



# CONE BOTTOM POLY TANKS (CBP)



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.

This manual uses signal words and symbols to help avoid personal injury. Danger, Warning, and Caution are signal words used to identify the level of hazard.



**Danger** alerts that an extreme hazard will cause serious injury or death if operators or installers do not follow the recommended precautions.



**Warning** alerts that a hazard may cause serious injury or death if operators or installers do not follow the recommended precautions.



**Caution** alerts that a hazard may cause minor or moderate injury if operators or installers do not follow the recommended precautions.



**Tip:** calls attention to special information.



**Note:** emphasizes general information worthy of attention.



**Example:** gives a problem or exercise that illustrates a method or principle.

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.



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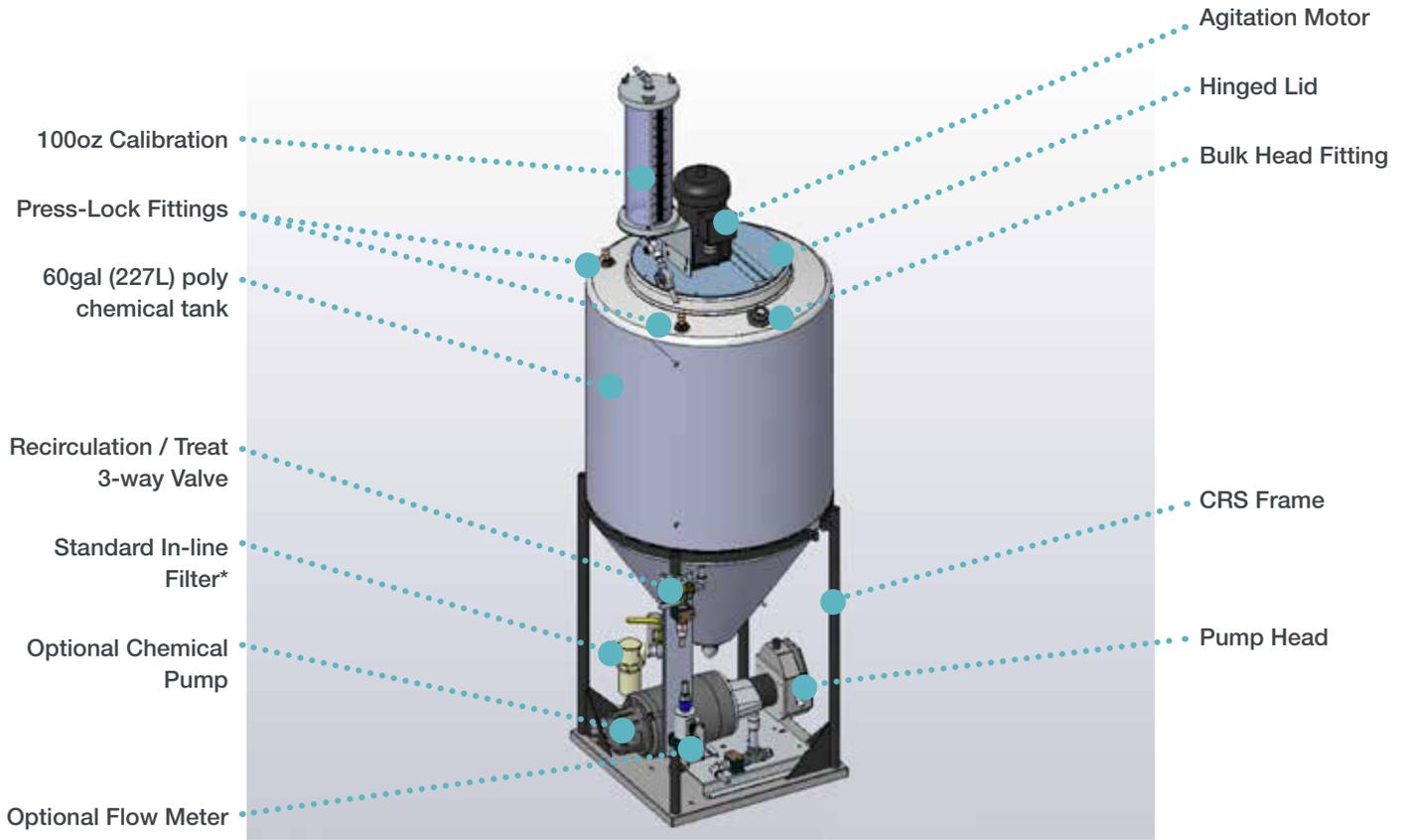
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# SYSTEM DIAGRAM

## CONE BOTTOM POLY TANK (CBP)



Base Model, no agitation; pump

### EXPLANATORY NOTES

Dry Weight (Base Model)  
**65lbs (27kg)**

Height (Base Model)  
**57.5" [1460mm]**

Capacity:  
**60gal [227L]**

# EQUIPMENT INSTALLATION



## Required assembly tools

- Slot Screwdriver (1)
- 9/16" wrench (1)
- 7/16" wrench (1)
- 5/16" Allen Wrench (1)
- 5 Gallon Pail (1)
- Hose Cutter (1)

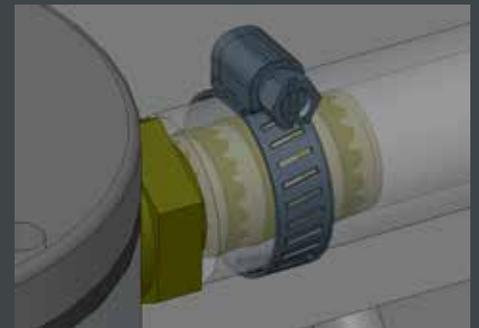
## Spill Containment

Spill containment is recommended around chemical supply tanks inside a building or structure.

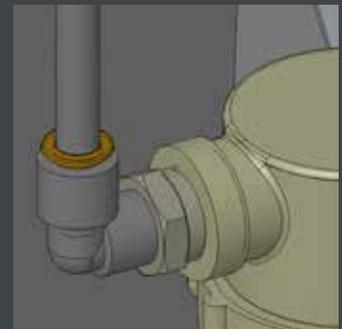


## Treatment Line Connection

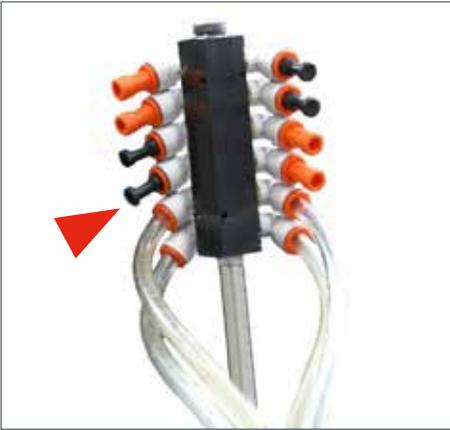
**Step 1:** The Premium Filter Assembly has a Hose Clamp attached. Connect one end of the factory supplied Tubing with Hose Clamp onto the Premium Filter Brass Hose Barb. Tighten in place with a screwdriver.



**Step 2:** The Press-lock fitting can be installed on the OUTLET of the Standard Filter Assembly, instead of the brass Hose Barb Fitting from the factory. Tanks with standard filters, connect the treatment line by pushing one end of the factory-supplied tubing into the press-lock fitting on the filter.



**Step 3:** Remove plugs. Insert the other end of the factory supplied Tubing into the Treater Chemical Inlet Assembly Press Lock Fitting.



## Metering Valve Assembly

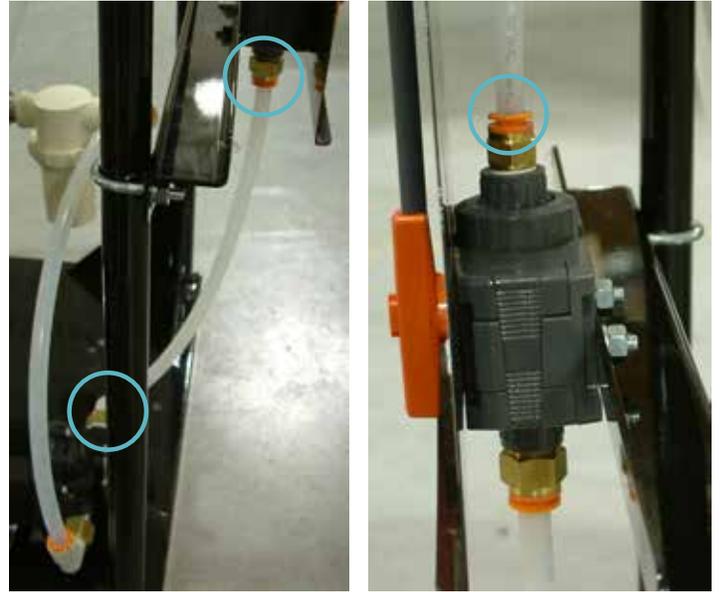
### Diaphragm Pumping System

**Step 1:** Components and hardware to install the Metering Valve Assembly will be included with the Tank in shipment. Insert the U-bolt from behind the Tank Stand Frame and push through the Mount Bracket. Use a 7/16" wrench and fasten in place in the following order: U-bolt+[Frame+Mount Bracket]+flat washer+lock washer+nut. Securely tighten. Repeat on other side of Mount Plate.



**Step 2:** Insert one end of the factory supplied 1/2" Tubing into the Pump Outlet Press Lock fitting. Cut the tubing to fit and connect the other end into the bottom Metering Valve Press Lock fitting.

Insert one end of the Tubing into the Metering Valve Outlet Press Lock fitting on top of the Metering Valve Assembly.



**Step 3:** Remove plugs. Insert the other end of the factory supplied Tubing into the Treater Chemical Inlet Assembly Press Lock Fitting.



## LS Pump Control

**Step 1:** The LS Pump Control Kit ships from the factory in the CBP Tank box. Remove from packaging and attach to the Tank Stand. Locate the Mount Plate in position. Set the LS Control on the Mount Plate.



**Step 2:** Insert the U-bolt from behind the Tank Stand Frame and push through the Mount Plate. Use a 7/16" wrench and fasten in place in the following order:

U-bolt+[Frame+Mount-plate]+lock washer+nut. Securely tighten. Repeat on other side of Mount Plate.

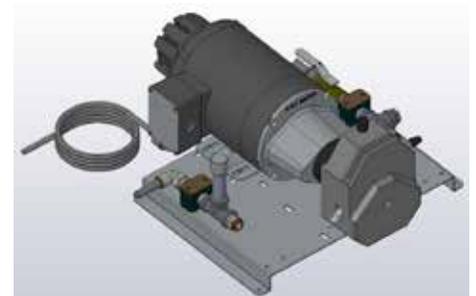


**Step 3:** Connect the Pump to the backside of the LS Controller. Connect 115VAC Control Power Cord to external power source. If used with treating system, Connect Control Power Cord to Treater Control Panel (refer to Treater manual for details).



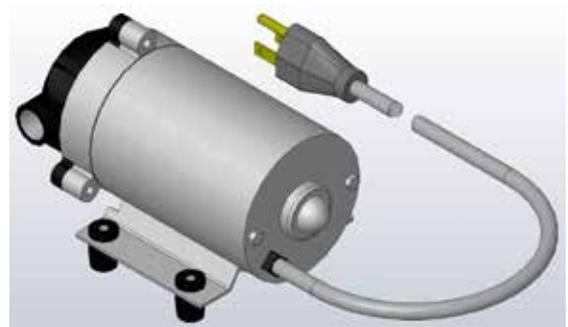
## I/P Pumping Systems

**Step 1:** I/P Pump Motor leads will need to be wired by a qualified electrician inside the Treater Control Panel (refer to Treater manual for details) according state and local codes. Some Pumps are equipped with a three-prong twist-lock male connector. Connect underneath the control panel (refer to Treater manual for details). Encoder signal cable connects to the treater control panel (refer to Treater manual for details).



## Diaphragm Pumping Systems

**Step 1:** Connect 115VAC Power Cord to external power source. Install an ON/OFF switch. If used with treating system, connect Power Cord to Treater Control Panel (refer to Treater manual for details).





**Warning!** Exercise extreme caution when working with chemicals! Refer to the Exposure Control Guide at the end of manual.

### Prime the Treatment Line

**Step 1:** Connect the Tank Agitation Power Cord to an external 115VAC power source. Tank agitation begins when power cord is plugged into power source. Install a remote ON/OFF switch for each Tank agitation power cord to avoid connecting/disconnecting for START/STOP modes.



**Step 2:** Ensure the tank valves are in the CLOSED position.



**Step 3:** Consult the product label to configure the slurry mix. Open the Tank Cover Lid and pour in desired chemicals. Allow chemicals to agitate for a few minutes.



**Step 4:** Turn the LS Control Pump Switch to FORWARD.



**Step 5:** Ensure the RH Basic Main Power Switch is in the ON position (UP). Power light will also indicate that the power is ON when lit.



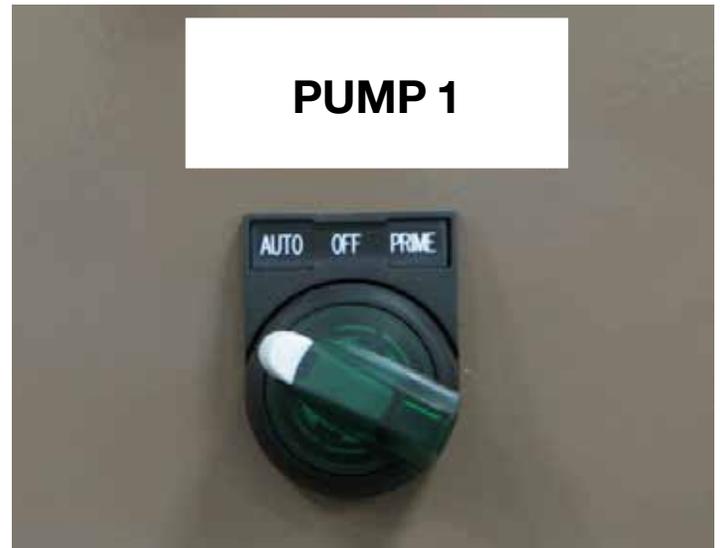
**Step 6:** Turn the RH Basic PUMP #1 Switch to the PRIME position.



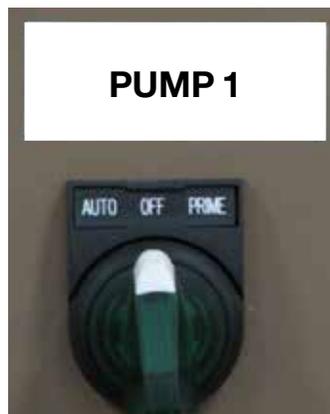
**Step 7:** The Pump will run, purging the treatment lines of air and send chemical to the Treater Chemical Inlet Assembly.



**Step 10:** Turn the pump #1 switch to the AUTO position.



**Step 8:** Then turn PUMP #1 Switch to OFF position. Repeat for all Pumps used (1-4).



**Step 9:** When ready to calibrate, ensure the tank valves are in the TREAT mode.



# CALIBRATION



**Warning!** Exercise extreme caution when working with chemicals! Refer to the Exposure Control Guide at the end of manual.

## Diaphragm Pump & RH Basic

**Step 1:** Open the main shut-off valve underneath the Tank.



**Step 2:** Ensure the recirculation valve is in the TREAT mode.



**Step 3:** Disconnect the treatment line from the Chemical Inlet Assembly on the treater.



**Step 4:** Hold the treatment line in a graduated beaker (customer supplied).



**Step 5:** Turn Pump #1 Switch to PRIME for one minute.



**Step 6:** Turn Pump #1 Switch to OFF position.



Note: Make note of the amount (ounces) of chemical pumped into the beaker in one minute. Compare that amount to the chemical product label requirement.

**Step 7:** Adjust chemical flow up or down. Repeat calibration until desired output is achieved.



**Step 8:** Connect the treatment line into the chemical inlet assembly on the treater.



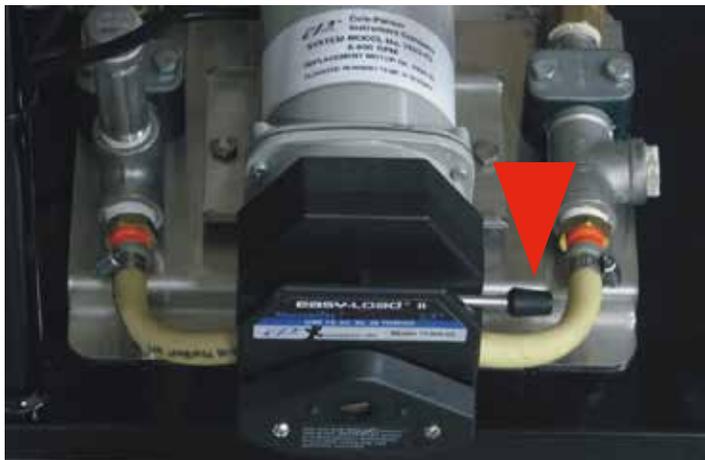
**Step 9:** Turn Pump #1 switch to the PRIME position. The pump will run, sending chemical to the chemical inlet assembly on the treater. Turn the Pump #1 switch to the OFF position.



Note: Check pump calibration on each lot of seed. If extremely high or low temperatures exist, the viscosity and flow of certain treatment products may be affected. A typical example would be treating early in the morning at colder temperatures compared to treating in the afternoon when the temperature has increased.

### LS Pump, Closed Calibration & RH Basic

**Step 1:** Ensure the pump head is clamped down on the pump element.



**Step 2:** Ensure the pump main flow valve is in the TREAT mode.



**Step 3:** Ensure the pump recirculation valve is in the RECIRCULATION mode.



**Step 4:** Ensure the tank valves are in the TREAT mode.



**Step 5:** Close the calibration drain valve, turn to the right.



**Step 6:** Turn the LS Control Pump Switch to FORWARD.



**Step 7:** Ensure the RH Basic Main Power Switch is in the ON position (UP) Power light will also indicate that the power is ON when lit.



**Step 10:** Then turn PUMP #1 Switch to OFF position. Repeat for all Pumps used (1-4).



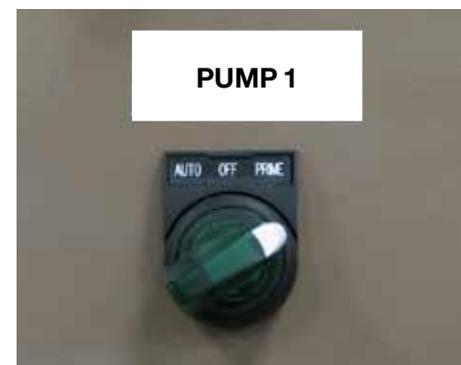
**Step 8:** Turn the RH Basic PUMP #1 Switch to the PRIME position.

**Step 11:** Open the calibration drain valve, turn to right to stop recirculation back into tank.

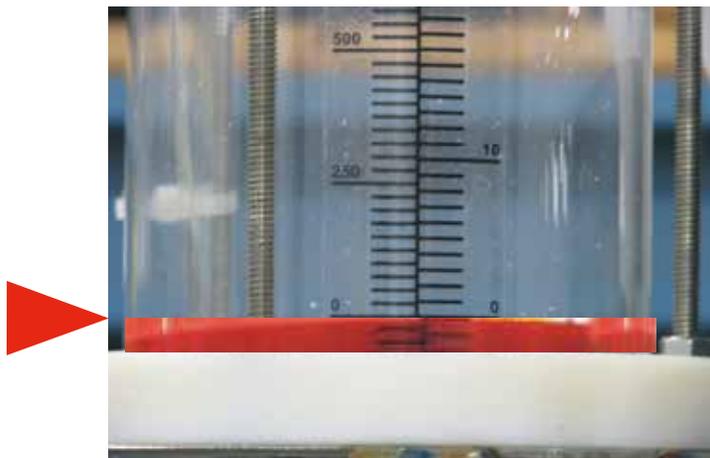


**Step 12:** Turn the RH Basic PUMP #1 Switch to the PRIME position.

**Step 9:** The Pump will run, purging the treatment lines of air and send chemical to the Treater Chemical Inlet Assembly.



**Step 13:** The Pump will run, filling the Calibration Graduated Beaker with chemical just up to the ZERO mark.



**Step 14:** Turn the RH Basic PUMP #1 Switch to OFF position.



**Step 15:** Turn the RH Basic PUMP #1 Switch to the PRIME position.



**Step 16:** The Pump will run, filling the Calibration Graduated Beaker with chemical for one minute.



**Step 17:** Turn the RH Basic PUMP #1 Switch to OFF position. Ensure chemical does not drain from the graduated cylinder! If required, open and close the Drain Valve to ensure the Valve properly seals!



**Step 18:** Note the amount (ounces) of chemical added to the Beaker in one minute. Compare that number to the chemical product label requirement. Adjust the Dial on the LS Pump Control (increase or decrease) to achieve desired Pump output speed.



**Step 19:** Turn the Drain Valve underneath the calibration Tube to the right. Chemical will drain from the Beaker back into the Supply Tank. Repeat these calibration steps for each Supply Tank used until desired calibration results are achieved.



**Step 20:** When calibration is complete, turn the Recirculation Valve in the TREAT mode.



**Step 21:** Turn the RH Basic PUMP #1 Switch to the PRIME position.



**Step 22:** The Pump will run, purging the treatment lines of air and send chemical to the Treater Chemical Inlet Assembly.



**Step 23:** Then turn PUMP #1 Switch to OFF position. Repeat for all Pumps used (1-4).



**Note:**  
 Check pump calibration on each lot of seed. If extremely high or low temperatures exist, the viscosity and flow of certain treatment products may be affected. A typical example would be treating early in the morning at colder temperatures compared to treating in the afternoon when the temperature has increased.

### Optional Backlight Kit

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

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



**Step 2:** Loosen the existing lower nut connected to the same stud as above.



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



**Step 4:** Re-tighten the wing nut on the stud and the lower nut. Connect the power cord to an external 115VAC power source.



Backlight Kit for 100oz Beakers

# 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.



## 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 treating facility, workers, farmers and the environment during sowing.



## Cleaning

Use a vacuum to clean machines and coveralls. Never use compressed air.



## 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.

# MAINTENANCE

## Standard Filter

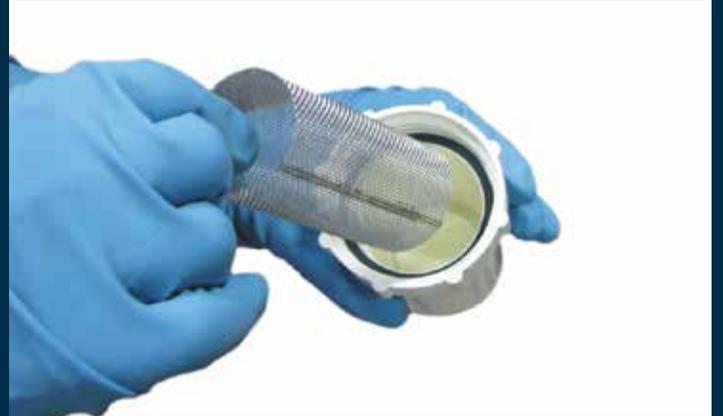
**Step 1:** Turn the supply tank valves to the RINSE mode.



**Step 2:** Place a drip pan or bucket underneath the filter assembly. Unscrew (left twist) the filter bottom from the filter top. May need to use a channel locks to loosen the threads.



**Step 3:** Remove the filter screen from the filter bottom and check it for clogging and material build-up. Clean it thoroughly.



**Step 4:** Ensure the gasket is seated correctly below the threads. Replace the filter screen in the filter bottom.

Carefully thread (right twist) the filter bottom back onto the filter top. Hand tighten only!



## Premium Filter

**Step 1:** Turn the supply tank valves to the RINSE mode.



**Step 2:** Check filters periodically for clogging issues. Use a 9/16" wrench to remove the filter cap from the filter body. Remove the filter basket and clean thoroughly.



**Step 3:** Replace the filter basket in the filter body. Replace the filter cap on the filter body. Use a 9/16" wrench to tighten the two bolts.



## Changing LS & I/P Pump Elements

**Step 1:** Turn the supply tank valves to the RINSE mode.



**Step 2:** Close the pump main flow valve.



**Step 3:** Use the pump head handle to OPEN the pump head.



**Step 4:** Push each orange press lock fitting to release and remove the element from the pump head.



**Step 5:** Insert a new element fittings into each of the orange pump fittings.



**Step 6:** Ensure the Pump Element fits properly onto the Pump Rollers and under each Clip. Failure to properly align the Element may cause Pump failure!



**Step 7:** Use the pump head handle to CLOSE the pump head.



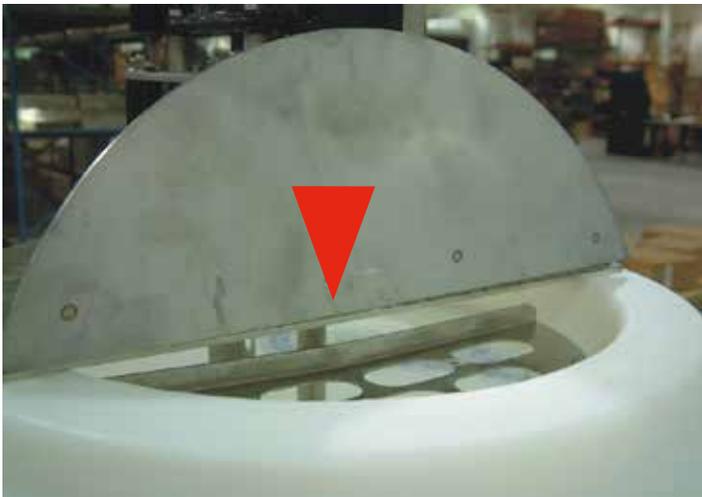
### I/P Pump Only

**Step 1:** Set the Pump Head Tension Adjustment Knob to 3.



### Tank Rinse

**Step 1:** Fill the supply tank with clean water.



**Step 2:** Ensure the tank valves are in the TREAT mode.



**Step 3:** Turn the pump main flow valve and recirculation Valves in the TREAT mode.



**Step 4:** Push the orange fitting and disconnect the treatment line from the Chemical Inlet Assembly on the Treating Head Assembly.



**Step 5:** Hold the Treatment Line in a 5 gallon pail.



**Step 6:** Ensure the RH Basic Main Power Switch is in the ON position (UP) Power light will also indicate that the power is ON when lit.

**Step 8:** Turn the RH Basic PUMP #1 Switch to OFF position.



**Step 7:** Turn the RH Basic PUMP #1 Switch to the AUTO position. Allow the Pump to run and completely empty the CBP Tank, Pump Element, Treatment Line.

**Step 9:** Fill the CBP Tank with clean water mixed with ammonia or a mild detergent or a cleaning solution recommended by the manufacturer of the treatment product. Turn PUMP #1 Switch to the AUTO position. Allow the Pump to run and completely empty the CBP Tank, Pump Element, Treatment Line.



**Step 10:** Then turn PUMP #1 Switch to OFF position. Repeat this rinse process for each Pump used (1-4).



Note:

Rinse water (gray water) may be saved and used with the next slurry mix or dispose of properly, according to state and local regulations.

If the CBP is going to be stored in subfreezing temperatures, flush with products to prevent freezing such as RV Antifreeze or dilute windshield washer fluid, to prevent freezing which will cause pump damage.

Failure to clean the CBP properly, or failure to completely drain all liquid from the pump and lines after use, may damage the equipment and void any warranties expressed or implied.

It will not damage the pump to run it dry or with the valves in the closed position.

## End of season Shut-down

**Step 1:** After Step 3 on page 21, remove the Chemical Inlet Assembly from the Treater (use 15/16 Allen Wrench). Place it in 5 gallon pail. Follow steps 8 - 10 for final tank rinse.





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