Micro-Solve®

bioremediation

Installation & Operation Manual

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Product Description

The Micro-Solve® Grease and Odor Bioremediation System is composed of a 55-gallon drum of Micro-Solve® solution, a pump, a pump box and stem and an aerator/mixer. The systems programmable pump delivers Micro-Solve® from the drum to the wastewater in the lift station in doses timed and measured for optimum effect. For protection against moisture and inadvertent damage, the pump is mounted in the custom two-piece pump box and stem. The pump stem is constructed of tubular steel and features an integral copper feed tube. Inserted into the drum of Micro-Solve®, the pump stem mounts securely in the large bung hole via a threaded collar fitting. The pump box has a steel body with a clear plexiglass access door and a tubular steel mounting post which fits into the pump stem. A separate steel dipstick for checking the level of Micro-Solve® in the drum is installed in the drum's small bung hole.

This installation and operation manual is specifically designed for the Micro-Solve® pumping and application equipment. The aerator/mixer information is included in a separate manual entitled *The Bubbler Installation and Operation Manual.*

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The Viking Pro Scentnal high speed, automated pump is capable of delivering up to 17 ounces of Micro-Solve® per minute from the drum to the lift station and is equipped with a programmable timer and adjustable circuit board for dosing activations of up to 48 feeds in 24 hours. The Viking Pro Scentnal features an internal Viton tube for superior durability and an adjustable brass spray nozzle for even dispersal of Micro-Solve® to the treatment area.

IMPORTANT SAFETY INSTRUCTIONS:

Safety Messages & Signal Words:

⚠ DANGER

Indicates n immediate hazardous situation which if not avoided, will result in death or serious injury to the operator or to bystanders.

⚠ WARNING

Indicates a potentially hazardous situation which if not avoided, could result in death or serious injury to the operator or to bystanders.

⚠ CAUTION

Indicates a potentially hazardous situation which if not avoided, may result in moderate or minor injury to the operator or to bystanders.

NOTICE

Indicates a potentially hazardous situation which if not avoided, may result in moderate or minor injury to the operator or to bystanders.

⚠ CAUTION

Use caution when using extension cords.
Use an extension cord which is no more than 25 feet long and at least 14 gauge.
Using an excessively long or thin-wired extension cord will cause severe damage to the motor.
Use only a 3-wire extension cord that has a 3-blade grounding plug.

⚠ DANGER

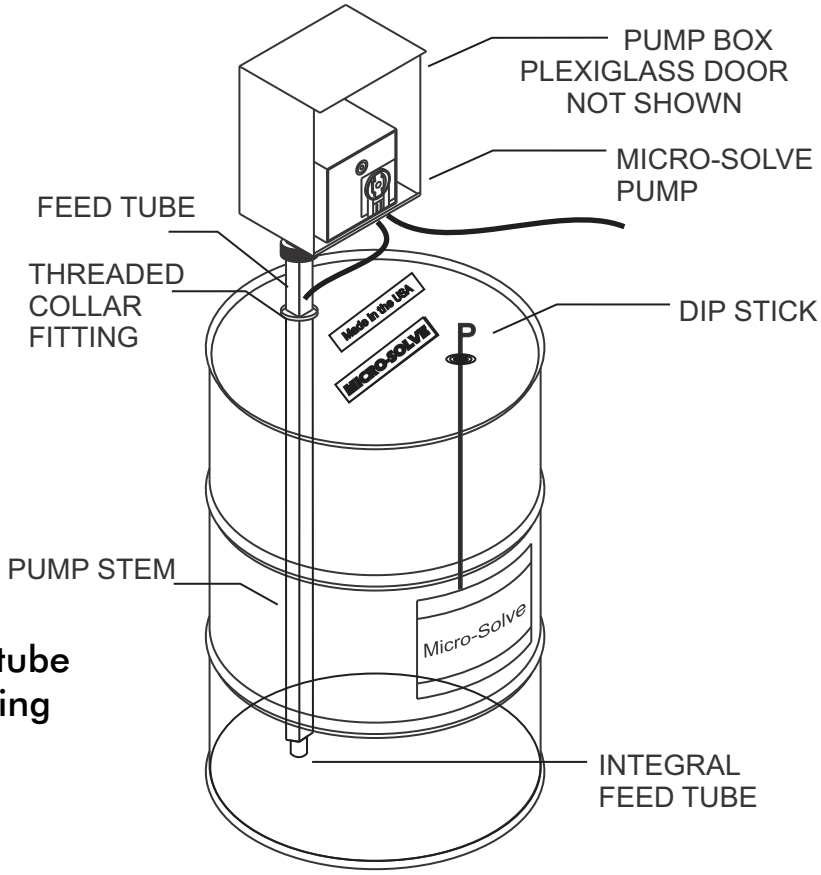
Moving parts can cause severe trauma.
Keep hands and feet away from rotating parts, tie up long hair, remove jewelry, and DO NOT wear loose clothing.

⚠ DANGER

There is a danger of electric shock. Use only undamaged electrical cords.
DO NOT touch bare wires or receptacles.
DO NOT operate air compressor in wet weather or in wet conditions.
DO NOT touch air compressor or cords if hands or feet are wet.
Ensure that all cords are free of damage before connecting to the power supply.
Ensure that you have a sufficient electrical supply for supporting the requirements of the motor.

Components

Micro-Solve® System



Micro-Solve® Solution:
- 55-gallon drum of Micro-Solve
- Dip stick

Pump Box and Pump Stem:
- 10" x 8" x 12" Aluminum all-weather pump box with Plexiglass door
- 40" Pump stem with threaded collar fitting and internal suction tube
- 0.60" adjustable brass spray nozzle
- 1/4" O.D. x 16" pump suction tube
- 1/4" O.D. pump discharge tubing
- Viton pump tube

Micro-Solve® Pump:
- Viking Pro Scentnal
- Manual timer
- Adjustable circuit board

Manuals:
- Micro-Solve® Installation and Operation Manual
- *Pro Drain Chief Installation and Operation Instructions*

Carefully examine the shipping box(s) upon receipt to ensure that all components are present and there is no apparent damage. To get the best results and most efficient performance, we recommend the following:

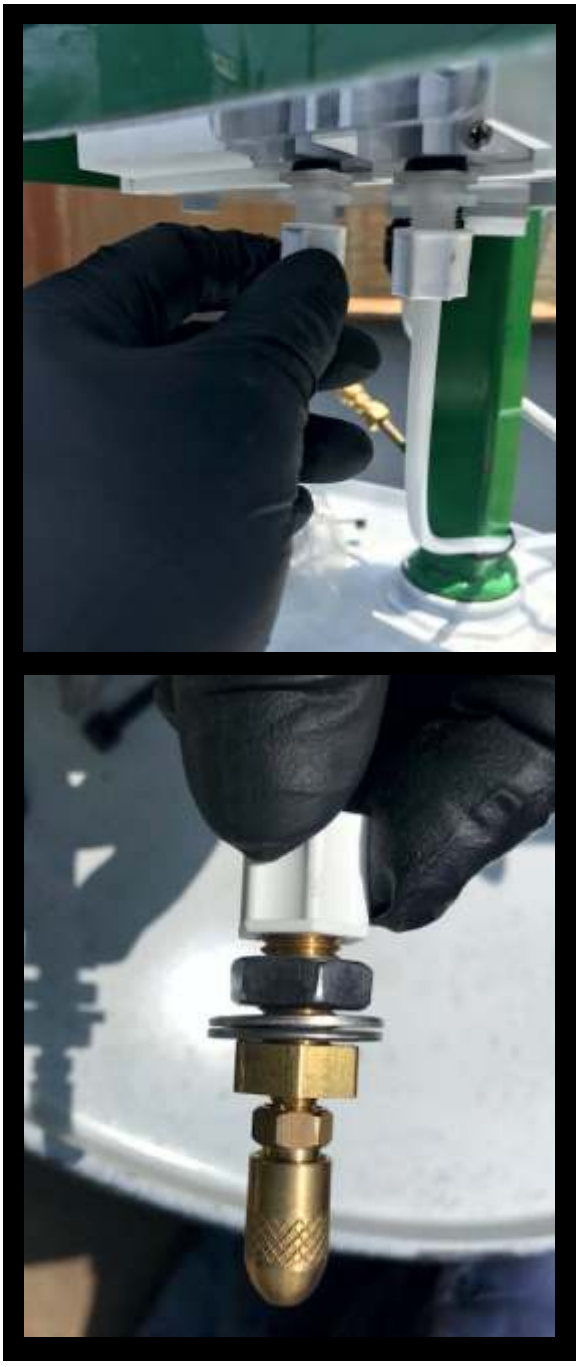
Recommended Tools:

- Adjustable wrench
- Knife or box cutter
- small pipe wrench

Install the Micro-Solve® System:

- The 55-gallon drum of Micro-Solve® solution should be positioned first.
- Be sure to locate your system as close to possible to both the chemical injection point and a 115-vac power source.
- Remove the 1" bung plug from the Micro-Solve® drum, insert the dip stick, and hand-tighten.
- Remove the 2" bung plug from the Micro-Solve® drum and insert the 40" pump stem with threaded collar fitting and internal suction tube.
- Using a small pipe wrench, thread the pump stem into the 2" drum bung until tight and so that the 1/4" tubing connector is positione at a 90 degree angle from the desired location of the front of the pump box.
- Slide the 10" x 8" x 12" Aluminum all- weather pump box with Plexiglas door onto the pump stem and lower it to the point that it rests in the desired location.

Install the Tubing and Spray Nozzle:



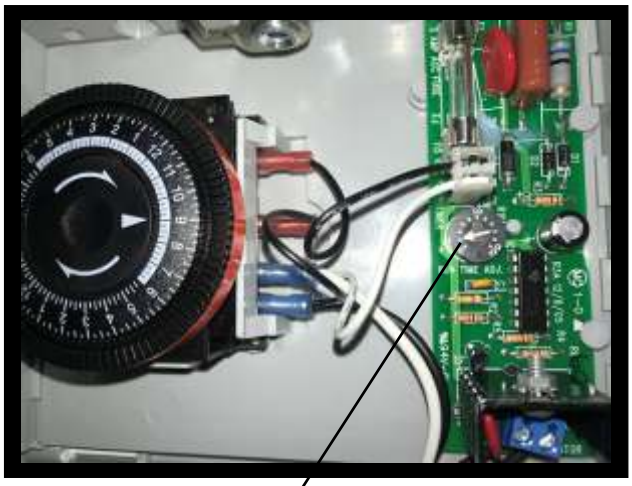
- Remove the plastic nut from the plastic tubing connector on the left side of the pump unit.
- Insert the end of the 1/4" pump discharge tubing through the plastic nut and insert the assembly into the plastic tubing connector on the right side of the pump unit and hand-tighten.
- Route the discharge tubing to the injection point, taking care not to kink the tubing and secure it in place using plastic zip ties or other means.
- Carefully cut the discharge tubing to the desired length and install the 0.60" adjustable brass spray nozzle.
- Remove the brass nut and ferrule from the 1/4" tubing connector on the 40" pump stem.
- Insert one end of the 1/4" x 16" pump suction tubing through the brass nut and ferrule and then insert the assembly into the brass tubing connector and, using the adjustable wrench, tighten the nut on the brass connector.
- Remove the plastic nut from the plastic tubing connector on the right side of the pump unit.
- Insert the other end of the 1/4" x 16" pump suction tube through the plastic nut and insert the assembly into the plastic tubing connector on the left side of the pump unit and hand-tighten.
- Care should be taken to avoid kinking the suction tubing during installation.

Program the Timer:

Pre-determine the number of gallons of Micro-Solve® you wish to dispense per week. The recommended initial dosage is 3-5 gallons per week.

- Using the key on the top of the Viking Scentnal pump, open the lid to expose the timer mechanism and circuit board.

- The small potentiometer on the right side of the timer mechanism should be set to the first mark above zero, which is 10.



- The timer is programmable in 15 minute increments throughout a 24- hour period.

- To program the timer, rotate the dial until the arrow points to correct time of day.
  *The clock face may only be rotated clockwise.
  *There is no designation for AM or PM.

- Push in one dipswitch pin for each gallon of Micro-Solve® that you want to dispense per week. The pushed in pins should be evenly distributed over the 24-hour period.

Operation:

- Plug the power cord into a 115-vac power source to complete the installation.

Obstructions to Chemical Flow

Problem	Possible Causes	Possible Solutions
Motor runs but will not pull chemical from source.	Air leaks in tubing	Check tubing for air leaks.
	Kinks or blockage in tubing	Check tubing for air leaks.
	Connections not airtight	Make sure all connections are tight spray nozzle is open.
	Dip tube is not properly installed	Check to make sure the dip tube reaches the bottom of the drum.

Pump and/or Power Source

Problem	Possible Causes	Possible Solutions
The pump stopped and does not start.	Overloaded because of motor overheating.	Check that the main voltage corresponds to specifications. An extension cord that is too thin or too long can cause a voltage drop and cause the motor to overheat. Allow the motor to cool down. use heavy duty extension cords. ensure that the pump is plugged into a socket as close as possible to the consumer unit or fuse box.
	Motor windings are burned out.	Contact EGSW Representative.
	Low voltage supply to the motor.	Check that the main voltage corresponds to specifications. An extension cord that is too thin or too long can cause a voltage drop and cause the motor to overheat. Allow the motor to cool down. u se heavy duty extension cords. ensure that the compressor is plugged into a socket as close as possible to the consumer unit or fuse box.

The Micro-Solve® system is relatively maintenance free with the exception of the following:

Periodic Maintenance:

Periodic Maintenance is as simple as keeping the pump lubricated.

- As the grease in the pump dries out, the pump will need to be re-greased with a good silicone grease such as "Permatex Super Lube II with Teflon". Grease can be applied using the access hole on the pump face above the felt pad and wall of the pump cavity.
- If a pocket of air starts to appear on the 1/4" tubing on the intake, side of the pump, the squeeze tube is failing.
- When changing the squeeze tube, always clean out the pump cavity and re-grease the roller assembly, felt pad and cavity wall.

Replace Tubing:

It is recommended that the internal Viton tubing be replaced once every 12 months.

- To replace the tubing, you must first remove the plastic cover on the front of the pump.
- Unscrew each of the 4 screws at each corners to remove the plastic cover.
- Pull the current tubing out by rotating the rotor.
- Make sure to apply petroleum jelly to your replacement tube before inserting into the pump.

Limited Warranty:

Warranty is for 12 months against manufacturer defects.

EGSW P.O. Box 40843 Austin, Tx 78704 512-775-5358
www.egsw.us