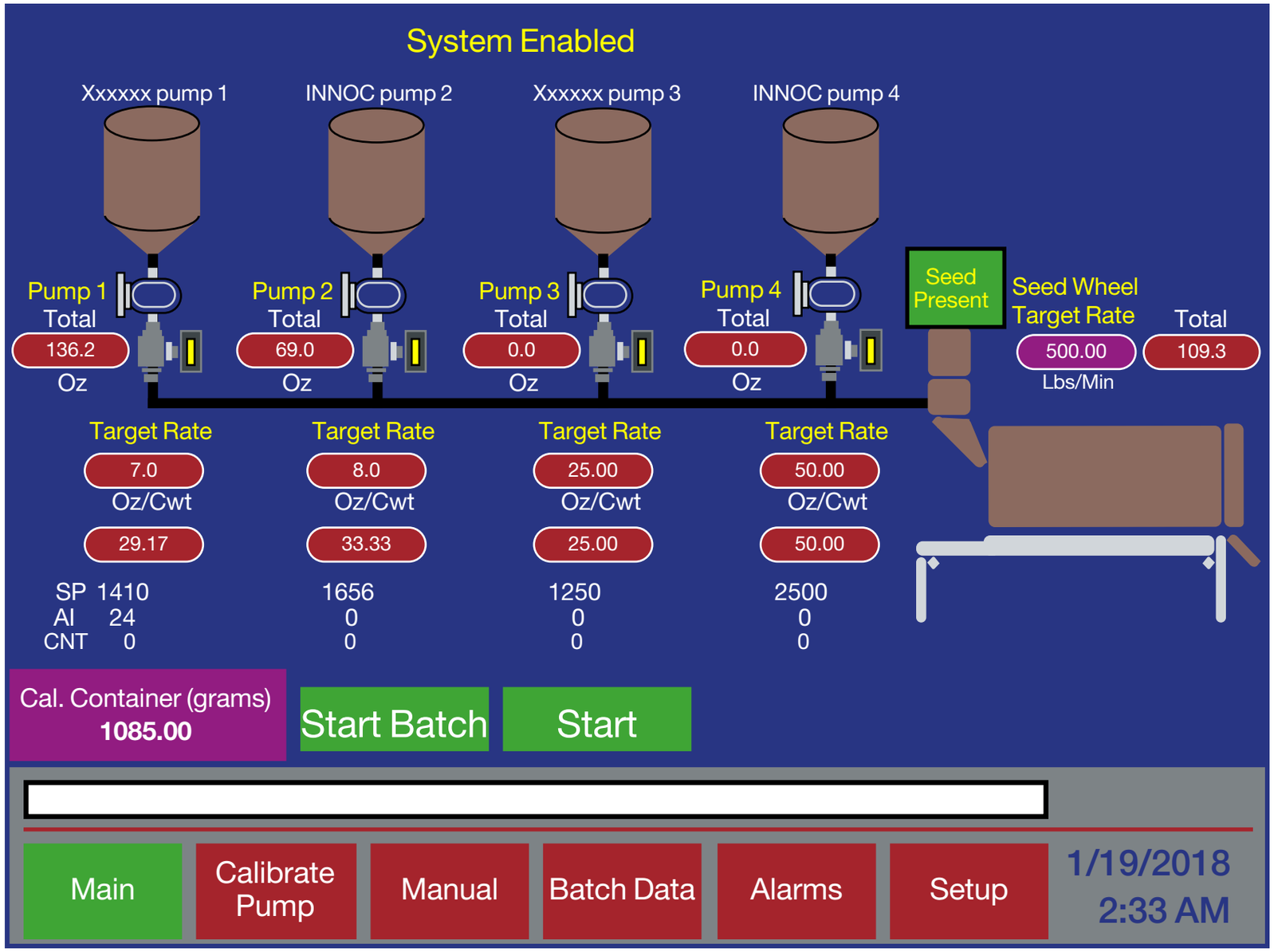
Step 2: Touch the **MANUAL** button icon: navigates to the **MANUAL MODE SCREEN** ➲



MANUAL MODE SCREEN

Step 1: Touch each red **JOG** button icon, to manually jog seed and chemical to the Seed Wheel and from each Pump (1-4) used with the system. This verifies that everything is properly wired and connected and the Auto Tune function is finished with errors.

Step 2: Touch all red **STOP** button icons: navigates to the **MAIN SCREEN ➲**



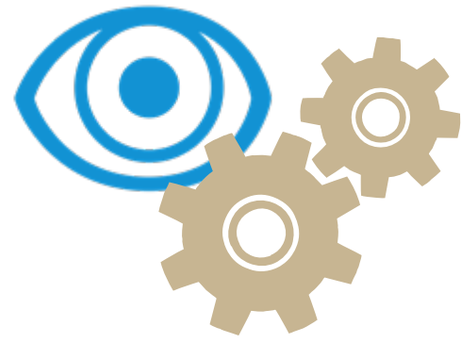
MAIN SCREEN

Installation and Software Configuration are now complete.

POWDER FEEDER

Required installation tools

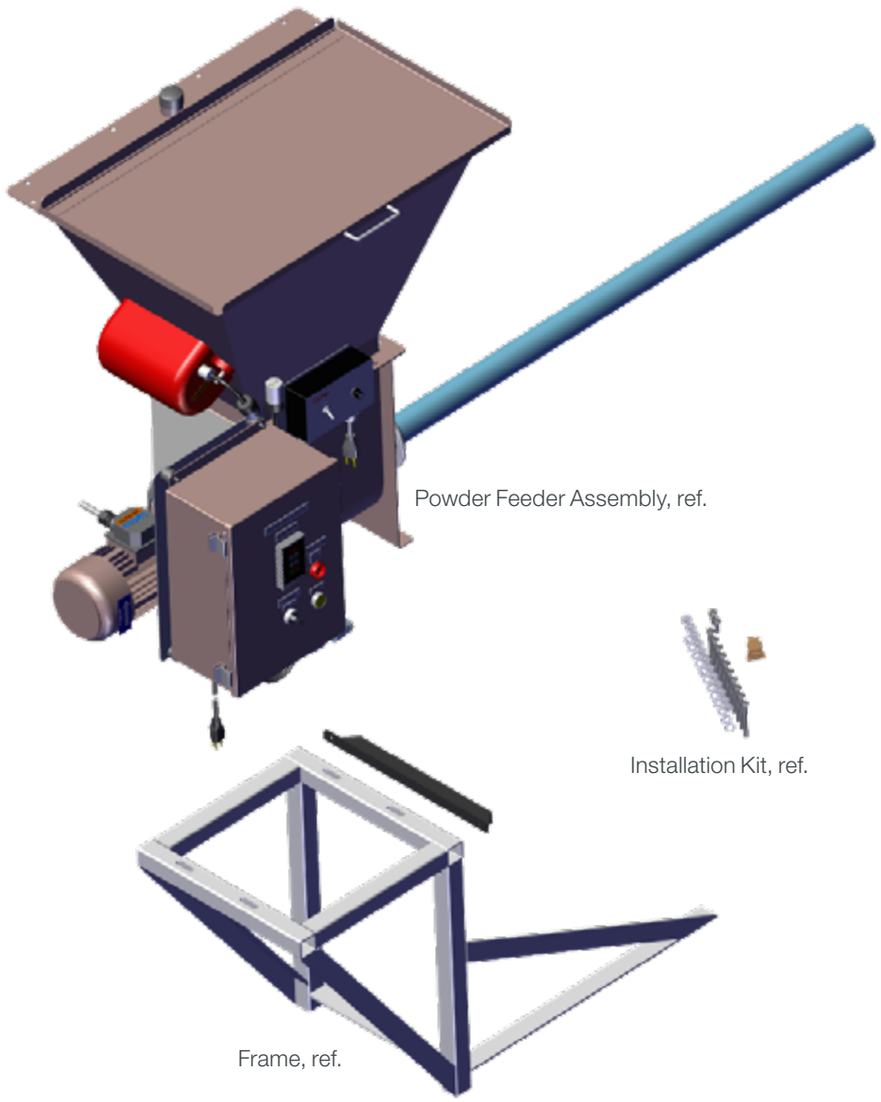
- Material Handling Device
- ½” Wrench (2)
- ½” Drill Bit Index
- Drill
- Petroleum Jelly



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 ➲



Powder Feeder Assembly, ref.

Installation Kit, ref.

Frame, ref.

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.

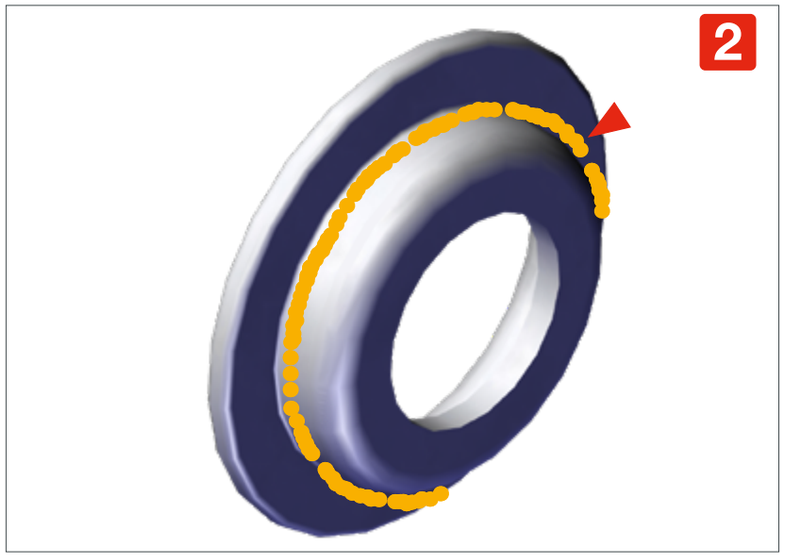
Step 2: Apply petroleum jelly onto the backside of the Auger Tube Seal prior to inserting into the Doghouse (supplied from factory).

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.

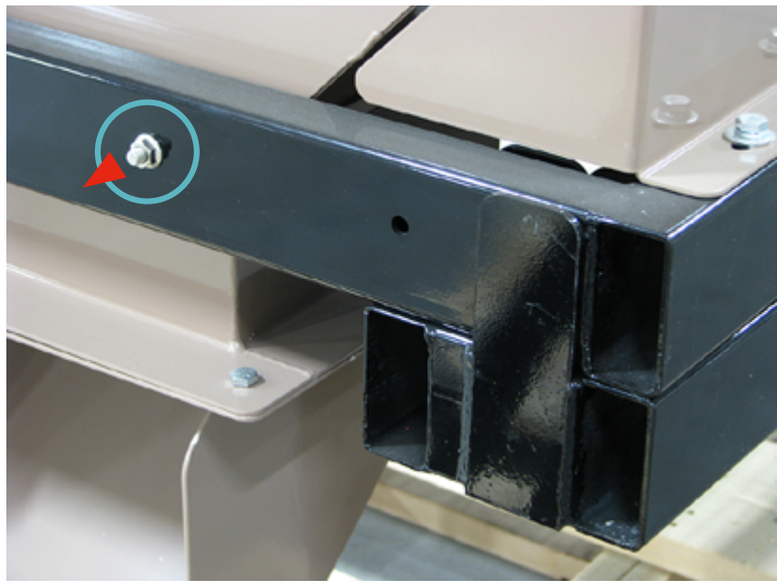


Apply Petroleum Jelly on the backside of the Auger Tube Seal, ref.

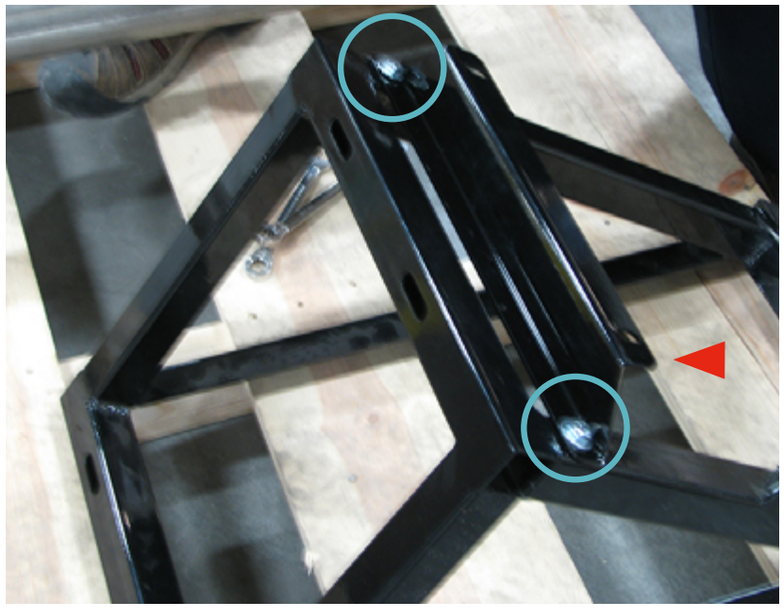
Insert the Auger Tube Seal into the Doghouse, ref.

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**.



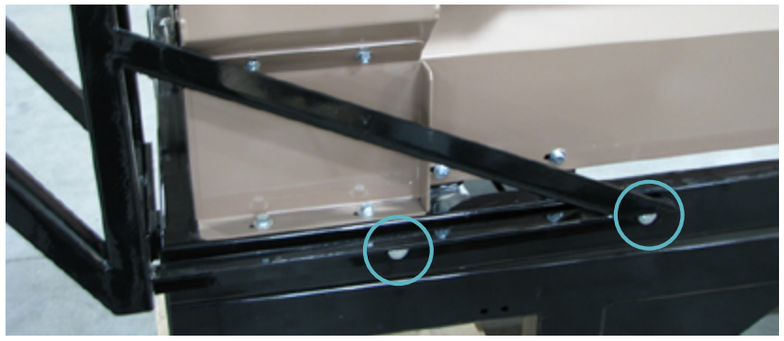
Note: the orientation of the Bracket (facing down towards bottom and in relation to the slot holes on top of the Frame!

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 ➲

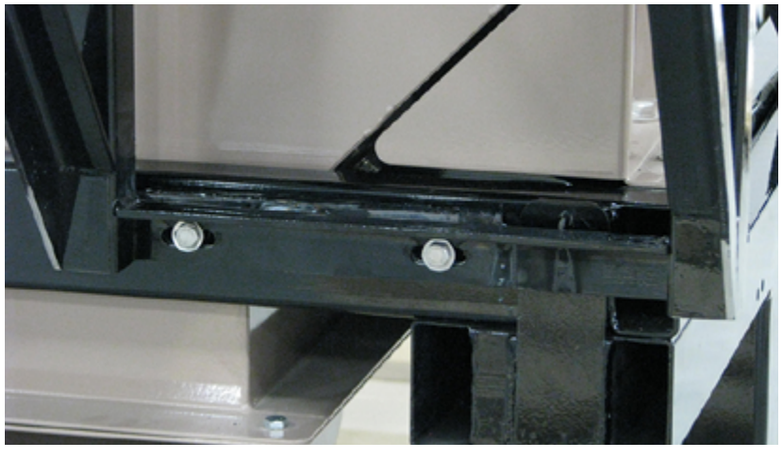
Step 8: Bolt in place with two 5/16-18 x 2.75 Hex Bolts, Washers, Lock washers and Nuts in the following order: bolt+flat washer+[frame]+lock washer+nut.

- **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.**



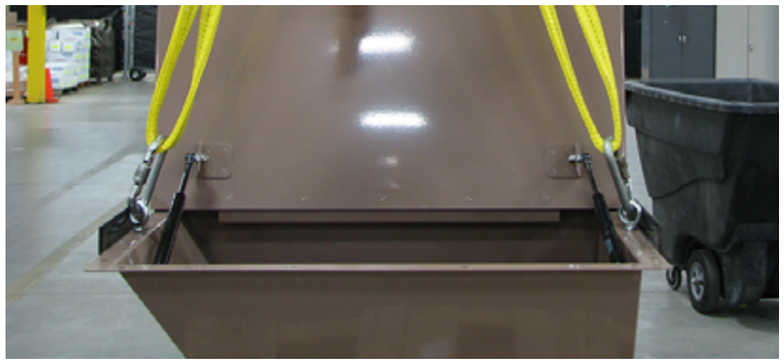
Step 10: Use a 5/16” drill bit. Drill two 5/16” holes in the Doghouse to connect the Powder/Doghouse Bracket to the Doghouse.

- 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.

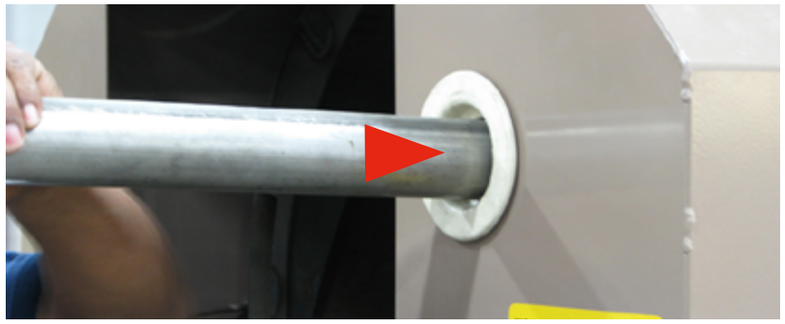
Continued ➲

Step 12: Use proper rigging and lifting techniques to ensure safety when installing the Powder Feeder onto the RH Drum & Frame Assembly. Open the Powder Feeder Lid and connect rigging to each side. Approximate dry weight: 190lbs./ 86Kg.



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

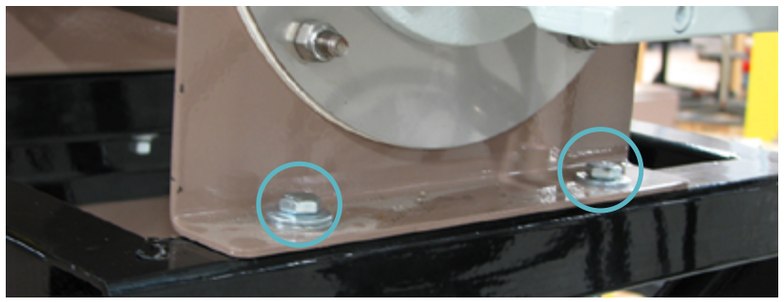
- Carefully insert the Auger Tube into the Auger Tube Seal on the Doghouse Door Plate.



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 ➲

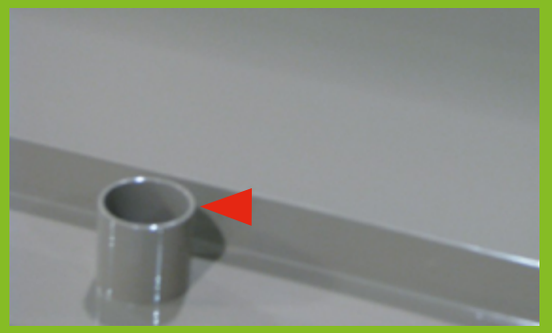


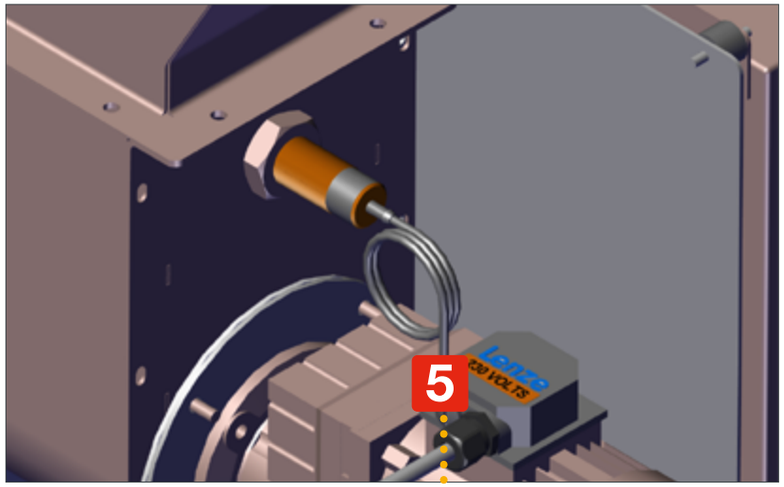
30cfm max. recommended.

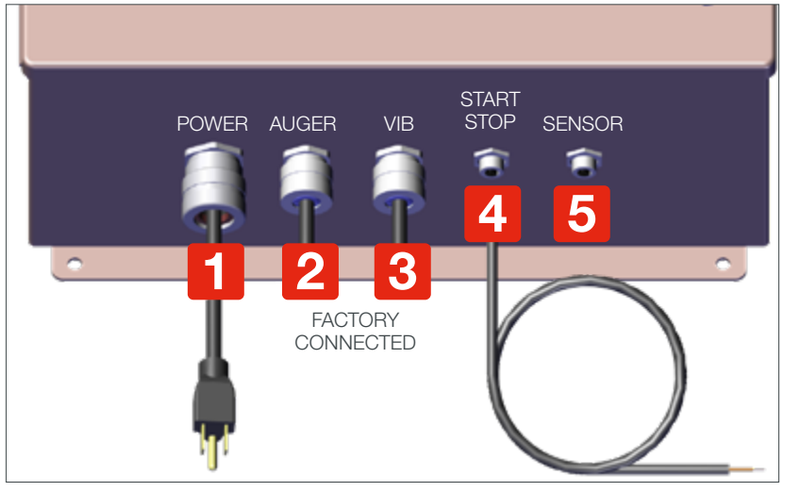
Integrated Aspiration System

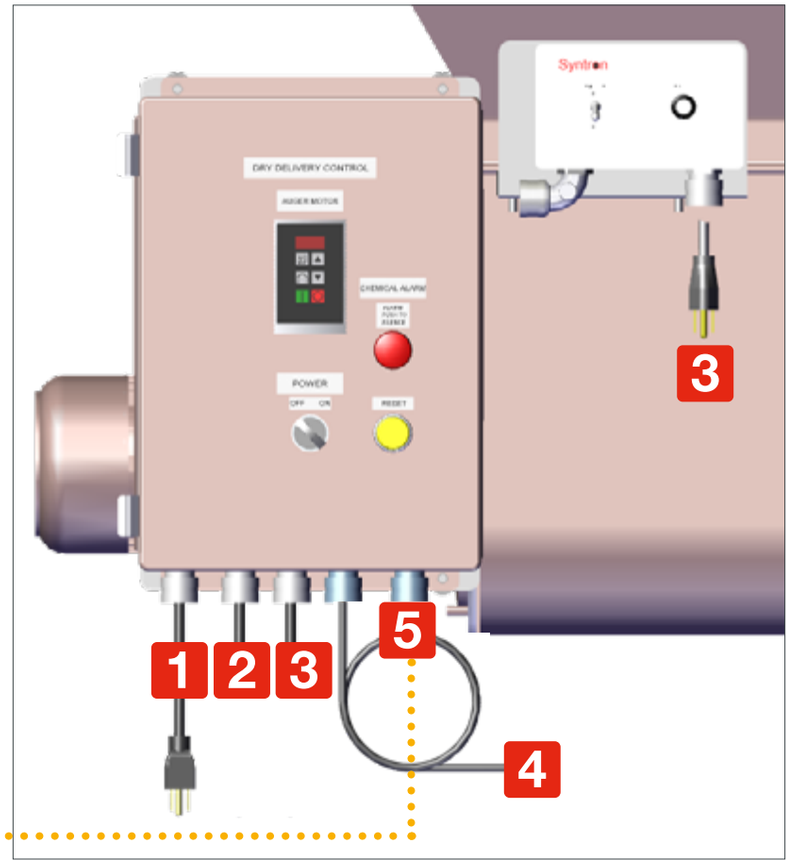
An exhaust unit with slide gate supplied by the customer must be connected to a central aspiration system.

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 CONNEC-TOR FOR START/ STOP CABLE.

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