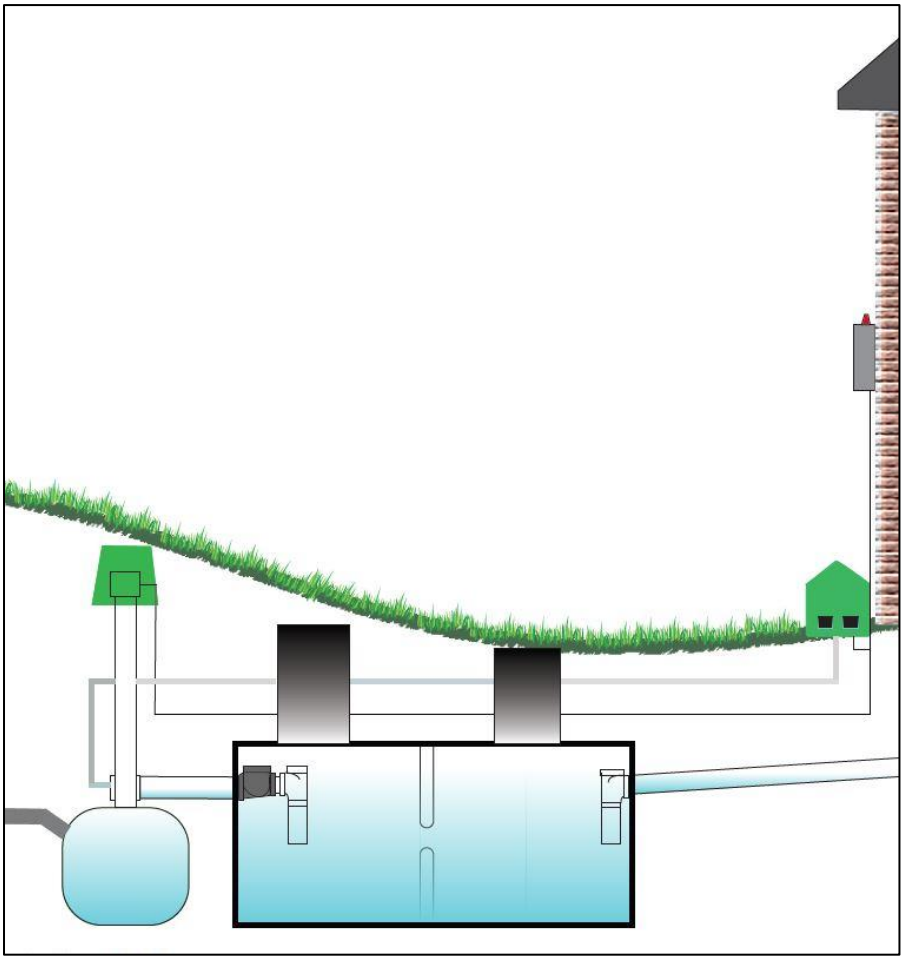
GEOMATRIX

HyAir™

Rhode Island Design, Installation and O&M Manual



For HyAir models
HA47, HA71, HA138, HA239, HA1000

March 29, 2019

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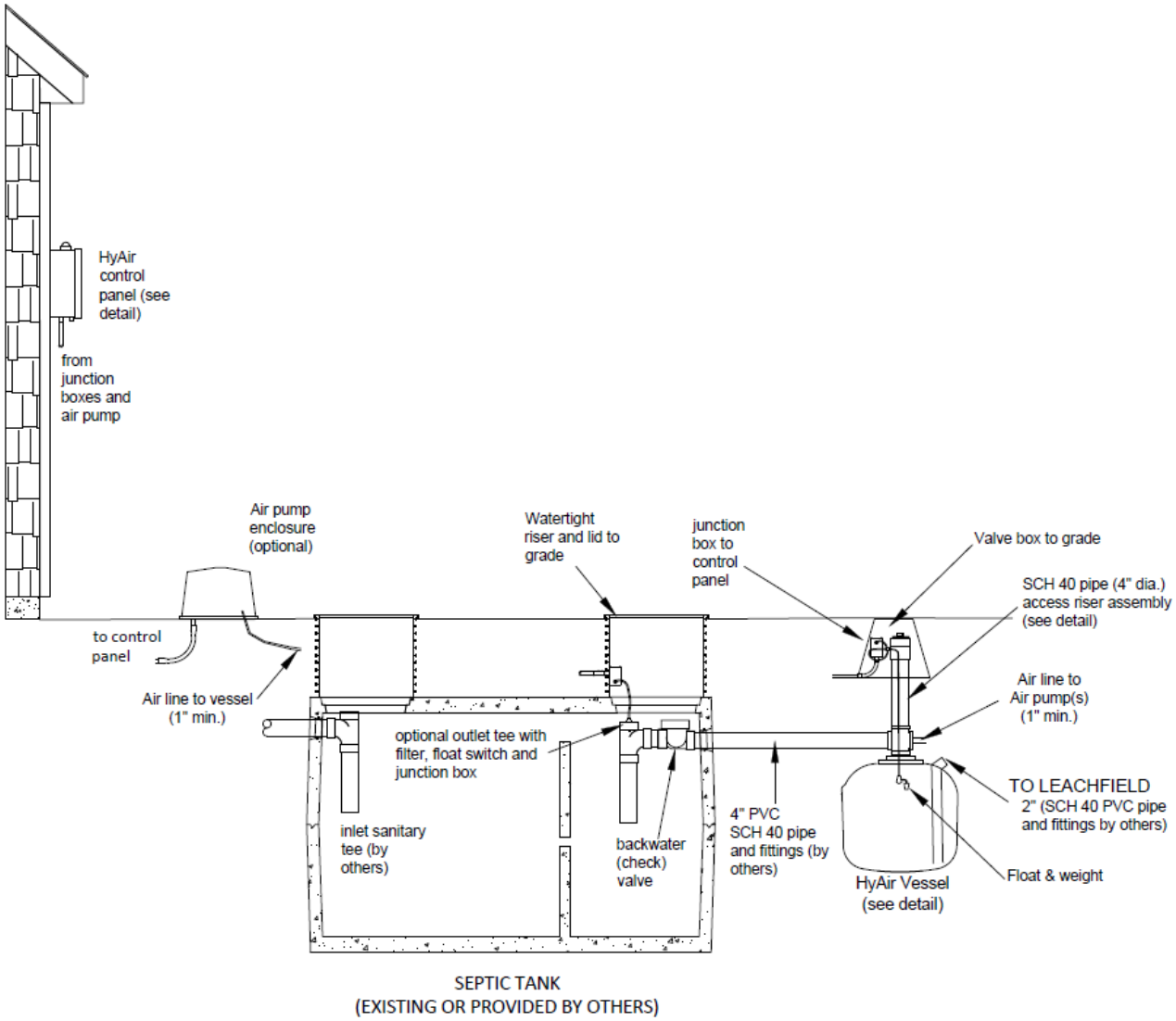
1. About HyAir

HyAir™ (HyAir) is a patented pump station that utilizes a sealed vessel and air pressure for lifting and/or pressure distribution of wastewater. The HyAir pump does not directly contact wastewater. This unique feature provides for easier and safer maintenance over other available pumps.

HyAir is typically installed downstream of a septic tank or a treatment train component (treatment tank). When the HyAir vessel (vessel) receives sufficient wastewater, a level sensor (float) is activated and the HyAir pump (pump) engages. The pump increases air pressure inside the vessel until it is sufficient to overcome the total dynamic head and begins dosing. After the dose of wastewater has been evacuated, air flow purges the piping of water; this, among other benefits, also prevents siphoning.

System Schematic:



2. Features and Specifications

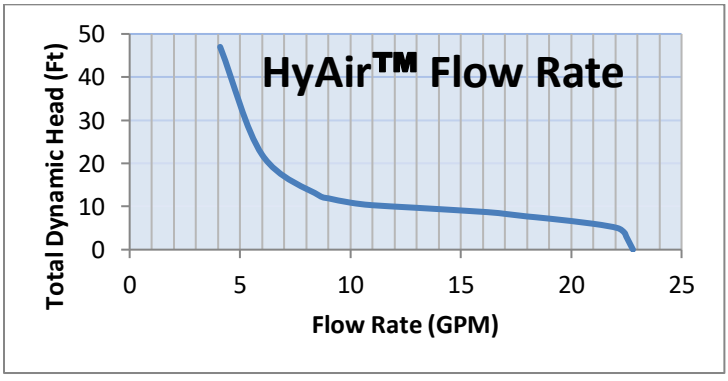
- Water lifting
- Aerates leaching system
- Pressure distribution
- Volume, timed, or micro dosing
- Records doses
- Fully programmable
- Displays current system status*
- No mechanical parts in corrosive wastewater
- Easy, clean, cost effective, and safe air pump replacement
- Power savings
- Compact
- Battery backup power supply*
- H-20 wheel load compatible*
- Anti-flotation kit for high water table installations*
- Helps reduce organic accumulations in pressure distribution piping and orifices
- Corrosion proof vessel
- Sealed vessel prevents water infiltration and inflow
- Installed cost savings

* (Optional features)

AIR PUMP SPECIFICATIONS:

Model	PG4-32
Weight of air pump	24 lbs.
Electrical	110-120V, 60Hz, 5.4A Max, 600W
Sound Level	≤ 52 dbA @ 10’

Figure 1



Air pump curve

3. Designing a HyAir System

1. Determine dose requirements.

2. Determine HyAir vessel sizing based on dose requirements using Table 1.

Table 1: HyAir models and vessel capacity

Tank Specifications				
Model	Exterior Diameter (inches)	Volume (gallons)	Height (inches)	Weight (lbs.)
HA47	28	47	28.5	43.5
HA71	32	71	35	70
HA138	40	138	40	91.5**
HA239	48	239	48	140**

**approximate

3. Confirm pump curve is appropriate. Using Figure 1 above.

4. Determine location(s) of blower enclosure and control panel. The control panel is typically located within 25' and line of sight of the blower enclosure.

5. The vessel is located downstream of the septic tank at an elevation lower than the septic tank outlet pipe invert elevation.

6. Determine groundwater elevation in the vicinity of the HyAir vessel.

7. If groundwater level will create buoyancy issues, determine appropriate HyAir hold down kit.

4. Component Identification: *Figure 2*

Vessel (HA47, HA71, HA128, or HA239)

Air Pump Enclosure

Air Pumps

Control Panel

Float Splice Box w/ Cord Grip

Electrical Whip

4” Inlet Check Valve

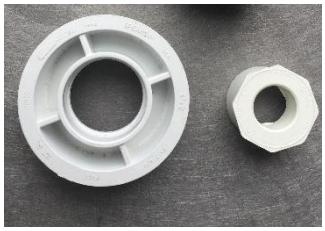
Float and Weight

4” SCH40 Cross

Access Box with Lid

2” Flexible Outlet Assembly

Vessel Access Assembly



Airline Reducing Bushings

Geotextile Bag for Concrete*

Effluent Filter/ Float Kit*

*Optional

Note:

Installer is required to provide onsite wastewater installation materials, labor, expertise, and necessary licensed professionals.

Installer is also responsible to provide the following materials:

PVC primer and glue	PVC pipe & fittings	Electrical conduit & fittings
Laser level	Excavation equipment	Fasteners (for mounting panel)
Specified vessel backfill material	1½” step bit, spade bit, or hole saw	Silicone based grease
1/2” wrench/socket	Tape measure	Bubble level

Pipe bedding material if suitable bedding material devoid of rocks and debris is not present

4.1 Component Handling and Inspection

Prior to installation, all components should be thoroughly inspected for any damage which may have occurred during shipping. Any damage to the components should be immediately reported to the shipping company and your supplier.

The interior of the vessel and all other components must be kept free of dirt, debris, oil, grease and any other foreign substances. Failing to do so will impede performance.

4.2 Contents of HyAir Kit and Optional Components (Figure 2):

1. Vessel
2. Vessel access assembly – (access assembly) is extended to grade with 4" Schedule 40 (SCH40) PVC pipe supplied by installer
3. Float and weight
4. Access box with lid
5. Float splice box with cord grip
6. 4" inlet check valve (check valve)
7. 4" SCH40 cross
8. 2" flexible outlet assembly
9. Control panel (One of the following):
    - Simplex air pump
    - Duplex air pumps
10. Electrical whip from panel to air pump assembly (One of the following):
    - 25'
    - Other lengths upon request
11. Air pump assembly (One of the following):
    - Simplex – one air pump
    - Duplex – two air pumps

    Both options include enclosure and manifold
12. Anti-flotation kit- (optional for use in high groundwater)
    - Geotextile bag for concrete

5. Installation Instructions

Warning: Only licensed installers and service providers should install, inspect, maintain, and/or troubleshoot HyAir systems. Please contact Geomatrix, LLC to ensure you are in possession of the most recent documentation regarding the HyAir you are installing and/or servicing. All regulations and standards must be followed when installing HyAir systems.

If you are unsure of the installation requirements for a particular site, contact Geomatrix, your designer, engineer and/or regulatory agent.

5.1. Determine the location of the vessel, air pump assembly, and controls.

Use the design plan and an engineer's scale to determine the vessel placement location.

If you are unsure how to locate this from the plan, please contact your designer, engineer, and/or regulatory agent.

The control panel is typically installed close to the vessel to minimize extensive runs of electrical conduit, wire and/or connections. The air pump must not be further from the vessel than specified on **Table 2**. The air pump should be installed as close as possible to the vessel. This minimizes air pressure friction losses in long pipe runs, and allows the control panel to be installed within eye sight of the air pump per electrical code.

The control panel installation must conform to all applicable electrical codes. Ease of service should be considered in determining installation location. The piping between the air pump and vessel must conform to **Table 2**.

Blower shall be located at an elevation higher than the vessel to facilitate drainage from condensation buildup.

Although the air pump is quieter than a typical air conditioner, it is advisable to not install it near windows, porches, decks, etc. Care should be exercised to not locate the air pump enclosure in excessively wet locations, such as low spots, near downspouts, etc.

Table 2. Maximum pipe length from air pump to vessel

Application	Minimum 1.0" Dia. SCH40 PVC
Single family residential	250 feet or less
Commercial or non-single family residential	Contact Geomatrix

Note: Do not install more than 360 degrees in total fittings from air pump to vessel. For any run greater than 250 feet, please contact Geomatrix.

5.2. Determine the excavation diameter and depth for the vessel

The minimum excavation diameter is based on the HyAir model being installed as specified in **Table 3**. Keeping the excavation diameter as close as possible to the specifications will minimize backfill costs and provide appropriate space for placement and compaction of bedding material. Particular care should be exercised in compacting the backfill and pipe bedding to prevent damage to components that can result from settlement. The excavation dimensions should be increased to account for the addition of anti-flotation counterweight(s), if utilized, and may require importing additional bedding material.

The vessel is gravity fed from an up gradient septic or treatment tank (treatment tank). Refer to **Table 3** for minimum installation depth per model number. The pipe slope toward the vessel must be a minimum of 1%. If the minimum installation depth does not meet the prescribed 1% pipe slope then vessel shall be installed deeper into the ground to meet the 1% pipe slope. The top of the SCH40 PVC riser will need to be installed so the top of the access assembly is approximately 4-6" below finished grade.

Table 3. Vessel specifications for excavation depth and diameter

HyAir vessel model	Vessel diameter	Minimum bottom elevation depth below treatment tank outlet invert elevation [1]	Minimum excavation diameter[2]
HA47	28"	36"	54"
HA71	32"	41"	58"
HA138	40"	48"	68"
HA239	48"	56"	78"

[1] - base of the vessel, with anti-flotation counterweights installed around it, will need additional bedding material.

[2] - excavation will need to be larger if anti-flotation counterweights are required.

5.3. Excavate and prepare base

Once Dig Safe has cleared the area, the vessel is located, and excavation depth is determined, begin excavation.

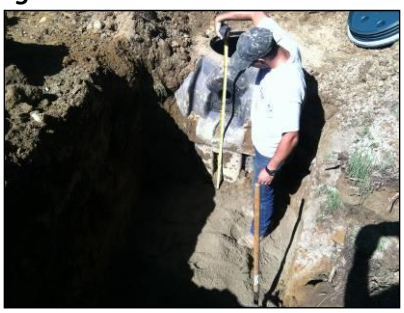
If during excavation, unsuitable soils such as peat, muck, organic materials, buried stumps, construction debris, stones, or boulders are encountered, they need to be removed and filled with compacted sand, pea stone or ⅜ – ¾ inch stone (Specified Backfill). If unsuitable fill cannot be removed, contact an experienced soils professional for design assistance. The excavation must be over dug by a minimum of 6" to allow the vessel to sit on a 6" thick minimum bed of Specified Backfill.

Level and check elevation of the Specified Backfill base. (**Figures 3-5**)

Figure 3

Figure 4

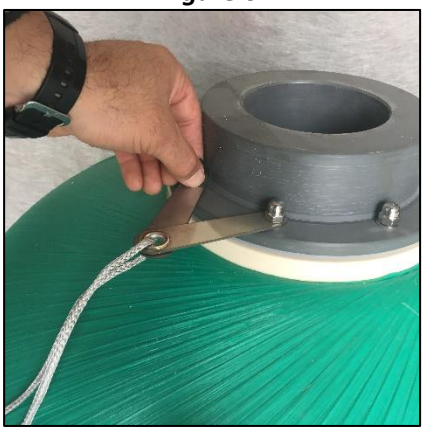
Figure 5



5.4. Prepare the vessel for installation

Unravel cords from vessel. Ensure the hold-down plates attached to the top of the vessel are installed and firmly secured. The nuts are pre-torqued to Geomatrix specifications. (**Figure 6**). The vessel is now ready for installation.

Figure 6



5.5. Placing the vessel into excavation

5.5a. Lower the vessel into the excavation utilizing all the hold down tabs and ropes provided with the vessel. Avoid unnecessary bending of tabs. **(Figure 7)**
Orient the 2" flexible outlet assembly (outlet assembly) as needed.
Ensure that the vessel is level.
Verify that top of vessel is a minimum of 6" below the treatment tank outlet invert.
If anti-flotation is required, continue to Step 5.5b; if no anti-floatation is required, skip to Step 5.6.

Figure 7

Note: Do not backfill vessel until inlet plumbing has been completed (Step 5.6)

5.5b. Anti-flotation component installation instructions:

Follow this step only if anti-floatation is required.

Wrap 80lb concrete bags (not supplied by Geomatrix) (minimum number specified in **Table 4**) with suitable filter fabric or Geotextile bags. This will allow the concrete to cure while providing strength to the bag prior to curing. Optional geotextile bags for concrete are available to order through Geomatrix. (**Figures 8 and 9**)

Table 4. Anti-floatation minimum concrete

Vessel	# of bags of concrete (min.)
HA47	3
HA71	4
HA138	4
HA239	7

Figure 8

Figure 9

Place the wrapped concrete bag next to installed vessel on the end and slip the loop of cord (attached to the hold down tab) around the bag, and lay the bag next to the vessel. (**Figure 10**)
Orient the bag so the cord, when tightened, will be aligned with the appropriate hold down tab. (**Figure 11**)
Tighten the cord using the slip splice. (See **Figures 11-13**) Do not cross cords. Cords should go straight down to the bag they are connected to. For bag layout configuration see **Figure 15**.

Figure 10

Figure 11

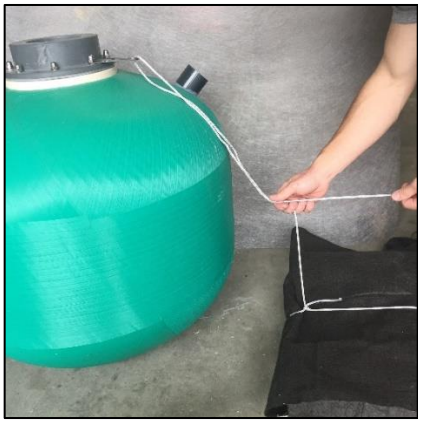


Figure 12

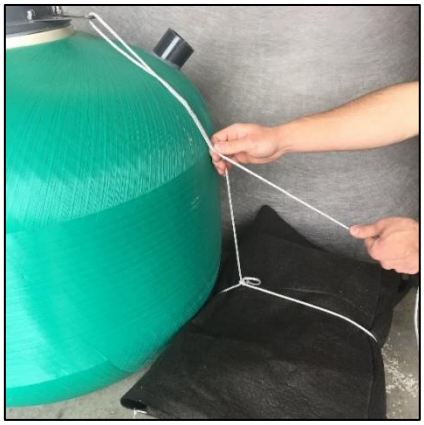


Figure 13

Figure 14

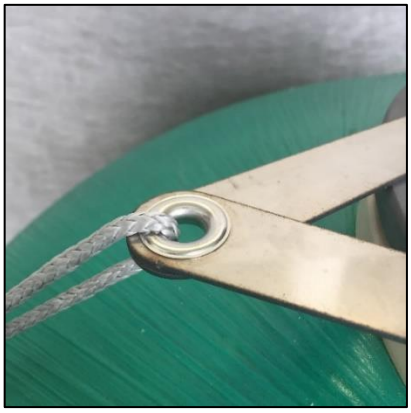
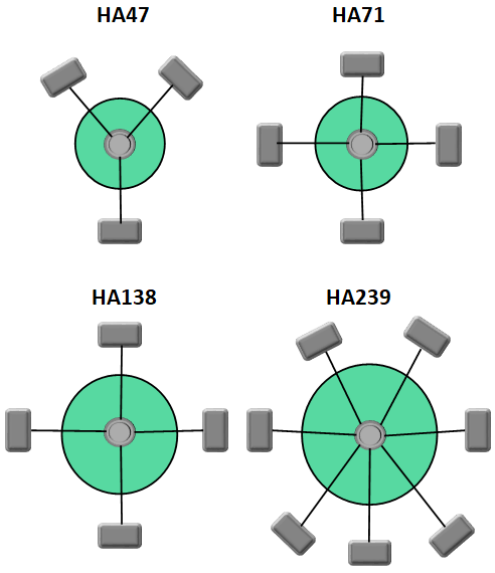


Figure 15



Verify that the vessel has not shifted and remains level.
Repeat for the remaining wrapped concrete bags and ensure that all cords have similar tension.

5.6. Inlet plumbing

The opening in the top of the vessel and the discharge pipe should remain covered with their protective plugs while trenches for the inlet and outlet pipes are excavated. If the trenches are over-excavated, suitable backfill material must be placed and compacted to bring the excavation to the necessary elevations.

Observe all OSHA safety standards and practices. The inlet and outlet piping must be SCH40 PVC pipe to withstand the operating pressures. Install piping according to design plan. Keep a minimum of 1% slope on the pipe between the treatment tank and the vessel. Do not allow dirt or debris to enter piping system or vessel.

5.6a. Inlet 4" SCH40 cross installation

1. Determine an appropriate length of 4" SCH40 PVC pipe to connect the 4" SCH40 cross (cross) to the outlet of the treatment tank. This pipe should be cut longer for later adjustments. The pipe must stick into the treatment tank a sufficient distance for the check valve to be serviceable between the outlet and access hole. **(Figure 16)**
2. Connect the pipe to the treatment tank.
3. Properly apply glue and primer to the pipe and cross and connect. **(Figure 17)**

Figure 16

Figure 17

4. Determine length of 4" SCH40 PVC pipe extending from vessel to the cross that will result in a 1% slope from the treatment tank to the cross. **(Figure 18-20)**

Figure 18

Figure 19

Figure 20

5. Verify that there is a 1% slope on the pipe and the vessel is level. (**Figure 21**)
6. Properly apply primer and glue to the cross, nipple and vessel top.

Figure 21

5.6b. Inlet Check Valve Installation

The 4” inlet check valve (check valve) is installed inside the treatment tank supplying effluent to the vessel or between this tank and the vessel. (**Figures 22 and 23**) If installing between tank and vessel, a riser to grade over the check valve is required to inspect and maintain the check valve. If installing inside treatment tank, the check valve must be positioned below the outlet access for inspection and maintenance purposes.

Figure 22

Figure 23

The required effluent filter shall be installed in the treatment tank feeding the HyAir vessel. (**Figure 24**) This effluent filter is capable of accepting a high level float (optional float switch). If the check valve is installed in the tank, both the check valve and the filter must be serviceable from the outlet opening of the tank.

The inlet check valve must be installed level or slightly pitched down on the end closest to the baffle/filter. This will ensure that the seal closes completely. The check valve is directional, it must be installed in the direction of flow with the raised arrow on the exterior of the check valve pointing toward the HyAir vessel. (**Figure 25**)

Figure 24

Figure 25

If the installation is a retrofit to an existing treatment tank, and the outlet pipe is SCH40 PVC, the pipe may be pitched at too great of a slope for the check valve to be level. If this is the case, install a section of 4” dia. flexible PVC and fittings near the end of the tank so that the outlet pipe is either level or slightly pitched back, as described above.

When installing the check valve, be careful to not damage the sealing surfaces of the check valve and swing flap. (**Figure 26**) Remove the check valve access cover and the swing flap prior to installation to ensure proper functionality. (**Figures 27 & 28**)

Figure 26

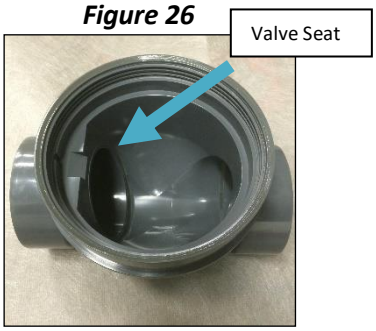


Figure 27

Figure 28

Carefully apply primer and glue to the joints. Do not allow primer or glue to contact the check valve sealing surface. (**Figure 26-31**) Check that the seal between the flap and sealing surface appears tight. In rare instances this seal is not competent and a new flap or valve will need to be obtained.

Figure 29

Figure 30

Figure 31

Install check valve and filter assembly on outlet pipe. Ensure that the assembly is level or slightly pitched down on the end closest to the baffle/filter. (**Figures 32 & 33**)

Figure 32

Figure 33

Figure 34

Allow glue and primer to dry. Then reassemble the check valve assembly and install filter. (**Figure 34**)

5.6c. Optional SoilAir Air Float Switch Installation

If the SoilAir is being utilized, a high level float must be installed in the effluent filter screen housing. A ½" PVC conduit must be run from the control panel to the tank's outlet riser electrical box and a qualified professional should make the electrical connections from the float electrical box to the HyAir control panel. (**Figures 35 - 37**)

Figure 35

Optional float switch

Figure 36

Installing float switch in effluent screen

Figure 37

Float switch installed in effluent screen

5.6d. Vessel Backfill

Using appropriate bedding material, ⅜" to ¾" stone, or compacted clean sand for backfilling the vessel. When sand is used for backfill, compact around the vessel in 6" lifts up to the half way point of the vessel. (**Figures 37 & 38**)

Verify that the vessel remains level and that the check valve / filter assembly has not been disturbed. (**Figures 37-39**) Complete backfill instructions will be explained later.

Figure 37

Figure 38

Figure 39

5.7. Riser Plumbing

The access riser is constructed from 4” SCH40 PVC pipe supplied by others, primed, glued, and inserted into the top of the 4” SCH40 cross. The vessel access assembly is then glued onto the 4” SCH40 riser. The length of the riser pipe required will be such that when installed the threaded plug of the access assembly is approximately 4”- 6” below final grade. (**Figures 40 & 41**)

Note: Riser assembly is not H20 load rated. For applications in traffic areas, utilize traffic rated riser covers poured into a load bearing concrete pad extending at least 12” beyond vessel footprint.

Figure 40

Figure 41

Prime and glue the riser pipe. Install into the 4” SCH40 cross and vessel access assembly.

5.8. Outlet Plumbing

The vessel outlet pipe should be connected to the pipe(s) that directs flow to the desired discharge point utilizing SCH 40 PVC glue, primer and fittings. A 2” PVC flex pipe with a SCH80 90° elbow and 2” SCH40 coupler (2” outlet assembly) is provided, pre-assembled, with fittings glued on for attachment to the vessel outlet. Properly prime and glue the vessel outlet pipe and the elbow on the outlet assembly. This will provide for multiple piping options and reduce the risk of damage to vessel and piping while backfilling. (**Figure 42**) Be sure to properly bed the 2” outlet assembly before backfilling. (**Figure 43**).

Figure 42

Figure 43

5.9. Air Line Plumbing

Excavate the trench(s) for the air line and the conduit from the access riser assembly to the air pump and control panel location(s). The same trench can usually accommodate both the air line and the float conduit, assuming the trench slopes toward vessel. The air line must be sloped toward the vessel to prevent condensation accumulating within the air line.

Install the air line from the 4" cross bushing assembly to the air pump assembly location utilizing 1" SCH40 PVC pipe and fittings. **(Figure 44 & 45)** Airline plumbing into blower enclosure will be covered later.

Figure 44

Figure 45

5.10. HyAir Float Conduit

All electrical components should be installed by a qualified professional.

Install the float switch electrical junction box adjacent to the vessel access assembly, as shown. (**Figure 46**) Ensure that when the vessel is backfilled and the access box is placed over the vessel access assembly and the float electrical box that there is room to access both. **(Figure 47)**

Figure 46

Figure 47

5.11. Float and Weight Installation

5.11a. Float Weight

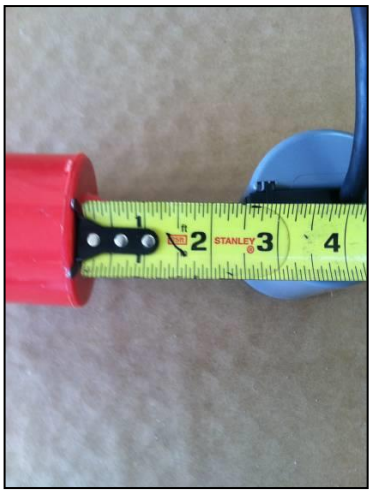
Attach the float weight to the float cord as detailed below. (**Figures 48-50**)

1. Remove retainer clip. **(Figure 48)**
2. Insert float cord. **(Figure 49)**
3. Measure distance from top of float to weight. **(Figure 50)**
4. Reinsert retainer clip to secure cord.

Figure 48

Figure 49

Figure 50



Verify that the distance from the float weight to the float is 2.5”; adjust as necessary.

5.11b. Cord Grip

Unscrew and set aside the compression cord grip nut and inner rubber seal. Insert the end of the float cord through the cord grip in the vessel access assembly. (**Figure 51**) Slide on rubber seal with cone shaped side toward access riser and flat side toward nut. (**Figure 52**) Float height will be adjusted in the next step.

Continue to move the cord through the cord grip until there is approximately 4’ of cord beyond the cord grip to the float/weight assembly. Insert the cord grip components loosely into place on the cord grip body.

Figure 51

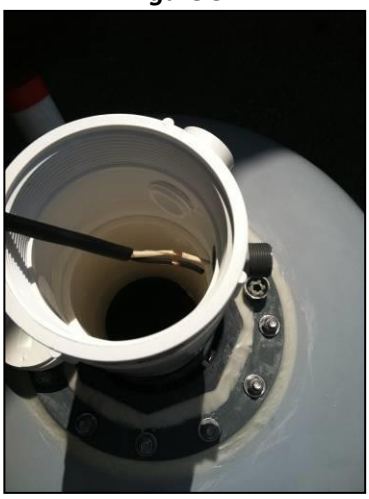


Figure 52

5.11c. Float Height

The float elevation from the top of the riser assembly will vary with riser height. To maximize the volume available in the vessel, it is important that the float height be set as high in the vessel as possible without allowing the float to contact the underside of the vessel or any internal components which may interfere with proper float operation or cause the float to “hang-up”.

To determine the proper float height, measure the total height of the riser from the inside of the vessel. This dimension is from the inside bottom portion of the vessels grey PVC assembly, to the top of the vessel access assembly. (**Figures 53 & 54**) Add 6” to this measurement. This distance is the minimum distance that the float weight can be from the top of the vessel access assembly.

Figure 53

Figure 54

The distance from the top of the access riser assembly down to the weight retainer clip should be as calculated above. Do not over-tighten the cord grips as it can damage the float cord from excessive pressure. Verify that the float will not contact the vessel or any internal components.

Install the vessel access assembly threaded plug temporarily to prevent debris from entering the vessel. Ensure that debris does not get into the threads of the plug or the vessel access assembly, as this may damage the threads. **DO NOT BACKFILL VESSEL AND OTHER COMPONENTS UNTIL THE ENTIRE SYSTEM IS TESTED**.

5.12. Air pump and Enclosure Installation

With the location of the air pump assembly enclosure determined and the air line close by, minimal excavation is necessary to install/stabilize the enclosure.

The air pump assembly can be installed without the Geomatrix enclosure inside garages and other structures. Please contact Geomatrix for specifications regarding these installations.

Remove the cover of the air pump enclosure by removing the 4 bolts and washers in the corners of the enclosure cover with a 7/16" wrench or socket. (**Figure 55**)

Figure 55

Figure 56

Figure 57

Figure 58

Figure 59

Remove and set aside the air pumps and manifold assembly. (**Figures 55 - 57**)

There is a recessed dimple in the middle of the enclosure base to serve as a drill location. Using a 1 ½ inch step/spade bit or hole saw, drill fully through the base of the enclosure for the airline. (**Figure 58**)

Temporarily install the base over the air line. (**Figure 59**) Verify that the location of the base is correct. Cut the air line 2" above the installed base elevation. Temporarily cover or cap the end of the air line to prevent debris from entering it.

Set the air pump(s) and manifold assembly back on the base.

Locate the electrical box on the base in an area that will not interfere with cover installation or contact air pumps. Affixing the electrical box will be covered below. Mark out and drill a 3/4" hole for the electrical whip installation, through the base, for installation to the control panel location. (**Figures 60 & 61**)

Figure 60

Figure 61

Figure 62

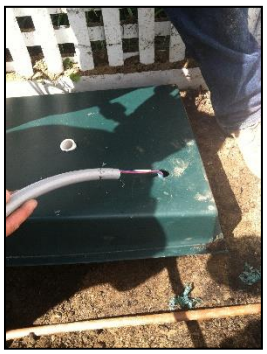


Figure 63

Figure 64

Figure 65

Remove the air pump(s) and manifold assembly. Install the electrical whip into and through the base. (**Figure 62 & 63**)

Prepare the area below the base to support the air pumps with soil, bricks, and other materials that will provide support for the air pumps. Ensure that the air line and the electrical whip are positioned properly with the air line protruding vertically through the base and the electrical box positioned as described above. Place soil over the lip and around the perimeter of the base to prevent the base from shifting. (**Figure 64**)

Reinstall the air pump(s) and manifold assembly. Secure the manifold assembly to the air line with primer and glue. Secure the electrical box to the base utilizing the stainless sheet metal screws provided. (**Figure 65**)

Attach the solenoid coil to the solenoid that is on the manifold, using the supplied brass securing nut. The spring washer (**arrow in Figure 66**) is installed between the coil and the solenoid body. Do not over tighten. (**Figures 66 - 68**)

Figure 66

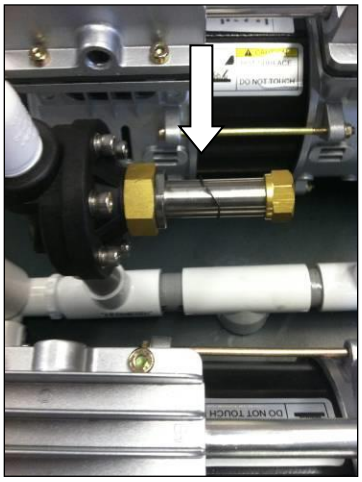


Figure 67

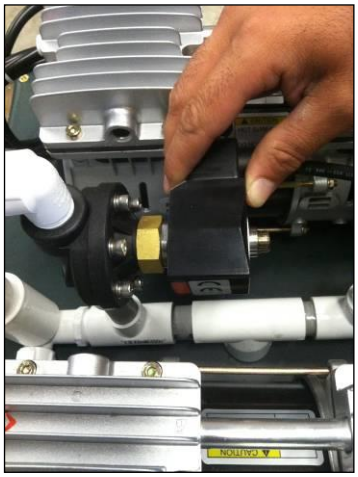


Figure 68

Plug the air pumps(s) into the electrical box outlet. (If there are two air pumps, it does not matter which air pump is plugged into which outlet.)

Figure 69

Air pump installation is complete. (**Figure 69**)

5.13. Control Panel Installation

The control panel can be mounted to a building, structure, or pressure treated post(s) with a suitable board. The control panel should be installed at a convenient height for servicing. The size of the control panel varies depending on package selected. (**Table 5**) Once in place, complete the conduits from the effluent filter float switch (optional for use with SoilAir air), the vessel float switch, air pump enclosure, and power supply. A qualified professional shall perform all work in accordance with all regulations and best work practices and install electrical wires and make necessary connections as specified in the wire diagram. The conduit(s) entering the control panel shall be gas and water tight.

Figure 70

Table 5 HyAir Control Panel Dimensions

Option	Height	Width	Depth
Non extended aeration	10.5 Inches	10.5 Inches	7 Inches
Extended aeration	14.5 Inches	12.5 Inches	7 Inches

5.14. Control Panel Setup

Refer to the HyAir Control Panel Setup Manual included with the HyAir Control Panel.

System testing procedure is explained in the applicable control manual

5.15. Backfilling

TEST SYSTEM FUNCTION PRIOR TO BACKFILL

1. Vessel: At this point, the HyAir vessel should be backfilled to the outlet of the vessel with all plumbing and electrical services connected and glued.

   Finish backfilling the vessel excavation with specified backfill and compaction. Special care should be taken when backfilling around pipes/conduits. To avoid unwanted breakages and settling, properly bed and compact under pipes/conduits.

   Install access box with lid over vessel riser assembly and float electrical connection. For H20 applications use suitable load rated access risers poured into a concrete pad extending at least 12" beyond the vessel footprint.

   Grade area around access box so that the lid of the access box is at grade and easily visible.

2. Check valve: Instances with check valves external to the tank require risers to grade for maintenance. Repeat vessel backfill procedure for external check valve backfill.

3. Air piping/conduit: Special care should be taken to properly bed air line piping and conduit prior to backfill to avoid unwanted breakages and settling. Ensure that air line pitch is maintained from the air pumps downwardly towards the vessel.

4. Blower enclosure: With the base of the blower enclosure properly supported underneath; backfill air line plumbing and properly compact. Reinstall cover over air pumps utilizing the Qty 4 ¼-20 bolts and washers. (**Figure 71**) Backfill around enclosure base to prevent shifting.

Figure 71

Installation is complete.

Turn ON circuit breakers in control panel and secure panel cover.

6. Troubleshooting

Refer to troubleshooting guide on pages 30 - 31.

IF YOU SHOULD EXPERIENCE PROBLEMS WITH THE EQUIPMENT, IMMEDIATELY NOTIFY YOUR SERVICE PROVIDER. IF THE PROBLEM IS NOT RESOLVED CONTACT GEOMATRIX.

Contact us

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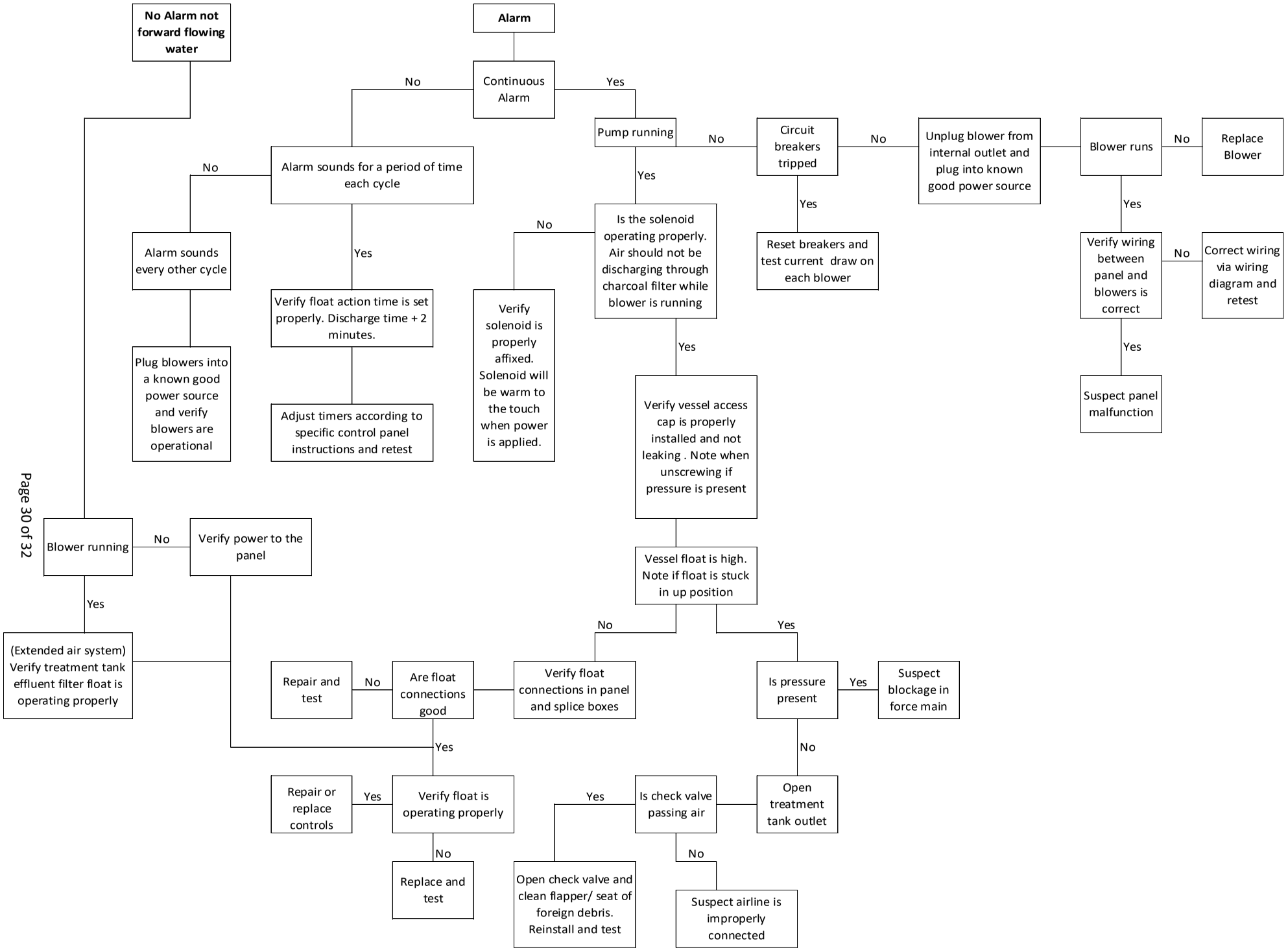
No Alarm not forward flowing water
Alarm
Continuous Alarm
No
Yes
Pump running
No
Circuit breakers tripped
No
Unplug blower from internal outlet and plug into known good power source
Blower runs
No
Replace Blower
Yes
Verify wiring between panel and blowers is correct
No
Correct wiring via wiring diagram and retest
Yes
Suspect panel malfunction
Yes
Reset breakers and test current draw on each blower
Yes
Is the solenoid operating properly. Air should not be discharging through charcoal filter while blower is running
No
Verify solenoid is properly affixed. Solenoid will be warm to the touch when power is applied.
Yes
Verify vessel access cap is properly installed and not leaking . Note when unscrewing if pressure is present
Vessel float is high. Note if float is stuck in up position
No
Verify float connections in panel and splice boxes
Are float connections good
No
Repair and test
Yes
Suspect blockage in force main
Is pressure present
Yes
Open treatment tank outlet
No
Is check valve passing air
Yes
Open check valve and clean flapper/ seat of foreign debris. Reinstall and test
No
Suspect airline is improperly connected
Alarm sounds for a period of time each cycle
No
Alarm sounds every other cycle
Plug blowers into a known good power source and verify blowers are operational
Yes
Verify float action time is set properly. Discharge time + 2 minutes.
Adjust timers according to specific control panel instructions and retest
Blower running
No
Verify power to the panel
Yes
(Extended air system) Verify treatment tank effluent filter float is operating properly
Yes
Verify float is operating properly
Yes
Repair or replace controls
No
Replace and test

Symptom	*Possible Cause*	*Location*	*Solution*
System forward flowing water Whooshing sound from air pump enclosure after cycle completes	Discharge Timer	Control Panel	Verify that the timer was properly set as outlined in the applicable control panel manual. If set for too short of an interval, water will remain in the vessel. Since the water has not been completely evacuated, residual pressure will be present and will be vented through the solenoid valve.
Odor from the Air pump enclosure	Discharge Timer	Control Panel	Verify that the timer is set as outlined in the applicable control panel manual. If set for too short of an interval, water will remain in the vessel. Since the water has not been completely evacuated, residual pressure will be present and will be vented through the solenoid valve. On systems where the blowers are installed in the building it is advisable to plumb the outlet of the charcoal filter to the outside.
Pressure release from blower enclosure	Over Pressure	Blower enclosure	****IMMEDIATELY TURN OFF THE SYSTEM AND CONTACT YOUR INSTALLER AND / OR GEOMATRIX****

STANDARD LIMITED WARRANTY

The Equipment is subject to a one year Limited Warranty on all mechanical and electrical components (the "Warranty"). However, damage caused by or resulting from electrical surges, lightning or power outages is specifically not covered. You will have no other rights, and we shall have no other obligations, arising from the performance of the HyAir System or Equipment or your septic system. This limited warranty and associated remedies are exclusive. NO OTHER WARRANTIES ARE PROVIDED, AND WE EXPRESSLY DISCLAIM ALL OTHER WARRANTIES, INCLUDING ANY EXPRESS OR IMPLIED WARRANTIES OF PERFORMANCE, MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE

No representative of Geomatrix has the authority to change or extend this Limited Warranty. No warranty applies to any party other than the original Purchaser.

This represents the Standard Limited Warranty offered by Geomatrix. A limited number of states and counties have different warranty requirements. Any purchaser of Product should contact Geomatrix main office in Old Saybrook, Connecticut, prior to such purchase, to obtain a copy of the applicable warranty, and should carefully read that warranty prior to the purchase of the product.

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