

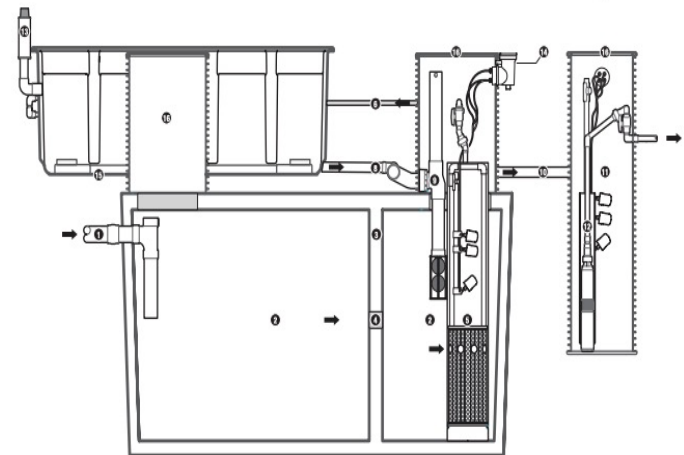
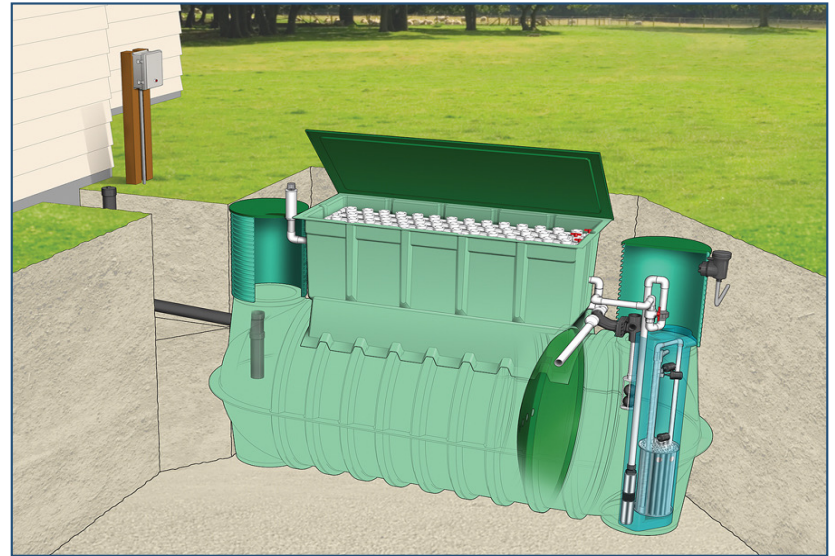
Installation

Residential Applications

AdvanTex[®] Overview

Main Components

- Control panel
- AdvanTex filter with vent
- Recirculating splitter valve
- Biotube[®] pump package
- Processing tank



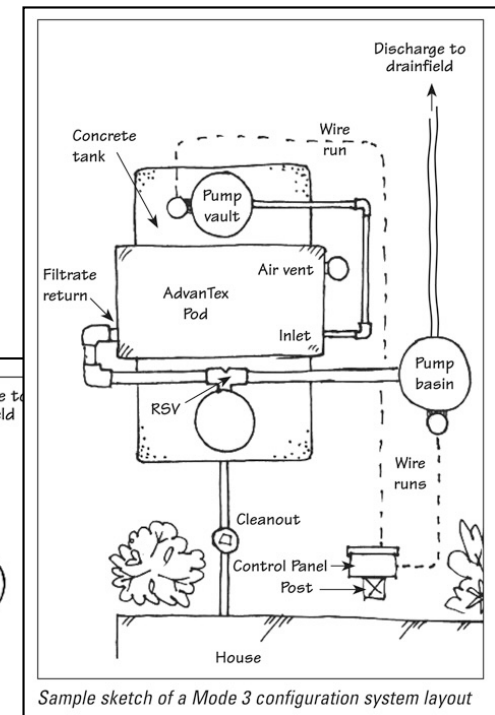
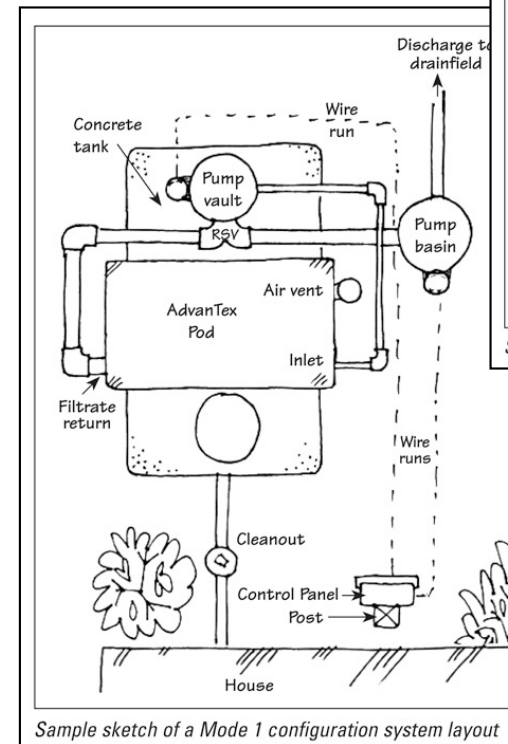
Side view, Mode 1 AX20 system with unit, concrete tank, and discharge pump basin

Before Installing the System

- Installer schedules preconstruction visit with Service Provider and Homeowner to discuss ...
 - System location, including buried conduits
 - System operation/Mode
 - System maintenance
 - Preventive maintenance and Homeowner' s Manual
- **Installer checks to make sure that water softener backwash is not, and will not be plumbed into the processing tank**

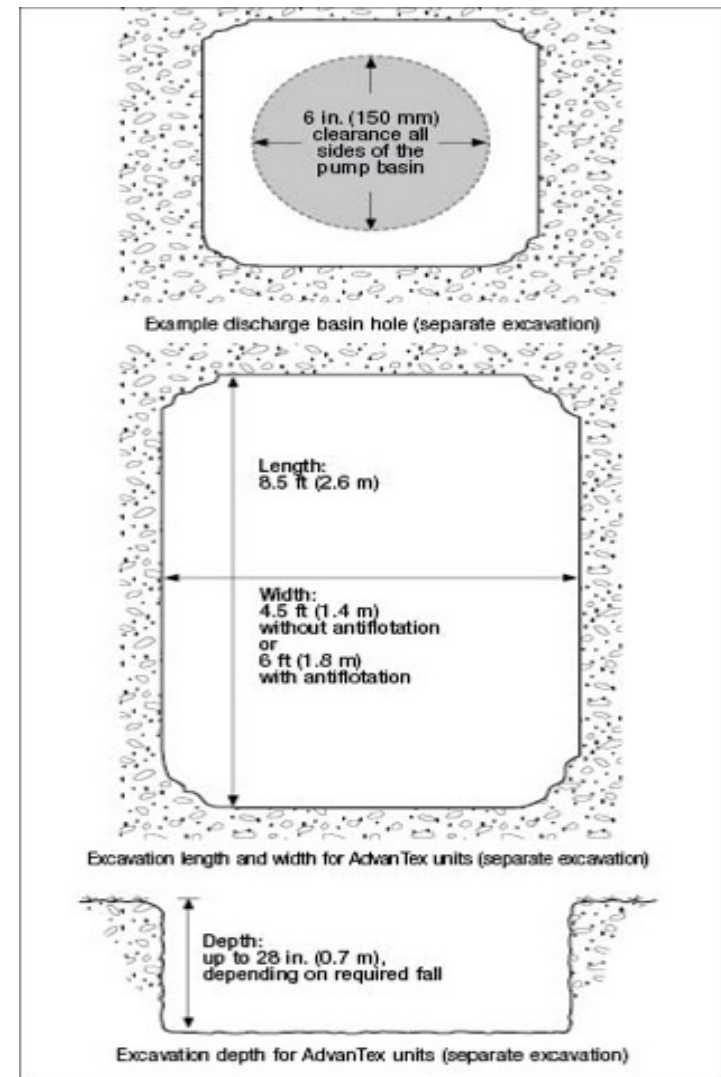
Step 1: Determine Tank and Pod Position

- Decide how to orient filter
- Identify position of the system
- Filter often sits on, or immediately adjacent to, tank
- Consider filtrate return line for best filter orientation
- Include electrical conduits and drain lines
- Possible landscaping?



Step 2: Excavate Site and Set Tank

- Outline tank/filter excavation area
- Follow tank manufacturer's excavation instructions
- If filter pod will be installed in separate hole, make it 4.5' x 8.5'
- If pump basin will be used, determine location and excavate hole
- Determine required elevations
- Excavate to the proper depths
- Make sure the bottom of the excavation is free of debris

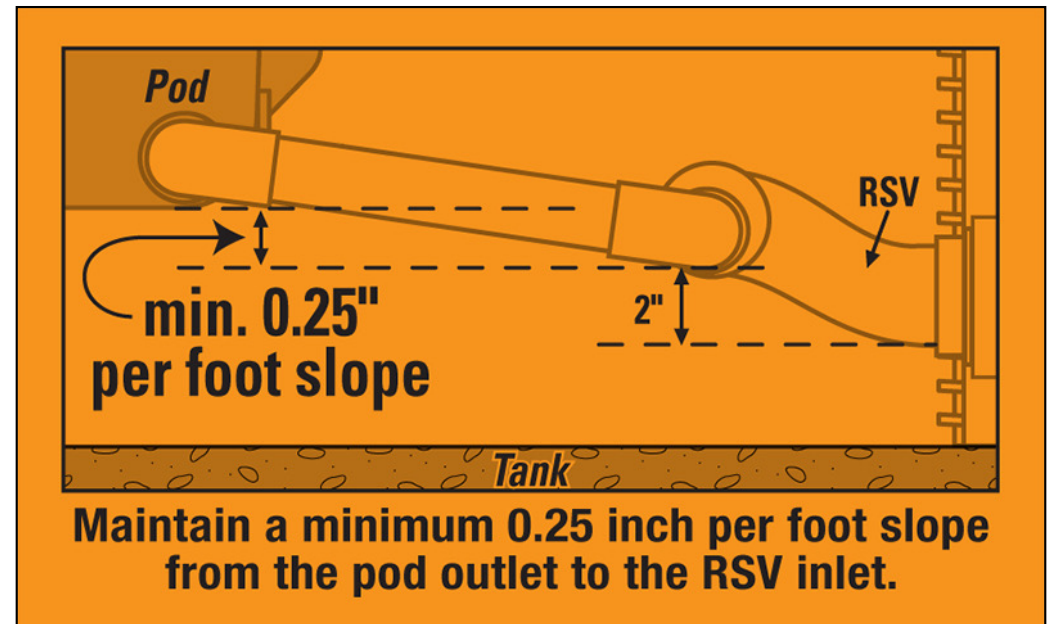


Step 2: Excavate Site and Set Tank



Step 2: Excavate Site and Set Tank

- Slope filtrate return line at least 1/4" per foot (minimum 1" drop if <4')
- Connect Filtrate return line to one end of tee



Step 3: Prep and Set Tank

- Set tank per manufacturer's instructions
- If installation calls for a discharge pump basin, set the pump basin in the excavation next to the tank (if possible)



Optional Step: Set Pump Basin

- Pump basin is used when dispersal requires pumping or dosing
 - Refer to Pump Basin Installation Instructions for details (NIN-PB-1)
 - Contains pump, flow inducer, splice box, and discharge assembly



Steps 4-5: Riser Prep and Orientation Check

- External splice box (if used) and recirculating splitter valve bracket should be installed on riser before riser is mounted



Steps 4-5: Install Risers and Water Test Tank

- Orient RSV riser to accept filtrate return line
- Orient electrical grommets to minimize bends
- Wipe surfaces to be bonded
- Apply adhesive to the outside and inside of the riser tank adapter
- Orient riser correctly
- Seal riser-adapter joint
- Water test tank and riser connections
- Pull inlet plug to drain excess water



Step 6: Set the AdvanTex[®] Pod Using a Concrete Tank

- Prepare bedding for filter
- Compact fill if placing filter on tank
- Set filter into place
- Use backhoe, truck straps if necessary
- Install anti-flotation flanges onto predrilled fiberglass tabs on bottom corners of filter



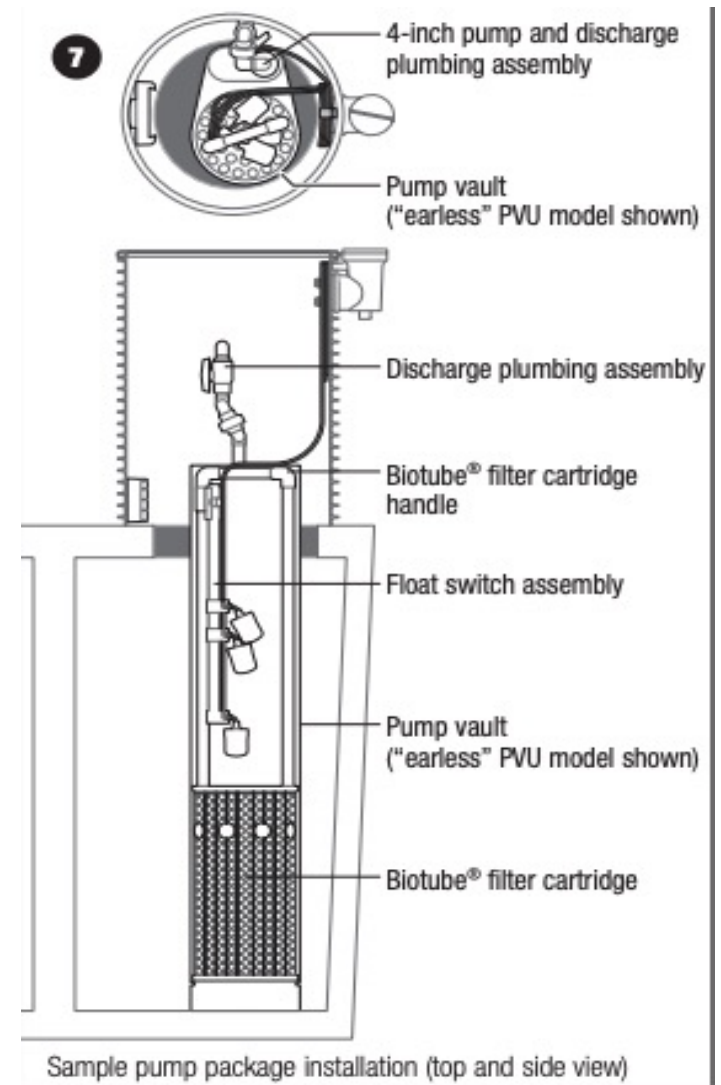
Step 7: Install Biotube[®] Pump Package

- Can use internal or external splice box
- Attach external splice box before installing riser
 - See instructions



Step 7: Install Biotube[®] Pump Package

- “Earless” vault rests on bottom of tank
- Secure lifting rope to splice box



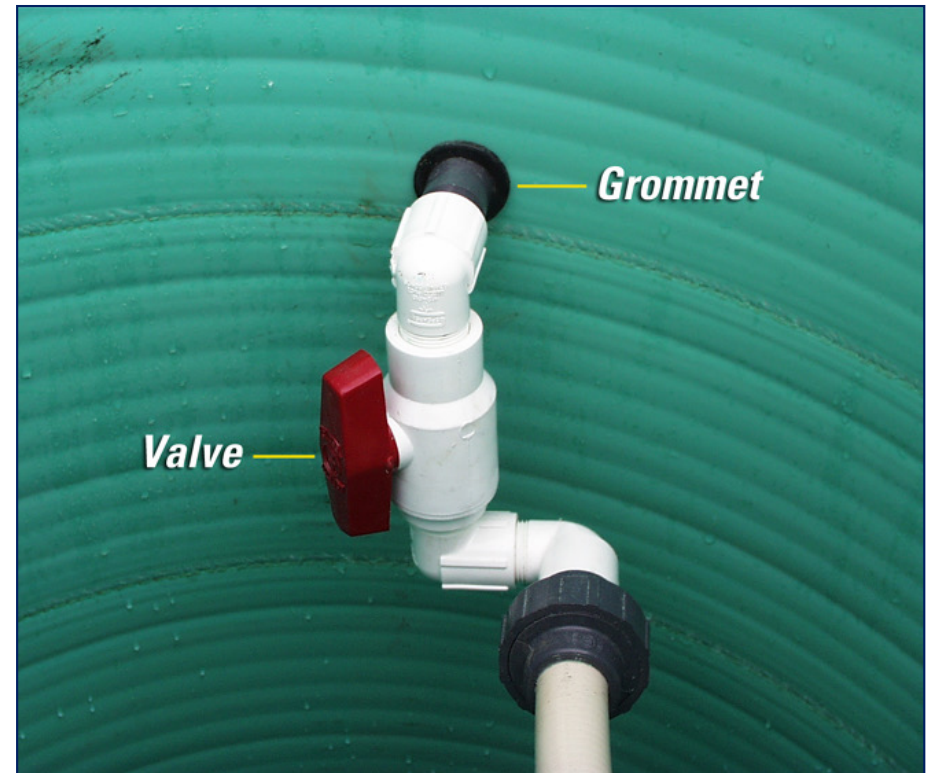
Step 7: Install Biotube® Pump Package

- Attach discharge assembly to pump
- Lower pump and discharge assembly into flow inducer



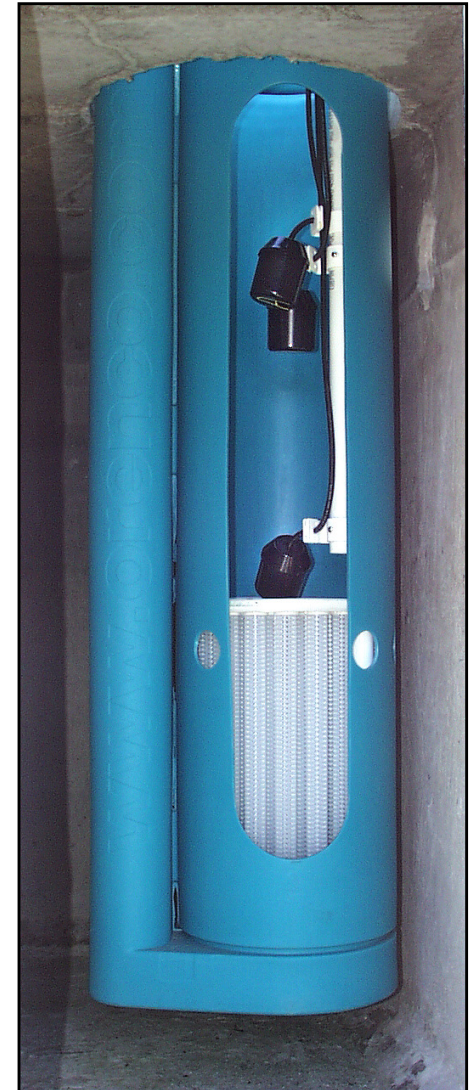
Step 7: Install Biotube[®] Pump Package

- Lube access riser discharge grommet
- Lube discharge nipple and push through grommet



Step 7: Install Biotube[®] Pump Package

- Refer to the document NIN-ATX-DA-1 to calculate float levels
- Verify float elevations
- Snap in float bracket



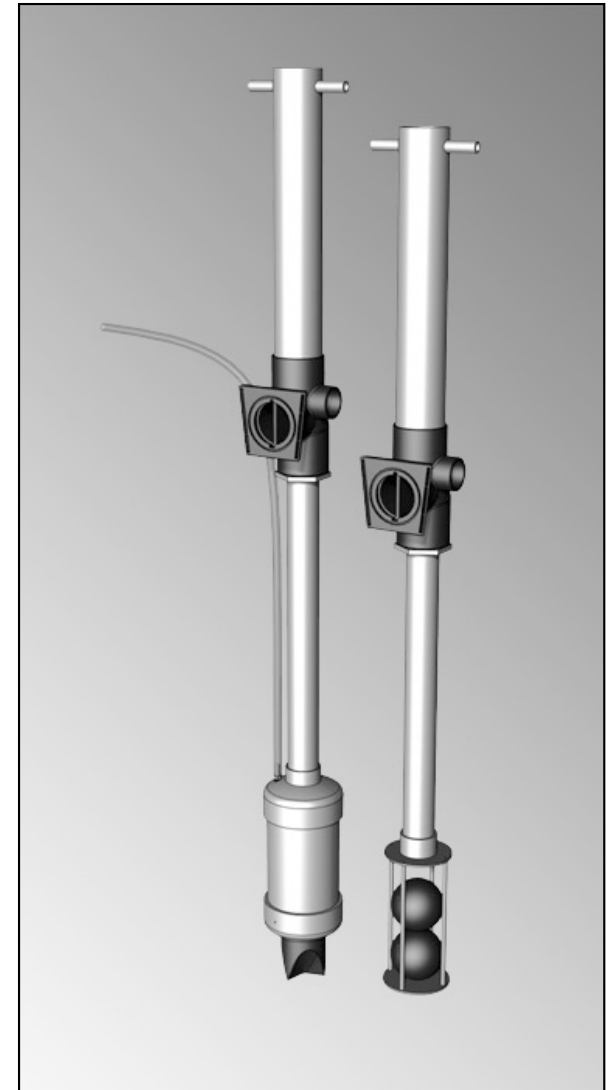
Step 8: Install Basin Pump Package

- Install the pump and discharge assembly
- Install the float switch assembly
- Watertight test the basin
- Connect the components and wiring

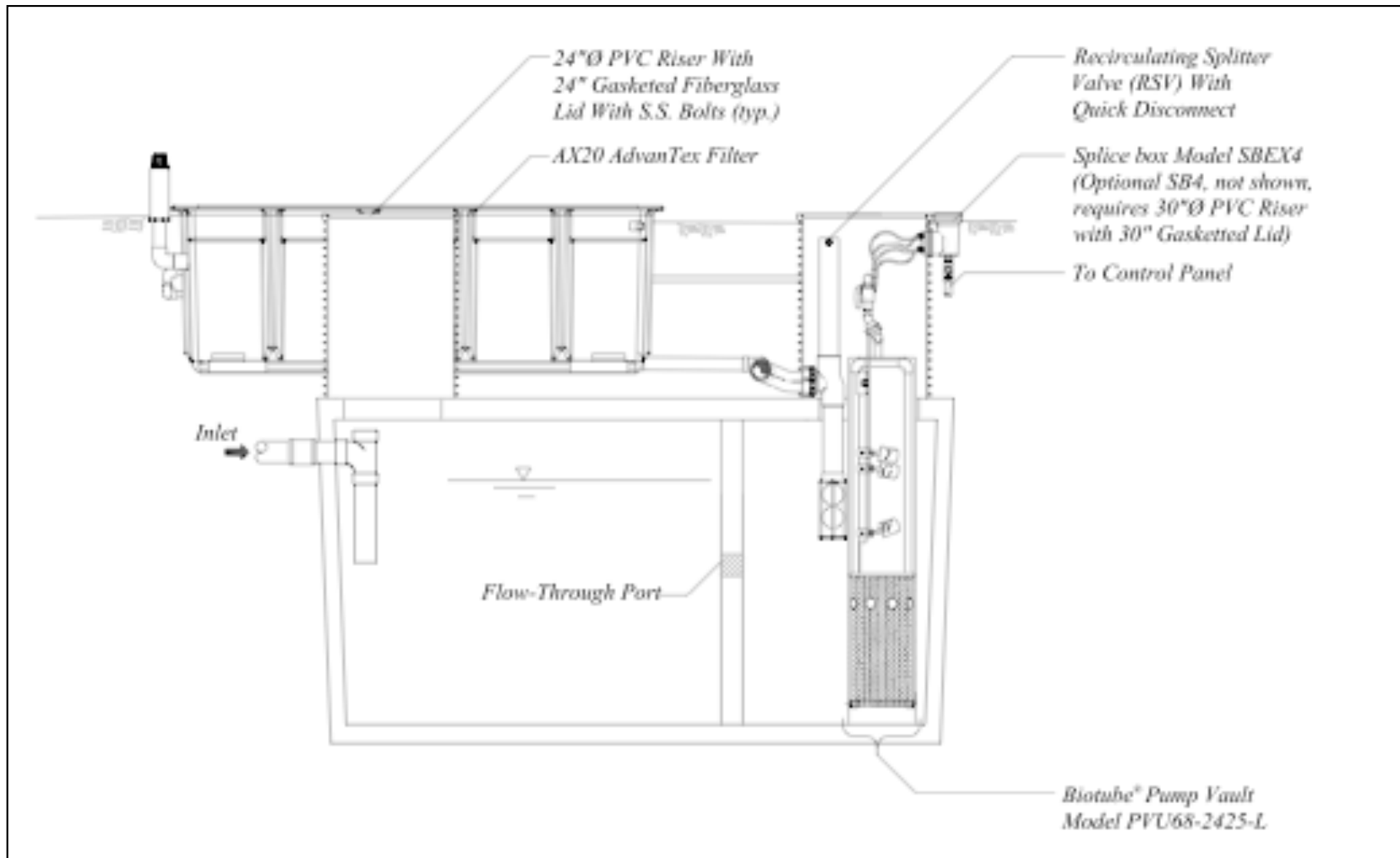


Step 9: Install Recirculating Splitter Valve

- Understand how the RSV works
- Determine if bracket requires installation
- Note quick disconnect

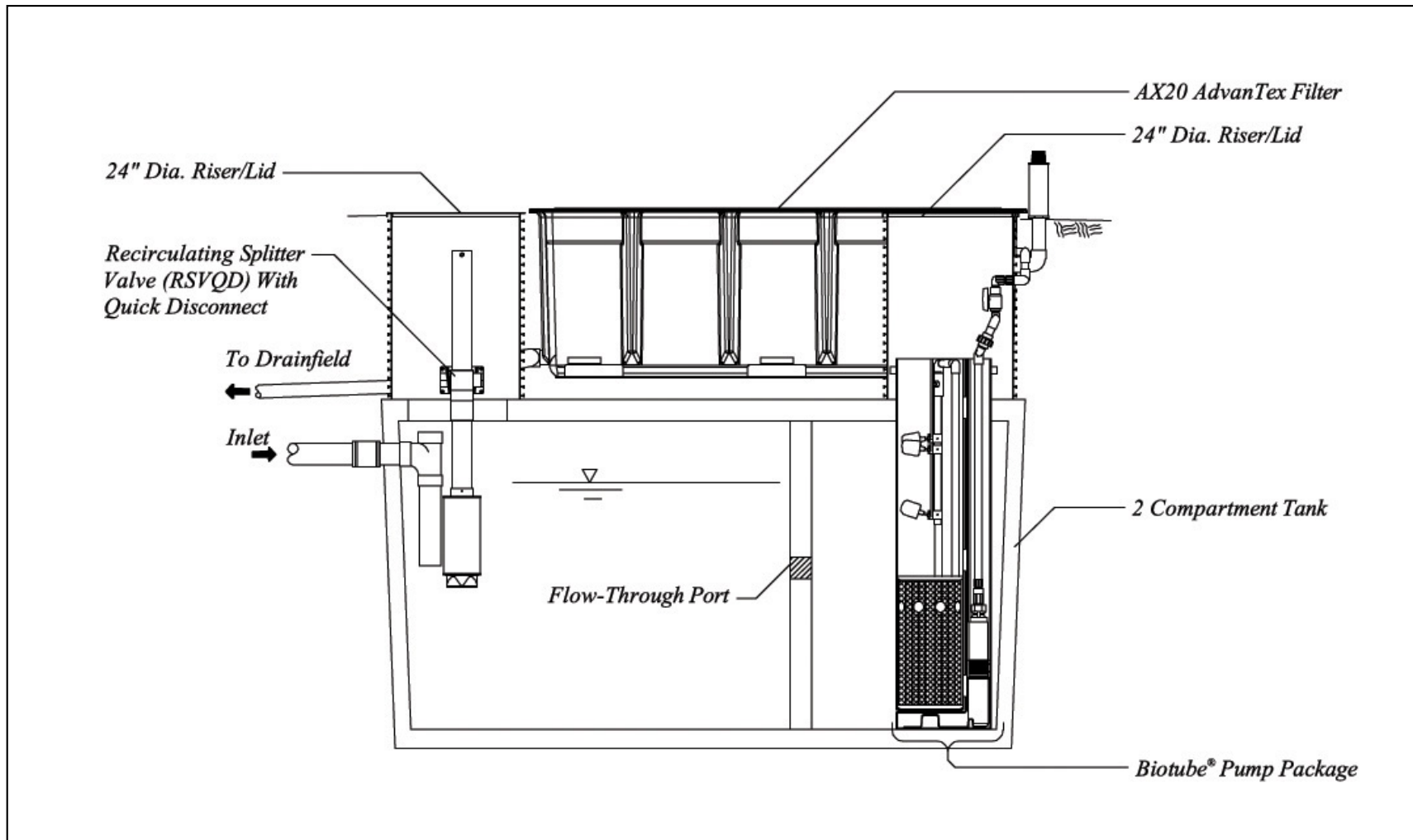


Mode 1 RSV Placement



With Mode 1, RSV is placed in second compartment.

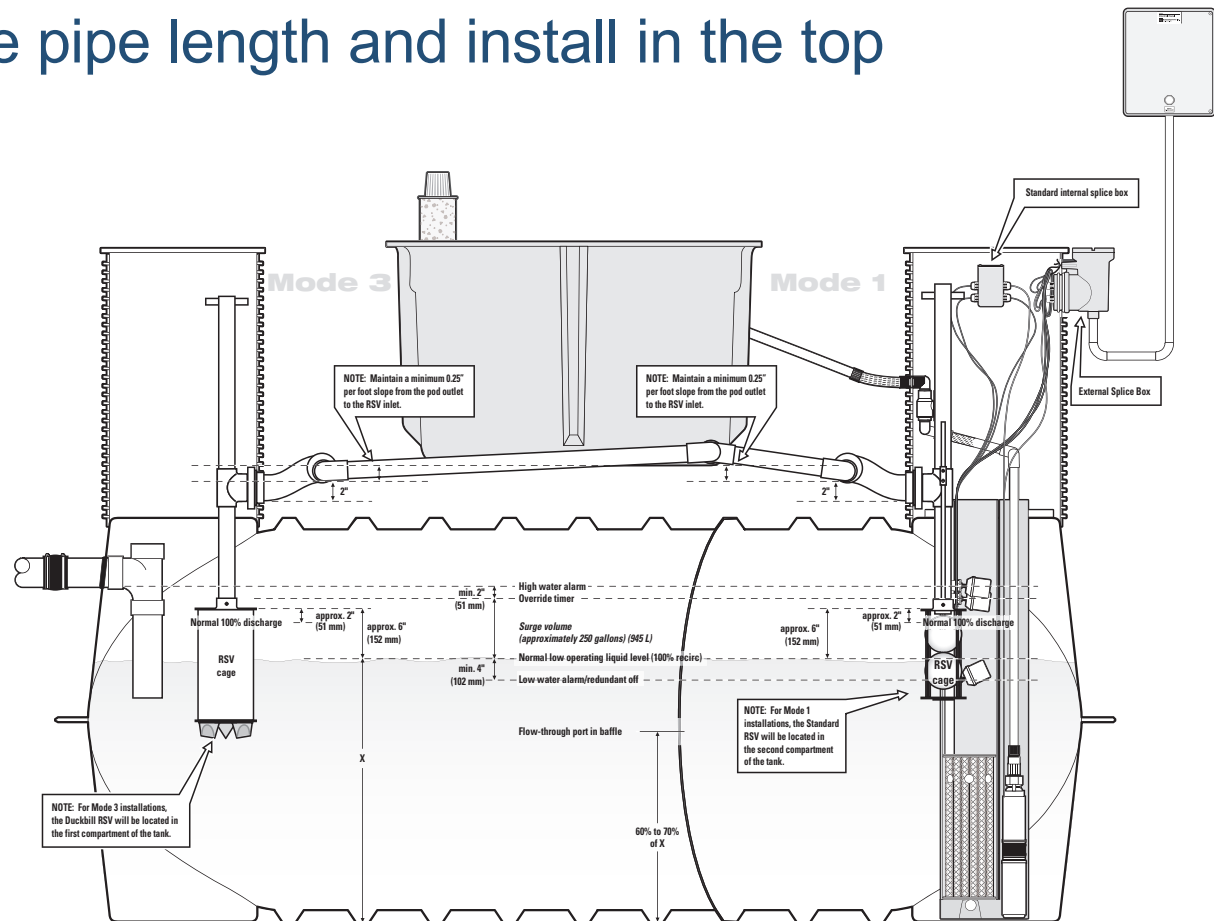
Mode 3 RSV Placement



With Mode 3, RSV is placed in first compartment

Step 9: Install RSV

- Refer to the document NIN-ATX-DA-1 to calculate stinger length
- Determine the handle pipe length and install in the top of the RSV body



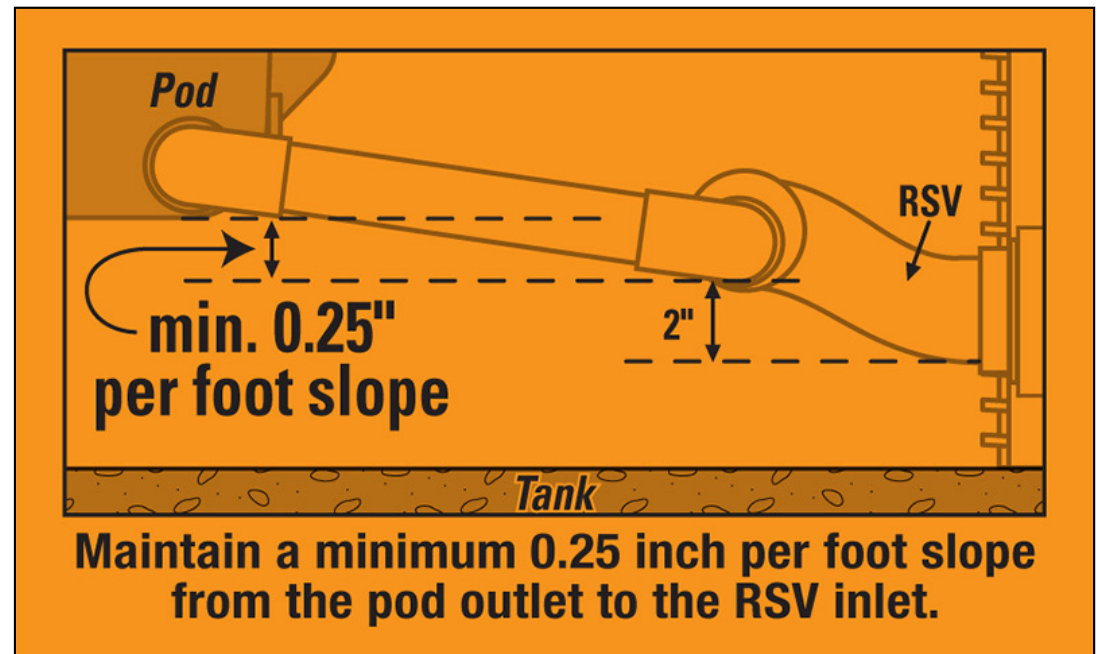
Step 9: Install RSV

- Carefully lower RSV body into bracket
 - Push down until it is fully seated



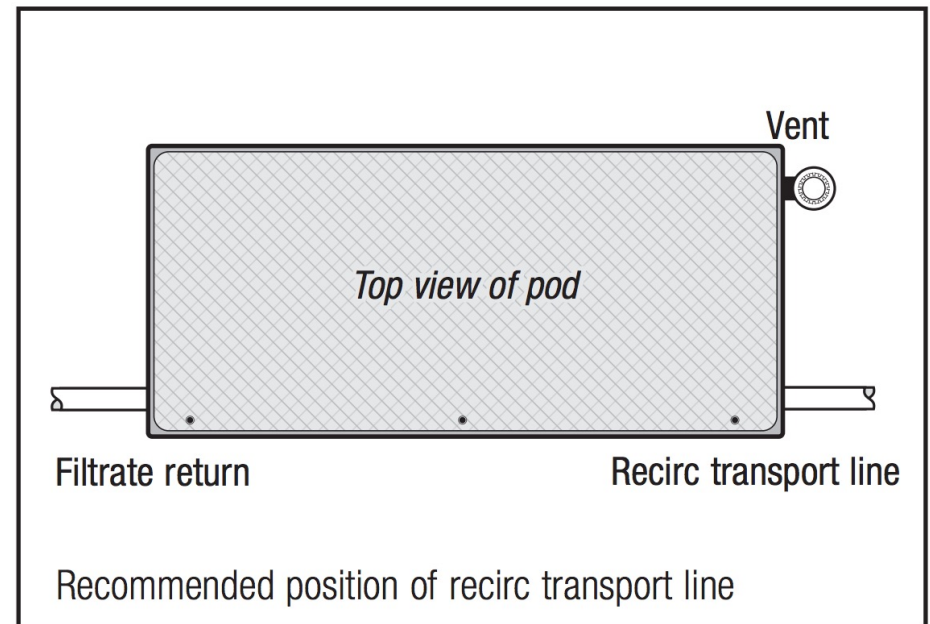
Step 10: Install Filtrate Return Line

- Slope filtrate return line at least 1/4" per foot (minimum 1" drop if <4')
- Connect Filtrate return line to one end of tee



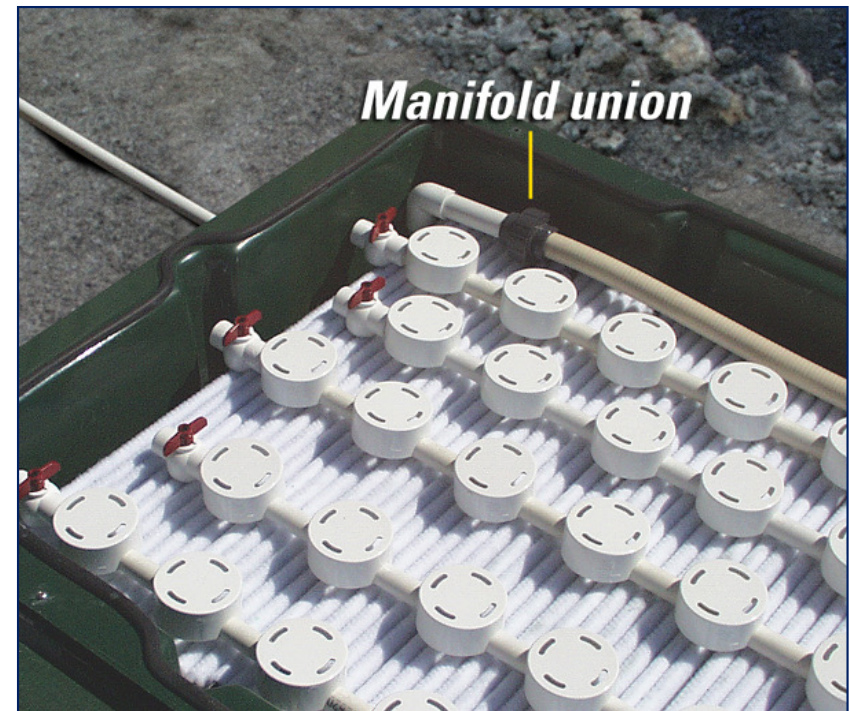
Step 11: Connect Transport Line to Pod

- Use 1" PVC pipe
- Determine inlet position on pod; two inlet options available
- Drill 1 3/4" hole
- Install 1 1/4" grommet
- Lube grommet and push 1" elbow through grommet
- Slope Transport line if necessary for cold weather applications



Step 11: Connect Transport Line to Pod

- Temporarily disassemble manifold union so that, when the pump first comes on during start-up, debris in the transport line will not be pumped into the manifold



Step 12: Install Discharge Line

- Slope discharge line at least 1/4" per foot (minimum 1" drop if <4')
- Orient split-flow tee to slope of discharge line
- Connect discharge pipe to other end of tee



Step 13: Install Passive Air Vent

- 2" vent line: 20' or less
- Consider locating near protective wall or under shrubbery
- Do not allow “low” points in vent piping
- Make sure vent is sloped back $\frac{1}{4}$ " per foot so that it can drain properly.



Step 14: Install Control Panel

- Use Properly Credentialed electrician for wiring
 - Float connections
 - Incoming power to panel
 - Power from panel to recirc pump
 - Power to discharge pump, if applicable
 - Conduit sealoffs outside riser

NOTE: Do not install control panel against the house. Use a 4" X 4" post.

- Recommend:
 - 5' height
 - Within view of system
 - Accessible/Unobstructed

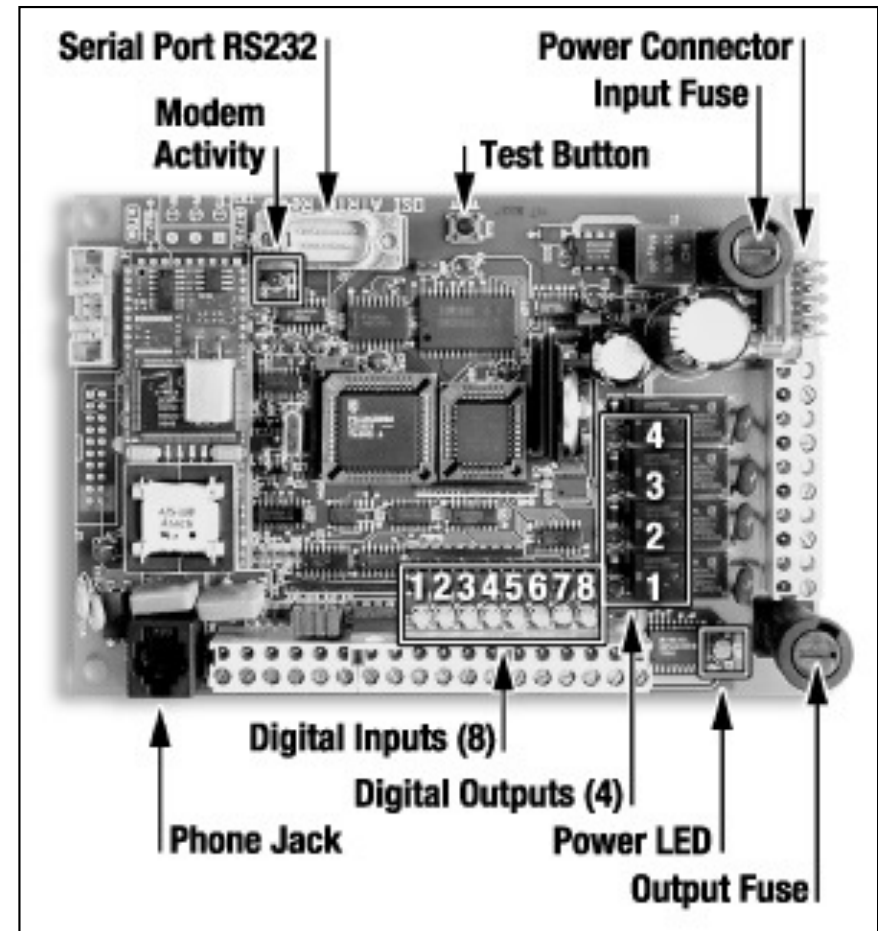


Step 15: System Functional Test

- Verify ...
 - Pump operation
 - Filter operation
- First installation by each contractor should be overseen by Dealer

Step 15: Functional Test for VeriComm[®] Panel

1. Verify system status
2. Enable test mode
3. Perform manual pump test
4. Perform float test
5. Perform communication test
6. Disable test mode (optional)



For detailed procedures specific to each VeriComm model, refer to the documentation that comes with the panel.

Step 15: System Functional Test

- Verify pump operation
 - First, ensure proper water level per installation guide
 - Test pump operation in “manual”



Functional Test for MVP Panel

- Perform manual pump test
- Perform float test
- Set Timers per Design Criteria



Step 15: System Functional Test

- Verify filter operation
 - Reconnect and hand-tighten the manifold union
 - Open each lateral individually to flush debris
 - Switch to “manual” position, flush lateral, then close ball valves
 - Remove several orifice shields
 - Check squirt height: 3' to 5' typical
 - Record residual head measurement



Step 15: System Functional Test

- Verify proper liquid flow and drainage
- Verify no leaks at plumbing joints

Step 16: Backfill Installation

- Backfill tank per manufacturer's guidelines
- Backfill filter in max. 12" lifts
- Ensure bottom of lid is a min. of 1" to 2" above grade
- Slope ground away from filter



Homeowner Documentation

- Dealer, Installer, or Service Provider fills out emergency contact information on back of Homeowner's Manual
- Homeowner is given Homeowner's Package, along with additional documentation, including ...
 - Copy of service contract
 - Copy of invoice with serialized pod #
 - Copy of equipment list, bill of materials, if available
 - Copy of as-built, if available

Solutions for Decentralized Wastewater Treatment

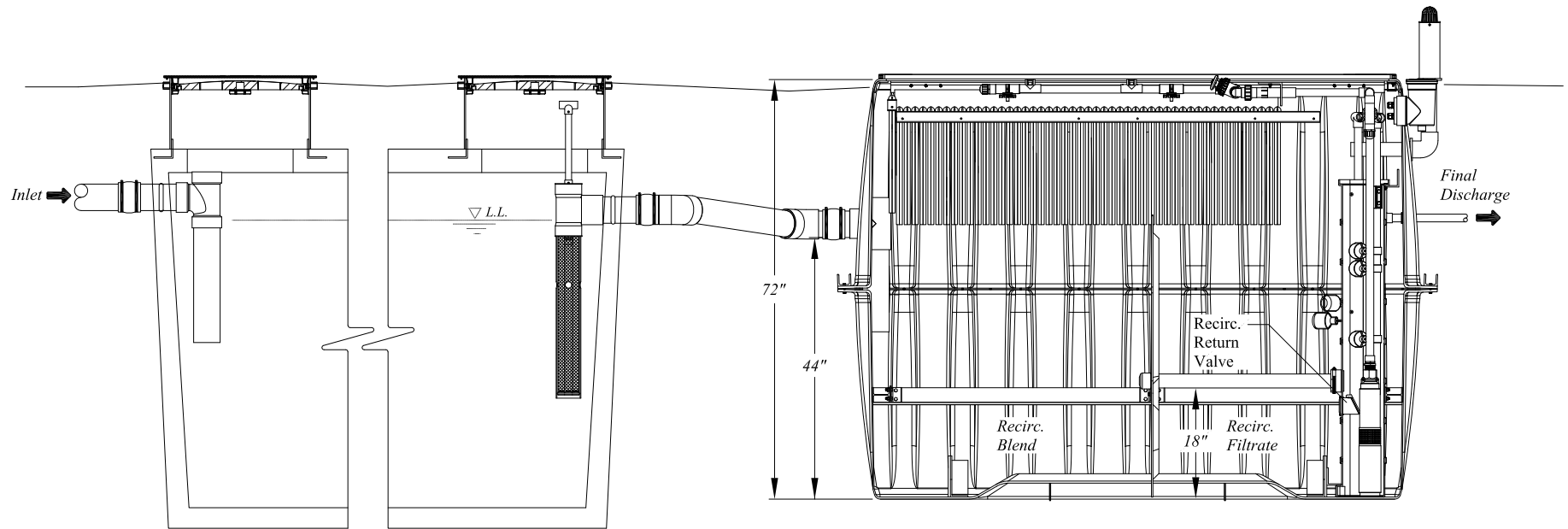
Orenco Systems[®], Inc.

www.orenco.com

AdvanTex RT

Installation

Overview



1000 gal. Primary Tank - Side View

AX20 Recirc. Tank - Side View

Before You Begin

- Installer schedules preconstruction visit with Service Provider and Homeowner to discuss ...
 - System location, including buried conduits
 - System operation
 - System maintenance
 - Preventive maintenance and Homeowner's Manual

Conditions for Using an AX20-RT to Repair an Existing System

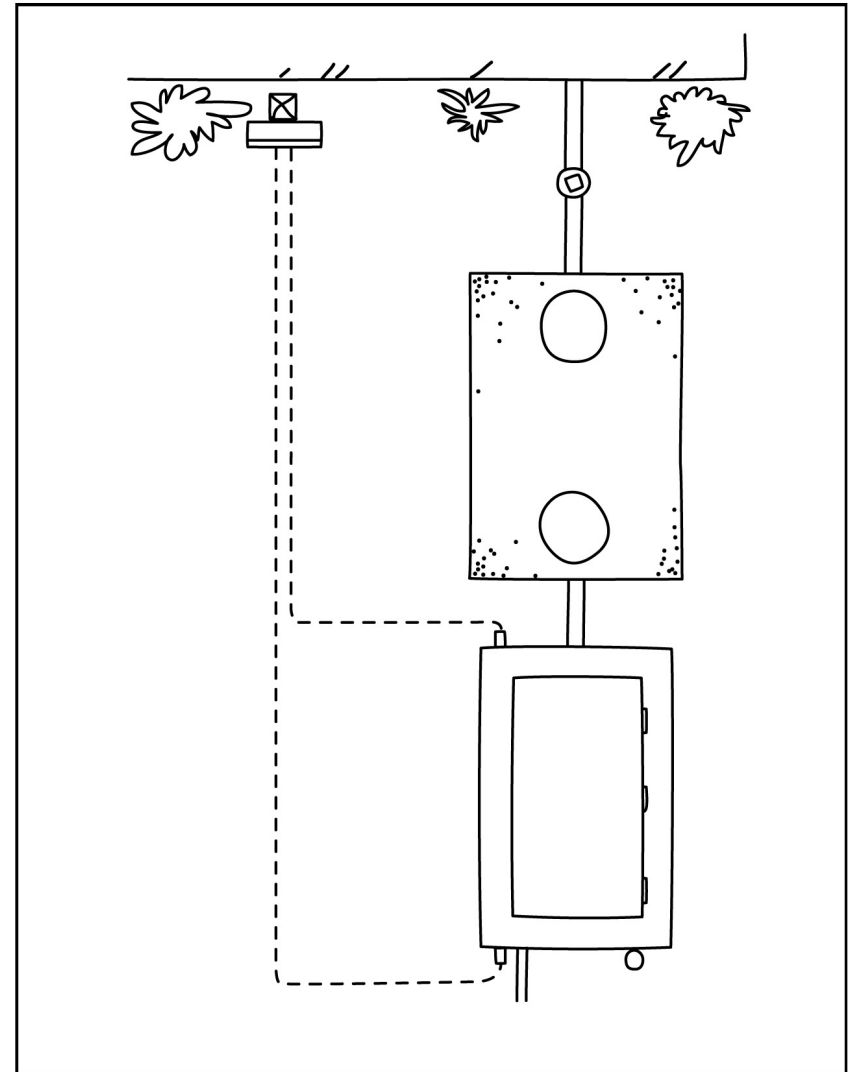
- Existing primary tank must be approved
 - Existing primary tank must be structurally sound
 - Existing primary tank must have at least 1000 gal capacity
 - Existing primary tank must have at grade access
- Primary tank must be watertight tested
- Orenco effluent filter must be installed in primary tank
- Existing primary tank must allow for a fall of at least 1/8 in. per foot from the outlet of to the inlet of the AX20-RT*
- You must be a trained AdvanTex Installer before installing system

Important Considerations

- All tanks must be prequalified
- Installer checks to make sure that water softener backwash is not plumbed into the processing tank
- All pipe diameters are given in US nominal IPS pipe sizes

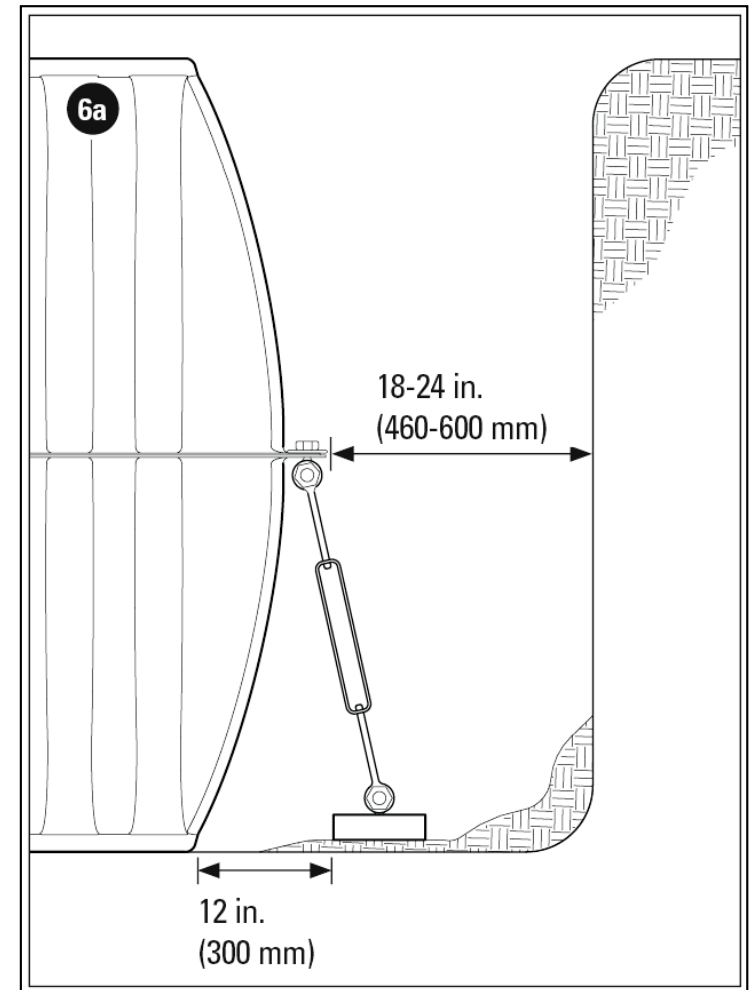
Steps 1- 4

- Review or Sketch Site Planes
- Excavate and Set Septic Tank



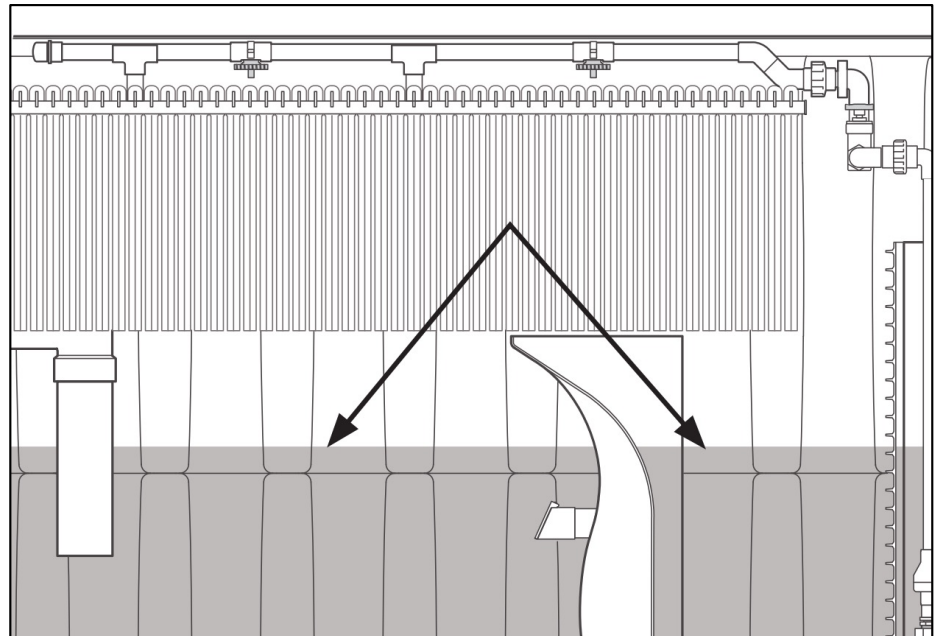
Steps 5 & 6

- Excavate and Set AX-RT Unit
- Prep and Install Counterbuoyancy/deadmen if needed
- Partially backfill AX-RT Excavation



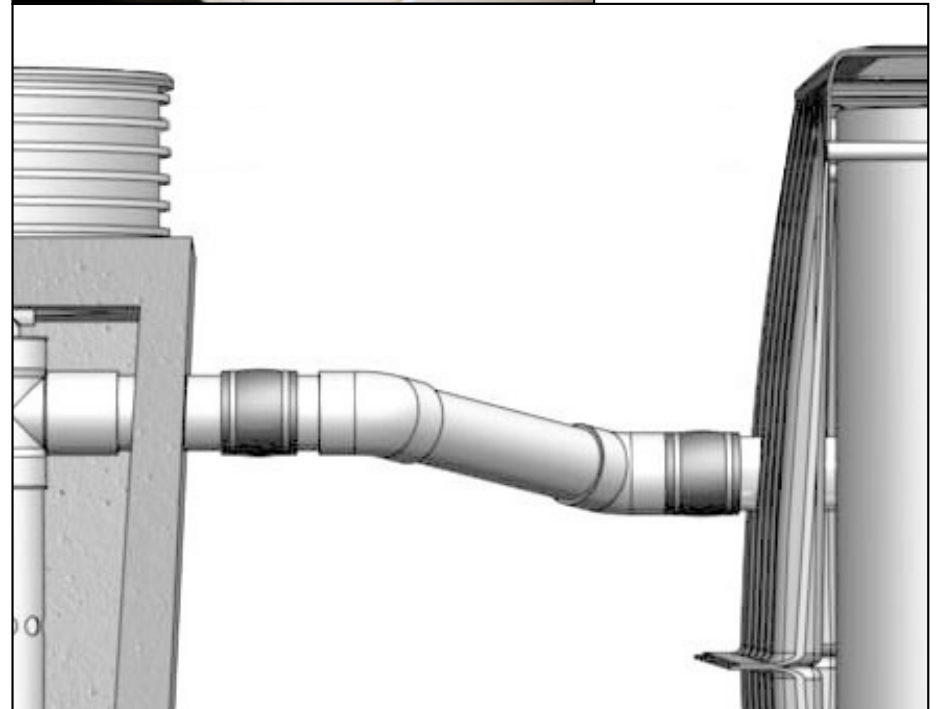
Step 7- 9

- Install Adapters and Risers (If needed)
- Test Tank and and Adapter seams
- Test Water tightness of AX20-RT Unit



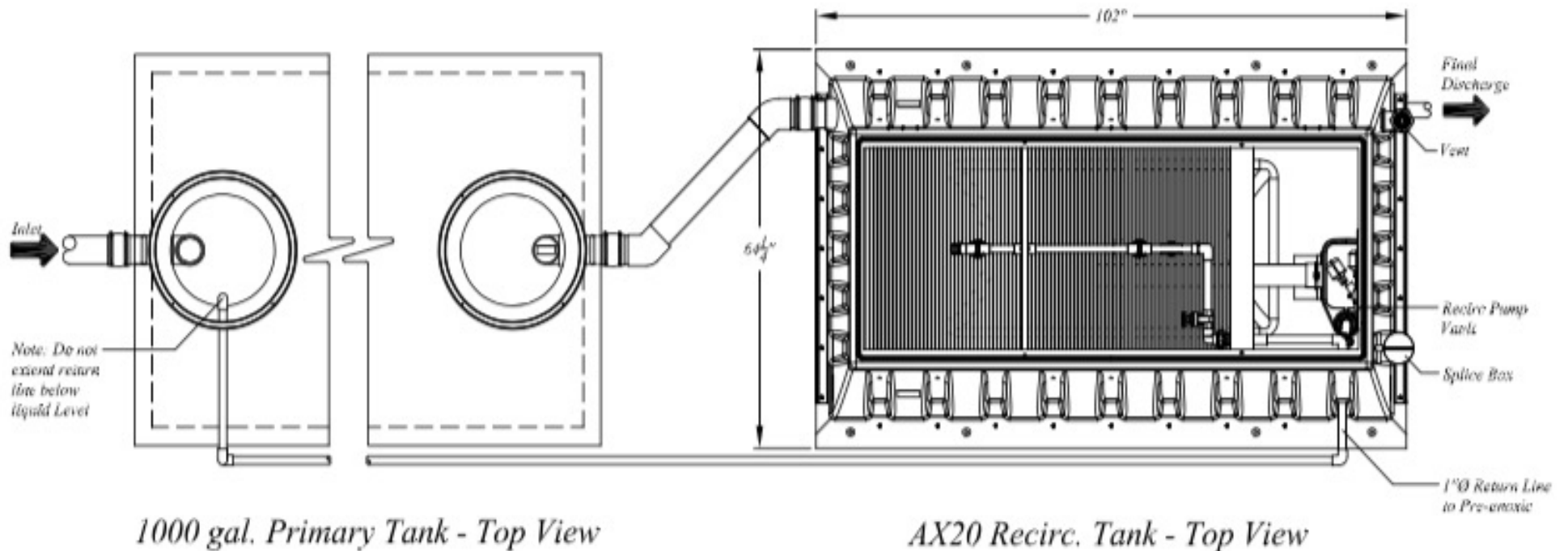
Step 10 - 16

- Install effluent filter
- Connect Transport Line
- Connect Passive Air Vent
- Connect AX-RT discharge line
- Install and Test Control Panel
- Test System Function
- Complete Final Backfilling



Return Line installation

- Mode 3 return line used for De-Nitrification



Questions?