

# ***norweco***® **SINGULAIR**®

## **BIO-KINETIC® WASTEWATER TREATMENT SYSTEM**

### **INSTALLATION OF THE BIO-KINETIC® SYSTEM**

The Bio-Kinetic system is installed in the final clarification tertiary treatment, flow equalization and, if required by compact assembly. The Bio-Kinetic system is recommended for application where extremely high quality effluent is desirable as the tank is ready for storage or immediately after the

Drain and fill valves built into the Bio-Kinetic system allow has been poured and stripped. This allows faster Singulair installing the Bio-Kinetic system before tank delivery, making cast-in-place receiving flange, the Bio-Kinetic discharge

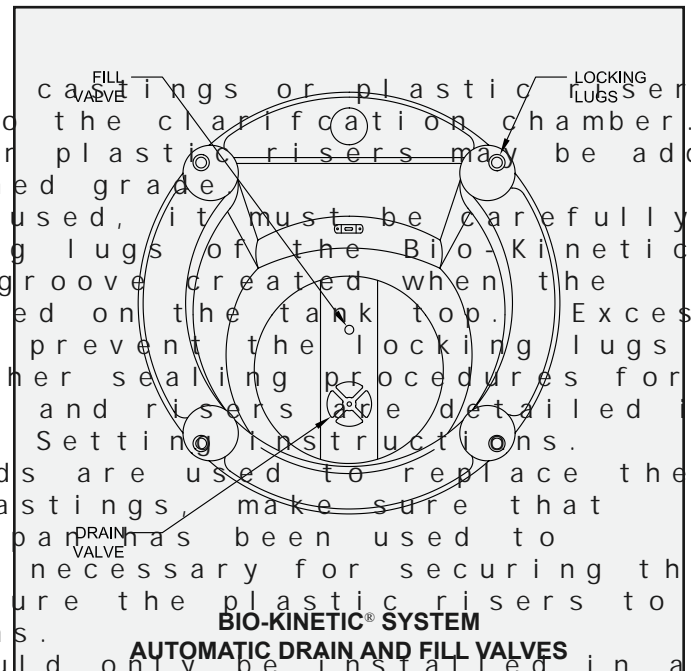
#### **BIO-KINETIC® SYSTEM PRE-INSTALLATION CHECKLIST**

All chambers of the Singulair tank should be full to the top and placed in the excavation and backfilling begins. When the liquid level has reached the Singulair system. If the liquid level has not reached the top of the Bio-Kinetic system, the liquid level should be raised. These instructions consider the use of concrete as well as a metal opening pan, designed to accommodate the locking lugs in the Bio-Kinetic system access opening.

The service vehicle should be fully stocked, including Blue Crystal disinfecting tablets and Bio-Neutralizer dechlorinator. Make sure the proper quantity and model of Bio-Kinetic systems may be supplied with or without Blue Crystal disinfecting tablets. Therefore, check your order and Distributor Service and make sure the proper quantity of Bio-Kinetic systems with the correct model and quantity that they are properly labeled for the correct Singulair system. For Singulair systems requiring multiple Bio-Kinetic tanks, the Bio-Kinetic system to be installed.

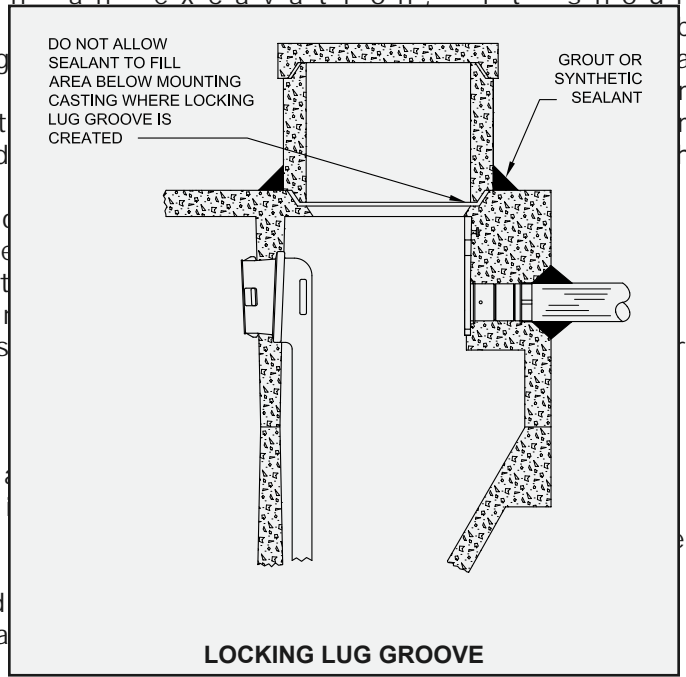
#### **PREPARING THE SINGULAIR TANK**

1. Bio-Kinetic system mounting castings or plastic risers should be used for access to the clarification chamber. Additional riser castings or plastic risers may be added as necessary to reach finished grade.
2. When a mounting casting is used, it must be carefully sealed to allow the locking lugs of the Bio-Kinetic system to engage into the groove created when the mounting casting is installed on the tank top. Excess sealant in this groove may prevent the locking lugs from properly engaging. Other sealing procedures for the tank, mounting castings and risers are detailed in Singulair Tank Delivery and Setting Instructions.
3. When plastic risers and lids are used to replace the concrete system mounting castings, make sure that the proper access opening panel has been used to create the grooves that are necessary for securing the locking lugs. Seal and secure the plastic risers to the manufacturer's specifications.
4. The Bio-Kinetic system should only be installed in a



# INSTALLATION THE OF BIO-KINETIC® SYSTEM (Cont.)

- concrete mounting casting on a plastic amount with Bio-Kinetic vented concrete or plastic cover the above mentioned small the cover to the mounting casting the plastic is evenly applied to the mounting castings, risers and coverings must be in place before backfilling the tank to prevent the gas from entering the Singulair tank in the outlet of the Bio-Kinetic.
- The proper quantity of Bio-Kinetic should have been installed in the chamber wall when tank delivery is completed. Check to be sure return is installed in each of the aeration/clarification chamber wall.
  - If the Singulair tank is in an excavation, it should already be filled with clean free of dirt, mud, leaves, etc. The tank should be filled with time it is backfilled outside precast tank. The aeration chamber access opening. The should be filled separately.
  - Influent and effluent sewer lines connected to the system as backfilling to prevent entry.
  - When a Singulair system is a failed onsite wastewater septic tank need not be abandoned. The Singulair system of the old septic tank and system is completely pumped. Singulair tank is installed obsolete system may be total and abandoned in the ground.
  - Check to see that roofing down sump pump piping or garage drains are not connected to Singulair system may not operate. If flows greatly exceed the rated the facility is equipped with a water backwash discharge line. The backwash be connected to the Singulair system.



**CAUTION: Bio-Kinetic lubricant has been specially formulated. Use of other lubricants, especially petroleum based lubricants, can cause degradation of the rubber components and will void the warranty.**

## SELF FILL VALVE

### BIO-KINETIC SYSTEM INSTALLATION PROCEDURE

Remove the Bio-Kinetic system from the lifting process. Lift of the Bio-Kinetic system and the service cover and fill valve is engineered to operate when the Bio-Kinetic system discharges. The Bio-Kinetic system discharge plastic receiving fange that of the Singulair tank. Careful the outlet coupling and receive residue or aggregate that has of the receiving fange or inside be removed and the grooves and fange should be wiped clean.

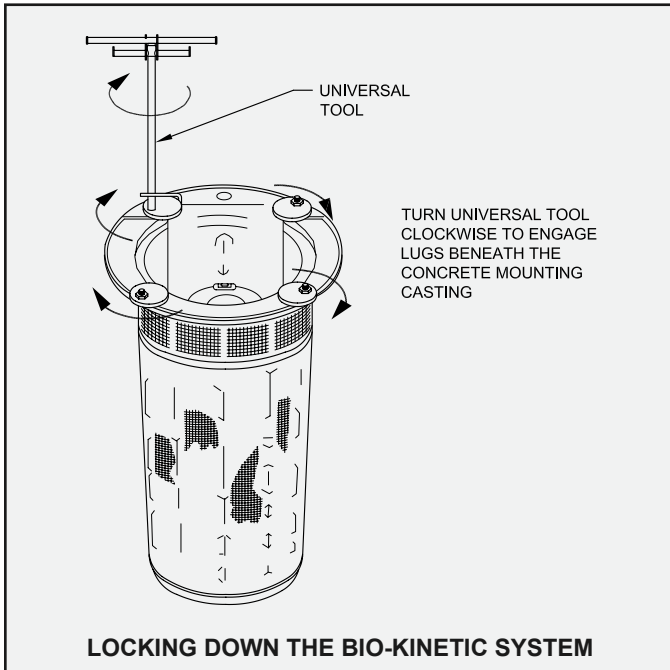
Use the lifting tool to lower mounting casting. Be careful with the receiving fange cast system is equipped with a pre-filled process for new and the draining process during fill valve is engineered to operate when the Bio-Kinetic system reaches water level reaches 16" on the large fange must engage the

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Engineering the future of water and wastewater treatment

# SINGULAIR® BIO-KINETIC®

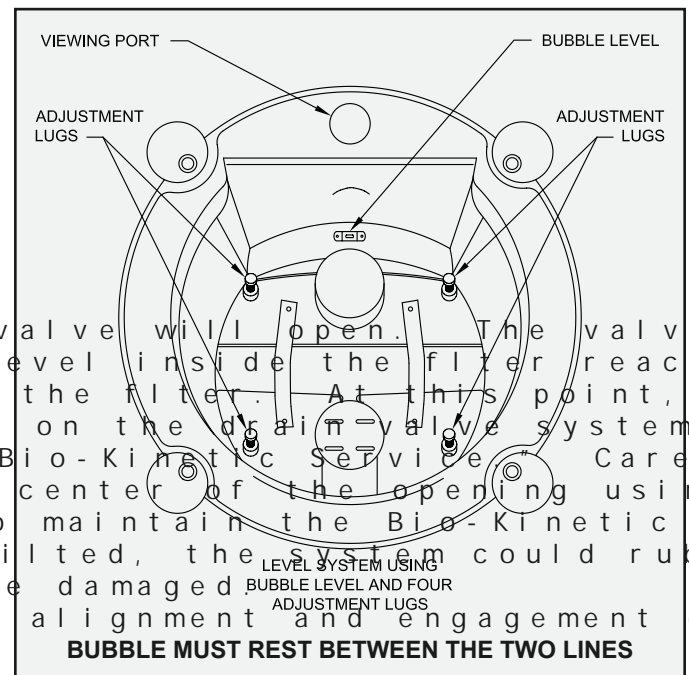
## WASTEWATER TREATMENT SYSTEM

### INSTALLATION OF THE BIO-KINETIC® SYSTEM (Cont.)

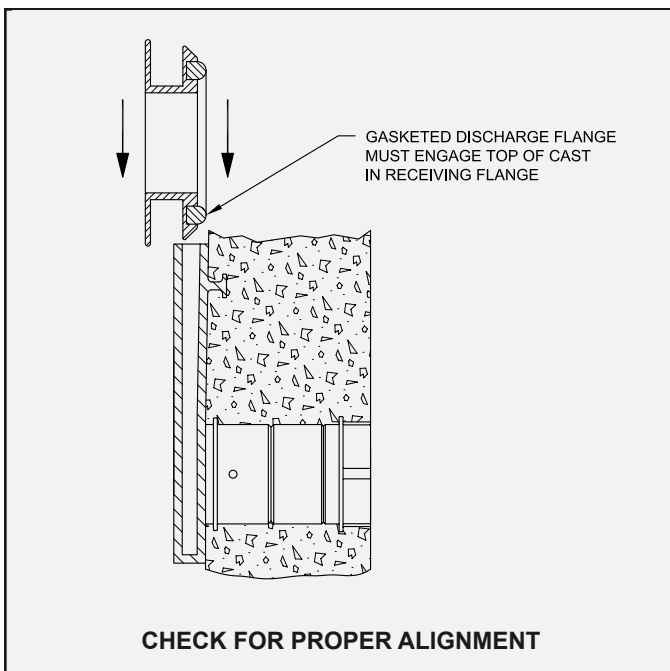


the outlet connection. The d  
the top of the cast-in-place

Continue to lower the system  
fully engages the receiving f  
the Bio-Kinetic system rests  
clarification chamber access o  
discharge flange and receiving  
look through the viewing port  
locking lug tool to twist each  
clockwise, so that each locki  
beneath the concrete lip of t



Bio-Kinetic system, the fill valve will open. The valve will remain open until the water level inside the filter reaches below the water level outside the filter. At this point, the valve will close. For instructions on the drain-valve system, refer to "Clarification Chamber and Bio-Kinetic Service" Carefully guide the system through the center of the opening using the lifting tool. Be sure to maintain the Bio-Kinetic system in a vertical position. If tilted, the system could rupture the viewing port to insure proper alignment and engagement of



Locate the level indicator mo  
Bio-Kinetic system flow distrib  
be resting squarely between th  
case. If the location of the  
not installed in a level posi  
should be leveled using the f  
for this purpose. With 1/16" r  
socket from the Tool Kaddy, t  
lugs the minimum amount neces  
rest squarely between the two  
case. Leveling of the flow dis  
proper operation of the flow e  
feed tubes and effluent weir wi

The system service cover can  
Install the cover, handle side  
in the cover with the four lo  
optional chlorination and dec

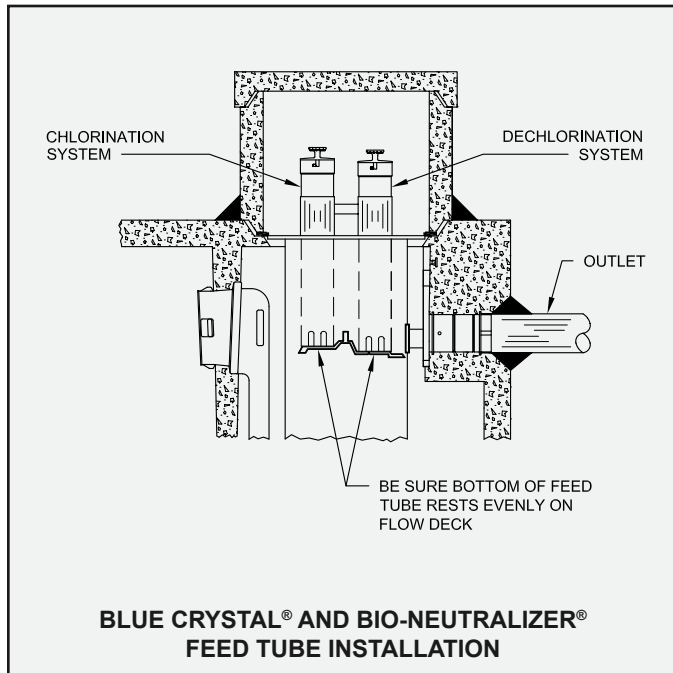
# INSTALLATION OF THE BIO-KINETIC® SYSTEM (Cont.)

openings are in the proper position. Do not allow the chlorine feed tube to rest on the collar of the riser. If necessary, you may need to add fasteners to the riser.

If the installation requires the use of a chlorine feed tube, the chlorine feed tube must be positioned on the inlet side of the system nearest the aerator mounting casting. Carefully read the instructions in this section of these instructions to ensure proper installation. To remove the cap, hold the tube (open end down) with one hand and insert Blue Crystal disinfecting tablets, one at a time, until the tube is filled. When the tube has been filled, remove the cap. Install the feed tube through the plastic collar molded into the system service cover. The feed tube should be inserted into the round recess in the flow deck and rotated clockwise until it locks.

**NOTE:** The chlorine feed tube must always be completely filled through the mounting collar nearest the aerator mounting casting. If the installation requires dechlorination, there will be a dechlorination feed tube installed nearest the system outlet.

## WARNING



**BLUE CRYSTAL® AND BIO-NEUTRALIZER® FEED TUBE INSTALLATION**

## WARNING

Blue Crystal disinfecting tablets are a strong oxidizing agent and highly corrosive. Tablets should be stored in a cool, dry, well-ventilated area away from combustible materials such as paper, petroleum products, chemicals, rags or cardboard. Contact with other liquids or chemicals may cause skin and eye damage, irritate the nose and throat, and may be fatal if swallowed. If irritation persists. If swallowed, immediately drink large quantities of water, do not induce vomiting, avoid alcohol and get medical attention immediately. If inhaled, avoid exertion and get medical attention immediately. This is a violation of Federal Law to use Blue Crystal tablets in a manner inconsistent with the instructions printed on the storage container label.

children, as they can cause skin and eye damage, irritate the nose and throat, and may be fatal if swallowed. If irritation persists. If swallowed, immediately drink large quantities of water, do not induce vomiting, avoid alcohol and get medical attention immediately. If inhaled, avoid exertion and get medical attention immediately. This is a violation of Federal Law to use Blue Crystal tablets in a manner inconsistent with the instructions printed on the storage container label.

Bio-Neutralizer dechlorination tablets must be stored in a cool, dry place away from acids and oxidizers. Do not allow Bio-Neutralizer tablets to come into contact with chlorine tablets. Although not rated a hazardous material by the USEPA, exercise caution when handling and wash skin thoroughly with soap and water if contact occurs.

Reinstall the Bio-Kinetic system riser and lid are used, secure using the fasteners provided steps outlined in the Single System Start - **DANGER: Make sure the system access cover is in good condition and securely installed on the mounting casting. Never allow access risers to be left uncovered or partially covered. Failure to secure access covers and safety nets could result in bodily injury, illness or death. Riser safety nets are available from Norweco for concrete or plastic risers.**

## SERVICING THE BIO-KINETIC SYSTEM

Each installation equipped with a riser should be inspected and serviced at regular intervals. Refer to the instructions for service and maintenance.

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