Aqua Star, LLC

Water Well and Septic

Metro---936-931-2443 **Fax-----936-931-5007**

Residential and Commercial

936-931-2443

25277 FM 1488 **MAGNOLIA, TEXAS 77355**

About Us

Contractors and homeowners have come to rely on **Aqua Star, LLC** for all their septic needs when it comes to the finest installation of septic systems. Our company installs a variety of systems for many contractors and homeowners. We are very content in knowing that our reputation for installation and service has been impeccable. We work seven days a week if needed, to keep an exact schedule to suit the convenience of our customers. Our company carries the right equipment, insurance, and products so that we are always prepared for each and every job. We custom install systems so that every specific detail, big or small, is handled in a timely and professional manner. Taking extra care of your property is a top priority with **Aqua Star, LLC**. We strive to maintain an Accident Free Environment. **We SPECIALZE in service and safety!**

Training is still a big part of our Goal as professionals. Continuing education is a must for our people out in the field. We hold a state license for site evaluation and installation of On Site Sewage Facilities. (OSSF), with special training to operate sewer treatment plants up to 100,000 gallons per day. Every job is installed, inspected, and completed to County/State rules, regulations, and standards.

Aqua Star, LLC

25277 FM 1488 MAGNOLIA, TX 77355

JUST A LITTLE SEPTIC TANK HISTORY

Septic Tanks were introduced in the United States in the 1880's. The past 100 years has seen septic systems become the most widely used method of on-site sewage disposal. Approximately 25% of all housing units in the nation dispose of their sewage by septic tanks. During the past 40 years, the population of Texas has shifted from rural to urban.

More than 4 million Texan's rely on Septic Tanks to dispose of their domestic wastes. These citizens live in rural and suburban areas. The proper design, construction, inspection, and operation of these on-site sewerage systems protect the public health. The improper design, construction or operation of on-site sewerage facilities can result in multiple problems; the most serious of which is the transmission of disease. Other problems that may result include environmental degradation, particularly surface and groundwater pollution, and lowering of property values.

Americans in general demand safe water supplies, and clean pleasing, environments.

In response to citizen's demands the Texas Legislature passed a law in 1987 for the purpose of regulation on-site sewage disposal facilities statewide. The law called for regional and local governments----such as counties, cities, river authorities and special districts—to implement and enforce on-site sewage regulations with approval and oversight by the *TNRCC.

Everyone benefits when an on-site sewerage system is properly designed, installed, and inspected and operated. Everyone includes:

*Homeowners	*Inspectors
*Neighbors	*Mortgage Companies
*Installers	*Wild Life

***TEXAS NATURAL RESOURCE CONSERVATION COMMISSION**

INFORMATION YOU NEED TO KNOW

While you are looking for property there are a few things you need to keep in min

Absorption qualities of your soil----This is determined with a proper soil analysis. For instance; if you have sandy soil and it is dry, liquids are very easily absorbed. A normal design going by the TNRCC (Texas Natural Resource Conservation Committee) codes and your County Rules and Regulations are approximately 75 gallons per day per person. *Example: a family of four (4) needs to have three hundred (300) gallons of liquid absorbed in the lateral field line per day.* If you have clay, and you have a very rainy season, the field line is not going to absorb liquid very easily, if at all. In this case, you need to consider an aerobic treatment plant.

Examine your landscape: You were probably attracted to a lot because of the big beautiful trees. If the system you have chosen requires large machinery to excavate the soil, or to dig lateral lines, some roots may be cut causing the tree or other vegetation to die. So keep in mind, if the property you are thinking of building your dream home on is flat and has a lot of clay or rock, a conventional system may not work. A septic system for this area will be more expensive than a conventional system, if a septic system can be installed at all. Sites like these will require an aerobic system. Your installer or Contractor should have ample information for your to consider on either system.

Settling--------When installing tanks for your septic, whether a conventional, aerobic, (also known as a spray system) low pressure dosing, ECT. There will always be settling. Usually, if the county permits us to, we will leave the tank site with a mound of dirt, so that you may occasionally add to these areas. We are not responsible for final grade.

Future Plans----It is important to think about the future. Maybe you will want a swimming pool one-day or perhaps a tennis court. Any and all things must be considered. Speak with a licensed sanitarian or engineer about the property you are looking to buy. They should know the area well, and be able to discuss many aspects of soil analysis and septic systems in your area.

It is **Important** to talk with your Contractor or your local County office about the site that you have chosen. State or local regulations can actually prohibit a septic system on many sites.

Do not be afraid of having a septic system installed. If properly designed, installed, and maintained, your system will work for many, many years.

HOW YOUR NEW TREATMENT SYSTEM FUNCTIONS

The Wastewater Treatment System is similar to large municipality sewage treat plants. It uses an extended aeration activated sludge process. This type of treatment depends primarily on the use of air. When air in introduced to the wastewater, it promotes the growth of aerobic bacteria and other micro-organisms that break down the organic material found in regular household sewage.

Raw unsettled waste/water from your home enters directly into the pretreatment tank, the solids separate from the liquid and the liquid flows into the aeration chamber. Inside the aeration chamber, simple hydraulic displacement is accomplished by the introduction of air. Air is introduced into the aeration chamber by passing from the aerator motor through the air diffuser and into the system. This air promotes the growth of aerobic organisms in much larger amounts than would naturally occur. It is these aerobic organisms (bacteria) that break down the organic material. As the wastewater leaves the aeration chamber, it enters the "quiet zone" better known as the clarifier. No mixing occurs inside the clarifier.

In the clarifier, and "leftover" solids separate from the liquid and settle to the bottom of the clarifier. This solid material is called sludge. Sludge contains dissolved oxygen and the sludge bacteria are activated by oxygen. This activated sludge is returned to the aeration chamber where it is mixed and digested again. The sludge then mixed with incoming wastewater. This mixture of returned sludge, wastewater, and dissolved oxygen is referred to as mixed liquor. The mixed liquor flows back into the clarifier, the solids separate and return once again to the aeration chamber. This never-ending cycle produces a clear, odorless, high quality effluent that is ready to be released to the environment. (Pro Flo System Owner's Manual)

TREATMENT SYSTEM STARUP

Upon installation completion, your new system needs to be filled with water before its first use. The installer usually performs this step after the tanks are set. Once the system has been filled with water and all electrical and plumbing connections have been made, you are ready to start using your new system.

In order for the aerobic system to be biologically stable, a population growth of micro-organisms (bacteria) will need to develop. This development process may take four (4) to twelve (12) weeks. It is these bacteria that make the treatment system operate.

OWNER MAINTENANCE, CARE, AND OPERATION INSTRUCTIONS

Aerobic Wastewater Systems have been designed and built to provide long term, reliable, and cost efficient service. Aerobic treatment plants will operate with minimal amount of attention; however, there are a few things the owner should know to properly maintain the new system.

Your local regulating authorities have sized you Wastewater Treatment system for your home. This means you should try to maintain a certain amount of daily flow into the system. You can find the size of your system on the label that is attached to the motor cover or control panel on the system.

NOTE:

You will need to monitor your frequency of washing clothes and dishes as this could complicate the treatment process if most of the wastewater from your house is gray water.
Gray water does not contain enough organic material to help the treatment process. To avoid disrupting the biological stability of your system, try to spread your laundry and dishwashing over several days instead of doing it all in one or two days.

The Wastewater Treatment System is much like a living organism. It needs certain things to work and perform properly. Your new system can treat most any type of household wastewater. This includes the waste/waters from showers and baths, clothes and dishes, and toilets. However, as great as the system performs in treating common household sewage, it cannot treat everything flushed from the house. Please see "**Items that are not Safe to Use in your New System"**

NOTE:

Toilets are known to leak water at times from the seal in the tank, so it may be a good idea to test your toilets(s) occasionally. Place a few drops of food coloring or dye into your tank. Observe the bowl for a few moments. If you notice dye or coloring entering your bowl, your seal in the tank is leaking. You will need replace the flapper in the tank. By performing this simple test, you not only reduce your water usage, but you prevent diluting the needed bacteria from your system.

ITEMS THAT ARE SAFE TO USE IN YOUR NEW SYSTEM

Think of your new system as a way for bacteria to live. This means anything that you use in your home could affect the performance of the system.

It is acceptable to use household cleaners as long as they are not over used. By following the directions on the labels, you should be fine with amount of chemicals being introduced in the system.

Other than regular household sewage and minor use of cleaners, no other products should be introduced into the system.

ITEMS THAT ARE NOT SAFE TO USE IN YOUR SYSTEM

The proper operation of the Aerobic Septic System depends upon proper organic loading and the life of the aerobic bacteria inside the system. We cannot control the loading of substances into the system that may upset its biological balance. We can only provide a System Owner's Manual that outlines the materials that should be kept out of the system.

Do not put strong disinfectants, leaches, toilet cleaners or sanitizers, other than small amounts used in daily house cleaning and laundry into the system. Do not use liquid softeners.
Do not put chemicals that have high volumes of bacteria killing agents into your system.
Do not put commercial, industrial, or chemical waste into your system.
Do not allow any discharge, backwash, and/or exhaust from any type of water softener to enter the system. Do not allow surface water flows caused by rain or ground water infiltration, storm water infiltrations, leakage from improperly maintained plumbing fixtures, excessive volumes of water, ect., to enter the system. Do not allow air conditioner condensation lines, other than those a/c lines installed to directly discharge into the pump tank, to flow into your aerobic system.
Do not put coffee grounds, shrimp shells, or any level of cooking grease and/or oils into the system.
Do not allow pet shampoo or pet dip to flow into the system.
Do not put solvents, paints or paint thinners, drain cleaners, harsh detergents, heavy metals, or any other toxic materials into your system.
Do not put disposable diapers, paper towels, tampons, sanitary napkins, condoms or any rubber/plastic products (including cigarette filters) or similar items into the waste water systems. Do not put non-biodegradable items into your system.
Pro Flo Aerobic Systems, LP strongly discourages the use of a garbage disposal; a grease/trash trap should be installed in front of the system. The grease/trash will stop undesirable waste materials from entering the system.
Do not put chemicals that are designed to clean out drains or correct "septic tank" problems into your system.

Please be aware that some medications you may be taking, such as antibiotics, may upset the biological stability of the system. IMPORTANT!

The Wastewater Treatment System is not a “Septic Tank”. Septic Tanks use and/or work by different form of bacteria. The use of chemicals that correct septic tank problems could greatly affect the aerobic bacteria in your new system. If you have any doubts about a certain chemical, please call your authorized installer or distributor.

THE AREATOR

Your system may be equipped with a quiet, energy efficient linear aerator. The aerator is located under the aerator cover. The amperage draw of each aerator depends on the model. A linear 500 g.p.d. & 600 g.p.d. (gallon per day) aerator draws about 1.6 amps and the linear 800 g.p.d. and 1000 g.p.d. aerators draw about 2.1 amps each. The linear aerator for the 1500 g.p.d. system draws about 3.4 amps.

If you purchased a 1000 g.p.d. or 1500 g.p.d. model, your system may have a carbon vane aerator which runs louder than a linear aerator. The carbon vane 1000 g.pd. aerator draws about 3 amps. The carbon vane aerator for the 1500 g.p.d. system draws about 10.4 amps.

You should get used to the sound of your aerator on your system. If you notice extreme sound changes, you should call for service.

WARNING!

Never attempt to service or clean your filter. Call your authorized service representative. As with electrical device, there is a chance of electrical shock if you attempt to service yourself.

THE CONTROL PANEL

Each Pro Flo Wastewater Treatment System has its own control panel. This panel is located under the aerator cover. This control panel is equipped with a complete “SYSEMS MALFUNCTION” alarm system. If for any reason the air pressure in the aeration system drops or the system has high water, the alarm will sound and the red light will come on. If you hear your alarm system sounding, something is not working properly with your system. You will need to call your septic provider for repair. A mute switch is located on the aerator cover to allow the sound to be interrupted until your service provider arrives.

WARNING!

Never attempt to service the control panel. Call your authorized service representative. As with electrical device, there is a chance of electrical shock if you attempt to service yourself.

PERIODIC PUMPING AND CLEANING

Determination of the need for pumping can be made only by a trained service person by testing the tank's contents and/or effluent. The pumping should be done by a competent septic tank cleaning company. Your system should be cleaned every 3 to 5 years depending on your daily loading. You should expect to obtain one inch of sludge at the bottom of your system every year. If you use more water that what the system was designed to handle, you will have more build up in less time. This means you may need to have your system pumped and cleaned more frequently.

YOUR RESPONSIBILITIES

WARNING!

IT IS THE SOLE RESPONSIBILITY FO THE OWNER TO UNDERSTAND, OBSERVE, AND FOLLOW ANY AND ALL SAFTEY RULES AND REQUIREMENTS PERTAINING TO THE ENTIRE ELECTRICAL SYSTEM, AREATOR OPERATION, AND SYSTEM DISCHARGE CONERNING THE OWNER, THEIR FAMILIES, FRIENDS, OR QUEST.

There are a few procedures that you will need to follow in order for your new Pro Flo Wastewater Treatment System to work to its full potential. These procedures include but are not limited to:

1. Make sure the aerator is never exposed to water or fire ants. Your warranty does NOT cover water or fire ant damage.

2. Make sure the system is not exposed to vehicular traffic. This could cause damage to the tanks.

3. Do not attempt to clean the aerator filter or service any part of the system yourself. Doing so could result in electrical shock and may cause severe bodily damage or death.

4. The Pro Flo Wastewater System will NOT produce water that is safe for human consumption. Always be sure children are not allowed to play on or around any part of the system. Do not allow pets or livestock around the system or any of its components.

5. Do not allow non-biodegradable materials (i.e. plastics, coffee grounds, etc.), chemicals, solvents, grease, oil, paints or any other type of non-domestic wastewater to enter the Pro Flo Treatment System. For a detailed list , see the section titled "**ITEMS THAT ARE NOT SAFE TO USE IN YOUR NEW SYSTEM**"

NOTE

In some states it is a requirement for you to have a continual service contract with a licensed service provider who is authorized to service the Pro Flo Wastewater Treatment System.

At the end of the initial 2-year period, you have the option of purchasing an additional service contract through your Pro Flo representative. We encourage you to purchase this additional contract at that time.

The Pro Flo System is designed to achieve a high degree of treatment necessary to protect both environmental and public health concerns. As with any piece of equipment, proper user care, in addition to regular service inspections and routine maintenance, will help ensure optimum treatment efficiency as well as reducing long-term operating costs.

IMPORTANT!

The Pro Flo System must be installed and maintained in compliance with all the state and local laws and regulations. This includes compliance with all regulations concerning proper effluent disposal as well as the pumping and disposal of sludge. Many states already require the use of chlorination system behind all mechanical plants for total effluent disinfection prior to final discharge. Pro Flo recommends the use of a chlorination system behind its mechanical plants for total effluent disinfection prior to final discharge. Pro Flo also recommends that children and animals should not be allowed to play or come in contact with the effluent or the effluent to discharge area.

Warranties

Your new Pro Flo Wastewater Treatment System comes with a 2-year limited manufacturer's warranty. This warranty covers the aerator, pump, floats and control panel.

PRO FLO AEROBIC SYSTEMS, LP LIMITED TWO YEAR WARRANTY

Controlled performance testing of limited duration is a means of establishing the capability of equipment to perform in a prescribed manner. Such testing cannot reproduce all conditions encountered by the equipment in actual use. Use experience dictates that service and maintenance are required to ensure continued satisfactory performance. Comprehensive warranty and service programs will facilitate that end. Manufacturers of proprietary systems covered by these criteria are required to provide such programs.

Pro Flo Aerobic Systems, LP warrants the parts in each treatment process/system to be free from defects in material and workmanship for a period of two years from the date of installation treating residential wastewater. Sole obligation under this warranty is as follows: Pro Flo Aerobic Systems, LP shall fulfill this warranty by repairing or exchanging any component part, F.O.B. factory, that in Pro Flo Aerobic Systems', LP judgment shows evidence of defects, provided said component part has been paid for and is returned through an authorized dealer, transportation prepaid. The warrantee must also specify the nature of the defect to the manufacturer.

The warranty does not cover treatment process/systems that have been flooded by external means or that have been disassembled by unauthorized persons, improperly installed, subjected to external damage, or damage due to altered or improper wiring or overload protection.

This warranty applies only to the treatment process/system and does not include any pumping of tanks, residential wiring, plumbing, drainage, or disposal system. Pro Flo Aerobic Systems, LP is not responsible for any delay or damages caused by defective components or materials, for loss incurred because of interruption of serviced, or for any other special or consequential damages or incidental expenses arising from the manufacture, sale, or use of this process/system.

Pro Flo Aerobic Systems, LP reserves the right to revise, change, or modify the construction and design of the treatment process/system for residential wastewater or any component part or parts thereof without incurring any obligation to make such changes for modification in previously sold equipment. Pro Flo Aerobic Systems, LP also reserves the right, in making replacements of component parts under this warranty, to furnish a component part which, in its judgment, is equivalent to the company part replaced.

Under no circumstances will Pro Flo Aerobic Systems, LP be responsible to the warrantee for any other direct or consequential damages, including but not limited to lost profits, lost income, labor charges, delays in production, and/or idle production, which result from defects in material and/or workmanship of the system.

This warranty is expressly in lieu of any other expressed or implied warranty, excluding and warranty of merchantability or fitness, and of any other obligation of the part of Pro Flo Aerobic Systems, LP.

This warranty gives you specific legal rights. You may also have other rights that vary from state to state.

The Manufacturer's warranty does not apply to the following:

Misuse, abuse, or any repair or alteration performed by anyone other than Pro Flo personnel or authorized representatives.

Failure to maintain electrical power to the treatment system in accordance with the requirements of the manufacturer (Pro Flo Aerobic Systems, LP) or the authorized service representative.

The disposal into the Pro Flo of non-biodegradable materials (i.e. plastics, coffee grounds, etc.), chemicals, solvents, grease, oil, paints or any other type of non-domestic, non-biodegradable wastewater. See the section in this manual titled "Items That are **NOT** Safe to use in your New System."

Daily sewage flows into the Pro Flo that exceeds the plant's hydraulic or organic design capabilities.

Any usage contrary to the Pro Flo Systems Owner's Manual and/or The Pro Flo representative's recommendations.

Damage to components caused by sewer gases, water and/or fire ants.

WHEN DO I REPLACE IT!

In the event you experience a problem with your Aerobic Wastewater Treatment System or if service is required, you can call Aqua Star, LLC@ 936-931-2443. After the expiration of your initial two-year service policy provided *Aqua Star Maintenance Company*, you may obtain a continuing service policy on a yearly basis, which will include terms comparable to the initial service policy from **Aqua Star, LLC** that is trained and certified.

In order for the Aerobic System to function at optimum performance levels, the system will require periodic service. The normally expected service that is associated with the system includes:

1. Repair or replace aerator	2 to 10 years
2. Clean Filters on aerator	6 months to 2 years
3. Break up scum in clarifier (settling chamber)	6 months to 2 years
4. Pump sludge from aeration tank	2 to 5 years *
5. Pump sludge from pretreatment tank	2 to 5 years *
6. Check aeration diffusers	annually
7. Check surge control weir	6 months

*Any sludge removed from pretreatment tank or Aerobic Unit must be disposed of according to all state, local, and federal regulatory requirements.

Removing Solids From Tanks

To remove solids from pretreatment tank drop pump hose through access opening on top of tank all the way through to the bottom of the tank. Pump out the whole tank volume, and then fill the tank back up with water immediately. The remove solids from Aerobic unit (aeration chamber) drop hose through access opening in tank all the way to the bottom of the tank. **Pump only ½ of the total tank volume and fill tank back up with water immediately. Your unit could collapse if you pump out more than ½ of the total tank volume, voiding your warranty.**

Aqua Star, LLC

WHAT'S WRONG WITH IT?

OR

The Most Frequently Asked Questions

1. **System not spraying; Alarm on:**
   A: Check to see if the Timer position in set to "ON"
   B: Check all electrical Breakers going to system
   C: Check to see if the timer is set to the correct time.
2. **No Alarm, No Spray, Sewage Backup- or Water Running From Tank**
   A: Check main Breaker
   B: Master Electrical Switch should be flipped to the "ON" position.
   C: Chlorinator may be stopped up from stacking to many tablets in the tube. (If stopped up from chlorine tablets, remove green access lid and tap remaining tablets with a long object to let them fall down to the bottom of the chlorinator)
3. **Bad Smell**
   A: Evaluate your habits at home

A-1: You may be overloading the system with too much organic matter. ***Example:*** You may be pouring too much fat and grease down the drain, grinding too much food in the garbage disposal, or sending too many paper products into the wastewater system.

A-2: Another problem could be that products toxic to the aerobic microbes are being sent into the system. ***Example:*** Sending too many cleaning products down the drain can kill the microbes.

A-3: Also, overloading water to the system, such as when fixtures leak or too much laundry is washed on a single day, this dilutes the microbe's food source. ***(See below)***

A-4: Sending too little waste into the system also can affect it. Microbes need a steady source of organic matter. Homes with periodic usage, such as lake houses with weekend visits, will have problems maintaining a good population of microbes to treat the wastewater. ***Example:*** Vacationing for 2 weeks lowers the microbial population by reducing the food supply entering the system. Returning home and washing 10 loads of laundry can flush out what population is left with all the laundry water. After a period of low system activity, the microbial population needs time to rebuild so it can function well

4. Is the compressor supposed to run all the time? The answer is yes. The aerobic system needs air for the aerobic bacteria to stay alive. The compressor is very economic to run; it uses 3.8 amps of electricity.

Let's Prevent Malfunctions!

To prevent malfunctions of your New Wastewater Treatment System, the following guidelines should be followed:

Any sewage system, whether aerobic or conventional, should not have inorganic materials (plastics, cigarette butts, throwaway diapers, feminine napkins, condoms, tobacco products of any kind, toxic chemicals such as paints, thinners, solvents, certain household cleaning agents, insecticides, pesticides, motor oil, certain detergents, bleaches, some prescriptions items such as antibiotics, and never under any circumstances discharge large amounts of grease or lard, ect.) that the bacteria can not consume, discharged into the system.

Large amounts of harsh chemicals, oil, grease, high sudsing detergents, discharge from water softeners, disinfectants or any other chemical or substance that kills bacteria should not be discharged into the system.

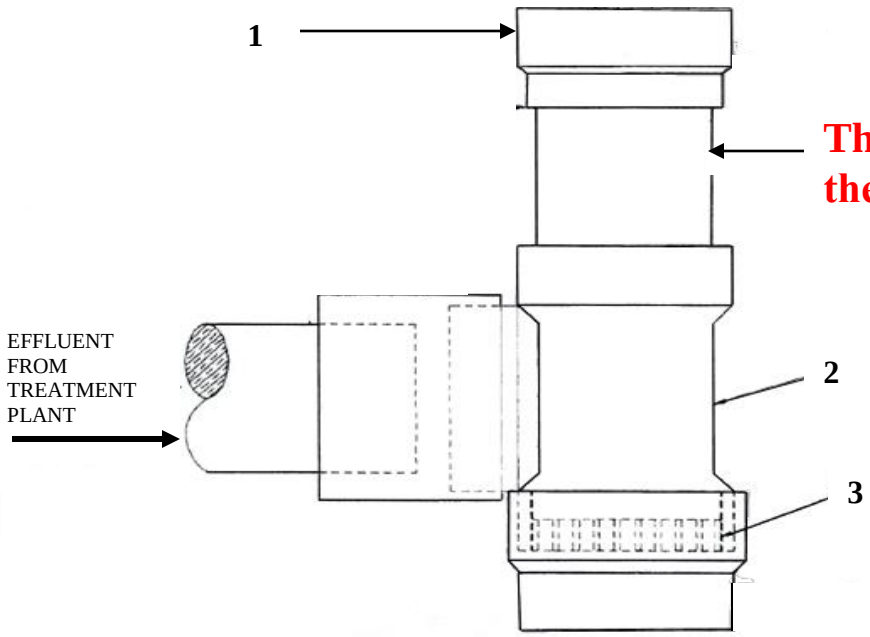
Excessive use of water, over the design flow of the system, or organic overloading in access of design parameters will cause the system not to perform to its fullest capabilities. Your Design is based upon 75 gallons per day, per person. If you think you may use more gallons per day, be sure to let your engineer, sanitarian, or installer know that your design and permit reflects your need for more gallons per day. Always be honest with your sanitarian about the number of people that will reside in your home.

Do not drive equipment, such as cars, trucks, tractors, or other heavy equipment over your system. The tanks could collapse and injury could occur.

If a spray system is installed, please be careful not to damage your spray heads while doing lawn maintenance. Although guaranteed, the guarantee is mechanical defect only. Running over the spray heads with your lawn mower does not fall under the mechanical malfunctions warranty.

Chlorinator

Please Note



LEGEND:

1. 4” THREADED ACCESS PLUG FOR REFILLING THE CHLORINE TABLETS.
2. STANDARD 4” PVC SDR-35 FOR INSTALLATION IN DOSING FOR CHLORINE CONTACT TANK
3. 4” PVC DRAIN GRATE FOR RETAINING CHLORINE TABLETS.

IF YOU STACK TO MANY CHLORINE TABLETS IN YOUR CHLORINATOR THEY WILL NOT DISOLVE PROPERLY. THE CHLORINE WILL THEN CLUMP OR CLOG, CAUSING SEWER TO BACK UP INTO THE CLEARSTREAM UNIT

CHLORINE TABLETS

ONLY USE 3-INCH TABLETS THAT ARE RECOMMENDED FOR SEWAGE EFFLUENT DISINFECTANT. AVAILABLE AT Aqua Star LLC.

Tablet Chlorination

Richard Weaver and Bruce Leskiar

Note: the following is taken from a fact sheet produced by the Texas A&M University System.

Where regulations allow treated Wastewater to be land applied, it first must be disinfected to prevent odors and remove disease-causing microorganisms. Wastewater can be disinfected with chlorine, ozone, and ultraviolet light. For onsite wastewater treatment systems, the most common form of disinfection is tablet chlorination.

Tablet chlorinators generally have four components: *chlorine tablets, *a tube holding the tablets, *a contact device that puts the chorine tablets into contact with the wastewater, and * a storage reservoir, usually a pump tank, where the wastewater is stored before it is distributed.

Before being chlorinated, wastewater from a home is treated by a secondary treatment device, usually in an aerobic treatment unit or sand filter. The wastewater moves from the treatment device through a pipe to the contact device.

The contact device usually contains a basin where the tube containing a stack of chlorine tablets is placed. The bottom tablet in the tube is in contact with the wastewater flowing through the basin. As that tablet dissolves and /or erodes, the tablet above falls by gravity to replace it.

A tablet can dissolve quickly or slowly, depending on the amount of wastewater coming into contact with it and the length of time it is in contact. A balance must be struck regarding the contact time in the chlorinator basin: too much contact time causes the wastewater to be over-chlorinated and the tablets to be consumed rapidly; too little contact time, and the wastewater is not chlorinated enough.

Use only chlorine tablets that are approved for use in wastewater. They are made of calcium hypochlorite, a common household bleaches. These tablets dissolve in the wastewater, releasing the hypochlorite, which then becomes hypochlorous acid, the primary disinfectant.

Do not use swimming pool chlorine tablets. They are often made from trichloroisocyanuric acid, which is not approved for use in wastewater treatment systems. These tablets make the chlorine available too slowly for it to be effective. If wetted repeatedly, they also can produce nitrogen chloride, which can explode.

Do not combine tablets of trichloroisocyanuric acid with calcium hypochlorite, because the combination will form the explosive compound nitrogen chloride. Read the list of active ingredients on the tablet label to make sure you are using calcium hypochlorite.

Because chlorine tablets are caustic, handle them with care. Wear gloves to protect your skin from direct contact with the tablets. Moist tablets are the most caustic; handle them with special care.

Also, because chlorine gas collects in the tablet container, open the container in a well-ventilated area. Chlorine gas can escape from the tablets and container, reducing the effectiveness of the tablets and possibly corroding metal products stored near the container.

After being chlorinated, the wastewater enters the pump tank, where the disinfection process is completed. At this point the wastewater is called reclaimed water.

An easy way to determine the chlorine concentration in your reclaimed water is by using chlorine test kits. They are available in stores that sell swimming pool supplies.

The most satisfactory kits require that you mix a small amount of reclaimed water in a solution and compare the mixture's color with those shown in the kit. The kits using paper strips may be less satisfactory because they do not determine the actual concentration of chlorine in the water.

Usually, if a test detects any chlorine, the wastewater will contain less than 200 fecal coliforms per 100 milliliters. But this does not guarantee that it is free of disease-causing organisms. To reduce the risk of having any disease-causing organisms, the wastewater should have at least 0.2 milliliters of chlorine per liter.

Keep it Working

You can either buy a chlorinator commercially or have one built by an installer. Please follow the manufacturer's recommendations for maintaining the system.

*Make sure the chlorinator contains chlorine tablets at all times. Inspect it weekly to ensure that tablets are present and in contact with the wastewater. Add chlorine tablets as necessary. Just as cars do not operate without gasoline, tablet chlorinators do not operate without chlorine tablets.

*Tablets can become compacted in the tube. To reduce the chances of compaction, place tow to five tables in the tube at a time.

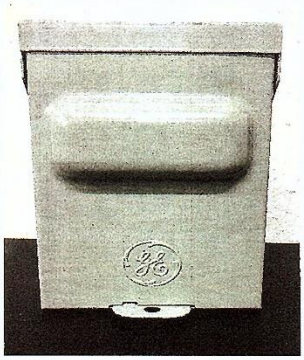
*If the tablets do become compacted in the tube, or if a portion of the bottom tablet has not dissolved and is holding up the rest of the stack, remove the tube and wash out the blockage with a stream of water from the garden hose.

*Use only tablets that have been certified for use in domestic wastewater systems. State regulations do not allow tablets for swimming pools and other applications to be used to treat wastewater.

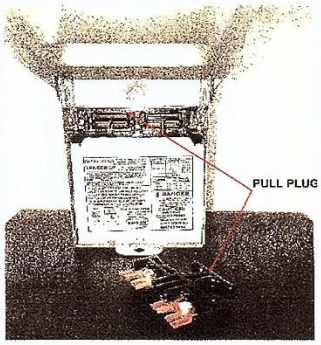
*Use a chlorine test kit to determine the chlorine concentration in the pump tank.

The Disconnect Box

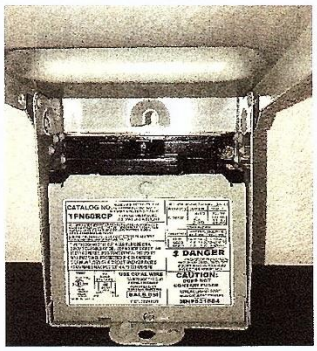
This metal box is Wired with 110 Volt Service



This metal box is mounted on the wall next to other electrical boxes, such as Air Conditioning. It should be labeled as septic



This is a picture of the disconnect opened ...The red arrows signify the pull bar. For the septic to operate the bar must be plugged into the top of the panel. Push in firmly.



The finished picture of the Disconnect with the pull bar properly pushed in.

IF THE ALARM SOUNDS...JUST SILENCE WITH SWITCH ON SIDE OF CONTROL BOX UNTIL WATER IS PUMPED DOWN IN PUMP TANK

SUPER*PRO*™ GEAR DRIVEN SPRINKLER SETTING INSTRUCTIONS

NOTE: The **Super*Pro*** is factory preset with a 90° arc setting, and includes a pre-installed #2.5 nozzle.

CHANGING A NOZZLE

1. REMOVING THE NOZZLE RETENTION SCREW

Use your key (**B**) or a small flat blade screwdriver to remove the nozzle retention screw (**M**) by turning counter-clockwise to remove and clockwise to re-install.

2. PULL UP THE RISER

Insert the key (**A**) in the keyhole (**C**) on the top of the nozzle turret (**D**) and turn the key ¼ turn to insure that the key does not slip out of the keyhole when you pull it up. Firmly pull up the entire spring-loaded riser to access the nozzle socket (**G**). Hold the riser assembly with one hand.

3. REMOVING THE NOZZLE

With the nozzle retention screw (**M**) removed, insert the key (**B**) into the slot directly under the nozzle *"prongs"* (**H**) at the top of the nozzle. Now, turn the key ¼ turn to *"hook"* the nozzle and pull the nozzle out.

4. INSTALLING A NOZZLE

Press the desired nozzle into the nozzle socket (**G**). Make sure the nozzle number is visible and the nozzle *"prongs"* (**H**) are up. Then, re-install the nozzle retention screw (**M**). **NOTE:** The nozzle retention screw is also a break-up screw and used to adjust the distance of the spray.

SETTING THE ARC ADJUSTMENT

1. FINDING THE LEFT START POSITION

Place your finger on the top center of the nozzle turret (**D**). Rotate the turret to the right until it stops and then back to the left until it stops. Notice the position of the nozzle arrow. (**L**) This is the *"Left Start"* position. The sprinkler will begin spraying from this position and rotate clockwise until it reaches the right Adjustable Stop-Return Point.

2. ORIENTING THE LEFT START POSITION

Insert the key (**A**) in the keyhole (**C**) on the top of the nozzle turret (**D**) and turn the key ¼ turn to insure that the key does not slip out of the keyhole when you pull it up. Being careful not to allow the nozzle turret to turn, firmly pull up the entire spring-loaded riser. Hold the lower riser assembly up with one hand. Now turn only the lower riser (**E**) clockwise or counter-clockwise until the nozzle arrow is pointing where you want the sprinkler to begin spraying.

3. CHANGING THE ARC

Insert the key (**B**) or a small flat blade screwdriver into the arc set adjustment slot (**N**). Turn clockwise to increase the arc or counter-clockwise to decrease the arc. **NOTE:** The arc set arrow in the center of the nozzle turret rotates to show the current setting. When set at 360°, the SuperPro will rotate continuously in a clockwise direction.

4. OPERATING THE SHUT OFF

To shut off the water flow, insert your key into the flow shut-off slot (**P**) and turn counter-clockwise. During system operation, the riser will remain elevated. To open flow again, turn key clockwise.

SPRINKLER INSTALLATION

1. INSTALL AND BURY

Thread the sprinkler on the pipe. Bury the sprinkler flush to grade. **NOTE:** Do not use pipe dope. Gear driven sprinklers and pop-up sprays should not be installed on the same watering zone.

2. INSPECTING THE FILTER

Unscrew the top and lift the complete sprinkler assembly (**J**) out of the housing can (**K**). The filter is located on the bottom of the sprinkler assembly and can be easily pulled out, cleaned and re-installed.

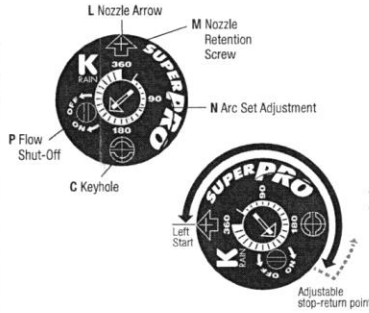
3. WINTERIZATION TIPS

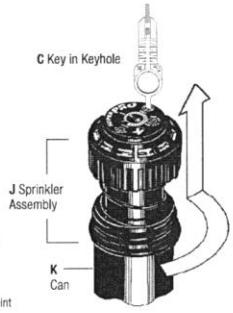
When using an air compressor to remove water from the system please note the following:

a. Do not exceed 30 PSI.

b. Always introduce air into the system gradually to avoid air pressure surges. Sudden release of compressed air into the sprinkler can cause damage.

c. Each zone should run no longer than 1 minute on air. Sprinklers turn 10 to 12 time faster on air than on water. Over spinning rotors on air can cause damage to the internal components.





PERFORMANCE DATA

PERFORMANCE

NOZZLES	PRESSURE PSI	RADIUS FT.	FLOW GPM
#0.5	30	30'	.45
	40	29'	.5
	50	26'	.6
	60	26'	.7
#0.75	30	32'	.7
	40	32'	.8
	50	33'	.9
	60	33'	1.0
#1	30	30'	1.1
	40	32'	1.3
	50	33'	1.5
	60	33'	1.6
#2	30	38'	2.3
	40	38'	2.5
	50	40'	2.7
	60	42'	3.0
#2.5 PRE-INSTALLED	30	35'	2.5
	40	36'	2.8
	50	37'	3.2
	60	38'	3.6
#3	30	35'	3.4
	40	36'	3.8
	50	38'	4.2
	60	39'	4.8
#4	30	42'	4.1
	40	44'	4.6
	50	45'	5.1
	60	46'	5.7
#6	40	46'	5.8
	50	48'	6.4
	60	49'	7.0
	70	49	7.5
#8	40	42'	7.5
	50	45'	8.2
	60	48'	9.0
	70	48'	9.5

METRIC

NOZZLES	PRESSURE KPA	PRESSURE BARS	RADIUS METERS	FLOW L/M	FLOW M3/H
#0.5	207	2.1	9.1	1.70	.10
	276	2.8	8.8	1.89	.11
	345	3.4	7.9	2.27	.14
	414	4.1	7.9	2.65	.16
#0.75	207	2.1	9.8	2.65	.16
	276	2.8	9.8	3.03	.18
	345	3.4	10.1	3.41	.20
	414	4.1	10.1	3.79	.23
#1	207	2.1	9.1	4.16	.25
	276	2.8	9.8	4.92	.30
	345	3.4	10.1	5.68	.34
	414	4.1	10.1	6.06	.36
#2	207	2.1	11.6	8.71	.52
	276	2.8	11.6	9.46	.57
	345	3.4	12.2	10.22	.61
	414	4.1	12.8	11.36	.68
#2.5 PRE-INSTALLED	207	2.1	10.7	9.46	.57
	276	2.8	11.0	10.60	.64
	345	3.4	11.3	12.11	.73
	414	4.1	11.6	13.63	.82
#3	207	2.1	10.7	12.87	.77
	276	2.8	11.0	14.38	.86
	345	3.4	11.6	15.90	.95
	414	4.1	11.9	18.17	1.09
#4	207	2.1	12.8	15.52	.93
	276	2.8	13.4	17.41	1.04
	345	3.4	13.7	19.31	1.16
	414	4.1	14.0	21.58	1.29
#6	276	2.8	14.0	21.96	1.32
	345	3.4	14.6	24.23	1.45
	414	4.1	14.9	26.50	1.59
	483	4.8	14.9	28.39	1.70
#8	276	2.8	12.8	28.39	1.70
	345	3.4	13.7	31.04	1.86
	414	4.1	14.6	34.07	2.04
	483	4.8	14.6	35.96	2.16

LOW ANGLE DATA

NOZZLES	PRESSURE PSI	RADIUS FT.	FLOW GPM
#1	30	26'	1.3
	40	27'	1.5
	50	27'	1.7
	60	28'	1.9
#3	30	29'	2.9
	40	30'	3.3
	50	31'	3.4
	60	33'	4.0
#4	30	28'	4.0
	40	31'	4.7
	50	34'	5.0
	60	36'	6.0
#6	40	30'	6.0
	50	34'	7.0
	60	37'	7.8
	70	38'	8.2

METRIC

NOZZLES	PRESSURE KPA	PRESSURE BARS	RADIUS METERS	FLOW L/M	FLOW M3/H
#1	207	2.1	7.9	4.92	.30
	276	2.8	8.2	5.68	.34
	345	3.4	8.2	6.44	.39
	414	4.1	8.5	7.19	.43
#3	207	2.1	8.8	10.98	.66
	276	2.8	9.1	12.49	.75
	345	3.4	9.4	12.87	.77
	414	4.1	10.1	15.14	.91
#4	207	2.1	8.5	15.14	.91
	276	2.8	9.4	17.79	1.07
	345	3.4	10.4	18.93	1.14
	414	4.1	11.0	22.71	1.36
#6	207	2.8	9.1	22.71	1.36
	276	3.4	10.4	26.50	1.59
	345	4.1	11.3	29.53	1.77
	414	4.8	11.6	31.04	1.86

* Data represents test results in zero wind. Adjust for local conditions. Radius may be reduced with nozzle retention screw.

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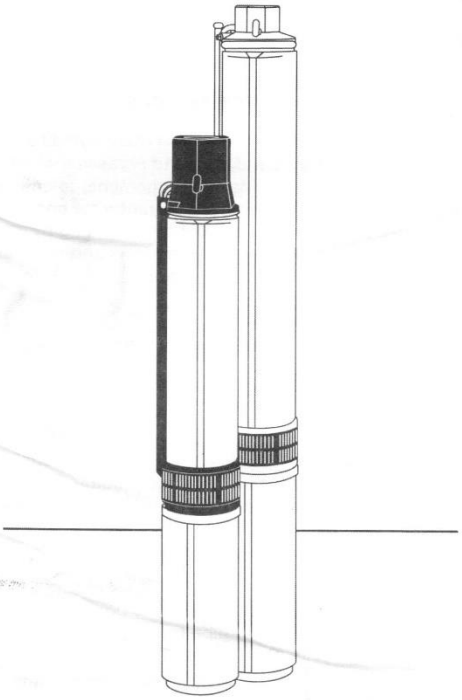
Franklin Electric

4" ENVIRONMENTAL E-SERIES PUMPS OWNER'S MANUAL



BEFORE INSTALLING PUMP, BE SURE TO READ THIS OWNER'S MANUAL CAREFULLY.

⚠CAUTION Fill pump with water before starting or pump will be damaged. The motor on this pump is guaranteed by the manufacturer and in event of failure it must be returned to an authorized service station for repairs. Motor warranty is void if repairs aren't made by an authorized repair station.

INSPECT THE SHIPMENT

Examine the pump when it is received to be sure there has been no damage in shipping. Should any be evident, report it immediately to the dealer from whom the pump was purchased. Please check the pump package to see that it includes pump, motor, and motor leads (if your pump purchase includes a motor).

Make certain that your available voltage corresponds to that of your motor.

READ AND FOLLOW SAFETY INSTRUCTIONS

⚠ This is the safety alert symbol. When you see this symbol on your pump or in this manual, look for one of the following signal words and be alert to the potential for personal injury:

⚠DANGER warns about hazards that will cause serious personal injury, death or major property damage if ignored.

⚠WARNING warns about hazards that **can** cause serious personal injury, death or major property damage if ignored.

⚠CAUTION warns about hazards that **will** or **can** cause minor personal injury or major property damage if ignored.

The label **NOTICE** indicates special instructions, which are important but not related to hazards.

Carefully read and follow all safety instructions in this manual and on pump.

⚠WARNING

Hazardous voltage. Can shock, burn, or cause death.

Ground pump before connecting to power supply. Disconnect power before working on pump, motor or tank.

Keep safety labels in good condition.

Replace missing or damaged safety labels.

⚠ **Wire motor for correct voltage. See "Electrical" section of this manual and motor nameplate.**

⚠ Ground motor before connecting to power supply.

⚠ Meet National Electrical Code, Canadian Electrical Code and local codes for all wiring.

⚠ Follow wiring instructions in this manual when connecting motor to power lines.

ATTENTION!

IMPORTANT INFORMATION FOR INSTALLERS OF THIS EQUIPMENT!

THIS EQUIPMENT IS INTENDED FOR INSTALLATION

106259101 Rev.2 6/12

BY TECHNICALLY QUALIFIED PERSONNEL. FAILURE TO INSTALL IT IN COMPLIANCE WITH NATIONAL AND LOCAL ELECTRICAL CODES, AND WITH FRANKLIN ELECTRIC RECOMMENDATIONS, MAY RESULT IN ELECTRICAL SHOCK OR FIRE HAZARD, UNSATISFACTORY PERFORMANCE, AND EQUIPMENT FAILURE. FRANKLIN INSTALLATION INFORMATION IS AVAILABLE FROM PUMP MANUFACTURERS AND DISTRIBUTORS, AND DIRECTLY FROM FRANKLIN ELECTRIC. CALL FRANKLIN TOLL FREE 800-348-2420 FOR INFORMATION. RETAIN THIS INFORMATION SHEET WITH THE EQUIPMENT FOR FUTURE REFERENCE.

⚠WARNING SERIOUS OR FATAL ELECTRICAL SHOCK MAY RESULT FROM FAILURE TO CONNECT THE MOTOR, CONTROL ENCLOSURES, METAL PLUMBING, AND ALL OTHER METAL NEAR THE MOTOR OR CABLE, TO THE POWER SUPPLY GROUND TERMINAL USING WIRE NO SMALLER THAN MOTOR CABLE WIRES. TO REDUCE RISK OF ELECTRICAL SHOCK, DISCONNECT POWER BEFORE WORKING ON OR AROUND THE WATER SYSTEM. DO NOT USE PUMP IN SWIMMING AREAS.

DO NOT INSTALL PUMP IN ANY LOCATION CLASSIFIED AS HAZARDOUS BY NATIONAL OR LOCAL ELECTRICAL CODES.

INSTALLATION RECORDS

To keep an accurate record of your installation, be sure to fill out the data below:

Purchased From: _____

Date of Installation: _____

Pump Model No: _____

Pump Date Code: _____

Inside diameter of well: _____

Pump Setting: _____

Drop Pipe Size: _____

Wire Size (pump to control box): _____

Wire Size (control box to power source): _____

Make of Motor

Amps: _____

HP: _____

Volts: _____

Ph: _____

Make of Control Box

HP: _____

Volts: _____

Power Supply

Volts: _____

HZ: _____

TEST RUNNING

If test running pump before installation:

1. Ensure the power supply corresponds with that shown on the nameplate of the motor.
2. Install pump and components appropriate for the test.
3. Make sure power supply is turned off and circuit breaker or disconnect switch is open. Make electrical connections appropriate to your motor as shown in Fig. 1 or 2.
4. Run pump and motor unit for a few seconds to ensure that it is in working order.

SUITABILITY OF WATER SOURCE

Water from an undeveloped source often contains an excessive amount of sand, dirt, and abrasives which can damage the pump. Make arrangements to ensure an adequate flow of water over the motor for cooling purposes. Determine the correct pump setting by taking into account the static water level and the draw down at the proposed pumping rate.

SPLICING THE POWER CABLE

Follow the instructions enclosed in the cable splicing kit you purchase.

DROP PIPE

Galvanized pipe is recommended for suspending submersible pumps. Plastic pipe may be used only when observing the plastic pipe manufacturer's recommendations of depth and pressure. Give special consideration to:

1. A safety cable to prevent loss of pump if pipe should break.
2. Torque arrestor just above pump to prevent chafing the cable when pump and pipe twist during the starting and stopping cycle. (See Figure 1)

Schedule 40 galvanized pipe is suitable for settings to 600 feet (180m). For deeper settings, use schedule 40 pipe for the bottom 600 feet (180m), and schedule 80 for the remainder.

Take great care to keep pipes clean and free from pebbles, scale and thread chips. Make sound, air-tight connections at all fittings. Pipe sealant is recommended.

CHECK VALVES

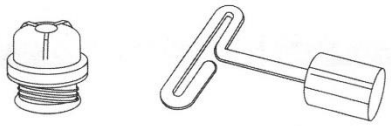
Many pumps have a built-in or externally supplied check valve. For a pump without one, install a check valve immediately above the pump. Install an additional check valve above the ground. If the pump is more than 100 feet (30m) below the surface, install another check valve in the drop pipe 100 feet (30m) above it. For pump settings deeper than 200 feet (60m), install additional check valves at intervals of 100 feet (30m).

REMOVABLE POPPET CHECK VALVE

4" submersible pumps with a 1-1/4" discharge are supplied with a REMOVABLE poppet style check valve assembly. The check valve can be removed from the pump discharge when the pump is installed in applications where drain back is desired.

⚠WARNING Fluid draining back through the pump can cause the pump to rotate backwards. If pump/ motor starts during this time; damage to the pump can occur.

The check valve can be removed with the use of the T-Handle Poppet Wrench(part no. 23498207). Ordered separately. Or, with standard needle nose pliers. The



Poppet Assembly T-Handle Poppet Wrench

poppet assembly is left hand threaded and is removed by turning CLOCKWISE.

If reinstalling a popppet check valve assembly, the assembly should be tightened to 15 inch-pounds.

ELECTRICAL INFORMATION

1. Employ a licensed electrician to perform the wiring. All wiring must be done in accordance with applicable national and local electrical codes.

2. Check that the power supply corresponds with the electrical rating of the submersible motor and the control box(if required). Make sure that the control box electrical rating matches the motor electrical rating.

3. Every installation requires a fused disconnect switch or circuit breaker.

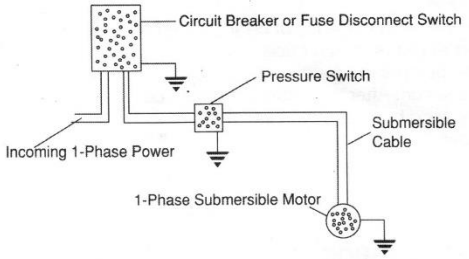
4. Every installation must be grounded. There must be a reliable ground connection between the pump and the distribution panel. The motor lead incorporates a green grounding conductor.

5. Lightning arrestors are recommended for every installation. All stainless steel, single phase motors thru 5HP have built-in lightning arrestors. 4" 3-phase motor requires a separate lightning arrestor installed as close to the installation as possible. Install the arrestor in accordance with manufacturers recommendations. A lightning arrestor provides protection against induced voltage surges on secondary power lines; it is not effective against direct hits.

6. Mount the control box in an area protected from rain, snow, direct sunlight or other high temperatures as this may cause tripping of the overload protector. Also protect the control box from extreme cold (below 25° F/-32° C) as this may have adverse effects on starting capacitor.

7. A two-wire pump does not require a motor control box, since all electrical components are built inside the motor. Fig. 1 shows a typical wiring diagram for a two-wire installation.

FIGURE 1 - 2-WIRE, 1-PHASE, 1/2 THRU 1-1/2 HP PUMP WIRING DIAGRAM



8. A three-wire, single-phase pump requires a motor control box incorporating overload relays. Fig. 2 shows a typical wiring diagram for a three-wire, single-phase installation. Note that a magnetic contactor must be used if the switch electrical rating is not sufficient to handle the submersible motor electrical rating. The switch would then be incorporated into a pilot circuit to control the magnetic contactor. Make the connections at the control box in accordance with the wiring diagram in the control box to avoid damage to the motor.

9. Use an ohmeter to make continuity and insulation checks after the installation is completed.

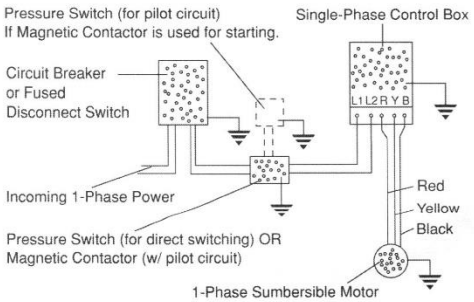
10. Place the additional pump nameplate onto the submersible label and place both onto disconnect switch or circuit breaker box for future reference.

WATER SOURCE TEST

Check the pump performance before making the final connection to the discharge system.

1. Install a gate valve on the end of the pipe. Partially open the valve.

FIGURE 2 - 3-WIRE, 1-PHASE, 1/2 THRU 3 HP PUMP WIRING DIAGRAM



Note: Order of red, yellow and black may vary from control box to control box. Always connect like colors.

2. Start the pump.

3. Open valve gradually to give full flow.

4. If the discharge is not clear, let the pump run until water clears. If water does not clear in 30 minutes, stop the pump and take the necessary steps to correct the condition. After the water has appeared clear, check for sand by discharging into a clean bucket or suitable container.

5. Close valve until maximum required system flow rate is obtained (this should correspond to the cut-in pressure of the pressure switch). Ensure that the output of the pump at this setting is not greater than the yield. This can be checked by monitoring drawdown level and ensuring that the level is stable at the maximum required system flow rate.

⚠CAUTION Never run pump unless it's completely submerged in water. If run without water, the pump and motor could be damaged. Note also that air drawn into the pump can cause an airlock under certain conditions.

TROUBLESHOOTING

Problem	Possible Cause
Unit fails to start	1. Electrical trouble, call dealer or electrician. 2. Drawdown protection device has pump turned off. 3. Overload tripped. 4. Reset low pressure cutoff switch if installed.
Pump fails to deliver water	1. Air lock in pump. 2. Clogged intake screen. 3. Insufficient application yield.
Pump gives reduced output	1. Insufficient application yield. 2. Worn pump. 3. Clogged intake screen. 4. Low voltage. 5. Incorrect rotation, 3-phase only.
Pump cycles too frequently (if installed with pressure switch)	1. Excessive pressure drop between pressure switch and pressure tank. 2. "Cut-in" pressure at pressure tank too high. 3. "Cut-out" pressure at pressure tank too low. 4. Waterlogged pressure tank. 5. Start and stop electrodes of floatless liquid level control set too close together. 6. Tank sized too small to meet system requirements.
Overloads trip	1. Electrical trouble, call dealer or electrician.
Pressure switch cycles rapidly when pump starts, (if installed with pressure switch)	1. Pressure switch too far from pressure tank. 2. Adjust air charge of tank to manufacturer's recommendations.

U.S. LIMITED WARRANTY*

Franklin Electric Co., Inc.

Franklin Electric Co., Inc. warrants its new products to be free of defects in material and workmanship for a period of 1 year from date of installation or 2 years from date of manufacture, whichever comes first, WHEN installed in clean, potable water applications. Warranty does not cover applications pumping saltwater or other corrosive liquids. Consult and adhere to local codes for all applications. Franklin Electric Co., Inc. also provides additional warranty coverage on specific products as specified herein.

Franklin Electric's warranty obligation with regard to equipment not of its own manufacture is limited to the warranty actually extended to Franklin Electric by its suppliers.

This warranty extends only to the original retail purchaser and only during the time in which the original retail purchaser occupies the site where the product was originally installed.

Requests for service under this warranty shall be made by contacting the installing Franklin Electric dealer (point of purchase) as soon as possible after the discovery of any alleged defect. Franklin Electric will subsequently take corrective action as promptly as reasonably possible.

Franklin Electric at its discretion may replace or repair any product that fails under this warranty after inspection by an authorized company representative or after Franklin Electric has received the product at our factory. Replacement or repair cannot be made until after the product is inspected. All charges or expenses for freight to and from the factory, removal and reinstallation of the product, or installation of a replacement product are the responsibility of the purchaser.

THIS WARRANTY SUPERSEDES ANY WARRANTY NOT DATED OR BEARING AN EARLIER DATE. ANY IMPLIED WARRANTIES WHICH THE PURCHASER MAY HAVE, INCLUDING MERCHANT ABILITY AND FITNESS FOR A PARTICULAR PURPOSE, SHALL NOT EXTEND BEYOND THE APPLICABLE WARRANTY PERIOD. Some states do not allow limitations on how long an implied warranty lasts, so the above limitation may not apply to you. IN NO EVENT SHALL FRANKLIN ELECTRIC BE LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above may not apply to you.

This warranty does not apply to any product which has been subjected to negligence, alteration, accident, abuse, misuse, improper installation, vandalism, civil disturbances, or acts of God. The only warranties authorized by Franklin Electric are those set forth herein. Franklin Electric does not authorize other persons to extend any warranties with respect to its products, nor will Franklin Electric assume liability for any unauthorized warranties made in connection with the sale of its products.

THIS WARRANTY GIVES YOU SPECIFIC LEGAL RIGHTS, AND YOU MAY ALSO HAVE OTHER RIGHTS WHICH MAY VARY FROM STATE TO STATE.

* Contact Franklin Electric Co., Inc. Export Division for International Warranty.

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TIMER
PROGRAMMING INSTRUCTIONS

TIME SETTING

TO SET THE CURRENT TIME (AND DAY OF WEEK ON 7 DAY UNITS), TURN THE MINUTE HAND CLOCKWISE. DO NOT SET THE TIME BY ROTATING "OUTER" DIAL.

Turn the minute hand clockwise until the day of the week (7-day timer) and the time of day on the outer dial is aligned with the triangle marker on the inner dial (two o'clock position).

Example for 7-day program dial Monday 10:30 AM. Turn the minute hand clockwise until Monday 10:30 AM is aligned with the triangle on the inner dial. The hour and minute hand will show exactly 10:30.

Example for 24-hour program dial 10:30 AM. Turn the minute hand clockwise until 10:30 AM is aligned with the triangle on the inner dial. The hour and the minute dial will show exactly 10:30.

PROGRAMMING

7-Day (SW, QRW Models)

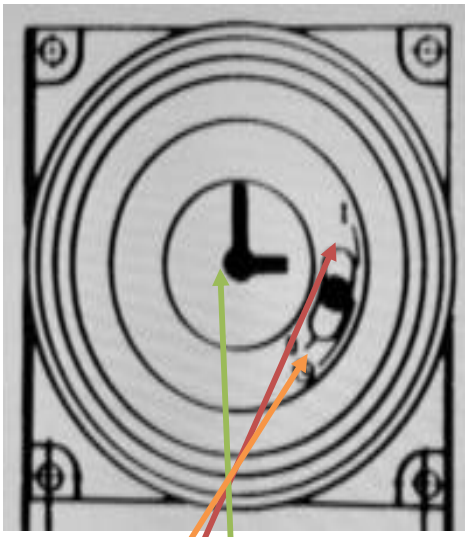
The weekly program dial reflects the seven days of the week and AM/PM imprints for each day.

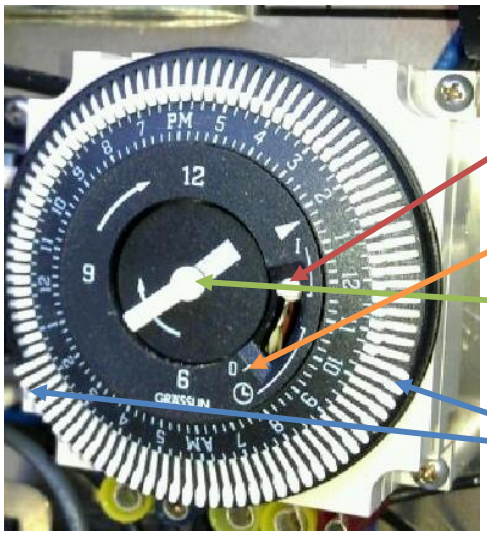
The time switch is programmed by pushing the captive trippers to the outer ring position for the entire period that the load is to be turned "ON", i.e., two hours for each tripper on the 7-Day dial. When the tripper is pushed to the inside, the switch is in the "OFF" position.

24-Hour (ST, QRT Models)

The 24-Hour dial has quarter-hour divisions and AM/PM indications.

The time switch is programmed by pushing the captive trippers to the outer ring position for the entire period that the load is to be turned "ON", i.e., fifteen minutes for each tripper on the 24-Hour dial. When the tripper is pushed to the inside, the switch is in the "OFF" position.





SWITCH UP OVER RIDE

SWITCH TO TIMER

CLOCK

THE PINS ARE IN THE UP POSITION –THIS IS WHEN THE SPRAYERS GO OFF

IMPORTANT INFORMATION FOR OWNERS OF SEPTIC AND ONSITE TREATMENT SYSTEMS

ITEMS TO AVOID IN AN ONISTE SYSTEM

The following guidance is a collaborative effort of wastewater professionals within the National Onsite Wastewater Recycling Association (NOWRA). The purpose is to identify common issues that can cause problems with the operations of newer onsite treatment and traditional septic systems. Many operational problems exist today because owners are either unaware of the results of daily practices to these systems. NOWRA's goal is to ensure that owners are educated and informed about the safe practices for their treatment systems, in order to avoid costly repairs and to protect groundwater quality. The items listed below are known to have caused failures of onsite treatment systems and must be considered if waste generated by/from a particular site will contain them in excessive quantities. Since excessive is a subjective word, it is highly recommended by NOWRA that you share concerns with your Wastewater Professional to come up with a treatment strategy for your particular needs.

PLEASE READ

Inert Materials: Plastic, Rubber, Scouring Pads, Dental Floss, Kitty Litter, Cigarette Filters, Bandages, Hair, Mop Strings, Lint, Rags, Cloth and Towels do not degrade in an on-site treatment system. Inert Materials will build up solids, and lead to system malfunction, clogging or increased pump out frequency.

Paper Products: Disposable Diapers, Paper Towels, Baby wipes, Facial Tissues, Baby Wipes, Lotioned, Scented or Quilted Toilet tissue, Moist Toilet Paper, do not dissolve readily in an on-site treatment system.

PLEASE READ

Excessive Amounts of toilet tissue will also not decompose. All can lead to system malfunction, back-up, or increased pump out frequency.

Food Wastes: Do not put Animal Fats & Bones, Grease, Coffee Grounds, Citrus & Melon Rinds, Corn Cobs, Egg Shells, down the sink. Garbage disposal use should be limited to waste that cannot be scooped out and thrown in the trash. Spoiled Dairy Products and Yeasts from home Brewery or Baking may cause excessive growth of microbes that do not degrade sewage.

Household Products: Do not flush Baby Wipes, Lotioned, Scented or Quilted Toilet Tissue, Female Sanitary Products, Cotton Balls or Swabs, or Condoms. Antimicrobial Soaps and Automatic Disinfection Tablets (blue, clear or otherwise) may kill the organisms needed to consume waste.

Medications/Aliments: Normal use of over the counter medications does not affect the performance of onsite systems. Do not flush expi Medicines/Antibiotics into an on-site treatment system. Some prescription medications are known to cause biological disrupt. Among these diseases or conditions are those suffering from bulimia, severe infections (including AIDS), chronic diarrhea, intestinal/colon bypass, or other gastrointestinal conditions and cancer. Oral or intravenous chemotherapy is known to cause severe disruption to the treatment process and will require more frequent pump out intervals or the use of biologically based additives.

Commercial Additives: Both the U.S. Environmental Protection Agency and the Small Flows Clearing House have reported that there is no evidence to support the use of additives with normally functioning Onsite Treatment Systems. Some Septic Tanks additives have been shown to do more harm than good. A normally functioning system should not require additive

PLEASE READ

Chemicals & Toxins: These materials kill the microbes necessary for the biological treatment to occur. Paint, Paint Thinner, Solvents, Volatile Substances, Drain cleaners, Automotive Fluids, Fuels, Fuels, Pesticides, Herbicides, Fertilizers, Metals, Disinfectants, Sanitizers, Bleach, Mop Water, Floor Stripping Wastes, Excessive use of Household chemicals, and Backwash from Water Softener regeneration.

Laundry Practices: On-site Systems must process the water as it e the system. Laundry should be spread out over the week, not all run at one time. Excessive use of Detergents, especially those containing bleach, can affect system performance. Liquid detergents are recommended over powders. Fabric Softener sheets are recommended over liquid softeners. Bleach should be used sparingly and at half the rate indicated on the container.

Clear Water Waste: From A/C discharge lines, Floor Drains, Gutters, Whole House Water Treatment Systems and Sump Pumps can increase the flow to your treatment system. These flows can at least disrupt, if not destroy you treatment process.

As Read On The NOWRA.org website

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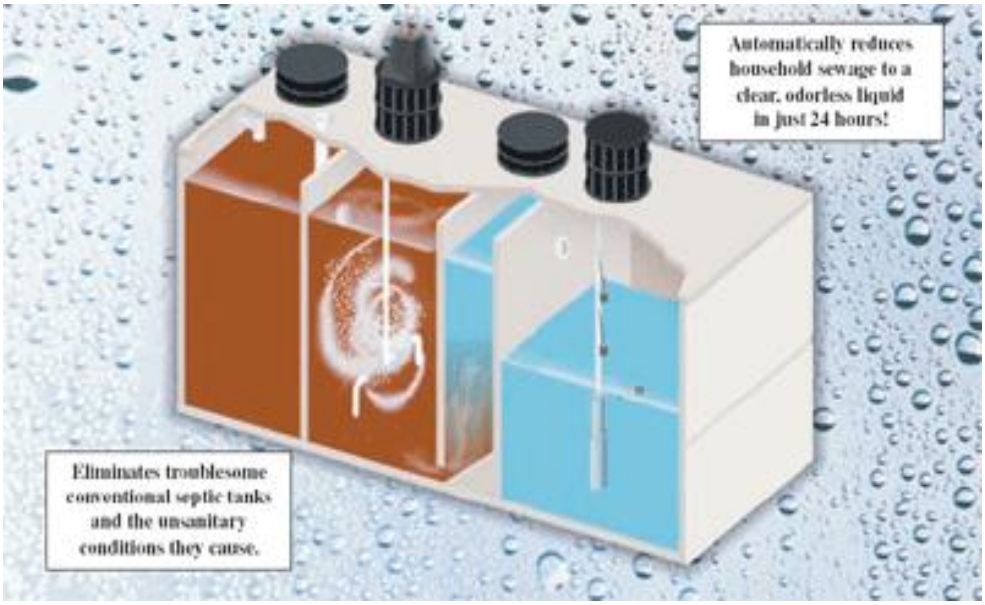

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