



INOCULATION TANKS 15 GALLON #79230745 30 GALLON #79894651



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.

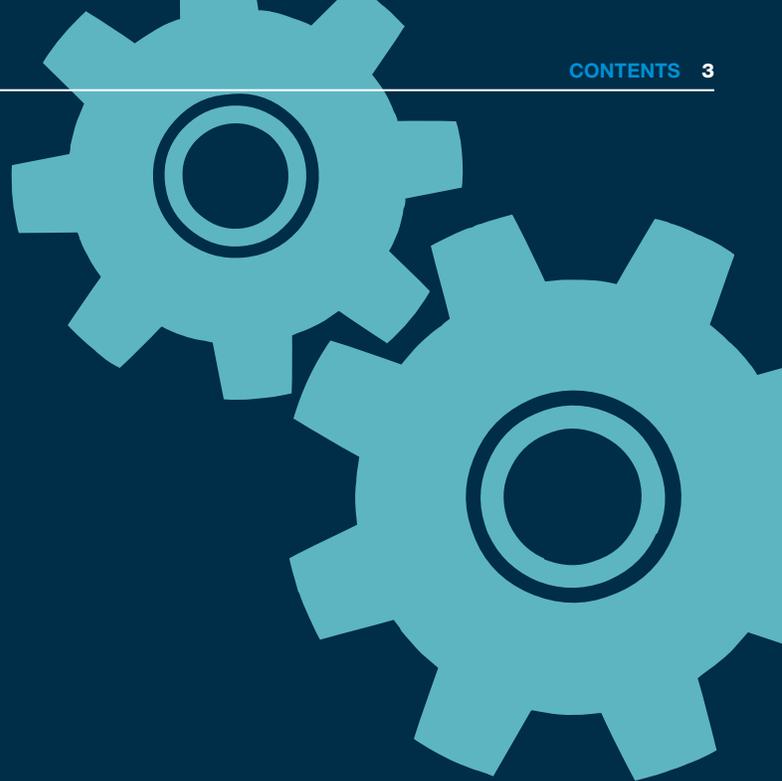


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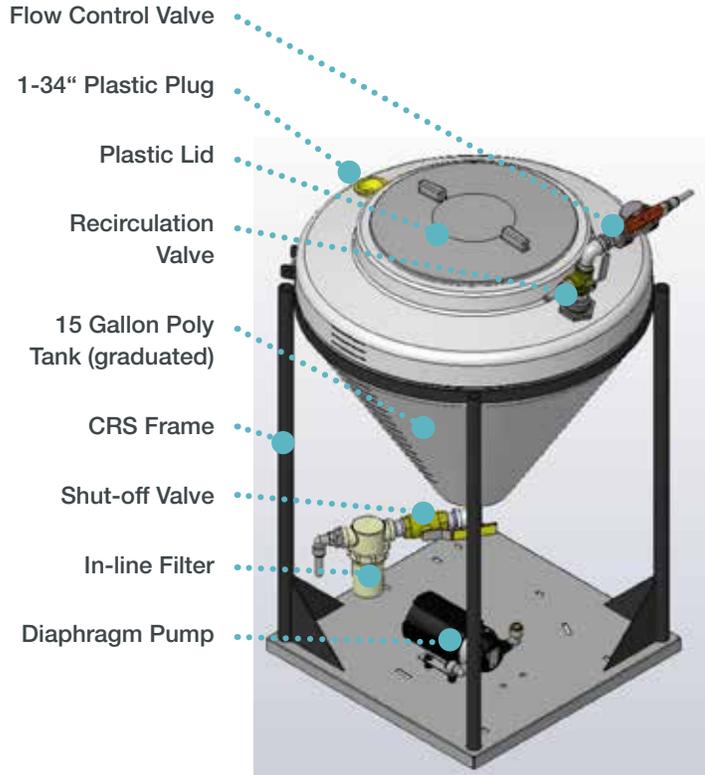


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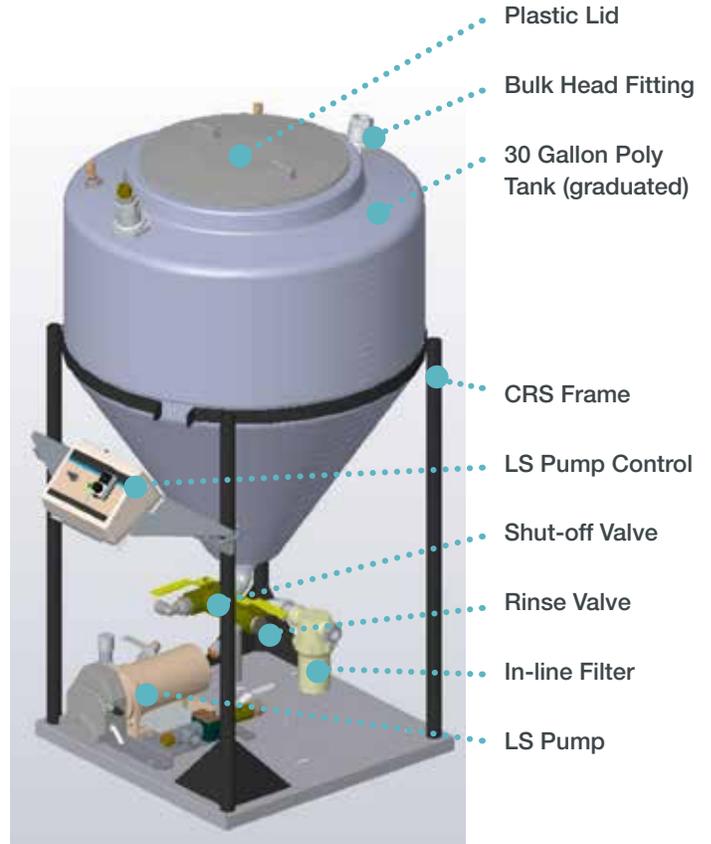
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SYSTEM DIAGRAM

15 & 30 GALLON TANKS



15 Gallon Tank



30 Gallon Tank

EXPLANATORY NOTES - 15 GALLON TANK*

Dry Weight
70lbs.

Service Required
115V, 1ph, 60Hz, .7A.

Capacity:
up to 15 Gallons

*15 Gallon Tank requires no assembly.

EXPLANATORY NOTES - 30 GALLON TANK*

Dry Weight
90lbs.

Service Required
115V, 1ph, 60Hz, 2.0A.

Capacity:
up to 30 Gallons

*30 Gallon Tank requires assembly.

EQUIPMENT INSTALLATION



Required assembly tools

- 7/16" wrench (1)

Spill Containment

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



15 Gallon Tank

Diaphragm Pump Connection

RH Basic Control

Step 1: Connect the Diaphragm Pump 115V AC power cord to the corresponding 115V AC pig tail power cord receptacle underneath the RH 4-Pump Control marked PUMP 1-4 (select one).





Warning! Exercise extreme caution when working with chemicals! Refer to the Exposure Control Guide.

Step 2: Insert one end of Tubing into the Metering Valve Outlet Press Lock fitting on top of the Metering Valve Assembly.



Step 3: Start at the bottom and insert the other end of the Tubing into the Treater Chemical Inlet Assembly Press Lock Fitting.



Step 4: Remove Tank Cover Lid and pour in inoculant product. Replace Lid when done.



30 Gallon Tank

LS Pump Control

RH Basic Control

Step 1: Locate the LS Control Mount Plate in position.



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. Set the LS Control on the Mount Plate. Connect 115VAC Control Power Cord to Treater Control Panel.



LS Pump Element Connection

Step 1: Use the Pump Head handle to open the Pump Head. Set the pump element on the roller heads. Insert element ends into each orange fitting on both sides of the Pump.



Step 2: Ensure the Pump Element lays on the roller and behind the clips on the Head.



Step 3: Use the Pump Head handle to close the Pump Head.



Treatment Line Connection

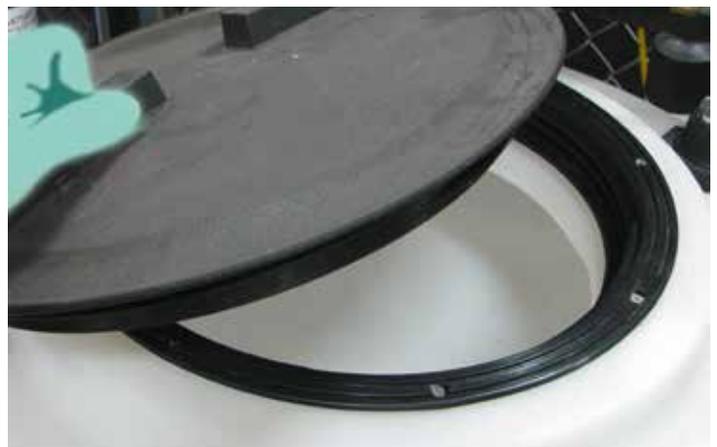
Step 1: Insert one end of the Tubing into the Pump Valve Outlet Press Lock fitting on the side of the Pump Assembly.



Step 2: Start at the bottom and insert the other end of Tubing into the Treater Chemical Inlet Assembly Press Lock Fitting.



Step 3: Remove Tank Cover Lid and pour in inoculant product. Replace Lid when done.



CALIBRATION

Required assembly tools

- Graduated Beaker



15 Gallon Tank

Diaphragm Pump

RH Basic 4- Pump Control

Step 1: Open the Tank Main Shut-off valve.



Step 2: Ensure the Recirculation Valve is in the TREAT mode.



Step 3: Disconnect the treatment line from the Chemical Inlet on the treating head.



Step 4: Hold the treatment in the graduated Beaker.



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.

Required assembly tools

- Graduated Beaker



30 Gallon Tank

LS Pump

RH Basic 4 Pump Control

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: Turn the LS Control Pump Switch to FORWARD.



Step 6: Disconnect the treatment line from the Chemical Inlet on the treating head.





Step 7: Hold the treatment in the graduated Beaker.



Step 8: Turn Pump #1 Switch to PRIME for one minute.



Step 9: 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.



Note: Speed Indicator sets the speed of the pump. The higher the number, the faster the speed of the pump... turn dial right or left.

$$296\text{ml} \div 100\text{cwt} = 2.96\text{ml} \times 60\text{lbs} = 177.6$$

Multiple calibration runs may need to be made by adjusting the LS pump speed, until the desired amount of chemical pumped reaches the target amount.



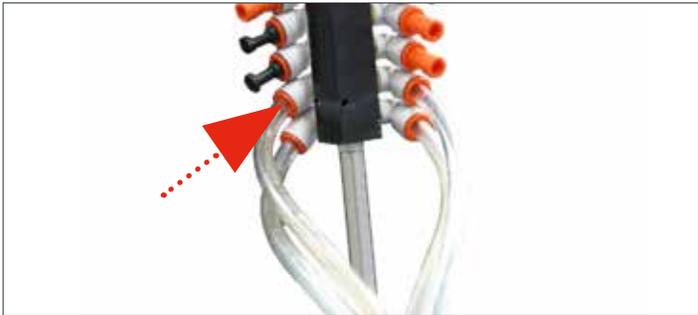
The calibration process will need to be repeated whenever a new seed type or seed size is introduced into the treating process.

Changes beyond the control of the operator or the functionality of the machine, such as temperature, humidity and winds peed throughout the day, can affect the calibration.



It is highly recommended that calibration checks be made periodically throughout the day, to help ensure proper application rates are achieved.

Step 10: Connect the treatment line into the chemical inlet assembly on the treater.



Step 11: 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.

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

15 & 30 Gallon Tank In-line Filter

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



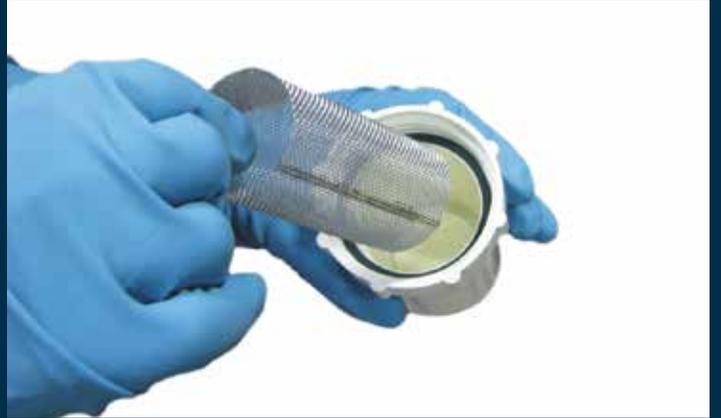
15 Gallon Tank Valve



30 Gallon Tank Valves

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!



Changing LS Pump Elements

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



15 Gallon Tank Valve



30 Gallon Tank Valves

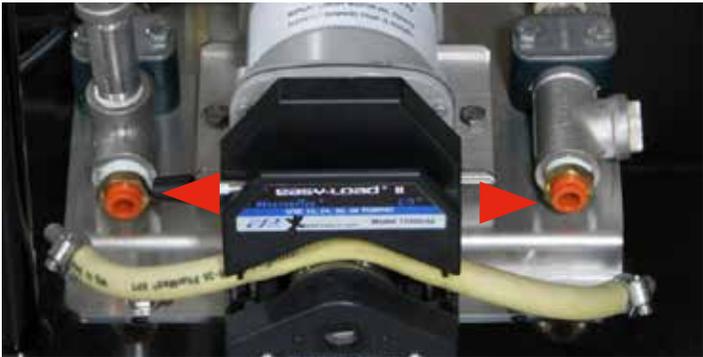
Step 2: Close the pump main flow valve.



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!

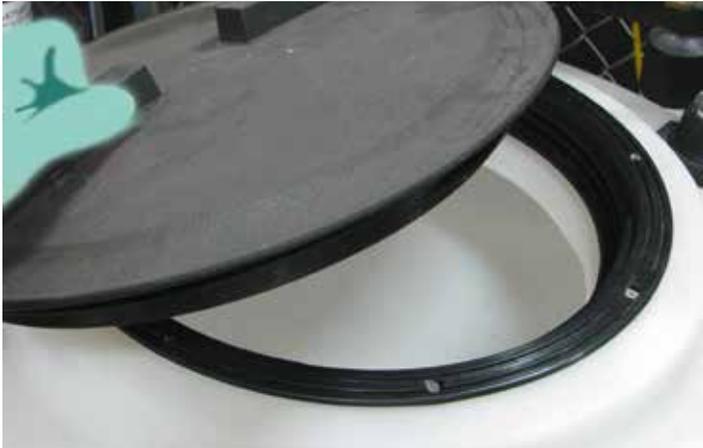


Step 7: Use the pump head handle to CLOSE the pump head.



Tank Rinse

Step 1: Remove Tank Cover Lid and pour in clean water. Replace Lid when done.



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

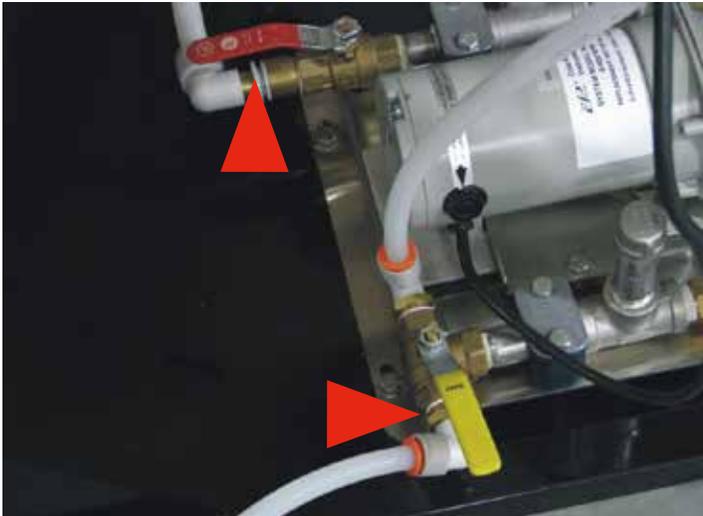


15 Gallon Tank Valve



30 Gallon Tank Valves

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 tank 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 tank 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 17, 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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