

October 2019

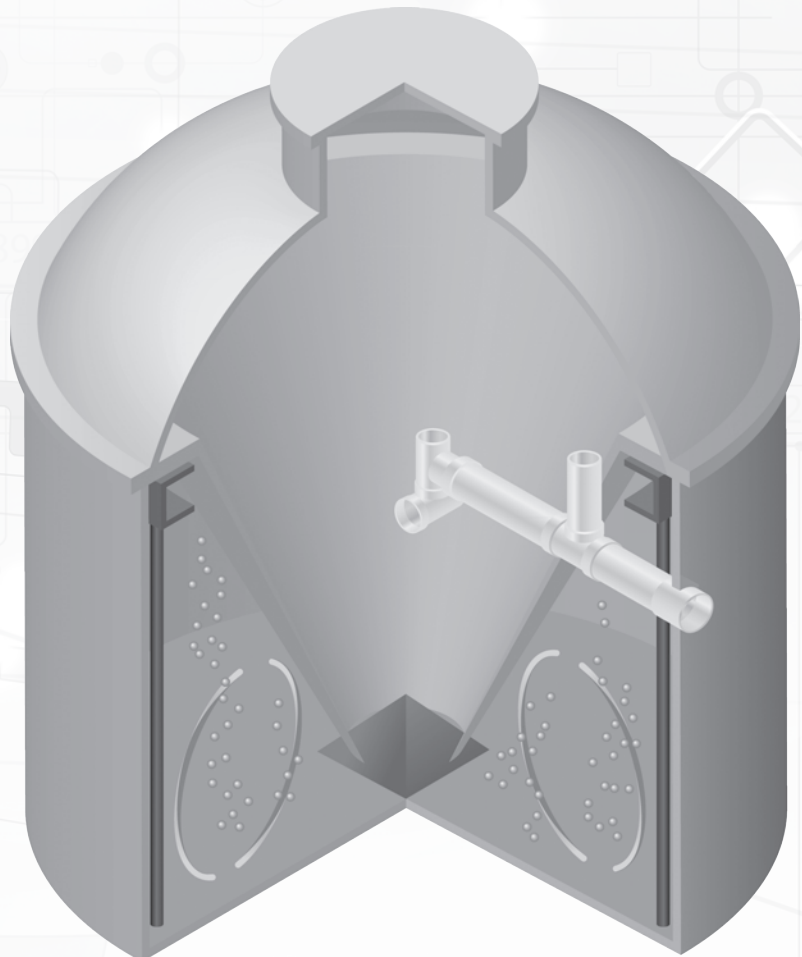


**WHITEWATER**

DF-Series

**AEROBIC RESIDENTIAL  
WASTEWATER TREATMENT SYSTEM**

**INSTALLATION, OPERATION  
AND MAINTENANCE MANUAL**



Delta Treatment Systems  
9125 Comar Drive  
Walker, LA 70785  
(225) 665-6162  
(800) 219-9183  
[www.deltatreatment.com](http://www.deltatreatment.com)  
[info@deltatreatment.com](mailto:info@deltatreatment.com)

## DISTRIBUTOR AND HOMEOWNER NOTES

---

1. The Delta Treatment Systems Model DF40-M has been tested by NSF International and conforms to NSF/ANSI Standard 40, class 1 effluent requirements. All other DF series models are certified based on provisions in the standard for certification of a series of plants of the same model varying only in rated treatment capacity and materials of construction.
2. State and/or local regulations govern the installation and use of individual Aerobic Wastewater Treatment Systems and must be complied with.

Consult your local Sanitarian/Regulatory Agency prior to installation.

<b>HOMEOWNER RECORDS</b>	
S/N: _____	DATE OF INSTALLATION: _____
INSTALLED BY: _____	
DISTRIBUTOR: _____	
_____	
_____	

This booklet provides operations, installation and warranty information on the **TREATMENT PLANT ONLY**. Other components manuals, such as dosing equipment or drip irrigation, require additional operations and carry separate warranties. Be sure that you have all of the correct manuals for each of the component pieces in your system. Contact your installer or call 1-800-219-9183.

# SYSTEM MAINTENANCE

---

## WHITEWATER® TREATMENT SYSTEMS NOTICE

This home is served by an individual wastewater treatment system. This system will serve you well only if it is properly maintained.

Your system is comprised of: \_\_\_\_\_

\_\_\_\_\_

Your system is located: \_\_\_\_\_

Please do not build on, fill over, allow heavy traffic or allow water to stand over this area. Avoid using strong chemicals, cleaning fluids, etc., which will kill helpful bacteria in the system. You should also avoid flushing grease, food scraps, cigarette butts, sanitary napkins and other inorganic waste down the drain.

You should have your system serviced (pumped out) every three to five years. Your service technician can advise you if you need more frequent or additional service.

To have your system serviced, or for additional information, contact: \_\_\_\_\_

\_\_\_\_\_

All of the details regarding system operation can be found in your homeowner's manual, which you should have received at installation. If you did not receive a copy, call 1-800-219-9183 and we will send you one at no charge.

### KEEP A RECORD OF SERVICE BELOW:

DATE	SERVICE PROVIDED	SERVICE TECHNICIAN

## INTRODUCTION

---

### HOW THE DELTA TREATMENT SYSTEMS AEROBIC WASTEWATER TREATMENT SYSTEM WORKS

The Whitewater® Aerobic Wastewater Treatment System that you have purchased produces high quality water suitable for various disposal methods. It is used to enhance your on-site wastewater disposal system. You can be proud that in purchasing your Whitewater System, with a minimum amount of maintenance, you can directly contribute to a cleaner, safer environment.

All wastewater treatment systems of this type work by using the bacteria that nature has provided. By pumping air into the system, the bacteria grow and thrive in much larger amounts than would occur naturally. The over-population of bacteria speeds up the process of breaking down domestic wastewater, making it safe to release into the environment. This entire process takes place within the walls of your specially designed, self-contained Whitewater Treatment System.

Your Whitewater System is made up of an outer mixing chamber and center settling chamber. Raw unsettled domestic wastewater enters directly into the mixing chamber. Mixing is accomplished by air passing from the air pump to the air

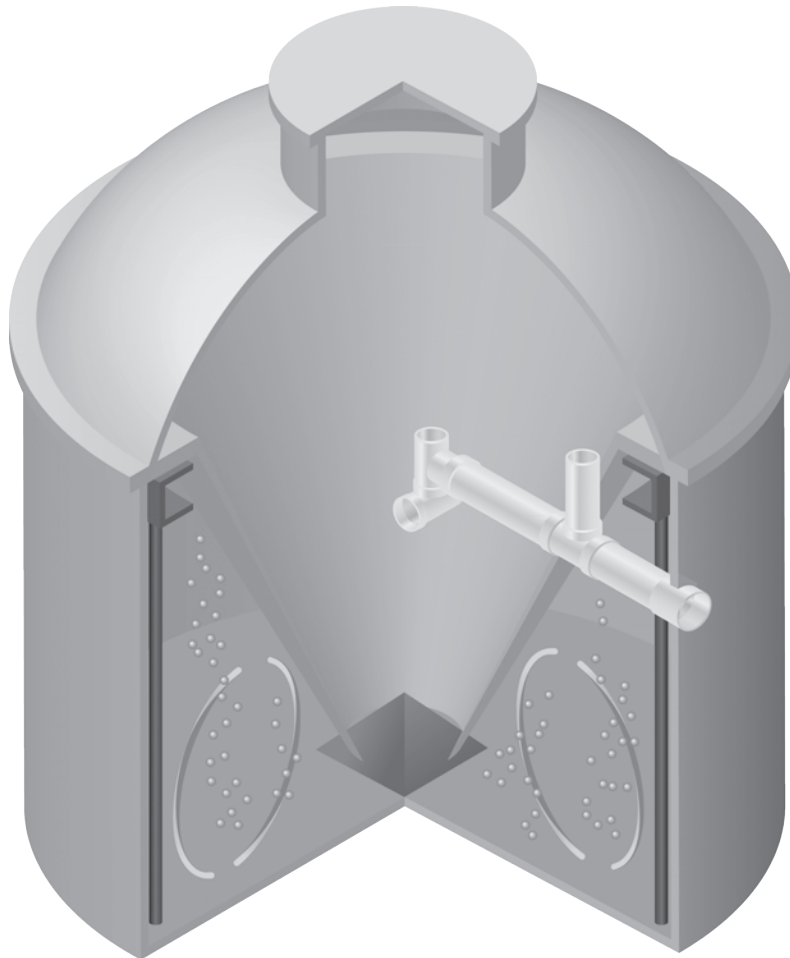
droplines located around the outer wall of the mixing chamber. The design is such that solids remain in suspension with a general flow pattern up the outer plant wall, then down the outside of the settling chamber when the air pump is on. This flow pattern allows a quiet condition in the settling chamber.

The mixed liquid enters the hopper-shaped settling chamber at the bottom and travels upward toward the discharge pipe. The quiet condition allows solids to settle down and re-enter the mixing chamber.

The result of this process is a clear, odorless discharge, which meets or exceeds state water quality standards.

By following the few simple steps that you find in this manual, your Whitewater System will provide you with years of service and the knowledge that you are doing your part to protect our groundwater, lakes, rivers and streams.

*Whitewater is a registered trademark of Delta Treatment Systems, LLC, a wholly owned subsidiary of Infiltrator Water Technologies.*



# CARE AND MAINTENANCE

## HOMEOWNER CARE AND SERVICE PROVIDER INSTRUCTIONS

The Whitewater® System has been designed and built to provide long term, reliable and efficient service.

Once the unit has been installed (see installation instructions), the unit will operate with a minimum amount of attention.

**Please reference the system's data plates that are located on the aerobic tank 24" cover, air pump and the alarm panel in the event that a problem arises or service is required. Call 1-800-219-9183 for your local service provider.**

The following should be performed as checks for proper system function:

### Daily

- Observe the warning device, which comes on when the power to the air pump has been interrupted or when the air supply system has malfunctioned. If the alarm is activated, check for a blown fuse or thrown circuit breaker. Check air pump to be sure it is operating. Once accustomed to the soft humming sound of a properly operating unit, any unusual noise is an indication of malfunction. If an unusual noise is detected or total failure is observed, call an authorized Delta Treatment Systems dealer/distributor.

### Weekly

- Check the treatment plant for offensive odor. If such a condition should develop, call an authorized Delta Treatment Systems dealer/distributor.

### Every Three Months

- The air filter on the air pump should be cleaned. Rinse with warm water if necessary. (See installation instructions.) Do not use oil or other solvents.

### Every Six Months

*Performed by a certified service provider.*

- Clean air filter on the air pump
- Inspect and make any necessary adjustments to mechanical and electrical components.
  - Make sure all components are functioning properly, (alarms, switches, air pump, etc.).
- Inspect the color and turbidity of the effluent and check for any odor.
  - No offensive odors should be present; an earthy odor is typical.
- Take a sample from the aeration tank and perform a 30-minute settleability test described in the "Solids Removal" section.
- Break up any sludge that may have developed in the clarifier so it can return to the aeration zone. Care should be taken to prevent solids from leaving the unit.

- The homeowner must be notified in writing if any improper operation is observed and cannot be corrected at the time of service.
- Refer to "Troubleshooting Guide" section in this manual.

**Note: To keep maintenance to a minimum and ensure high effluent quality, see the section labeled "The following should NOT be used or discarded into the system".**

### Ongoing Maintenance and Care

**The following should not be used or disposed of into the system:**

- Greases, fats, oils, pesticides, herbicides, or any other toxins.
- Garbage disposal should be used sparingly. Dispose of food waste, grease, etc., in the trash. Food waste represents additional loading on the Suspended Growth Wastewater Treatment System and could increase pump-out frequency.

**Do not discard the following into the system:**

- Paints, household chemicals, automobile fluids, mop water, etc.
- Nonbiodegradable items such as cleaning wipes, cigarette butts, disposable diapers, feminine hygiene products, condoms, coffee grounds, rags, paper towels, bandages, latex, plastic or metallic objects.
- Strong disinfectants or bleaches. Laundry products such as Lysol, Pine-Sol, Tidy Bowl, or discharge from water softeners.
- Septic systems additives – they do more harm than good.
- Excessive water from other sources as this can result in hydraulic overload.
- Home brewery waste, strong medicines, antibiotics and antibacterial soaps should be avoided.

Recommended detergents should contain low-sudsing, low phosphates and biodegradable ingredients. Fabric softener dryer sheets are recommended.

Recommended cleaning products should be biodegradable and nontoxic such as Ivory & Sunlight dish washing liquids, Cascade & Sunlight powdered dishwasher detergents, Comet & Biz powdered cleaners, and baking soda.

**SYSTEMS REQUIRING PUMPOUTS DUE TO THE ABOVE VIOLATIONS ARE NOT COVERED BY THE WARRANTY.**

The Whitewater system is designed to handle domestic wastewater, and nothing else should go into it. For anything other than domestic wastewater contact Delta Treatment Systems.

### SAFETY WARNINGS

- The proper operation of this or any other home sewage system depends upon proper organic loading and the life of the microorganisms inside the system. Delta Treatment Systems is not responsible for the in-field operation of a system, other

## CARE AND MAINTENANCE

than the mechanical and structural workings of the plant itself. We cannot control the amount of harsh chemicals or other harmful substances that may be discharged into the system by the occupants of a household. We can only provide a comprehensive owner's manual that outlines substances that should be kept out of the system.

- Hydraulic overloading (flows in excess of design flow) may cause the sewage treatment system not to perform to the fullest capabilities.
- Ants have been shown to be destructive to the air pump. Regular care should be taken to prevent infestation of ants near the system. Damage or destruction by ants is not covered under manufacturer's warranty.
- Your state or local health department may require other pieces of equipment to function separately or in conjunction with equipment manufactured by Delta Treatment Systems. Delta is not responsible for the mechanical or electrical safety of equipment it does not manufacture or supply with its aerobic treatment units. Particular care should be used in evaluating the electrical or mechanical safety of equipment manufactured by others. This may include but not be limited to electrical control panels or air pumps.
- Due to a possible fire hazard, DO NOT plug into service equipment on power pole and DO NOT use extension cords. All electrical work performed by the installer or others must be in accordance with the National Electrical Code (NEC) and local codes.
- The operation and maintenance outlined in this manual applies to normal operating conditions. Extreme conditions such as frigid cold temperature, extreme heat/or and high altitudes may affect the operation and maintenance of this unit. Consult the factory regarding these extreme conditions.

**Failure to properly secure the top may result in a serious health or safety hazard.**

### SOLIDS REMOVAL

The Whitewater® Treatment System is designed to provide years of trouble-free operation.

Determination of the need for solids removal can be done with a sludge judge sample. If the sludge judge indicates more than 12 inches of sludge in the bottom of the reactor tank, the treatment plant should be pumped out. Call your local authorized sewage disposal service to have the tank contents pumped out and disposed of properly.

#### Pumping Method

- Remove any floating solids by skimming.
- The air pump must be operating to keep the solids in suspension.
- Pump out two-thirds of the tank volume with the suction pipe opening being placed at the tank bottom.

- After the pump-out process is complete, fill the tank with fresh water to normal operating level.
- Refer to the Installation Instructions to get the treatment plant back into operation.
- Should indication of improper operation be observed at any time, contact your local authorized Delta Treatment Systems dealer/distributor.

**Note: The cost associated with pumping the treatment system is not covered under warranty and is not included in the service policy.**

### SEASONAL USE GUIDELINES OF THE WHITEWATER AEROBIC TREATMENT SYSTEM

These guidelines are for conditions as outlined below and apply for systems that are not in use for the periods of time indicated. Site conditions not covered by the following must be forwarded to Delta Treatment Systems for recommended guidelines to meet the particular site conditions.

1. System not in use for more than one month and less than three months. Electrical power is left on and there are no frost conditions.
  - Leave air pump on and system operating.
2. System not in use for more than three months. Electrical power is turned off and there are no frost conditions.
  - While system is operating with the air pump on, remove all material and liquid from tank.
  - Refill with clean water.
  - Turn off air pump.
3. System not in use more than three months. Electrical power is on and there are not frost conditions.
  - Leave air pump on and system running; OR
  - While system is operating with the air pump on, remove all material and liquid from tank.
  - Refill with clean water.
  - Turn off air pump.
4. System not in use. Electrical power is turned off and there are frost conditions.
  - While system is operating with the air pump on, remove all material and liquid from tank.
  - Turn off air pump.
  - Refill with clean water.

## CARE AND MAINTENANCE

---

**Under no circumstances should the air pump be turned off for more than a few days without removing tank contents!**

### SAMPLING REQUIREMENTS

A Whitewater aerobic treatment plant properly operated and maintained should provide the following effluent quality of:

*Carbonaceous Biochemical Oxygen Demand 5 day average (CBOD5) of less than 25 mg/l (or ppm)*

*Total Suspended Solids (TSS) of less than 30 mg/l (or ppm)*

*Volatile Suspended Solids (VOC) of less than 30 mg/l (or ppm)  
pH of 6.0 to 9.0*

*Dissolved Oxygen (DO) 1.5 to 3.0 mg/l (or ppm)*

### Taking Effluent Samples

Samples must be taken from the effluent discharge line or an effluent pump or after the chlorine contact tank. We recommend allowing the effluent to flow through the discharge pipe for a minimum of four minutes before taking the sample. This will allow any solids to be flushed out that might have accumulated in the discharge pipe. Please find attached drawing of a Sample Port.

**Samples should be taken by a local certified testing laboratory. The following recommended guidelines may be used if local procedures are not available:**

**Grab Samples:** If analysis is begun within two hours of collection, cooling is unnecessary. If analysis is not started within two hours of sample collection, keep sample at or below 4°C from the time of collection. Begin analysis within 6 hours of collection; when this is not possible because the sampling site is distant from the laboratory, store at or below 4°C and report length and temperature of storage to the lab. Never start analysis more than 24 hours after grab sample collection. When samples are to be used for regulatory purposes, make every effort to deliver samples for analysis within six hours of collection.

### Carbonaceous Biochemical Oxygen Demand (CBOD)

Samples for CBOD analysis may degrade significantly during storage between collection and analysis, resulting in low CBOD values. Minimize reduction of CBOD by analyzing the sample promptly or by cooling it to near-freezing temperature during storage. However, even at low temperature, keep the holding time to a minimum. Warm the chilled samples to 20°C before analysis; some storage time can be used to accomplish this conveniently.

### Total Suspended Solids (TSS)

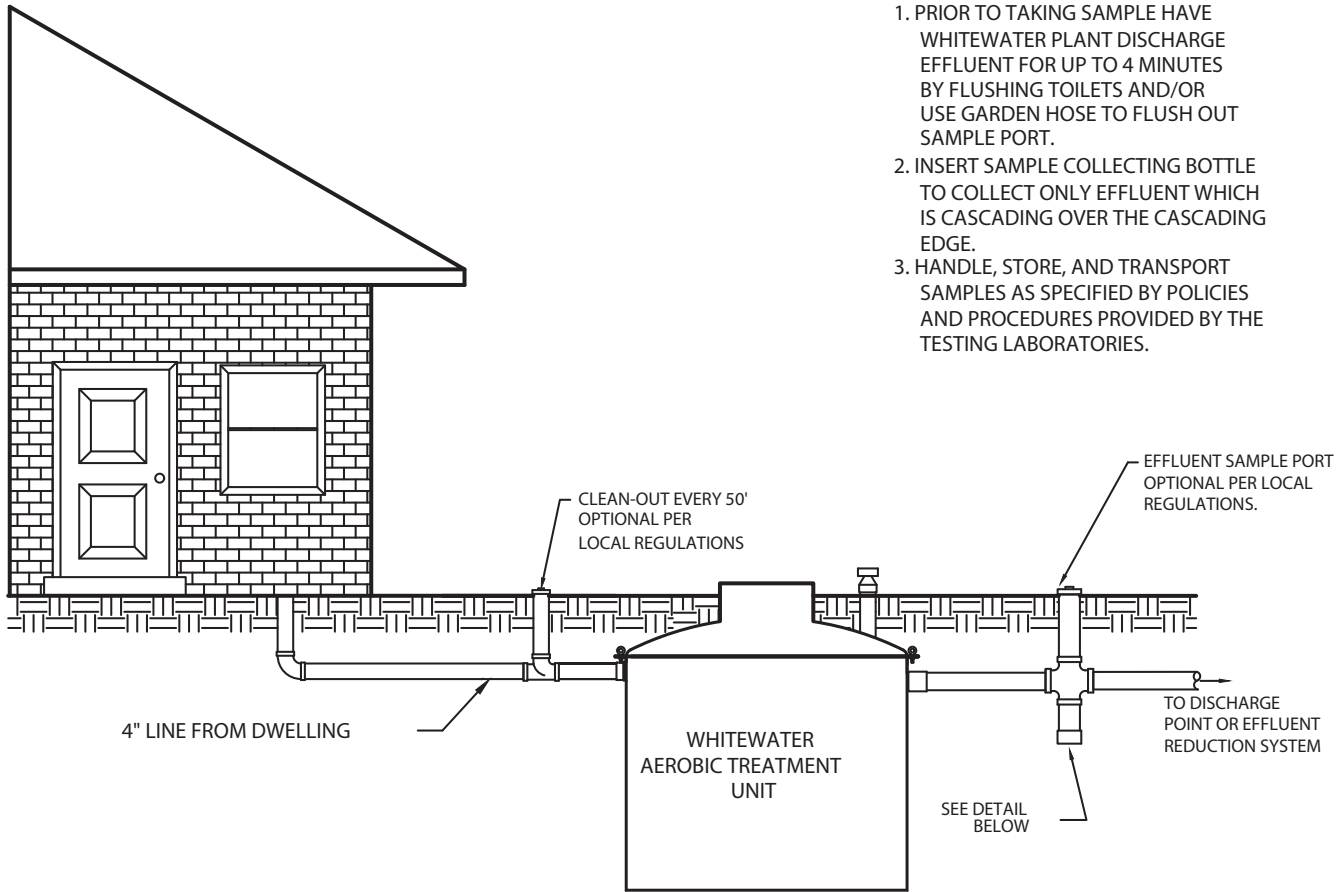
Use resistant glass or plastic bottles, provided that the material in suspension does not adhere to container walls. Begin analysis as soon as possible because of the impracticality of preserving the sample. Refrigerate sample at 4°C to minimize microbiological decomposition of solids.

### Ammonia Nitrogen

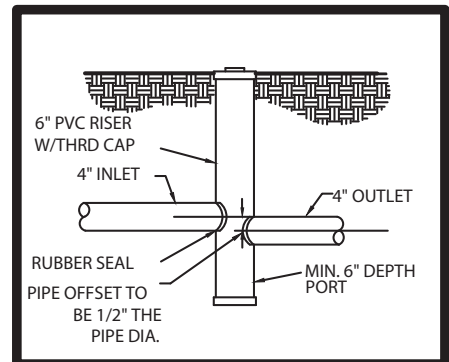
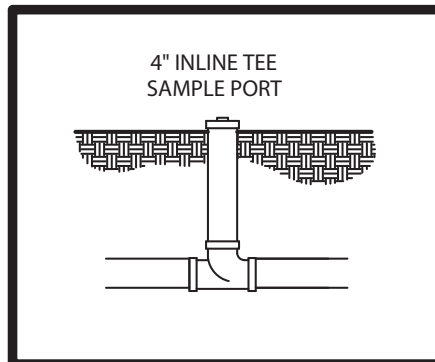
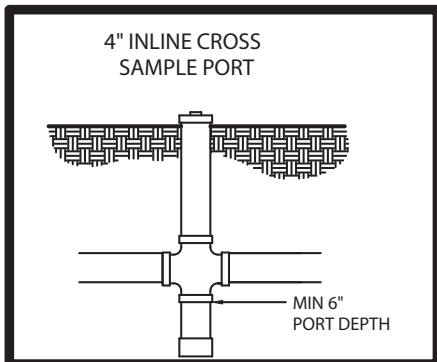
Most reliable results are obtained on fresh samples. Destroy residual chlorine immediately after sample collection to prevent its reaction with ammonia. If prompt analysis is impossible, preserve samples with 0.8 mL concentration H<sub>2</sub>SO<sub>4</sub>/L sample and store at 4°C. The pH of the acid-preserved samples should be between 1.5 and 2. Some wastewater may require more concentration H<sub>2</sub>SO<sub>4</sub> to achieve this pH. If acid preservation is used, neutralize samples with NaOH or KOH immediately before beginning the analysis.

**SAMPLE PROCEDURES:**

1. PRIOR TO TAKING SAMPLE HAVE WHITEWATER PLANT DISCHARGE EFFLUENT FOR UP TO 4 MINUTES BY FLUSHING TOILETS AND/OR USE GARDEN HOSE TO FLUSH OUT SAMPLE PORT.
2. INSERT SAMPLE COLLECTING BOTTLE TO COLLECT ONLY EFFLUENT WHICH IS CASCADING OVER THE CASCADING EDGE.
3. HANDLE, STORE, AND TRANSPORT SAMPLES AS SPECIFIED BY POLICIES AND PROCEDURES PROVIDED BY THE TESTING LABORATORIES.



**EXAMPLES OF SAMPLE PORTS**





# INSTALLATION INSTRUCTIONS

## ONLY FOR USE BY CERTIFIED, LICENSED INSTALLERS

### 1. Offloading and Handling

Care must be taken when offloading; and unpacking components. Care must be taken not to damage fiberglass with forklift or any other offloading device. Check for any damaged components that may have happened in transportation and notify factory within 24 hours of delivery. Prepare an excavation, having a diameter approximately one foot larger than the tank and a depth that will allow approximately 3 inches of the inspection port to extend above normal ground level. Backfill with a 6-inch layer of sand or gravel if otherwise unable to provide a smooth, level, compact base. We recommend that the hole be roped off in some fashion to prevent injury to passersby.

#### Component List (Example DF50)

- 1 – DF50 ATU
- 1 – DF50 Compressor Package
  - HP80 – air pump
  - GV12MIA – ½” galvanized male insert adapter
  - PV34X12FB – ¾” x ½” PVC slip x female bushing
  - 54175K14 – 7/32” x 5/8” worm drive clamp
- 1 – CP20 alarm panel
  - 8x6 polycarbonate enclosure
  - (5) wire terminals
  - (1) fuse holder w/5 amp fuse
  - (1) red pilot light (on outer door)
  - (1) two way silence switch (on outer door)
  - (1) alarm buzzer
  - (1) alarm pressure switch
  - (1) vent pipe assembly

### 2. Inlet and Outlet

Using lifting lugs provided, place the plant in the excavation so that the inlet and outlet line up with the sewer piping. The inlet line should slope down toward the plant and the outlet line should slope down away from the plant. The plant should be level within 1/2 inch, edge to edge.

Position inlet and outlet lines and make connections as necessary, depending upon the construction materials. The inlet line should be inserted and glued into the inlet elbow and the discharge line should be inserted and glued into the outlet coupling.

**Note:** Open inspection port and make sure discharge tee assembly is level and centered in clarifier prior to attaching discharge piping. Fill the tank with water until water flows from the discharge before backfilling. Backfill around the treatment plant up to the bottom of the discharge connections.

### 3. Air Pump

Do not install the air pump(s) in a low-lying area where water may accumulate. The air pump should be installed near the control panel and within 100 ft. of the tank. The air pump

can be installed outdoors or in a clean, well-ventilated area, such as a tool room, garage, etc. If the linear air pump is to be installed in an additional enclosure, the enclosure must be approved by Delta Treatment Systems in writing.

### 4. Control Panel

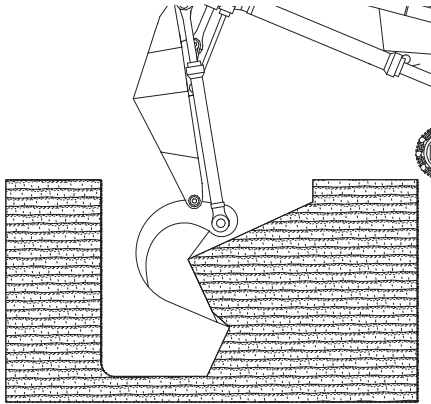
- A. Install the float switch wire from the control panel to the treatment plant. Wire can be direct burial type UF 600 volt or can be installed in Schedule 40 PVC conduit. Use type THWN, 600 volt if installed in conduit. Wire must be buried in accordance with NEC table 300-5. If in doubt, bury 24” deep. Keep sufficient distance or depth from airline to avoid confusion of pipes or damage to wiring during installation or repair of air piping. Connect to the float switch normally open contacts using underground rated compound filled wire nuts.

To set the high level pressure switch that detects high water level in the unit, follow the instructions below:

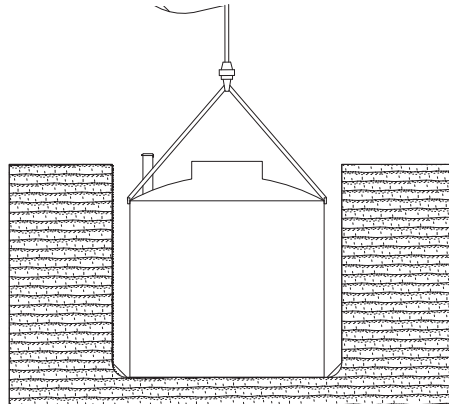
Bring plant to operating water level with compressor turned on. Using properly sized screwdriver, turn high-level alarm adjustment screw clockwise until alarm occurs. Then turn the screw counterclockwise until alarm stops. (See “high level pressure setting” drawing in this manual.)

- B. Connect the pressure air tubing to the 1/8” barb-fitting directly to the 3/4” airline or directly to the compressor. Refer to illustrations in Appendix B for appropriate air tubing connections.
- C. Install 3/4” Schedule 40 PVC piping between air pump and treatment unit. A minimum of 12” ground cover is recommended.

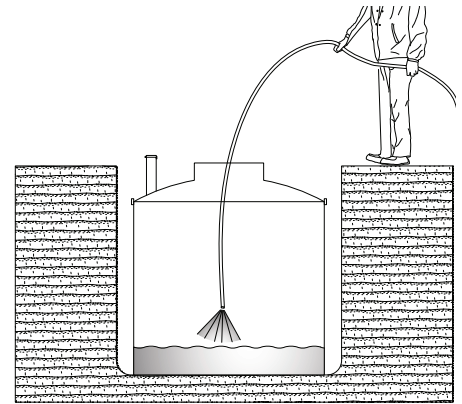
# INSTALLATION PROCEDURE



**STEP 1**



**STEP 2**



**STEP 3**

## RECOMMENDED INSTALLATION PROCEDURE

### 1. EXCAVATION

Dig hole from the side for accurate sizing. This reduces the bridging distance between the tank and undisturbed soil and provides good support for inlet and outlet pipes. The bottom of the hole should be undisturbed and level. If leveling is necessary due to over excavation, use sand for fill.

**NOTE:** Never place tank directly on rock. Place at least six inches of sand or gravel bedding between the tank and rock surface.

### 2. TANK PLACEMENT:

Use the backhoe to set the tank. Lifting lugs are furnished to lift the tank.

**CAUTION:** A small amount of soil or sand should be used around the bottom of the tank to hold it in place. Sand is best. If excavated soil is used, tamp it underneath the tank to provide a good base.

### 3. FILL TANK WITH WATER:

Place hose in six inch riser. Begin filling tank with water.

### 4. GFI CONTROLS AND AIR PUMP

Install duplex or quadruple GFI or GFI protected receptacles at the selected location of the air pump. Mount control panel and install fittings, tubing and piping to tank location. **CAUTION:** Do not plug anything but the air pump into the control panel.

### 5. INLET/OUTLET AND AIR CONNECTIONS

Properly make solvent cemented inlet, outlet and air connections.

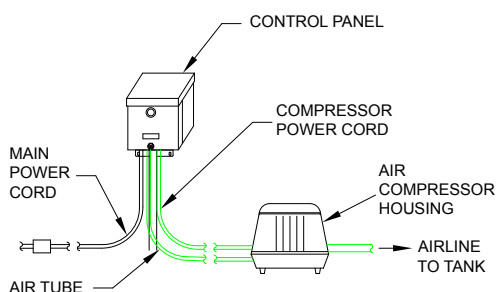
### 6. FILLING THE TANK

Finish filling tank with water until it drains out of outlet. Begin backfilling with natural soil or a good back fill material.

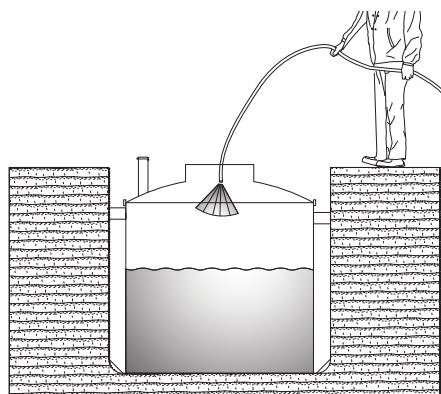
### 7. AIR DISTRIBUTION

Turn the air pump on and check all air connections and piping for air tightness. Observe air/water mixture through 4" riser.

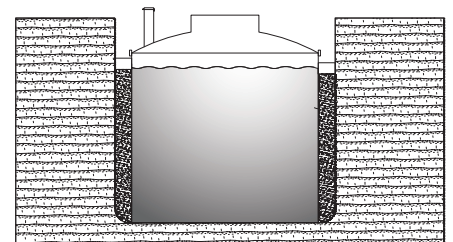
**NOTE:** If the electrical GFI receptacle has not been installed prior to checking the air distribution system during installation, use an extension cord to run the air pump. Remove it after inspection is completed.



**STEP 4**



**STEP 6**



**STEP 7**

# INSTALLATION PROCEDURE

**WARNING: Possible Fire Hazard**

Do Not plug into main service equipment on power pole.

Do Not use extension cords

## 8. FINAL BACK FILLING

Back fill should be mounded above grade slightly to allow for settling. Tamp the back fill beneath the inlet, outlet and air piping to provide good support.

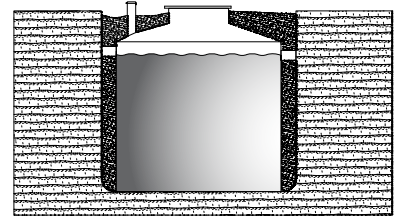
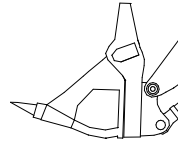
## 9. TRIM INSPECTION RISERS

Trim inspection risers to proper length. The 4" aeration inspection riser also serves as a vent for the tank.

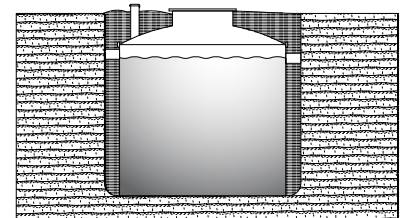
**Caution:** The bottom of the 4" aeration riser must be above the water level for both visual inspection and ventilation. Both of the optional 6" and 4" top caps must be above ground level to prevent ground water from entering the risers.

**Caution:** Care must be taken not to push the optional 6" Clarifier Inspection Riser down too far. This may cause damage to the effluent discharge tee assembly and the clarifier.

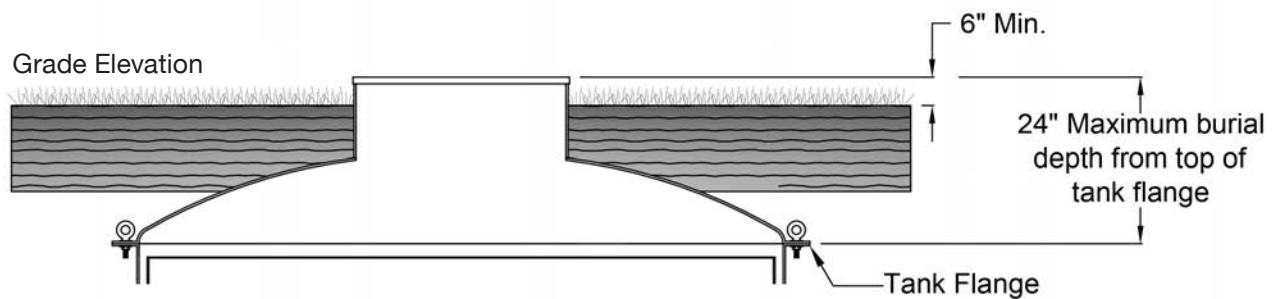
**Caution:** Maximum burial depth - 2 feet from top of tank flange with dome or 24" manways and 1 foot from top of tank flange with flat lids. For burial depths beyond 2 feet contact the factory.



**STEP 8**



**STEP 9**



# PUMPOUT PROCEDURE

## PROCEDURE

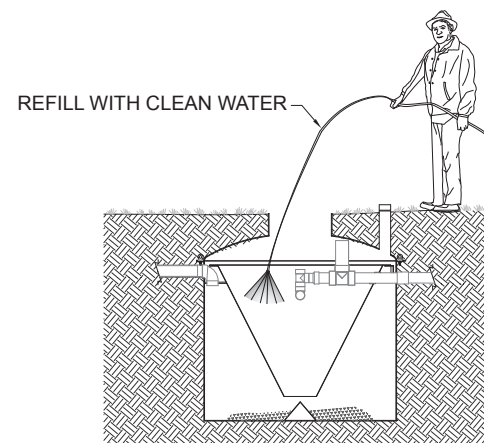
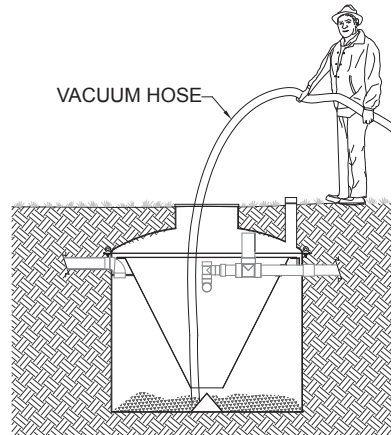
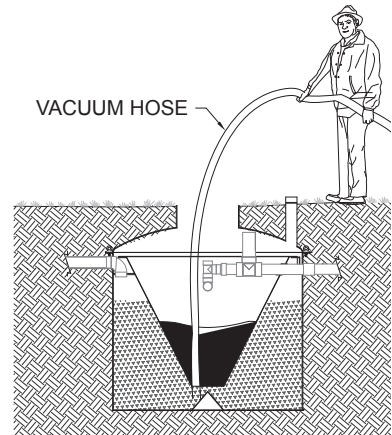
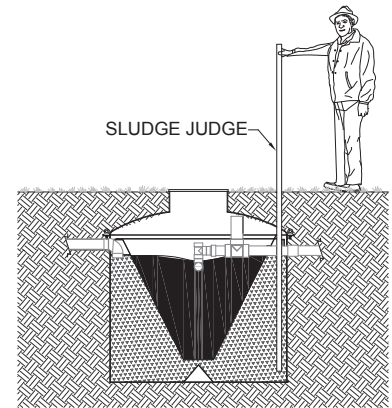
1. Determine the amount of mixed liquor suspended solids by using a “Sludge Judge” type sampler through the 4” vent/sample port riser.
2. Leave the air compressor for the ATU running.
3. Insert vacuum hose into the main access riser. Skim off any floatable solids on the surface of the clarifier and lower to the bottom of the clarifier.

**Caution: Care must be taken not to damage the discharge tee assembly.**

4. Pump out 80 to 90 percent of the ATU. Then remove the vacuum hose.
5. Insert a water hose into the main access riser. Wash down the clarifier walls and partially refill the ATU with clean water.
6. Repeat step 3 and refill the ATU with clean water.

**\*Never leave tank empty.**

**\*Always use licensed pumpers/haulers for this task.**



# TROUBLESHOOTING GUIDE

## AIR SUPPLY MALFUNCTION

1. Check to be sure all airdrops are working properly. They should be bubbling evenly and forcefully. A septic (rotten egg) odor could mean that the system is not getting enough air. If the air system is not working, partially working or working very little (slight bubbles), check the following:
  - a. Check to be sure the air pump is working.
    - check timer if one is used
    - bypass timer; temporarily connect directly to source
    - check the electrical source
    - if electrical source is OK – check service guide for pump unit troubleshooting information
    - wash air filter on pump
    - consult manufacturer for servicing information
  - b. Check to be sure tank is not severely out of level. Air follows a path of least resistance. The pressure differences at the bottom of droplines can be enough to prevent or restrict air flow.
  - c. Check for broken or cracked air lines both outside and inside the tank.
  - d. Ants will destroy an air pump. Check to see if there is an ant nest around the air pump.
  - e. Air pump should be protected from rising water.
  - f. Always check to see if inlet and outlet lines are correctly installed.

## INTERNAL ASSEMBLY MALFUNCTION

1. Improperly installed or loose seals and/or gaskets where the pipe goes through the clarifier wall can allow raw, untreated sewage from the aeration chamber (bubble zone) to enter the clarifier (quiet zone). Check the size of holes to be sure that there is no clearance for matter to pass through the wall around the piping.
2. Check to be sure all internal piping and connections are tight.

## DESIGN OVERLOAD

1. The system could be hydraulically overloaded (there is too much water going through the system for the size of the system).
2. The system could be biologically overloaded (there is too much waste for the size of the system).

## NO HARSH CHEMICALS SHOULD BE PUT IN THE SYSTEM

1. Water in the aeration chamber (bubble zone) should be the color of chocolate milk. Blue or gray/blue water indicates heavy use of detergents or other chemicals. If water appears sudsy, there is too much detergent being used.
2. Water in the clarifier (quiet zone) should be clear, but scum and debris may appear on the surface. Water is discharged

into the discharge tee at a minimum of 6–8 inches below water surface. You may not be able to see clear water by looking into the tank. Samples must be taken at the sample port.

3. Oils and grease should be kept to a minimum. Grease tends to form in white balls.

## TROUBLESHOOTING ELECTRICAL SYSTEM

1. Air pump does not run:
  - a. Check main service for power.
  - b. Check and/or replace fuse with same rating as is in control panel.
2. Alarm does not occur when air pump is off:
  - a. Malfunctioning pressure switch – replace.
  - b. Malfunctioning light or buzzer – replace.
3. Alarm occurs continuously even when air pump is running:
  - a. Air leak in main air system or air tubing to pressure switch – repair leak or replace air line.
  - b. Malfunctioning pressure switch – replace.
  - c. High water level in tank – inspect for cause.
  - d. Short in float switch wire or float switches – repair or replace.

**Note:** All replacement parts are available through your local dealer.

**CAUTION: Electrical shock or hazard may occur if unit is not serviced properly. The manufacturer recommends that a licensed electrician be called when electrical problems occur.**

## COMPONENT REPLACEMENT PROCEDURE

- **Air Pump:** Follow the same procedure as outlined in the “Installation Instructions.”
- **Float Switch:** Remove Aerobic Treatment Plant’s Riser or 24” cover. Locate float switch cable. Untie knot. Disconnect float switch inside conduit box. Slip float switch cable through rubber grommet into the plant. Replace with exact replacement float switch. Reinstall by reversing the procedure. Reconnect float switch wires using underground rated compound filled wire nuts. See Float Switch Mounting Details.
- **Pressure Switch:** Turn all power off to the control panel. Remove back plate. Remove screws securing pressure switch as well as connectors and tubing. Reverse procedure to install new pressure switch.
- **Buzzer:** Turn all power off to the control panel. Remove screw attaching the buzzer to back plate as well as connectors.

## TROUBLESHOOTING GUIDE

---

Reverse procedure to install new buzzer.

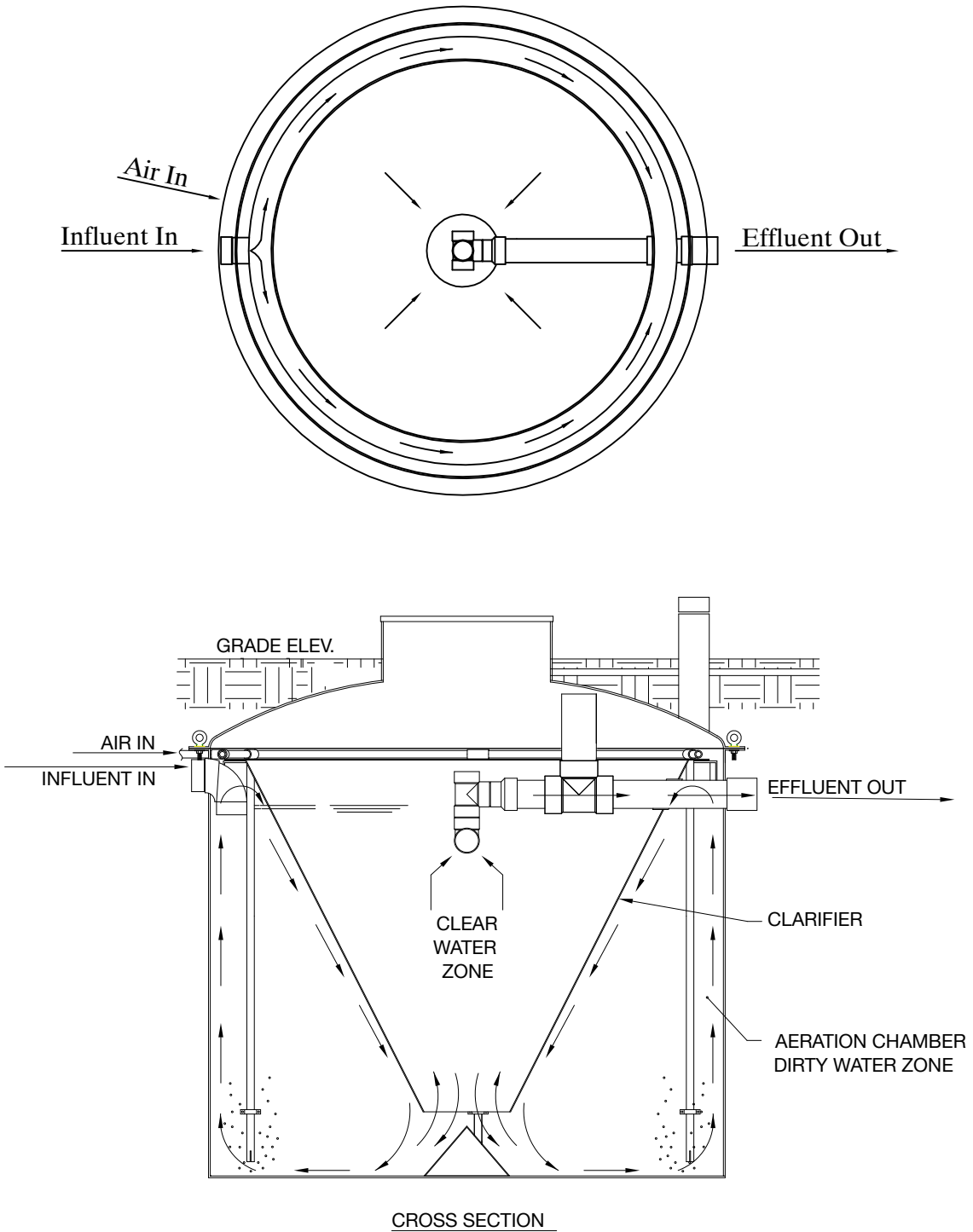
- **Lamp Holder:** Turn all power off to control panel. Remove lock nut securing lamp holder to door as well as connectors. Remove lamp holder. Install new lamp holder with gaskets furnished. Reverse procedure to install new lamp holder.
- **Lamp:** Turn all power off to control panel. Remove red lamp cover from front of control panel. Remove and replace lamp, which is a push-in type. Replace lamp cover and cover gasket.
- **Fuse:** Turn all power off to control panel. Pull top of fuse holder outward. Remove and replace fuse. Push fuse back into place.
- **Silence Switch:** Turn all power off to control panel. Remove rubber boot on switch. Remove hex nut from switch on panel front as well as connectors on switch. Reverse procedure to install new switch.

## GENERAL COMMENTS

- Only factory approved equipment can be used for replacement on individual treatment systems.
- If the decision is made to pump out a system, be sure to contact a licensed waste-hauler.
- If a chronic problem develops and all items have been checked, consult with the factory.
- A properly operating unit will produce a clear, odorless discharge; the mixed liquor in the aeration tank should be a medium brown color with good settling features and have an earthy smell.
- Keep good records.

**Note:** If the entire cover needs to be removed on any one of the various model treatment plants, the existing silicone or strip seal must be removed and replaced with a new one. This will provide a positive seal that will not allow any infiltration into or out of the treatment plant.

# FLOW DIAGRAM TREATMENT PLANTS



## SPECIFICATIONS

TREATMENT PLANT	TREATMENT CAPACITY (GPD)	TOTAL VOLUME (GAL.)	AERATION VOLUME (GAL.)	CLARIFIER VOLUME (GAL.)	BOD LOADING (LBS./DAY)	NO. OF AIR DROPS
DF50	500	909	720	189	1.25	5
DF60	600	1147	867	280	1.5	6
DF75	750	1438	1100	338	1.88	6
DF100A	1000	1926	1429	497	2.5	8
DF150	1500	2882	2227	655	3.75	8

## MATERIALS OF CONSTRUCTION

SUFFIX FF\* ..... AERATION TANK..... FIBERGLASS  
 COVER..... FIBERGLASS  
 CLARIFIER..... FIBERGLASS

SUFFIX CA\* ..... AERATION TANK ..... CONCRETE  
 COVER..... CONCRETE  
 CLARIFIER..... FIBERGLASS

**\*STANDARD PRODUCTION UNITS. OTHER APPROVED NSF CONFIGURATIONS ARE AVAILABLE UPON SPECIAL REQUEST. PLEASE CONTACT DELTA TREATMENT SYSTEMS AT (800) 219-9183.**

PARTS	LIST ITEM	MATERIALS OF CONSTRUCTION
AERATION TANK.....	1 .....	SEE ABOVE
CLARIFIER .....	2 .....	SEE ABOVE
AIR DISTRIBUTION SYSTEM .....	3 .....	PVC
ACCESS COVER.....	4 .....	POLYETHYLENE
DISCHARGE PIPING ASSEMBLY.....	5 .....	PVC
AIR PUMP ASSEMBLY .....	6 .....	SEE AIR PUMP PARTS LIST
SAMPLE PORT .....	7.....	PVC
CONTROL PANEL.....	8 .....	NEMA 3R STEEL OR NEMA 4X FIBERGLASS
HIGH WATER FLOAT SWITCH.....	9 .....	POLYETHYLENE



# SPECIFICATIONS

## ELECTRICAL REQUIREMENTS

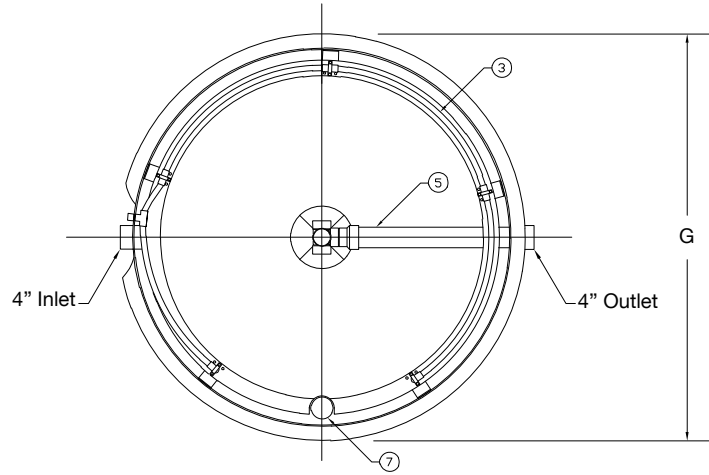
MODEL	COMPRESSOR	MOTOR FULL LOAD AMPS	MEASURED OPERATING WATTS	ELECTRICAL REQUIREMENTS
DF-50	Delta Model 60	1.75	63	115 volt – single phase
	AP60	1.75	63	
	Delta Model 80	2.1	85	
	AP80	2.1	85	
DF-60	AT05	4.6	449	115 volt – single phase
	5100S	2.71	110	
	Delta Model 80	2.1	85	
	AP80	2.1	85	
	Delta Model 100	2.71	110	
DF-75	5100S	2.71	110	115 volt – single phase
	5120S	2.8	157	
	AT05	4.6	449	
	Delta Model 100	2.71	110	
	Delta Model 120	2.8	157	
DF-100	(1) 0823	(1) 10.4	(1) 640	115 volt – single phase
	(2) Delta Model 80	(2) 2.1	(2) 85	
	(2) AP80	(2) 2.1	(2) 85	
DF-150	(3) 5100S	(3) 2.71	(3) 110	115 volt – single phase
	(1) 1023	(1) 10.4	(1) 850	
	(2) 5120S	(2) 2.8	(2) 157	
	(3) Delta Model 100	(3) 2.71	(3) 110	
	(2) DELTA MODEL 120	(2) 2.8	(2) 157	

TREATMENT PLANT	A	B	C	D	E	F	G
DF50	4' 11-3/16"	4' 8-3/16"	6' 0"	4' 5-9/16"	5' 0"	10"	6' 6"
DF60	5' 7-3/4"	5' 4"	6' 3"	5' 1-1/2"	5' 9"	11-1/2"	6' 9"
DF75	6' 0-1/2"	5' 8-1/2"	6' 9"	5' 6"	6' 2"	11-1/2"	7' 3"
DF100A	5' 9-5/8"	5' 6"	8' 0"	5' 3"	6' 0"	1' 0"	8' 6"
DF150	8' 3-5/8"	8' 0"	8' 0"	7' 9-1/2"	8' 6"	1' 3-3/4"	8' 6"

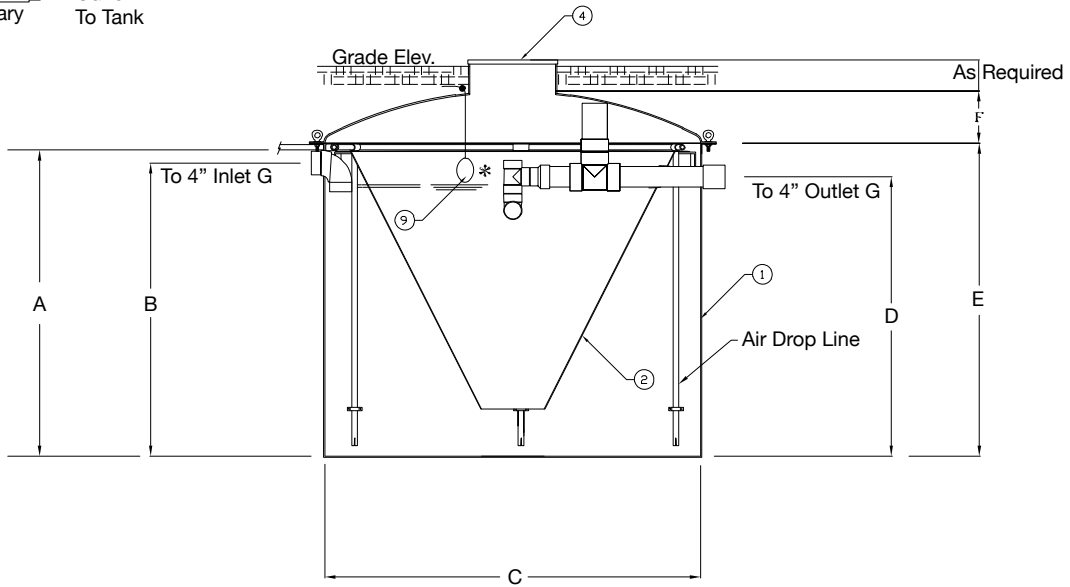
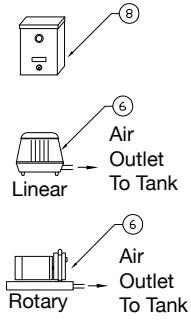
Refer to treatment plant drawings, pages 18 and 19, on the above dimensions.

**Note:** For special cargo or container shipments 12 inches must be added to the diameters of all fiberglass units (due to the fiberglass flange and lifting lugs).

# MODEL DFXX-FF

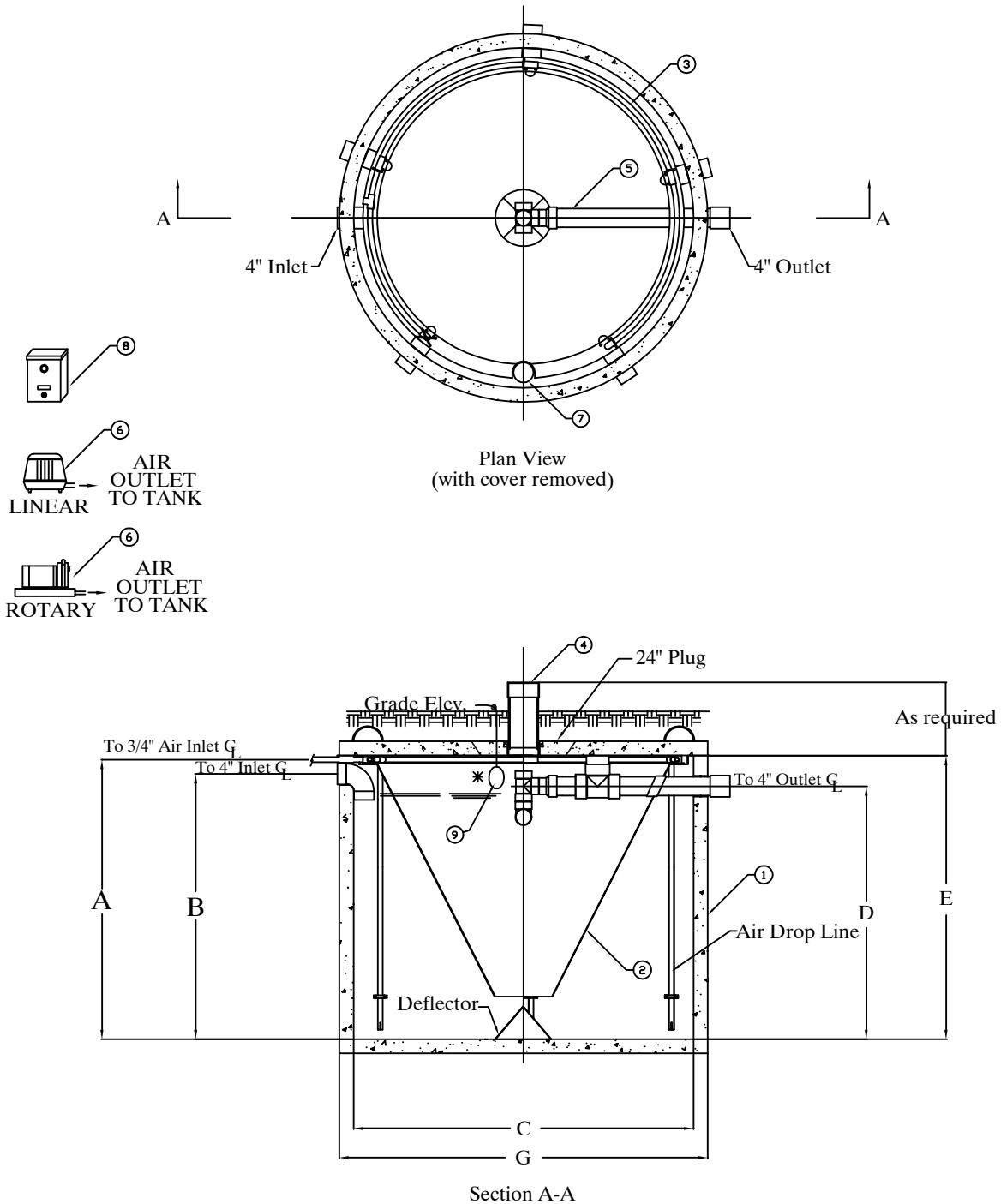


Plan View  
(with cover removed)



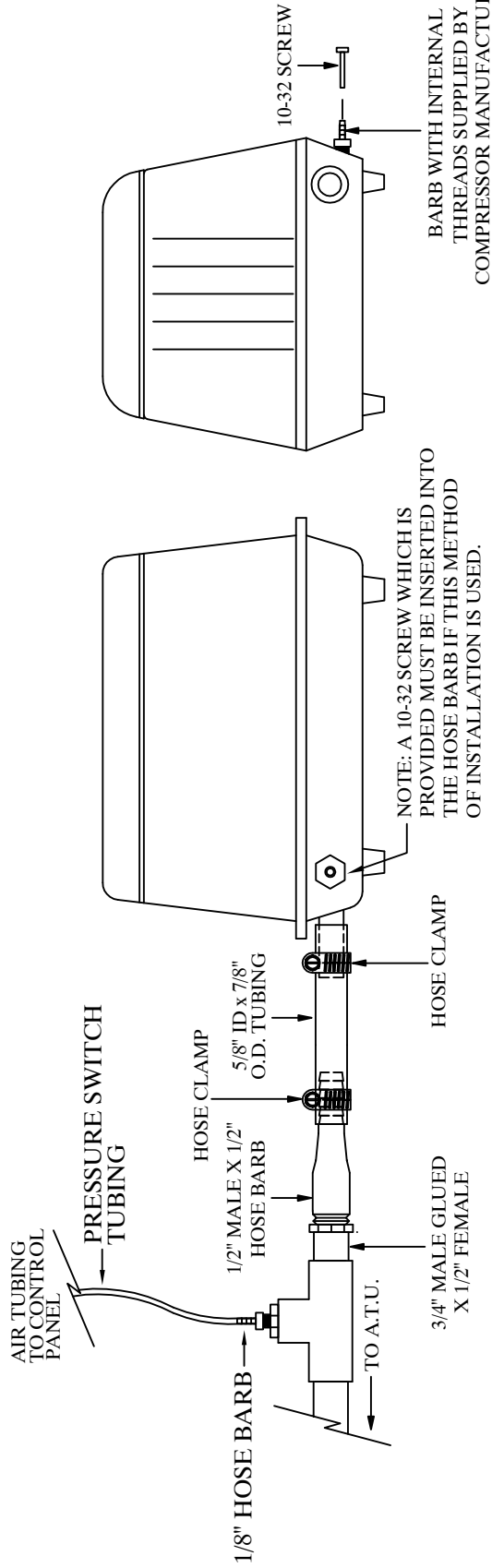
# MODEL DFXX-CA

Note: See dimension sheet for number of air drops

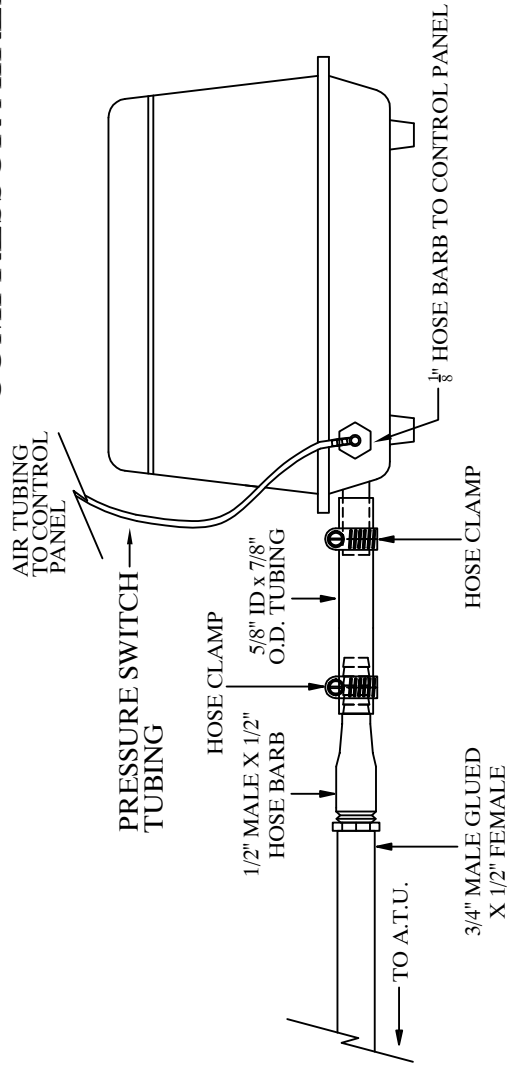


\* HIGH LEVEL FLOAT NOT REQUIRED WHEN USING CP22 SERIES CONTROL PANELS

DIRECT AIRLINE TAP INSTALLATION METHOD

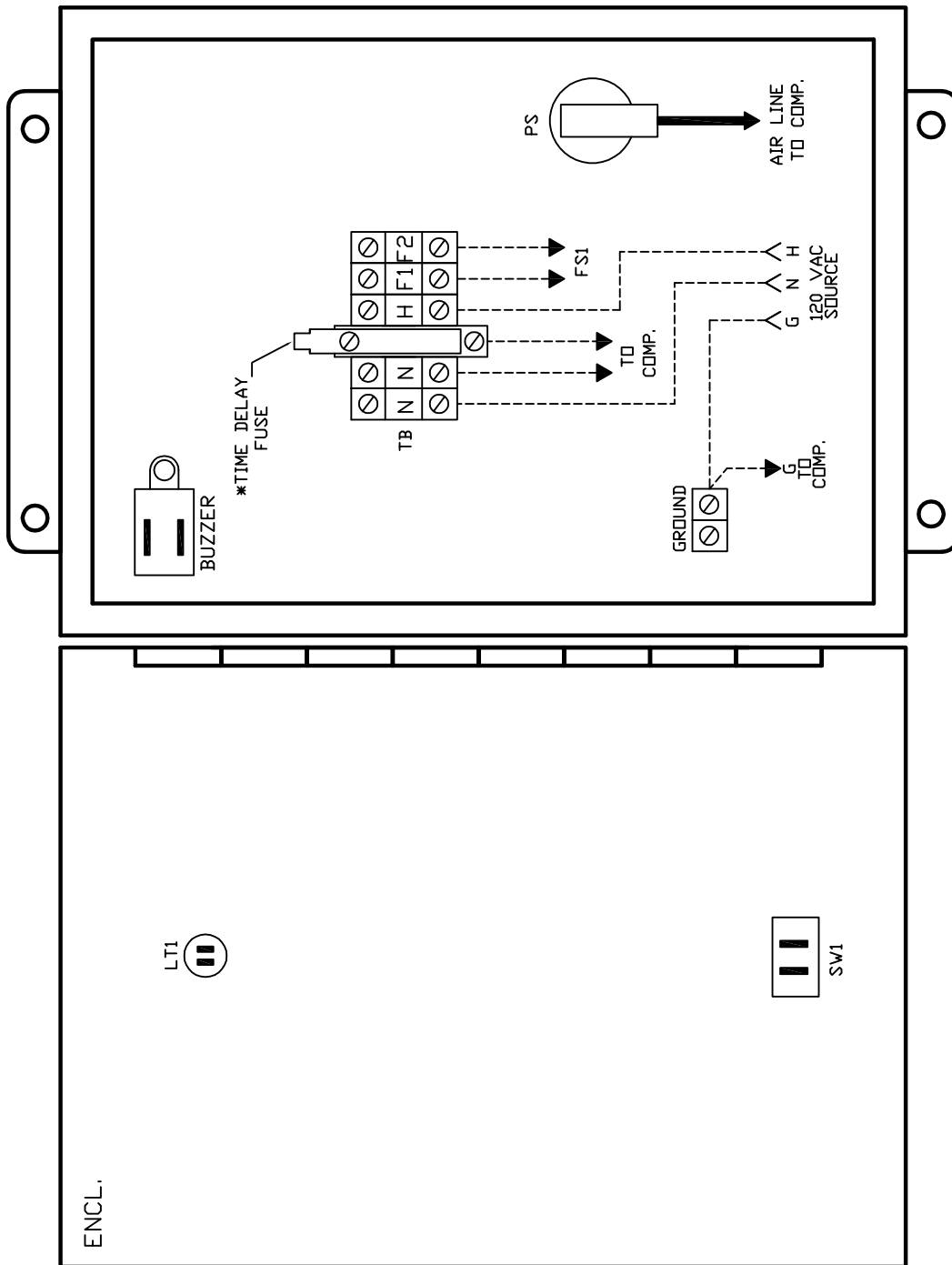


COMPRESSOR AIRLINE TAP INSTALLATION METHOD



**THIS PAGE INTENTIONALLY LEFT BLANK.**

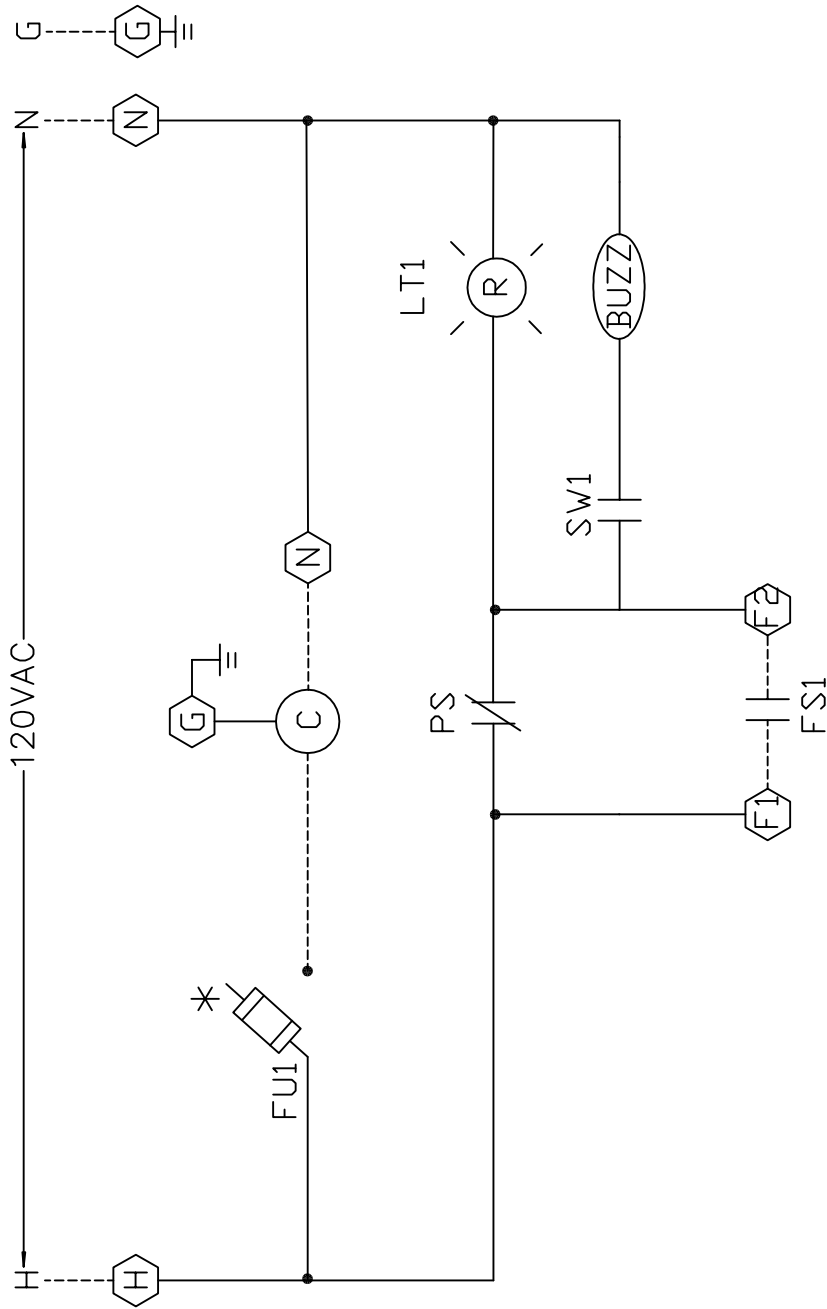
# CP20 CONTROL PANEL



FRONT VIEW  
 DOOR OPEN  
 CP20

FS1-FLOAT SWITCH IN TREATMENT PLANT  
 \* FUSE SIZE VARIES WITH COMPRESSOR SIZE  
 PER NATIONAL ELECTRIC CODE

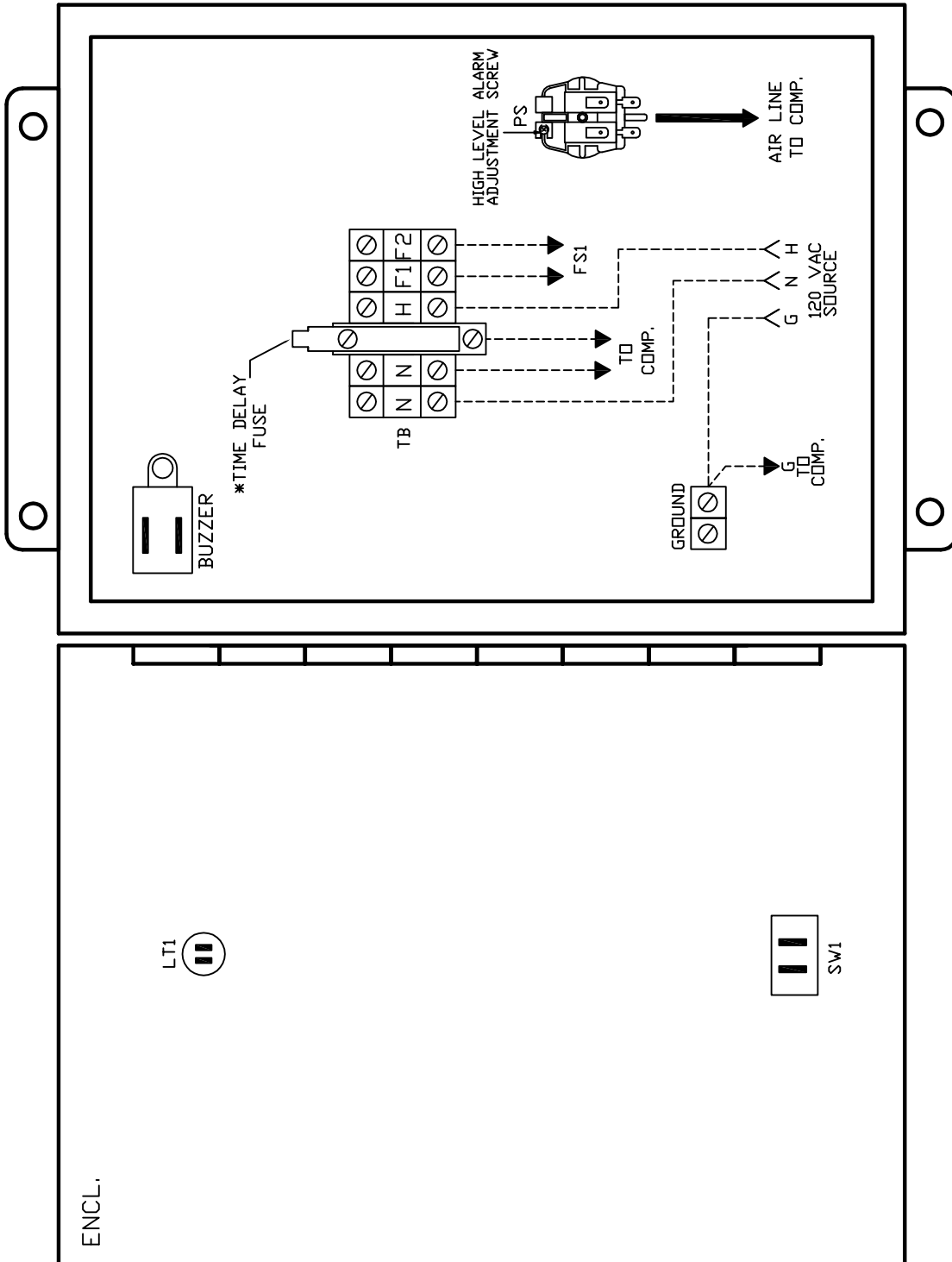
# CP20 WIRING DIAGRAM



SCHEMATIC DIAGRAM  
CP20 SERIES

\* FUSE SIZE VARIES WITH COMPRESSOR SIZE  
PER NATIONAL ELECTRICAL CODE

# CP 22 CONTROL PANEL

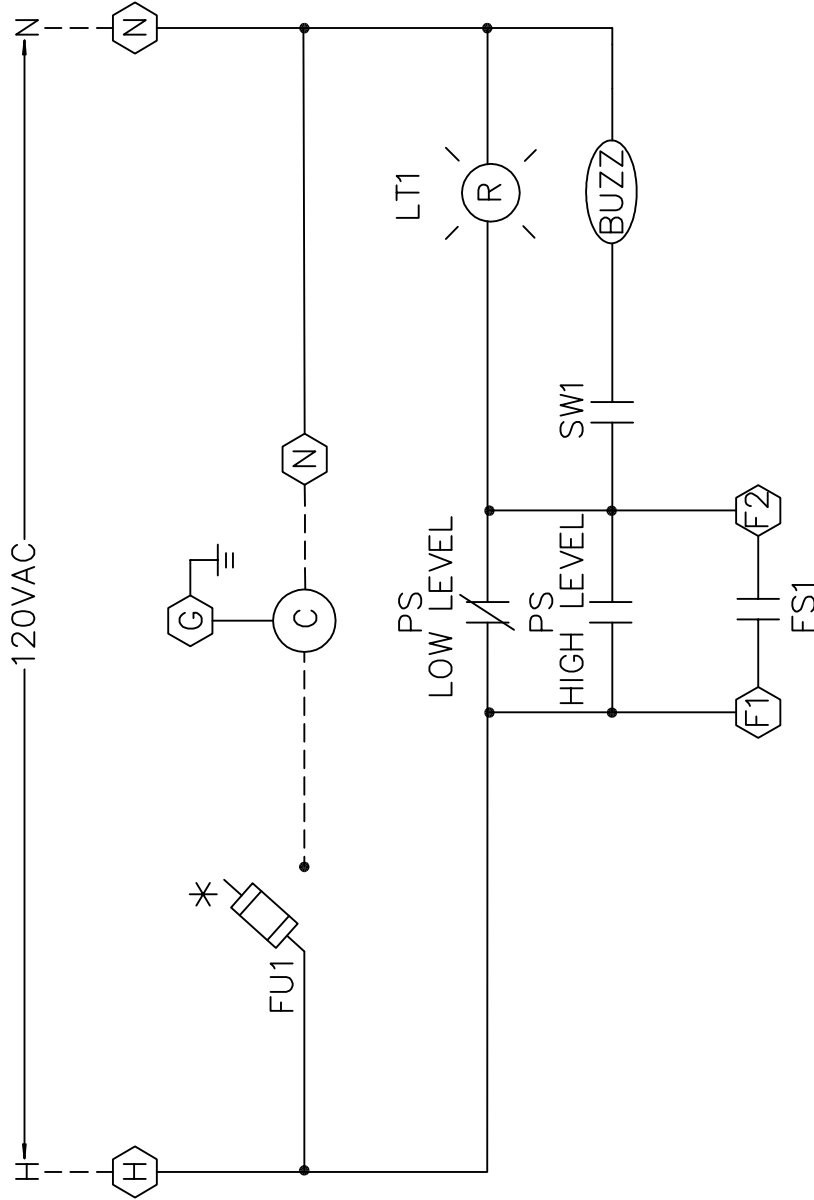


FRONT VIEW  
 DOOR OPEN  
 CP22

FS1-FLOAT SWITCH IN TREATMENT PLANT  
 \* FUSE SIZE VARIES WITH COMPRESSOR SIZE  
 PER NATIONAL ELECTRIC CODE



**CP 22 WIRING DIAGRAM**



SCHEMATIC DIAGRAM

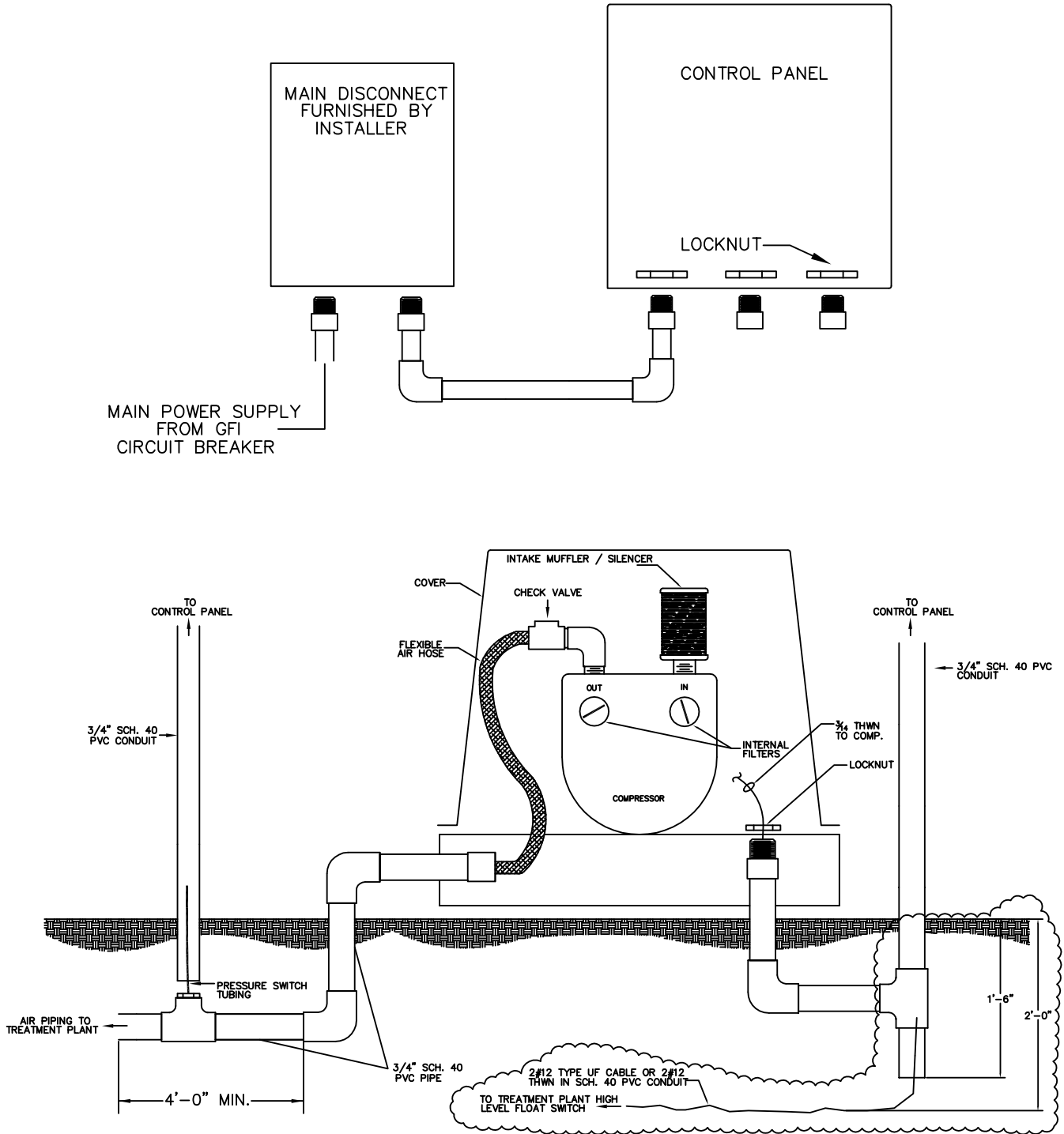
CP22 SERIES

FS1- H.L. FLOAT SWITCH (OPTIONAL)

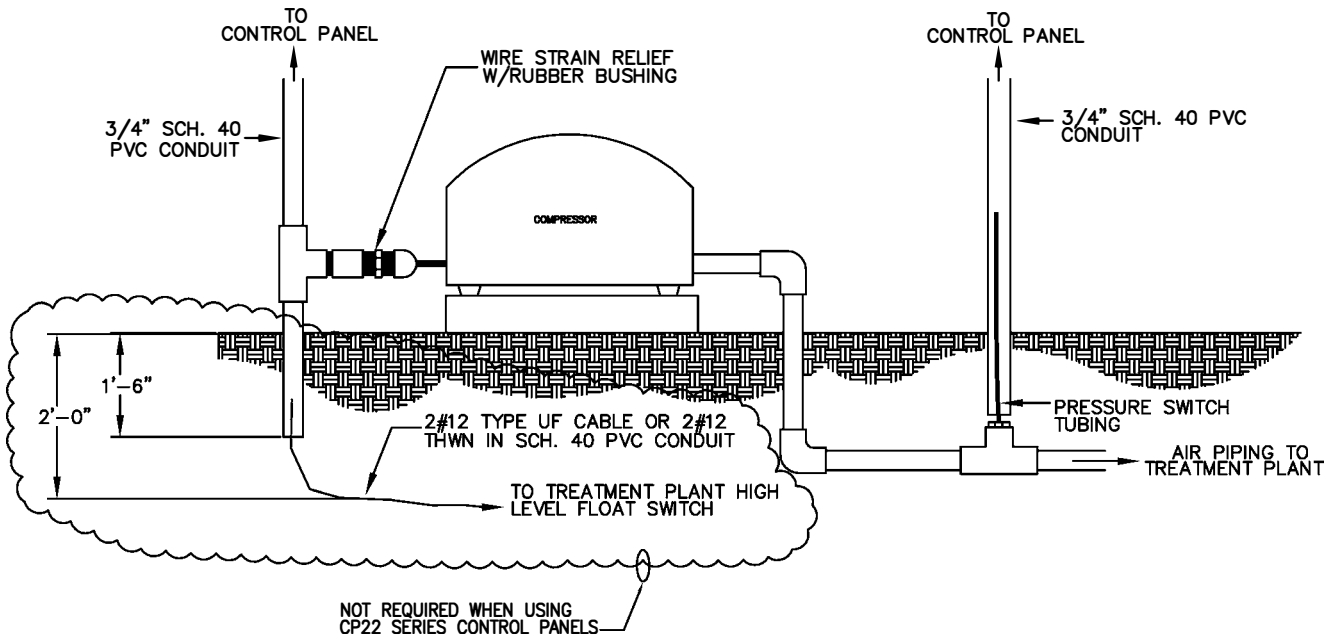
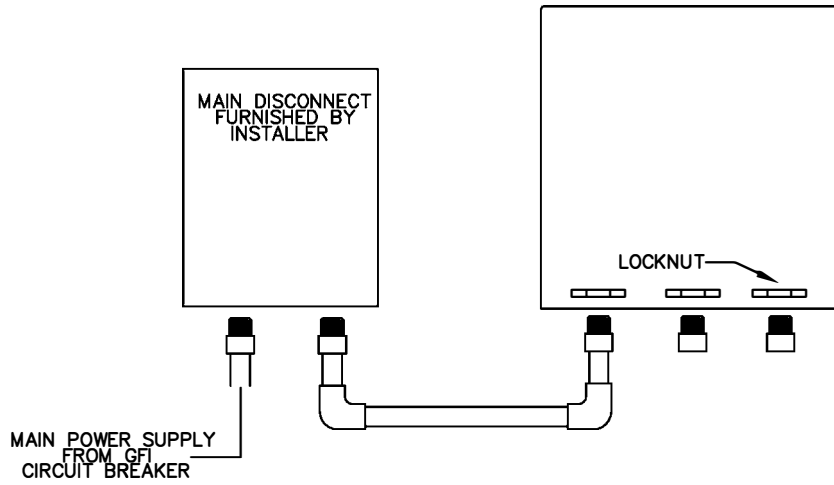
- \* FUSE SIZE VARIES WITH COMPRESSOR SIZE PER NATIONAL ELECTRICAL CODE
- A SEPERATE DISCONNECT IS REQUIRED.

DWG . CP22

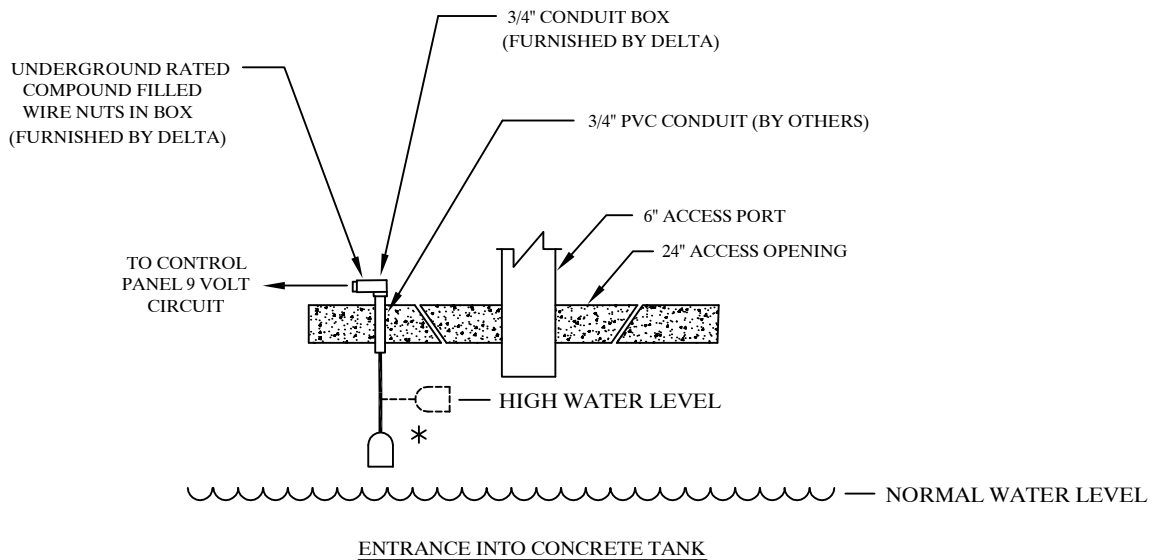
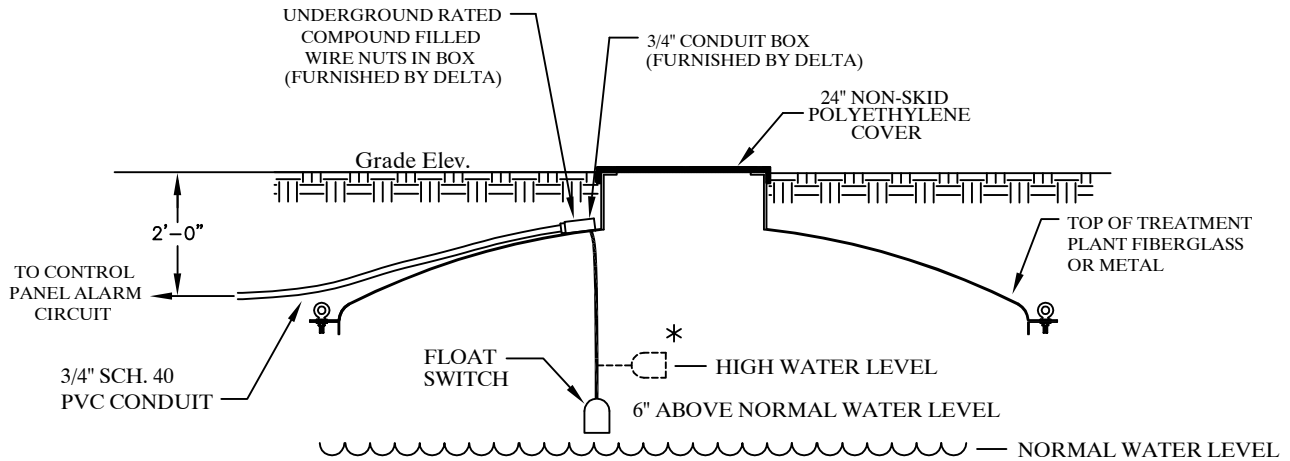
# CONTROL PANEL CONNECTIONS USING ROTARY SERIES COMPRESSORS



# CONTROL PANEL CONNECTIONS USING LINEAR COMPRESSOR



# FLOAT SWITCH MOUNTING



## NOTES:

1. GROMMET TO BE SELECTED FOR TIGHT FIT AROUND CABLE AND IN LID.
2. WIRE TO CONTROL PANEL TO BE 18 GAUGE AND RATED FOR DIRECT BURIAL SERVICE. WOODS WIRE-886 OR EQUAL.
3. WIRE NUTS TO BE RATED FOR UNDERGROUND SERVICE IDEAL-DB PLUS MODEL 60 OR EQUAL.
4. FLOAT SWITCH TO BE NORMALLY OPEN 2900-B8S1-3 OR EQUAL.
5. SMALL ACCESS PORT SHOWN ON DRAWING LARGE ACCESS PORTS MAY BE SUPPLIED.
6. MINIMUM AMOUNT OF CONDUIT SHOWN ABOVE IS REQUIRED EVEN WITH TYPE UF CABLE.

## CONTROL PANEL – ADDITIONAL INFORMATION

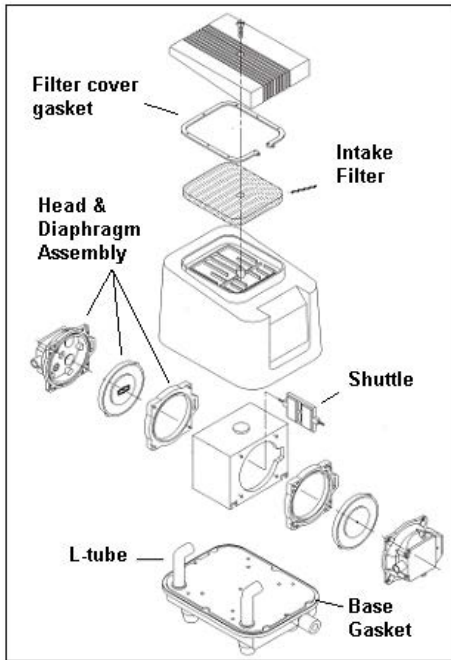
---

### ADDITIONAL MATERIALS NEEDED FOR CONTROL PANEL ELECTRICAL INSTALLATION

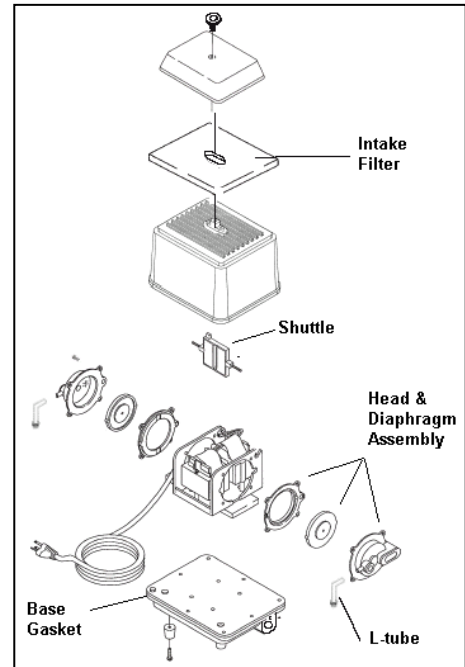
QUANTITY	ITEM	MANUFACTURER OR EQUAL
As required	2#12UF with ground	
2	300 volt silicon filled King-6T underground service wire nuts	King-6T
As required	Conduit and fittings are as shown in the drawings contained in this manual.	
1	20 amp minimum A/C type disconnect switch or equal. Required on CP20 series panels only	

# AIR PUMP DRAWINGS AND PARTS LIST

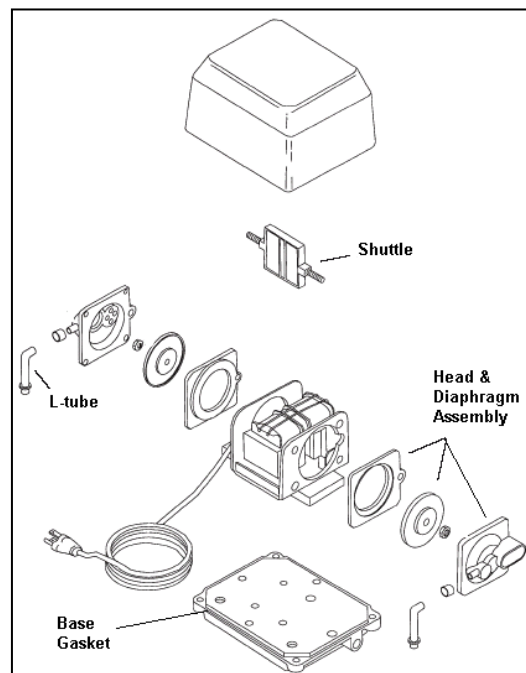
## 5078S, 5100S-C, 5120S, 5150S, 5200S



## 5030-A, 5040-A, 5060-A and V models



## 5006, 5015, 5020 and V models



## AIR PUMP PARTS LIST

Part Number	Description	Model
C50141	Shuttle assembly	5006, 5015, 5020 (PLUS MO, SE AND V MODELS)
C50279	Service kit (2 required)	5006, 5015, 5020 (PLUS MO, SE AND V MODELS)
C50144	L-tube (2 required)	5006, 5015, 5020 AND V MODELS
C50283	Gasket, tank	5006, 5015, 5020 AND V MODELS
C50151	Shuttle assembly	5030-A, 5040-A AND V MODELS
C50401-P	Service kit	5030-A, 5040-A AND V MODELS
C50554	L-tube (2 required)	5030-A, 5040-A, 5060-A AND V MODELS
C56008	Gasket, tank	5030-A, 5040-A, 5060-A AND V MODELS
C56300	Air filter	5030-A, 5040-A, 5060-A AND V MODELS
C50159	Shuttle assembly	5060-A AND V MODELS
C50397-P	Service kit	5060-A AND V MODELS
C50272	Shuttle assembly	5078S
C50284	Gasket, tank	5078S, 5100S-C, 5120S
C50318	Air filter	5078S, 5100S-C, 5120S
C53900	L-tube (2 required)	5078S, 5100S-C, 5120S
C56002	Gasket, filter cover	5078S, 5100S-C, 5120S
C50402-P	Service kit	5078S, 5100S-C, 5120S
C51600	Shuttle assembly	5100S-C, 5120S
C50265	Shuttle assembly	5150S, 5200S
C50285	Gasket, tank	5150S, 5200S
C53903	L-tube (2 required)	5150S, 5200S
C56005	Gasket, filter cover	5150S, 5200S
C56302	Air filter	5150S, 5200S
C50403-P	Service kit	5150S, 5200S

**Note:** Service kits (except C50279) include base gasket, filter cover gasket (where appropriate), L-tubes (2), head and diaphragm assembly (2) and intake filter. Service kit C50279 includes head and diaphragm assembly (2) only.

## AIR PUMP PARTS LIST

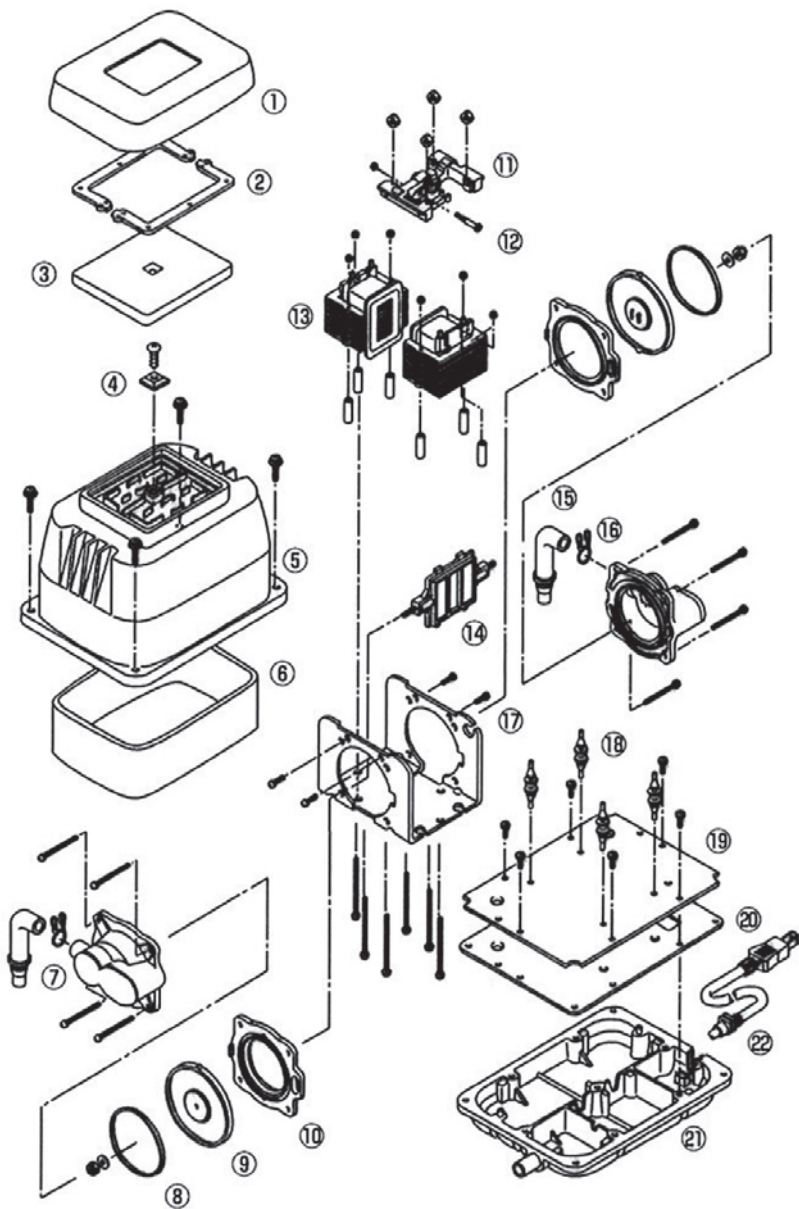
### Parts List for QR-0030 QR-0050 QR-0080 QR-0100

Ref. Number	Description	Part Qty.	291305 QR-003	291306 QR-0050	291303 QR-0080	291304 QR-0100
1	SILENCER	1	C60362		C60363-P	
2	VANE KIT [(4) VANES, GASKET]	1	L32100-P		L32103-P	
3	ENDPLATE	1	L07163		L07166	
4	SOUND CHAMBER	1	L07164		L07165	
5	GASKET	1	L31058		L31059	
6	SHROUD	1	L38230		L38231	
7	FILTER KIT [(8) FELTS, (2) O-RINGS]	1	L84194-P		L84195-P	
8	MOTOR	1	L36236		L36235	
-	SHIM .0010 THICK	A/R*	L10556		L10569 (.0010)	
-	SHIM .0015 THICK	A/R*	L10557		L10570 (.0015)	
-	SHIM .0020 THICK	A/R*	L10558		L10571 (.0020)	



## HP SERIES STRUCTURE AND PARTS NAMES

Air pump	Start of production	Discontinuance of production
HP-60	1995/ 9	—
HP-80	1995/ 9	—

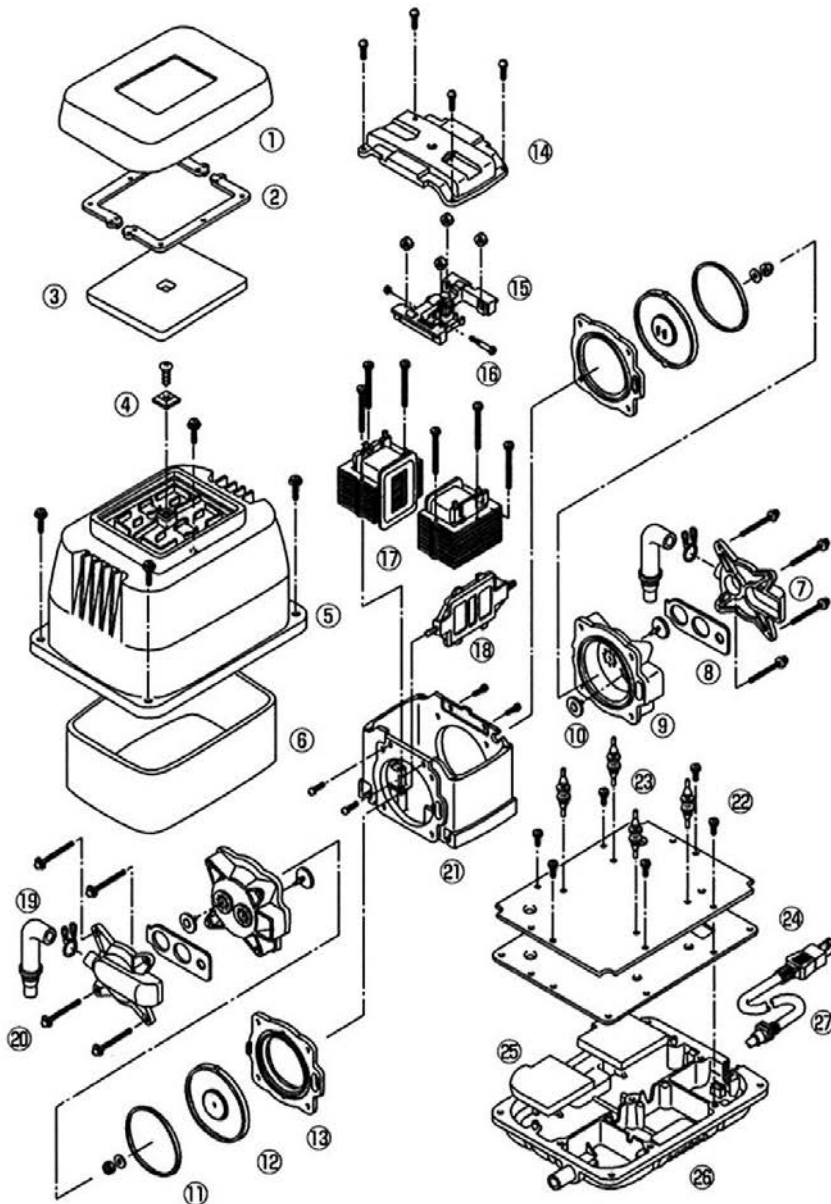


### HP-60/80

- ① Filter Cover
- ② Semi Cover Packing
- ③ Filter
- ④ Fitting Boss
- ⑤ Upper Housing
- ⑥ Sound Absorber
- ⑦ Casing Block
- ⑧ Diaphragm Ring
- ⑨ Diaphragm
- ⑩ Diaphragm Base
- ⑪ SP Switch
- ⑫ Safety Screw
- ⑬ Electromagnet
- ⑭ Actuating Rod
- ⑮ L-Tube
- ⑯ Hose Band
- ⑰ Frame
- ⑱ Vibration Control Rubber
- ⑲ Center Plate
- ⑳ Gasket
- ㉑ Lower Housing
- ㉒ Power Cord

## HP SERIES STRUCTURE AND PARTS NAMES

Air pump	Start of production	Discontinuance of production
HP-100	1997/10	—
HP-120	1997/10	—



### HP-100/120

- ① Filter Cover
- ② Semi Cover Packing
- ③ Filter
- ④ Fitting Boss
- ⑤ Upper Housing
- ⑥ Sound Absorber (Lap)
- ⑦ Casing Block A
- ⑧ Valve Chamber Packing
- ⑨ Casing Block B
- ⑩ Valve
- ⑪ Diaphragm Ring
- ⑫ Diaphragm
- ⑬ Diaphragm Base
- ⑭ Frame Cover
- ⑮ SP Switch
- ⑯ Safety Screw
- ⑰ Electromagnet
- ⑱ Actuating Rod
- ⑲ L-Tube
- ⑳ Hose Band
- ㉑ Frame
- ㉒ Vibration Control Rubber
- ㉓ Center Plate
- ㉔ Gasket
- ㉕ Sound Absorber (Filter)
- ㉖ Lower Housing
- ㉗ Power Cord

## EXPLODED PRODUCT VIEW, PARTS & ORDERING INFORMATION

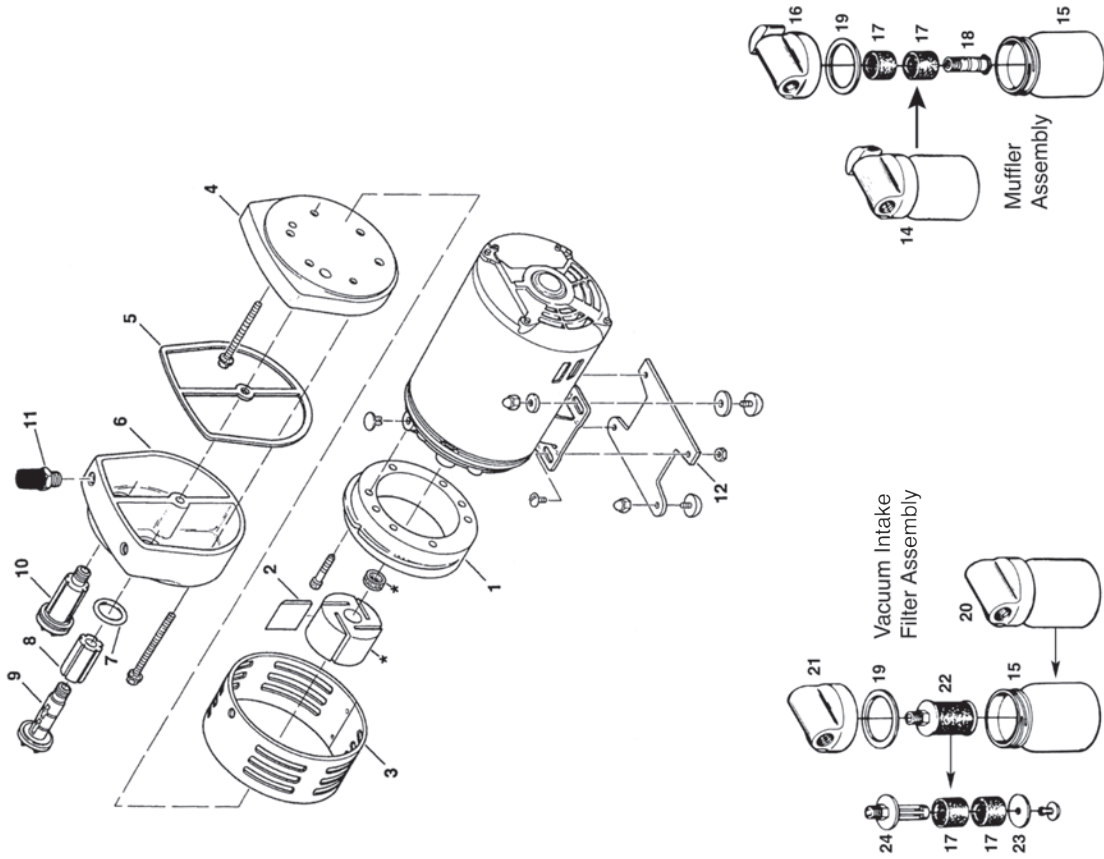
REF	DESCRIPTION	QTY	0323-101	0323-101Q	0523-101	0523-101Q	0523-V103
1	BODY	1	AK503	AK503	AK505	AK505	AK505
2 *	VANE	4	AH850A	AH850A	AH850A	AH850A	AH850A
3	SHROUD	1	AK502	AK502	AK502	AK502	AK502
4	END PLATE	1	AK516A	AK501	AK516A	AK501	AK516A
5 *	GASKET	1		AK521		AK521	
6	MUFFLER BOX	1		AK519		AK519	
7 *	O-RING	2		AK473		AK473	
8 *	FELT	2		AK524		AK524	
9	END CAP	2		AK510		AK510	
10	END CAP ASSEMBLY	2		AK526		AK526	
11	FILTER / MUFFLER	1		AK840A		AK840A	
12	FOOT SUPPORT	1		AC136		AC136	
13	ELBOW ***	2					AD997
14	MUFFLER ASSEMBLY	1					V425L
15	JAR	2					AA125A
16	COVER	1					AV427A
17	FELT FILTER	4					B344A
18	SUPPORT	1					B345A
19	COVER GASKET	2					B62A
20	FILTER ASSEMBLY	1					V400G
21	COVER	1					AV402C
22	FILTER ASSEMBLY	1					B343B
23	SCREEN CAP	1					AJ571
24	FELT SUPPORT	1					B347
	SERVICE KIT	1	K478A	K478	K478A	K478	K559

\* Denotes parts included in the Service Kit. Parts listed are for stock models.

\*\* No Service Kit available, order parts separately. \*\*\* Not shown.

For specific OEM models, please consult the factory.

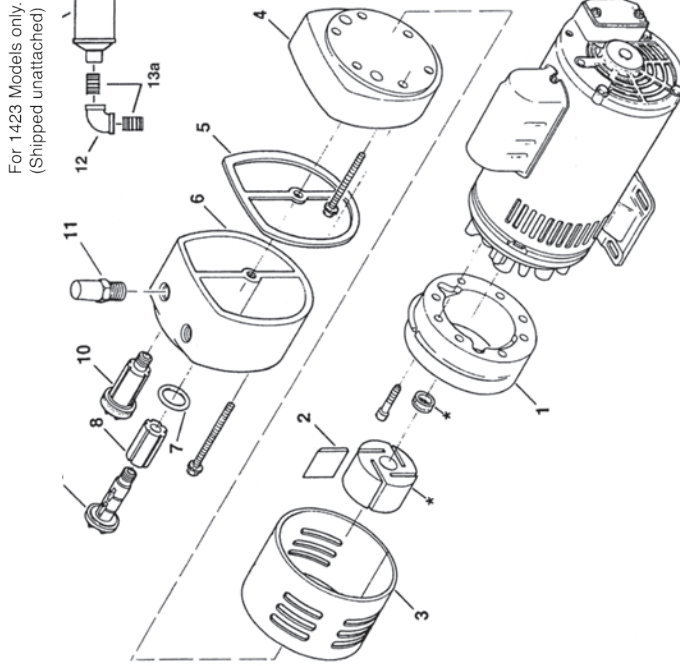
When corresponding or ordering parts, please give complete model and serial numbers.



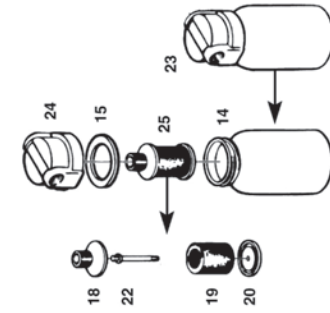
# AIR PUMP DRAWINGS

## EXPLODED PRODUCT VIEW, PARTS & ORDERING INFORMATION

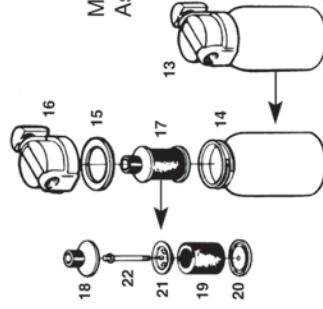
REF	DESCRIPTION	QTY	0823-101	0823-101Q	1023-101	1023-101Q	1023-V103	1423-101Q
1	BODY	1	AK517	AK517	AK518	AK518	AK518	AL283
2 *	VANE	4	AK513	AK513	AK513	AK513	AK513	AL284
3	SHROUD	1	AK511	AK511	AK511	AK511	AK511	AL281
4	END PLATE	1	AK515A	AK514	AK515A	AK514	AK515A	AK514
5 *	GASKET	1		AK522		AK522		AK522
6	MUFFLER BOX	1		AK520		AK520		AK520
7 *	O-RING	2		AK473		AK473		AK473
8 *	FELT	2		AK524		AK524		AK524
9	END CAP	2		AK510		AK510		AK510
10	END CAP ASSEMBLY	2		AK526		AK526		AK526
11	FILTER / MUFFLER	1		AK840		AK840		AC432
12	ELBOW	1						BA206
12	ELBOW ***	2					AF272	
13	MUFFLER ASSEMBLY	1					AB599B	
13 a	NIPPLE	2						BA714
14	JAR	2					AA805	
15	COVER GASKET	2					AA405	
16	COVER ASSEMBLY	1					AV805B	
17	MUFFLER ASSEMBLY	1					AC434-1	
18	COUPLING	2					AC391	
19	CARTRIDGE	2					AC393	
20	END CAP ASSEMBLY	2					AC394	
21	MUFFLER PLATE	1					AC395	
22	STUD	2					AC396	
23	FILTER ASSEMBLY	1					AB599	
24	COVER ASSEMBLY	1					AV805APC	
25	FILTER ASSEMBLY	1					AC433-1	
	SERVICE KIT	1	K479A	K479	K479A	K479	K479A	K575A



Vacuum Intake Filter Assembly

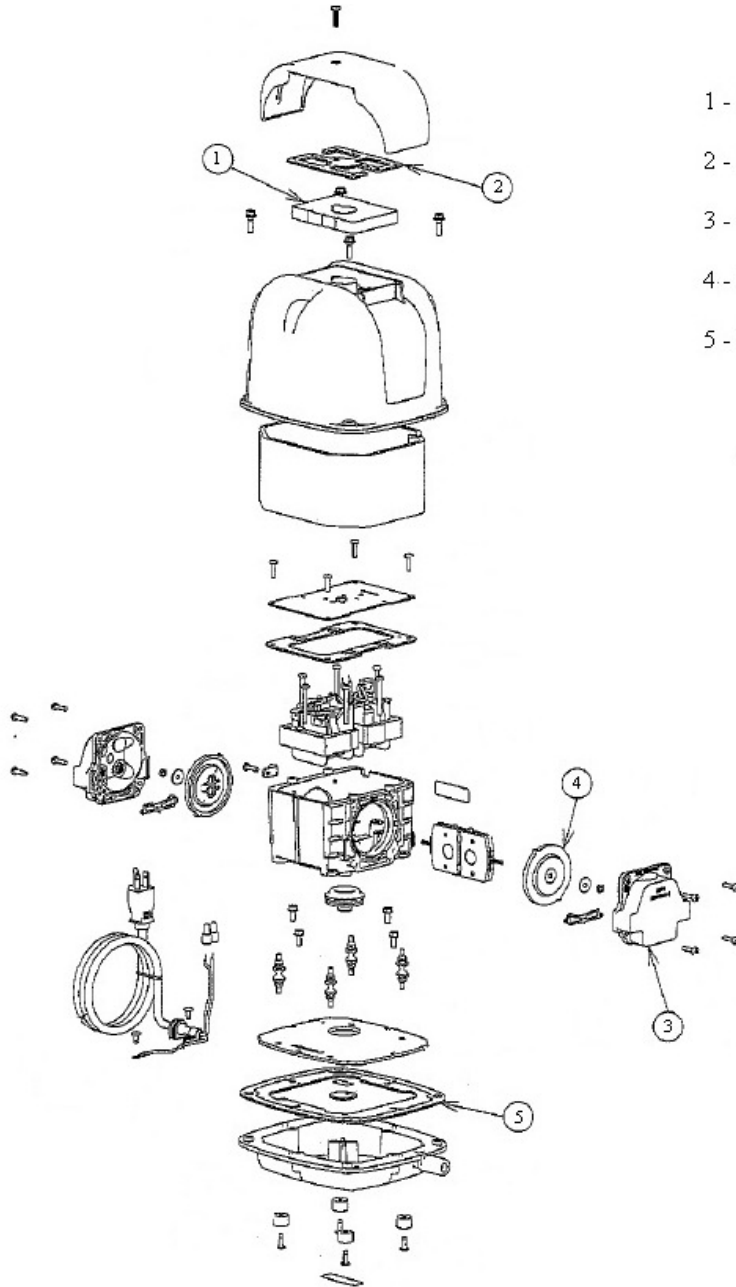


Muffler Assembly



\* Denotes parts included in the Service Kit. Parts listed are for stock models.  
 \*\* No Service Kit available, order parts separately. \*\*\* Not shown.  
 For specific OEM models, please consult the factory. When corresponding or ordering parts, please give complete model and serial numbers.

**AP SERIES  
STRUCTURE AND PARTS NAMES**



1 - Air Filter 641811


2 - Air Filter Cover Gasket 639571

3 - Chamber Block (2 each included in service kit SK-AP60/8)

4 - Diaphragm Assembly (2 each included in service kit SK-AI)

5 - Tank Gasket 639572


4"



9125 COMAR DRIVE WALKER, LA 70785  
1-800-219-9183

**THE DF SERIES**


Model

NSF/ANSI STDS 40   
 GPD CLASS 1

Serial No.

2"

4"




9125 COMAR DRIVE WALKER, LA 70785  
1-800-219-9183

**ALARM MALFUNCTION ELECTRICAL PANEL**

**THE DF SERIES**

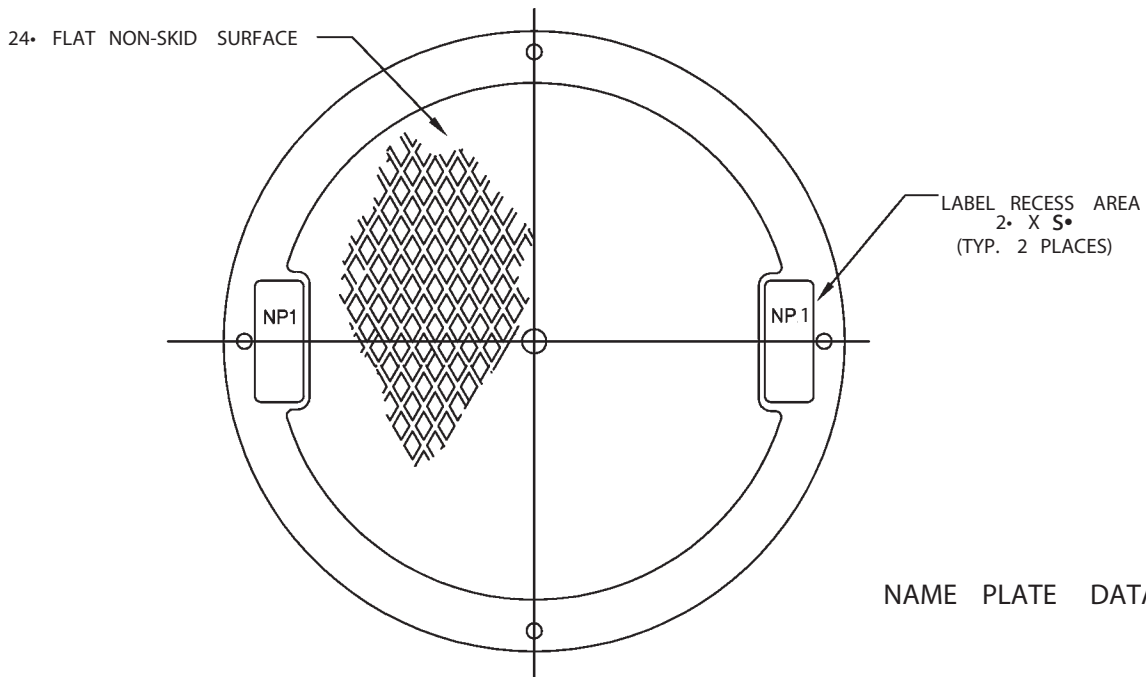
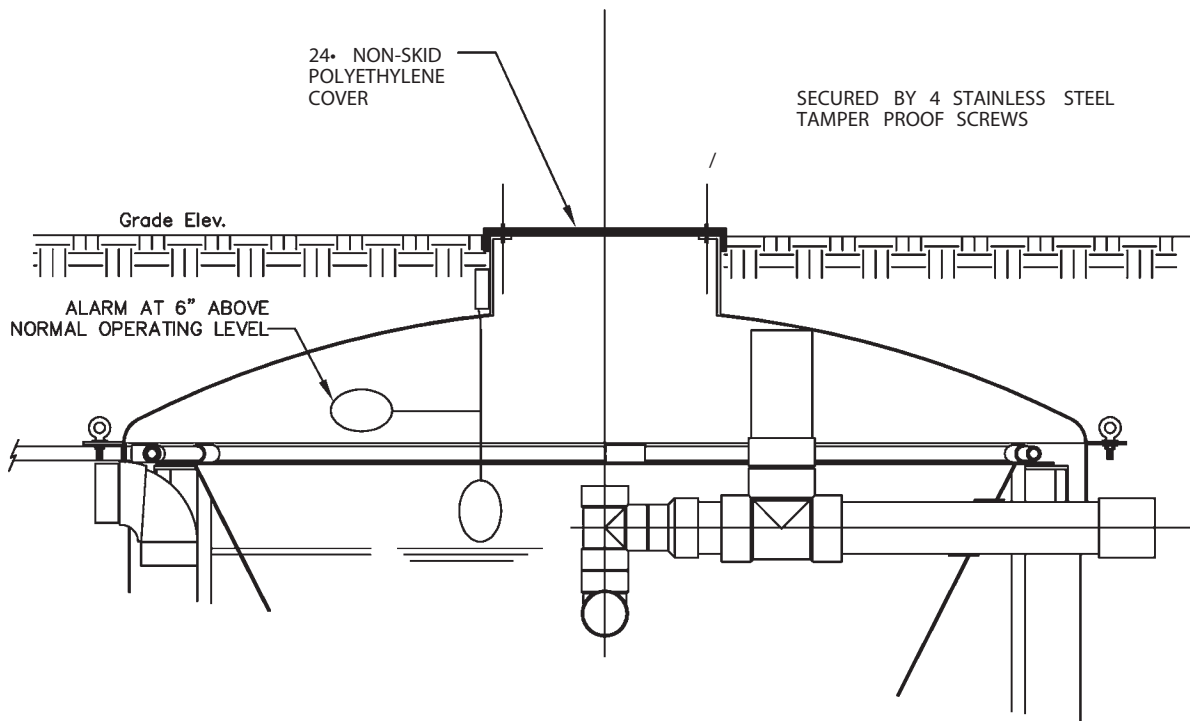
Model

NSF/ANSI STDS 40   
 GPD CLASS 1

Serial No.

3"

# MODEL DFXX-X



NAME PLATE DATA

24" MANWAY COVER

HIGH LEVEL FLOAT REQUIRED  
WHEN USING CP22 SERIES CONTROL PANELS

NP2 MODEL DF Series

The DF Series  
Model DF  
NSF-ANSI STDS 40  
xxxx GPD Class 1



## SERVICE POLICY

---

### DELTA TREATMENT SYSTEMS INDIVIDUAL MECHANICAL WASTEWATER TREATMENT SYSTEM SERVICE POLICY

#### INITIAL POLICY:

A two-year initial service policy shall be furnished to the user by the manufacturer or the distributor through the dealer. This policy may be included in the price of the system, provided the state in which the system is being installed has adapted NSF Policies as part of their state rules

1. **An inspection/service call every six months**, which includes inspection, adjustment, and servicing of the mechanical and electrical component parts as necessary to ensure proper function.
2. An effluent quality inspection every six months consisting of a visual check for color, turbidity, scum overflow, and an examination for odors.
3. If any improper operation is observed that cannot be corrected at that time, the user shall be notified immediately in writing of the conditions and the estimated date of correction. **THIS POLICY DOES NOT INCLUDE PUMPING SLUDGE FROM UNIT IF DEEMED NECESSARY.**

#### CONTINUING SERVICE POLICY:

An annually renewable service policy affording the same coverage as the Initial Service Policy is available. Consult your dealer for pricing information. The annually renewable service policy should provide the same service checks as the initial NSF service policy and should be performed twice per year.

#### PARTS:

Replacement parts or components may be obtained from your local distributor or contact Delta Treatment Systems for information.

#### COMPLAINTS:

In order for Delta Treatment Systems to properly address complaints, we require that you put in writing the date and nature of the complaint as detailed as possible. This **MUST** include the serial number of your system.

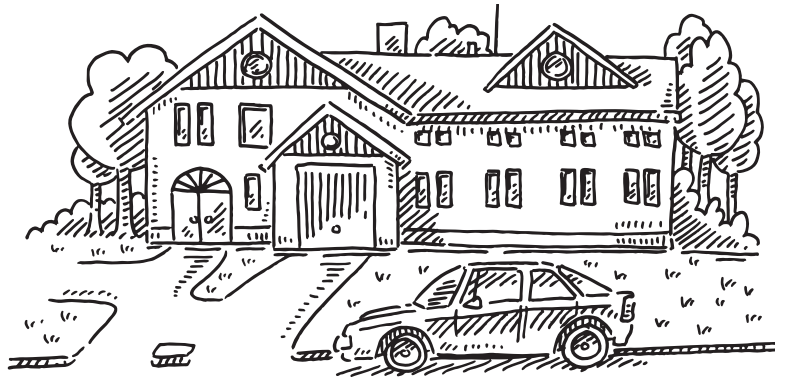
Send to: Delta Treatment Systems  
9125 Comar Drive  
Walker, LA 70785



# Delta Treatment Systems

## Homeowner's Manual: Onsite Wastewater Treatment System

### A Guide to the Proper Care and Maintenance of Your Onsite Wastewater Treatment System



### How to Take Care of Your Wastewater Treatment System

Congratulations, your home is now serviced by a meticulously engineered wastewater treatment system. Your new Delta wastewater treatment system is designed for the collection and treatment of your household wastewater.

When properly maintained, onsite wastewater treatment systems efficiently treat household wastewater and recycle local groundwater. Delta wastewater treatment systems use little energy and can often outperform municipal sewage treatment plants. The treated wastewater, or effluent, is often returned to the soil where it will receive a final level of treatment before it reenters and recharges the groundwater. With an onsite wastewater treatment system there's no degrading of our nation's rivers and oceans, which is often the case with municipal sewer system outflows.

Your Delta wastewater treatment system is like any other engineered system, like your heat pump or

your car. Engineered systems will last longer and offer optimal performance if maintained regularly by a qualified service provider. In the case of your Delta wastewater treatment system, the service provider will likely be the person who installed the system as they're the most familiar with the ins and outs of the system and where all of the components are located on your property.

Aside from regularly scheduled maintenance of the system, it's also important to be cautious of what you put into the system. The following pages outline some of the do's and don'ts to keep in mind to ensure the longevity of your Delta wastewater treatment system.

By following a maintenance schedule and our best practice recommendations in the do's and don'ts section, your Delta wastewater treatment system should function for decades. You'll also save water, energy, and pumpout costs, too!



**Don't flush dangerous or damaging substances into your system.**

# Wastewater Treatment System Inside the Home



## DO's



Collect any cooking grease or leftover oils in a container and dispose of them in your trash can. Compost food scraps or dispose of them into the trash can. Food byproducts can accelerate the need for pumping of your tank and increase overall maintenance cost.

Keep lint out of your wastewater treatment system by cleaning the lint filters on your washing machine and dryer before every load. Installing a supplemental lint filter on your washing machine would be a good precautionary measure.

Try to use substitutes for common hazardous waste that can be found in many cleaners. Replace the following with products that are less harmful to the environment.

- **Ammonia-Based Cleaners for Baking Soda/**

- Vinegar:** For surfaces, sprinkle baking soda on a damp sponge. For windows, use a solution of 2 tbs (30 mL) white vinegar to 1qt (1 L) water and pour the mixture into a spray bottle.

- **Carpet/Upholstery Cleaners for Cornstarch/**

- Baking Soda:** Sprinkle dry cornstarch or baking soda on the surface and then vacuum.

- **Disinfectants for Borax:** Use ¼ cup (50 g) of Borax in a half-gallon (2 L) of water and store in a spray bottle. This solution will also work as a deodorizer.

- **Drain Decloggers:** Use a plunger or snake to remove and clean the drain trap.

- **Scouring Cleaners & Powders for Baking Soda/**

- BonAmi® cleanser:** Sprinkle baking soda on a damp sponge or add 4 tbs (50g) baking soda to 1 qt (1 L) warm water. Or use BonAmi® cleanser; it's less expensive and is less likely to scratch the surface.

- **Furniture/Floor Polishes for Oil Soap/Lemon**

- Juice:** Use oil soap and warm water, and dry with a soft cloth. To polish, use 1 part lemon juice and 2 parts oil (any kind) or use natural products with lemon oil or beeswax in mineral oil.

- **Laundry Detergents:** Choose a liquid detergent without chlorine or phosphates. Avoid using powdered detergents.

- **Metal Cleaners for Toothpaste/Lemon:** To polish

silver gently rub with toothpaste and soft wet cloth. To clean and polish brass and copper, scrub with half of a lemon dipped in salt. To clean stainless steel, use a scouring pad and soapy water.

- **Oven Cleaners for Baking Soda/BonAmi®**

- cleanser:** Sprinkle the surface with baking soda or Bon Ami® then scrub with an unused toilet brush.

Practice water conservation with these tips. Using excessive amounts of water can cause hydraulic overload of the system. On average, 50 gallons (200 liters) per person per day is typical. Below are some water conservation tips to consider to ensure you're not overloading the system.

- Take shorter showers or baths with a partially filled tub. Be cautious about excessive use of large soaking tubs.

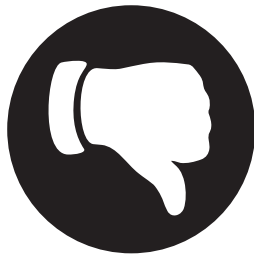
- Don't let water run unnecessarily while brushing teeth or washing hands, food, dishes, etc.

- Don't use the dishwasher or washing machine unless you have a full load. And, when possible avoid doing several loads in one day.

- Install water-saving devices on faucets and showerheads.

- When you need to replace an old toilet, replace it with a low-flush model.

# Wastewater Treatment System Inside the Home



## DON'T'S



Don't flush dangerous or damaging substances into your system.

- Pharmaceuticals
- Excessive Amounts of Bath or Body Oils
- Water Softener Backwash
- Flammable or Toxic Products
- Household Cleaners
- Chlorine Bleach, Chlorides, and Pool/Spa Products
- Pesticides, Herbicides, Agricultural Chemicals, or Fertilizers
- Eggshells, Cantaloupe Seeds, Gum, Coffee Grounds, or Tea Bags
- Chewing Tobacco or Cigarette Butts
- Condoms, Dental Floss, Sanitary Napkins or Tampons, Diapers
- Paper Towels, Newspapers, Candy Wrappers
- Large Amounts of Hair
- Baby, Medicated, or Cleaning Wipes (even those that claim to be "flushable" on the packaging)

**Don't plumb water softener discharge brine into your wastewater system** (softened water is ok, just not the brine that is produced during the regeneration cycle). Route the brine around your wastewater system so it discharges directly into the soil.

**Don't use special additives that are marketed to enhance the performance of your system.** Additives can cause damage in other areas of the collection system by disrupting the natural microorganisms that are currently growing within the system.

**Don't leave interior faucets on to protect water lines during cold weather.** A single running faucet can easily increase your daily flow up to 3,000 gallons per day and hydraulically overload your system. Properly insulate or heat your faucets and plumbing in preparation for winter months.

**Don't ignore leaky plumbing fixtures.** A leaky toilet can waste up to 2,000 gallons (7,500 liters) of water per single day, 10-20 times more water than an average household's daily use. Leaky plumbing fixtures increases your water bill, wastes natural resources and causes unnecessary overload on your system.

---

## Wastewater Treatment System Do's and Don'ts: Outside the Home

### Do's:

- Keep the tank's access lid secure at all times. Never open or attempt to enter the tank. Gasses present within the tank can be fatal. If you find the lid has become loose contact your service providerservice provider or Delta Treatment Systems.
- Plan landscaping and permanent outdoor structures before installation of the system.

### Don'ts:

- Never drive over any buried components of the system. If your system is in an area that could potentially be subject to any vehicular traffic place a barricade like a row of shrubs around it.

- Don't dump waste from your RV. This will not only cause an increase to the frequency of septage pumping but, when dumped directly into the pumping vault, RV waste clogs or fouls equipment causing unnecessary maintenance and repair costs. Additionally, some RV waste may contain chemicals that are toxic or may have a negative impact to the biological digestion occurring within the tank.
- Don't connect rain gutters or storm drains to the system or allow any surface water to enter it.
- Don't discharge hot tub water into your system.
- Don't dig without knowing the location of your wastewater system components.

# WARRANTY

---

## DELTA TREATMENT SYSTEMS, LLC (“DELTA”) DELTA TWO (2) YEAR RESIDENTIAL WASTEWATER TREATMENT SYSTEM LIMITED WARRANTY

- (a) This limited warranty is extended to the end user of a Delta ECOPOD® Delta Whitewater and Delta EnviroAire Series Advanced Wastewater Treatment System (the “Delta Product”). A Delta System manufactured by Delta, when installed and operated in accordance with Delta’s installation instructions and local regulation by a licensed installer, is warranted to you: (i) against defective materials and workmanship for two (2) years after installation. Delta will, at its option, (i) repair the defective System or (ii) replace the defective materials. This Warranty does not cover any damage caused by flooding, abuse, unauthorized disassembly, improper wiring or overload protection. This Warrants does not cover any of the house wiring, plumbing, drainage or disposal systems.
- (b) In order to exercise your warranty rights, you must notify Delta in writing at its corporate headquarters in Walker, Louisiana within fifteen (15) days of the alleged defect. Delta reserves the right to inspect the item to confirm that it is defective.
- (c) YOUR EXCLUSIVE REMEDY WITH RESPECT TO ANY AND ALL LOSSES OR DAMAGES RESULTING FROM ANY CAUSE WHATSOEVER SHALL BE SPECIFIED IN SUBPARAGRAPH (a) ABOVE. DELTA SHALL IN NO EVENT BE LIABLE FOR ANY CONSEQUENTIAL OR INCIDENTAL DAMAGES OF ANY KIND, HOWEVER OCCASIONED, WHETHER BY NEGLIGENCE OR OTHERWISE. SOME STATES DO NOT ALLOW THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THIS LIMITATION OR EXCLUSION MAY NOT APPLY TO YOU. THIS WARRANTY GIVES YOU SPECIFIC LEGAL RIGHTS AND YOU MAY ALSO HAVE OTHER RIGHTS WHICH VARY FROM STATE TO STATE.
- (d) THIS LIMITED WARRANTY IS THE EXCLUSIVE WARRANTY GIVEN BY DELTA AND SUPERSEDES ANY PRIOR, CONTRARY, ADDITIONAL, OR SUBSEQUENT REPRESENTATIONS, WHETHER ORAL OR WRITTEN. DELTA DISCLAIMS AND EXCLUDES TO THE GREATEST EXTENT ALLOWED BY LAW ALL OTHER WARRANTIES, WHETHER EXPRESS OR IMPLIED, OR STATUTORY, INCLUDING ANY WARRANTY OF MERCHANTABILITY, FINESSE FOR A PARTICULAR PURPOSE AND ANY IMPLIED WARRANTIES OTHERWISE ARISING FROM COURSE OF DEALING, COURSE OF PERFORMANCE, OR USAGE OF TRADE. NO PERSON (INCLUDING ANY EMPLOYEE, AGENT, DEALER, OR REPRESENTATIVE) IS AUTHORIZED TO MAKE ANY REPRESENTATION OR WARRANTY CONCERNING THIS SYSTEM, EXCEPT TO REFER YOU TO THIS LIMITED WARRANTY. EXCEPT AS EXPRESSLY SET FORTH HEREIN, THIS WARRANTY IS NOT A WARRANTY OF FUTURE PERFORMANCE, BUT ONLY A WARRANTY TO REPAIR OR REPLACE DEFECTIVE COMPONENTS.
- (e) YOU MAY ASSIGN THIS LIMITED WARRANTY TO A SUBSEQUENT PURCHASER OF YOUR HOME.
- (f) NO REPRESENTATIVE OF DELTA HAS THE AUTHORITY TO CHANGE THIS LIMITED WARRANTY IN ANY MANNER WHATSOEVER, OR TO EXTEND THIS LIMITED WARRANTY BEYOND THE STATED TWO (2) YEAR TERM.
- (g) NO WARRANTY OF ANY KIND IS MADE WITH REGARD TO ANY SYSTEM, COMPONENTS, DEVICES, MEDIA OR TREATMENT UNITS WHICH ARE MANUFACTURED BY OTHERS AND ARE INSTALLED IN CONNECTION WITH THE DELTA SYSTEM. USE OF THESE PRODUCTS ARE AT YOUR OWN RISK.

### CONDITIONS AND EXCLUSIONS

There are certain conditions or applications over which Delta has no control. Defects or problems as a result of such conditions or applications are not the responsibility of Delta and are NOT covered under this warranty. They include failure to install the Delta System in accordance with instructions or applicable regulatory requirements or guidance and altering the Delta Product contrary to the installation instructions.



DELTA TREATMENT SYSTEMS, LLC  
9125 Comar Drive, Walker, LA 70785  
(225) 665-6162 • (800) 219-9183  
www.deltatreatment.com  
info@deltatreatment.com