PROCEDURES FOR ASSEMBLY AND INSTALLATION

(1,000 & 1,500 GPD)

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Thank you for purchasing the Sybr-Aer advanced wastewater treatment system. The following will provide step-by-step installation instructions.

Each Syber-Aer kit has been pre-engineered for your specific application. Where possible, components have been factory installed for ease of installation. Your kit should include everything needed for a complete installation.

**Kit Includes:**

- Vented fiberglass blower enclosure with electrical junction box, cord grips, gel coated cover and exterior tamper proof latches

- (2) 24” diameter risers with pre-installed air manifolds, cord grips, junction box for electrical connections (1) and covers

- (2) adaptor rings for risers with butyl selant and concrete anchors

- (1) blower with galvanized fittings and mission couplings

- (1) discharge pump with quick disconnect fittings, floats and pedestal
  (1) mixing pump with pedestal

- Engineered diffusers

- 1 1/2” air drops with quick disconnect fittings

- Outdoor alarm with logic control module and individual circuit breakers for service disconnect

- 10’ twelve-conductor direct burial wire (jumper wire)

- All required miscellaneous hardware for installation

**NOTE:** Individual systems typically ship on standard skid
Install the supplied 1/2” butyl sealant to the bottom of air manifold risers, sealant should be overlapped to form a watertight seal.

If the application is not going to require a riser press the air manifold riser into the adapter ring and secure with the supplied screws.

If the application is going to require a riser install the butyl sealant into the riser and press the riser onto the adapter ring and secure with the supplied screws.

When using a riser it will go under the air manifold riser that way you can still reach the quick disconnects easily.

* Blower housing riser also goes under the blower housing.
Install butyl sealant to bottom of adapter rings, sealant should be installed closer to the inner diameter as shown.

Overlap seams 3/4” minimum.

Knead overlapped seams together to form watertight seal.

Air manifold risers with butyl sealant applied.
Center air manifold assembly over tank opening
Note: 1 1/2” airline stubs face center of tank measure and mark middle of the tank to help center airline stubs

Press assembly down onto concrete tank to seat butyl sealant

Center blower housing between air manifold assemblies and measure for the length of the 4” sleeves and cut accordingly
Cut excess from the non beveled side of pipe

NOTE: There should be 2”- 3” sticking into the blower housing

Use pipe lube and push the cut 4” PVC sleeves into the blower housing. Push the pipes in several inches.
Center blower housing between air manifold assemblies and anchor with (4) concrete anchors provided.

Note: Butyl sealant is not required

Slide the supplied high-heat rubber hose through the 4” sleeves and blower housing run it from one air manifold riser to the opposite riser and cut off excess tubing.

NOTE: Leave a little extra hose in the blower housing so you can move it to line up your blower fittings

Slip the rubber hose over the 1 1/2” PVC stubs coming out of the air manifold risers. Install the supplied stainless clamps and tighten securely

Using a rubber mallet drive 4” airline sleeves pre-installed in blower housing into couplings installed on air manifold assemblies

Note: Pipe lube recommended
Ensure 4” sleeve is glued and seated to prevent groundwater infiltration.

Assemble blower as shown below.

Note: Use thread sealant or Teflon tape on all threaded joints to prevent air loss.

- Air Filter Assembly
- 1 1/4” Coupling
- 1 1/4” x 8” Galvanized Pipe
- 1 1/2” T
- 1 1/2” x 3” Nipple
- 1 1/2” Elbow
- 1 1/4” x 1 1/2” Elbow
- 1 1/2” x 3” Nipple
- 1 1/2” x 11 1/2” Galvanized Pipe

Note: Install the barbed fittings onto the 3” nipples coming out of the T but don’t seal threads yet.
Install blower assembly onto mounting studs inside blower enclosure

Move rubber hose aside to clear fittings

Line up and cut the rubber hose

Once the hose is cut slide on the supplied stainless clamp. Unthread the barbed fitting and slip it into the hose. This will make lining up the hose much easier
Apply sealant to the nipple and reinstall the barbed fitting and tighten down

Position and tighten down stainless clamps

Completed blower installation
1 1/2” pump line (provided)

Thread 1 1/2” male adaptors into pumps
Note: Teflon tape should be utilized to prevent bypass.

1 1/2” pump line (provided) capped off and attaches to riser

Secure pump flanges to pedestals with 2 stainless screws

Discharge Pump 230 Volt

Pump pedestals

Mixing Pump 115 Volt

NOTE: Attach a nylon rope to mixing pump in order to remove or install pump
<table>
<thead>
<tr>
<th>GPD</th>
<th>On/Off</th>
<th>High Water</th>
<th>Emergency</th>
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</thead>
<tbody>
<tr>
<td>500 GPD</td>
<td>19”</td>
<td>39”</td>
<td>43.5”</td>
</tr>
<tr>
<td>600 GPD</td>
<td>19”</td>
<td>37”</td>
<td>41.5”</td>
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<tr>
<td>800 GPD</td>
<td>24”</td>
<td>48”</td>
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<tr>
<td>1000 GPD</td>
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<tr>
<td>1500 GPD</td>
<td>30”</td>
<td>61”</td>
<td>65.5”</td>
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Chart A: Float Settings for Discharge Pump

90° quick disconnect to pump line

Pump discharge line

Note: Care must be taken to protect 1 1/2” discharge line across over dig, failure to sleeve or bed in sand/gravel can result in damage during backfilling.
Cut provided diffuser legs to correct height

Glue diffuser drop legs together

Ensure diffuser legs are sealed to prevent air loss
Note: Diffusers thread to bottom of drop legs

Note: Bottom of diffuser should be located 3.25” from bottom of tank
• System requires (1) 30 AMP, 240 Volt dedicated circuit

• Run 1” conduit from the control panel to the Blower housing

• Run blower power cord into junction box in blower housing

• Run provided multi-conductor wire from blower junction box to pump junction box

• Run pump power cord and floats into pump junction box and make connections

• The mixing pump is programmed to run for 10 minutes every hour on the hour while the blower is running

Note: Cord grips are pre-installed for all penetrations, ensure grips are tightened securely to prevent water infiltration.

CAUTION: Make sure power is disconnected before wiring system. All connections should be in accordance with local codes and regulations.
START-UP PROCEDURES

Checking the Alarm
Once electrical work is completed, power should be supplied to the alarm. Turn on all breakers and press and hold the toggle switch on the control panel door down to “test” to activate the alarm.

Checking the Blower
With the breakers on, make sure the blower is running and all the diffusers are bubbling. Shut the blower breaker off and the alarm should sound and the light on control panel should come on solid.

Checking the Pump
Push and hold the toggle switch to the right towards “test” in the control panel to ensure the pump runs. This is a momentary switch and will manually run the pump. * Note: there must be enough water in the tank for the redundant on/off float to be up all the way to activate the pump.

Checking the Floats
Lift the high water float and the alarm should sound and the light should be flashing. With the blower running raise both the high water float and EPC float and the blower should turn off. (The EPC float is the emergency float and will shut the blower off to start a one hour settling cycle and then will turn the pump on and pump out the excess water.)

Programming
The Logic module is pre-programmed so once all the components are checked and operational, the unit is ready to receive sewage flows.