AdvanTex®
AX-RT Treatment System
Installation Instructions

AdvanTex® Treatment Systems are listed to NSF-ANSI Standards 40 and 245 for Class I Systems. Visit www.nsf.org to view our Certified Products.

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DOCUMENT

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About These Instructions

This manual contains an Installation Overview and a set of Installation Steps. It is not intended to replace installer training or requirements and instructions detailed in your engineering plans. Check to be sure all instructions and items supplied comply with your state and local regulations. If you discover any inconsistencies between your engineering plans and the instructions in this manual, contact your engineer or your dealer.

Installation Overview is a simple overview of the installation steps. It is intended as a summary only, to provide the suggested order of operations for installing an AX-RT unit – it does not provide complete instructions.

Installation Steps provide general instructions for each installation step along with references to installation documents for specific components. Many Orenco products come with installation instructions. All of these instructions are available in hard copy from Orenco and available online in the Orenco Document Library at www.orenco.com.

Before You Begin

Before beginning, read these instructions and any documents referenced in them, and confirm the instructions for all of these products are the most current available. Check the Orenco Document Library at www.orenco.com to be sure your documents are current.

Please note that you must perform the installation according to the current manual or the system's warranty will be void. If you are not an authorized AdvanTex installer, contact your dealer for training and authorization before installing this system. The dealer can provide technical support, training, and replacement components. To find the nearest dealer, check the Distributor Locator page at www.orenco.com. If there is no dealer in your area, contact Orenco.

Be sure all of the necessary components are present before beginning the installation. Contact your dealer or Orenco at www.orenco.com if any components are missing or damaged.

Note — *All pipe diameters provided are US nominal PVC pipe sizes. If you're using metric pipe, you will need adapters to connect to the US fittings supplied.*

Septic Tank Considerations

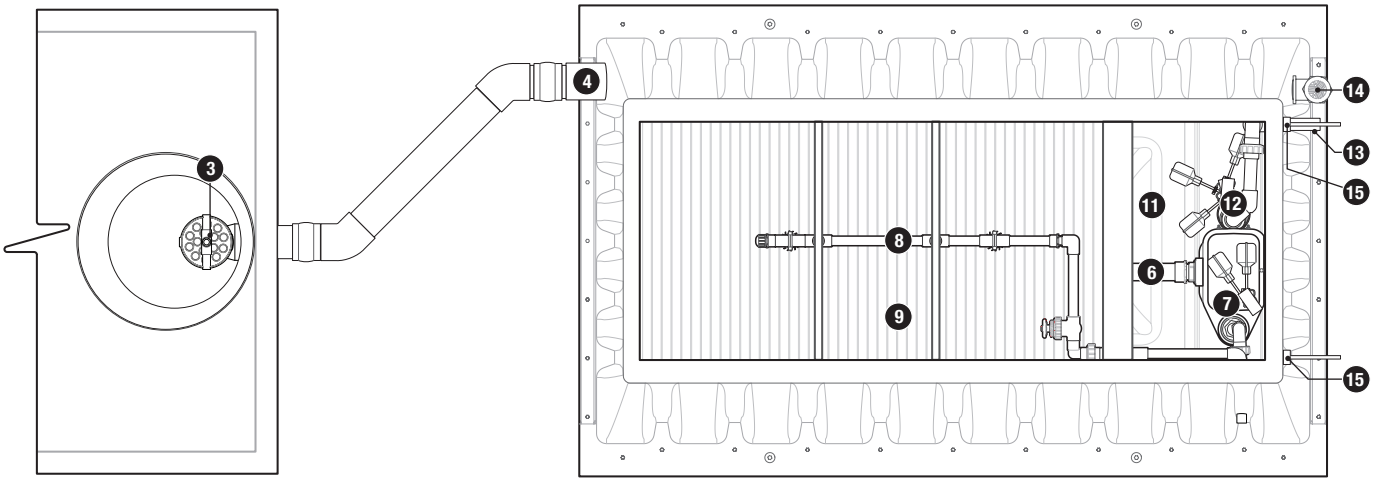
IMPORTANT — **DO NOT plumb backwash discharge from a salt-type water softener into an AX-RT unit or the preceding septic tank. Failure to follow this instruction, or any other in this manual, will void the system's warranty. Contact your dealer if you have any questions about any household plumbing arrangements that may interfere with the system's functioning.**

Key Point — For existing septic tanks, the tank's depth of burial has to allow for a minimum fall of 1⁄8in per ft (10mm per m or 1%) from the septic tank's invert of outlet to the AX-RT unit's invert of the inlet. If sufficient fall cannot be met, install a grade ring extension on the AX-RT or install a pumping system in the septic tank to move the filtered effluent to the AX-RT unit. (Contact your dealer or Orenco for assistance.)

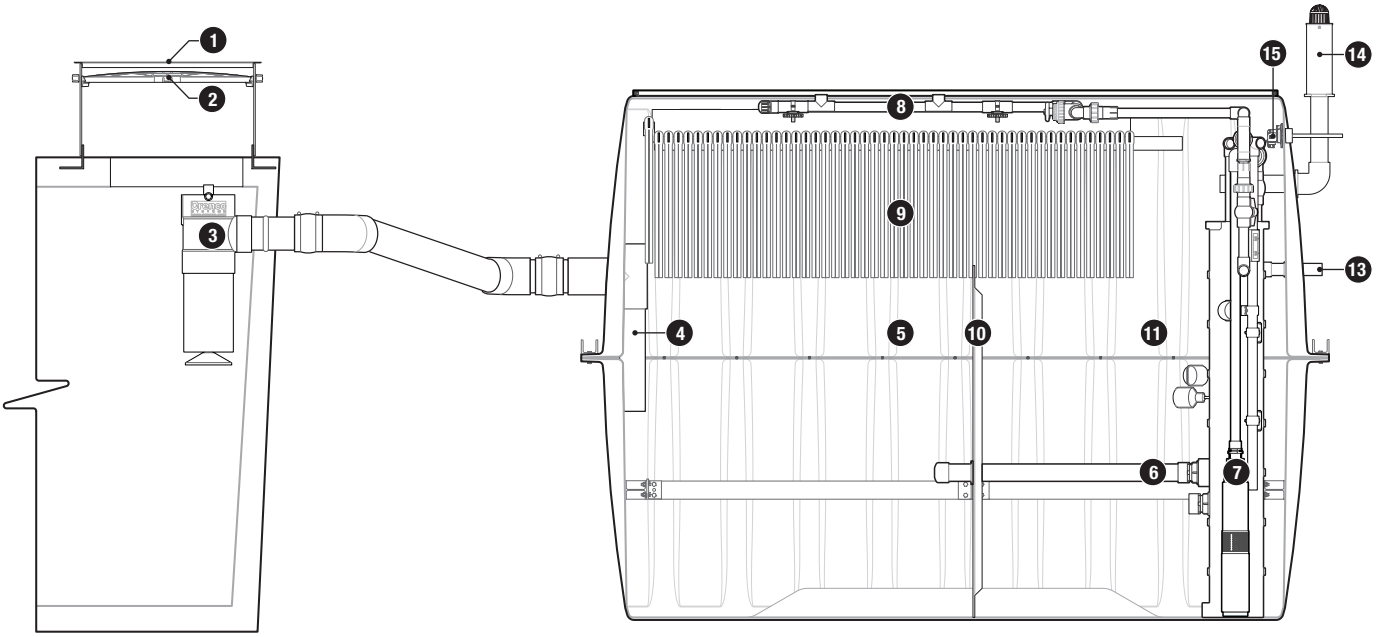
Be sure that any septic tank used in an AX-RT Treatment System meets the following conditions:

- The tank conforms to an approved and authorized tank design for AdvanTex Systems, and it meets all applicable regulatory requirements (no pour-in-place tanks, no homemade tanks, etc.). Call your dealer for specifics.
- The tank is structurally sound.
- The tank has at least 1000gal (3785L) capacity for an AX20-RT, 1250gal (4732L) for a 5-bedroom AX25-RT, and 1500gal (5678L) for a 6-bedroom AX25-RT at the normal operating level (below the invert of the outlet).
- The tank has an at-grade access with a securable and removable watertight lid. If it doesn't, install an at-grade access onto the septic tank and make sure it is watertight.
- The tank is watertight and free of leaks.
- An Orenco FT_04 or PSC_06 model effluent filter is installed in the septic tank.

Standard Unit Components



Top views, septic tank outlet and AX-RT unit



Side views, septic tank outlet and AX-RT unit

AdvanTex® AX-RT Components (AX20 RT mode 3 model shown)*

1. **Access lid**
2. **Tank Shield® safety barrier**
3. **Biotube® effluent filter**
4. **AX-RT inlet**
5. **Recirculation/blend chamber**
6. **Recirculation transfer line**
7. **Recirculation pump system**
8. **Manifold and spin nozzles**
9. **Textile media sheets**
10. **Tank baffle**
11. **Recirculation/filtrate chamber**
12. **Discharge pump system**
13. **AX-RT outlet**
14. **Passive air vent**
15. **Electrical connections (ClickTight™ shown)**

** Control panel not shown*

Installation Overview

Step 1. Review the site plan. If there is no site plan, draw up a plan including locations and distances.

Step 2. Make the excavations for the AX-RT unit and (if needed) the septic tank.

Step 3. Set the septic tank according to the manufacturer's instructions, if it has not been set.

Step 4. Set the AX-RT unit.

Step 5. Install antibuoyancy beams on the AX-RT unit (if needed).

Step 6. Partially backfill the AX-RT unit and (if needed) the septic tank.

Step 7. If the tank adapters and risers have not been installed on the septic tank, install them according to the manufacturer's instructions.

Step 8. Perform watertightness tests on the tank and tank-to-riser connections (if needed) and on the AX-RT midseam.

Key Point — The tank and tank-to-riser connections must pass this test before the AX-RT is connected to the tank.

Step 9. If the effluent filter has not been installed in the septic tank, install it according to the manufacturer's instructions.

Step 10. Connect all of the transport line(s) between the septic tank, AX-RT unit, and final discharge.

Step 11. Connect the passive air vent to the AX-RT unit.

Step 12. Mount the control panel for the AX-RT unit.

Step 13. Install connectors or splice boxes, and then route and connect the wiring between the panel and AX-RT unit.

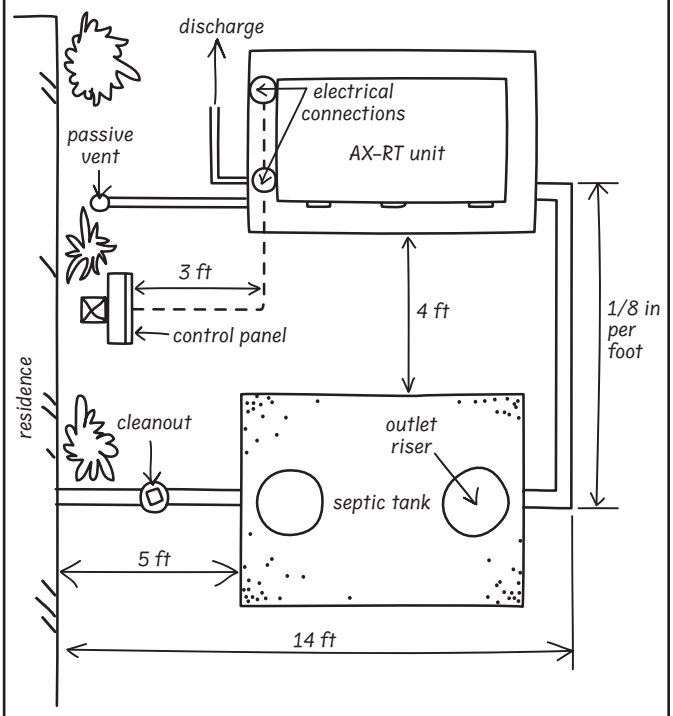
Key Point — This step should be performed by a licensed or qualified electrician.

Step 14. Perform an operational test of the AX-RT, including flush out, float switches, and pump(s).

Step 15. Complete the backfilling of the AX-RT unit and (if needed) the septic tank.

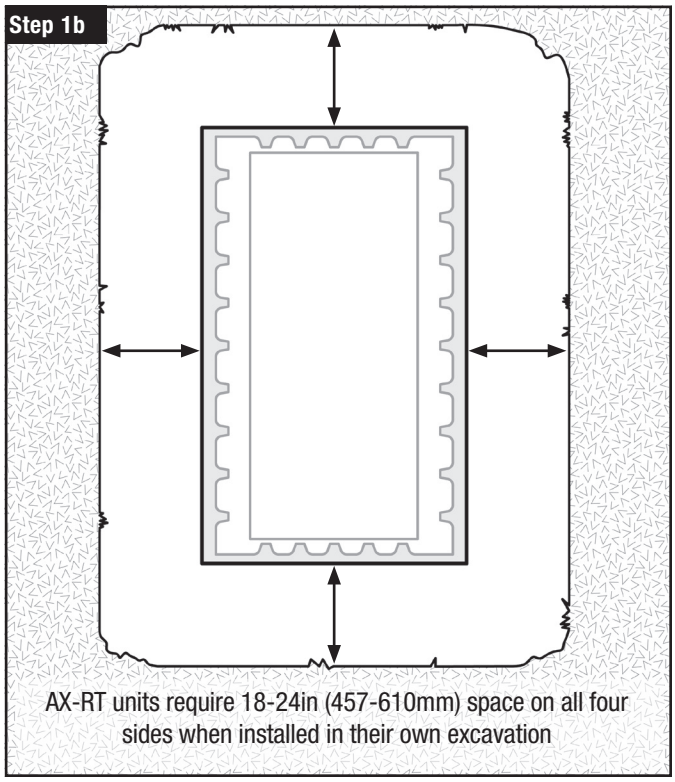
Installation Steps

Step 1b



Sketch site plan if needed

Step 1b



AX-RT units require 18-24in (457-610mm) space on all four sides when installed in their own excavation

Step 1. Review or Sketch Site Plans

Check the site plan for the specifics of your installation.

Key Point — If you're installing the AX-RT unit more than 20ft (6.1m) from the septic tank, contact your dealer.

Step 1a. If there is a detailed plan, make sure the plan accurately reflects conditions at the site. If it doesn't, contact the system designer before scheduling the installation.

Step 1b. If there is no detailed plan or it is of limited detail, contact your local dealer for assistance and then sketch a site plan that is consistent with the designer's specifications.

Key Points

- Sketch the exact positions of the system components, pipes, electrical conduits, etc. Account for current and likely future landscape features in the sketch. (See *Orenco Control and Alarm Panels: General Installation and Wiring Instructions*, EIN-CP-GEN-1, for recommendations for installing control panels.)
- A minimum fall of 1⁄8in per ft (10mm per m or 1%) is required from the septic tank's invert of outlet to the unit's invert of inlet.
- The unit's invert of inlet is 44in (1118mm) up from the unit's base.
- The unit's outlet is 24in (610mm) down from the top of the unit for pump dispersal; 41.5in (1054mm) down from the top of the unit for gravity dispersal.
- The bottom of the unit's lid must sit 2in (51mm) above finished grade when set and level.
- Standard unit height is 72in (1829mm); grade rings increase height by 6 or 12in (152 or 305mm).
- If the unit is installed in its own excavation, it requires 18-24in (457-610mm) of space on all four sides.
- If the unit is installed in tandem with the septic tank, a minimum of 24in (610mm) separation distance is required between them.
- If the unit is installed parallel to the septic tank, offset them by 6ft (1.8m) if antibuoyancy measures are necessary or 4ft (1.2m) if antibuoyancy measures are not necessary.

Installation Steps

Step 2. Make Excavations

Stay aware of the elevations, offsets, and grade requirements for the AX-RT unit and (if needed) the septic tank before and during excavation.

Step 2a. Perform the excavation(s).

Key Points

- Follow the manufacturer's recommendations for tank installation.
- A minimum fall of 1⁄8in per ft (10mm per m or 1%) is required from the septic tank's invert of outlet to the unit's invert of inlet.

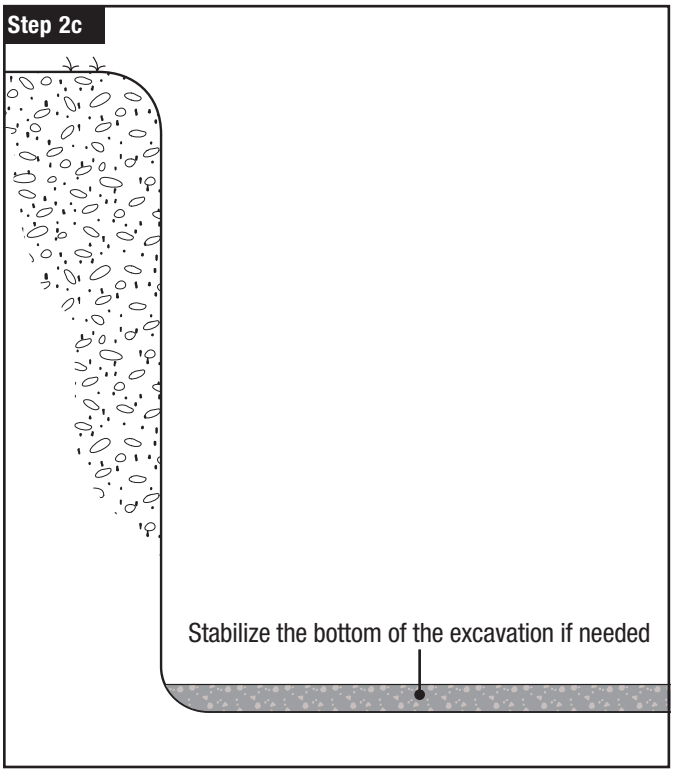
Step 2b. Make sure the bottom of the excavation is suitable for setting the AX-RT unit and (if needed) the tank: stable, smooth, level, and free of debris, rocks, and other sharp objects.

Key Points

- Follow the manufacturer's instructions for bedding the septic tank.
- If the bottom of the unit's excavation is uneven or rocky, lay a 4in (102mm) bed of sand or pea gravel and compact the material to create an even, smooth surface.

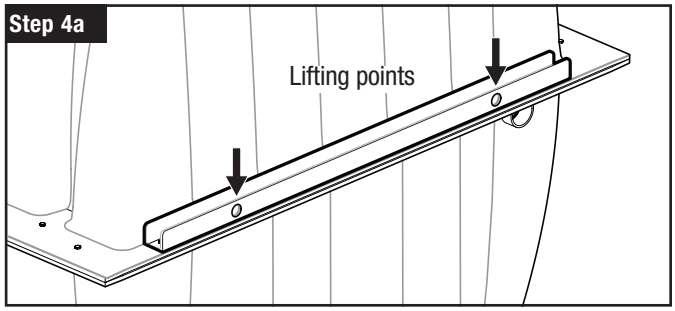
Step 2c. If the bottom of the AX-RT unit's excavation is unstable, stabilize it before continuing.

- For unstable base soil (peat, quicksand, muck, soft or highly expansive clay, etc.), you may need to over-excavate the site depth and set a firm, 6in (152mm) compacted base of ≤ 1/2in to ≤ 3/4in (13 to 19mm) aggregate or pea gravel.
- For extremely unstable soil, you may need to pour a concrete layer to stabilize the bottom of the excavation.
- If you have doubt about the soil's stability, consult a local civil or structural engineer.

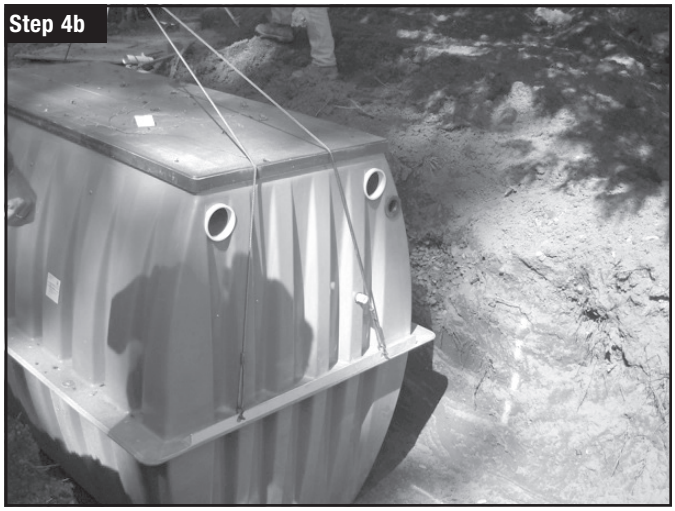


Installation Steps

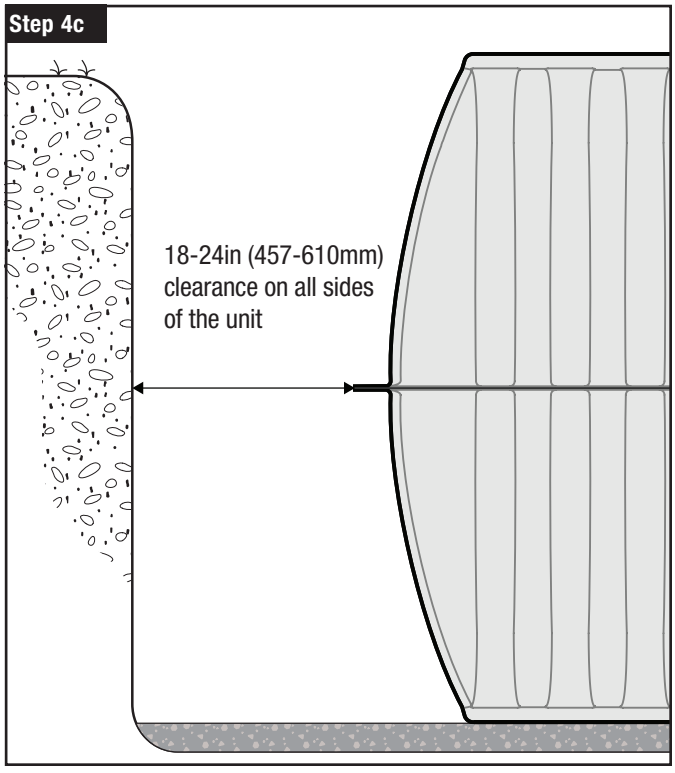
Step 4a



Step 4b



Step 4c



Step 3. Set Septic Tank

Set the septic tank according to the manufacturer's instructions, if it has not already been set.

- For Orenco M-Series tanks, see *Orenco M-Series Tank Burial Instructions*, NIN-TNK-9.
- For Infiltrator tanks, see *Infiltrator Septic Tank General Installation Instructions*.

IMPORTANT — Keep everyone clear of the excavation when placing the tank.

Key Points

- Set the tank at the correct depth to connect to the sewage inlet.
- A minimum fall of 1⁄8in per ft (10mm per m or 1%) is required from the septic tank's invert of outlet to the unit's invert of inlet.

Step 4. Set AX-RT Unit

IMPORTANT — Take care to keep everyone clear of the excavation when placing the unit. Use a lifting device that will not damage the unit or the unit's lid.

Key Points

- A minimum fall of 1⁄8in per ft (10mm per m or 1%) is required from the septic tank's invert of outlet to the unit's invert of inlet.
- The bottom of the unit's lid must sit 2in (51mm) above finished grade when set and level.
- To install the unit:
  - In its own excavation, make sure there is 18 to 24in (457 to 610mm) clearance from the excavation walls on all four sides.
  - In tandem with the septic tank, a minimum of 24in (610mm) separation distance is required between them.
  - Parallel to the septic tank, offset them by 6ft (1.8m) if antibuoyancy measures are necessary or 4ft (1.2m) if antibuoyancy measures are not necessary.

Step 4a. Attach proper lifting equipment to the lifting points on the unit.

Step 4b. Carefully lift the unit and lower it into the correct position.

Step 4c. Make sure the unit is level when set in position.

Step 4d. Remove the lifting equipment when the unit is level and set.

Installation Steps

Step 5. Install Antibuoyancy Kit

Determine if antibuoyancy measures are necessary for the installation. Orenco offers antibuoyancy hardware kits that can be used with Orenco fiberglass beams or concrete beams.

- If you are unsure whether to install antibuoyancy beams or not, consult the system designer or an engineer.
- Antibuoyancy beams are recommended for all installations.
- Antibuoyancy beams are required if there is a potential for groundwater to be present in the excavation at any time, or if surface runoff can fill the excavation at any time, resulting in a "bathtub" effect.

Note — *The bathtub effect occurs in dense soils when water fills an excavation during surface water runoff (usually during a heavy rain event) before the disturbed soil in the excavation has had time to settle.*

Step 5a. To install an Orenco antibuoyancy kit, follow the steps below.

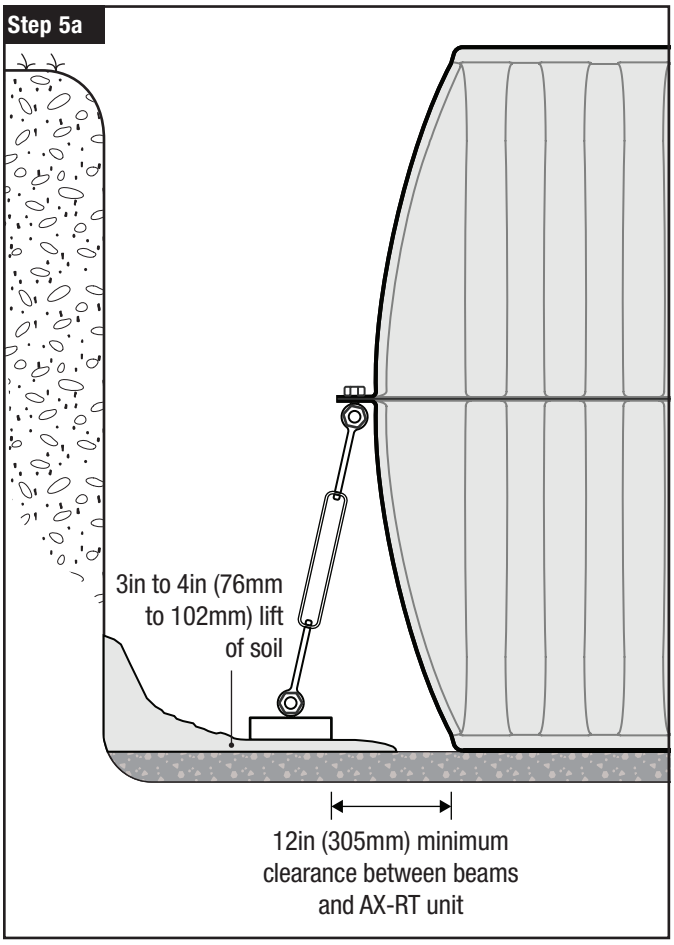
1. Build up a 3in to 4in (76mm to 102mm) lift of soil on each side of the unit for the beams to rest upon.
2. Secure the beams along the length of the unit, on both sides, with the antibuoyancy kit hardware.
3. Place the beams at least 12in (305mm) from the unit's bottom.
4. Make sure the beams are level.

Step 5b. To install concrete beams, follow the steps below.

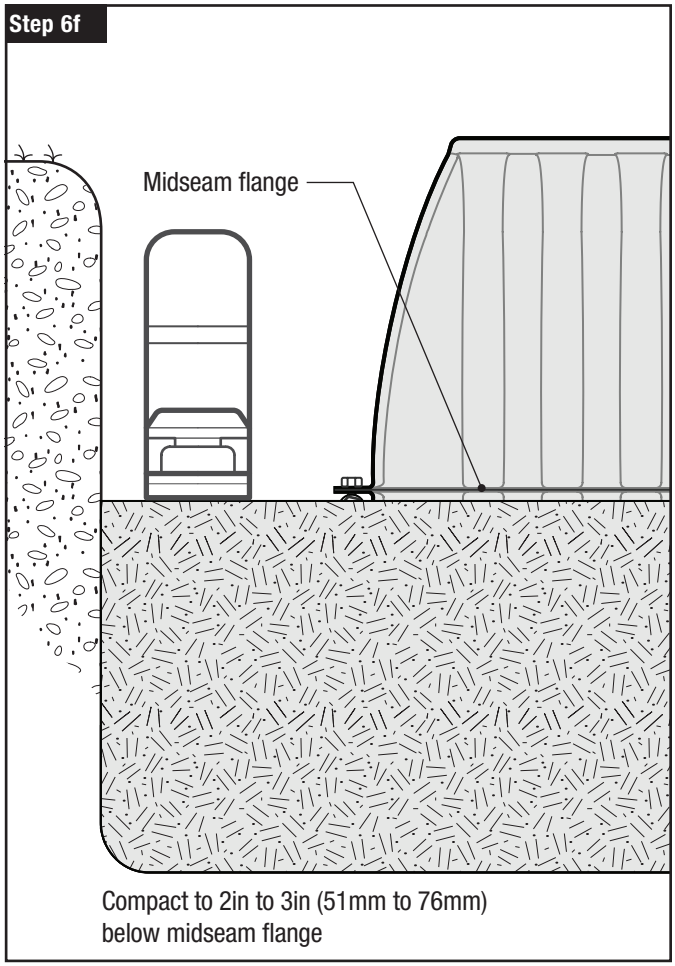
Notes

- *Orenco recommends preparing concrete beams off site.*
- *PVC forms for concrete beams can be made from 12in dia. × 4ft long (300mm × 1200mm long) PVC half-pipe or chamber material.*
- *Wooden forms for concrete beams can be built 12in wide × 6in tall × 4ft long (300mm × 150mm × 1200mm).*

1. Fill two forms halfway with concrete.
2. Place two #4 reinforcing bars in each of the forms.
3. Finish filling the forms.
4. Sink eye bolts from the antibuoyancy hardware kit into the concrete for attaching the beams later.
5. Let the concrete set completely before moving the beams.
6. Use appropriate lifting gear to set the beams in place.
7. Secure the beams along the length of the unit, on both sides, with the antibuoyancy hardware kit and make sure they are level.



Installation Steps



Step 6. Partially Backfill Excavations

IMPORTANT — **Bolt down the AX-RT unit's lid before backfilling to increase rigidity and help prevent deformation.**

Partially backfill around the AX-RT unit and (if needed) the tank.

- Follow the steps below to backfill around the unit.
- Follow the tank manufacturer's instructions for backfilling.

Step 6a. Fill the unit with water on both sides of the baffle to 16in (410mm).

Step 6b. Backfill around the unit with a 16in (410mm) layer of material.

- Dampen the fill material for better compaction, if necessary.

Key Points

- Do not use native material to backfill if it:
  - Is primarily sand
  - Is very soft or highly expansive clay
  - Contains debris, large (> 3/4in or 19mm) rocks, sharp rocks, peat, or muck
- In these cases, use ≤ 3/4in (≤ 19mm) rounded gravel, crushed stone, or pea gravel that is washed, free flowing, and free of debris.
- Do not backfill with sand.

Step 6c. Compact the fill thoroughly with a mechanical compactor.

Step 6d. Fill the unit with water to just above the midseam flange on both sides of the baffle.

Step 6e. Add another 16in (406mm) layer of backfill.

- Dampen the fill material for better compaction, if necessary.

Step 6f. Compact the fill to 2in to 3in (51mm to 76mm) below the midseam flange.

Installation Steps

Step 7. Install Adapters and Risers

Step 7a. Install the tank adapter if it hasn't been installed. Follow the manufacturer's instructions.

- For Orenco tank adapters:
  - PRTA24 or PRTA30, see *PRTA24 and PRTA30 Tank Adapter Installation Instructions*, NIN-TA-PRTA-2
  - RRFTA24, see *Installing RRFTA24 Tank Adapters Instructions*, NIN-TA-RRFTA-2
  - RRFTA30, see *Installing RRFTA30 Tank Adapters Instructions*, NIN-TA-RRFTA-1
  - FRTA24-RVF or PRTA30 with Roth tanks, see *Adapters for Roth Tanks Installation Instructions*, NIN-GOP-TAD-1
- For Infiltrator tank adapters:
  - SNAPPAR-Series adapters with Infiltrator tanks, see *Infiltrator Pipe Adapter Ring Assembly Instructions for EZsnap Compatible IM-Series Tanks*

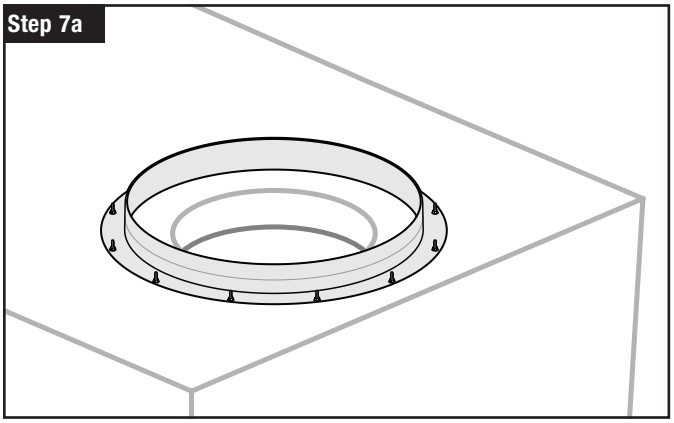
Step 7b. Install the access risers and any additional components if they have not already been installed. Follow the manufacturer's instructions.

- For installing grommets and risers on Orenco tank adapters:
  - PVC risers, including ultra-rib-style access risers sold by Orenco, see *PVC Riser Installation Instructions*, NIN-RLA-RR-1
  - Fiberglass (FRP) risers, see *Orenco Fiberglass Riser Installation Instructions*, NIN-RLA-RF-1
- For installing Orenco electrical connections:
  - ClickTight, see *ClickTight Installation Instructions*, NIN-CLK-2
  - Internal splice boxes, see *Internal Splice Box (SB) Installation Instructions*, NIN-SB-SB-1
  - External splice boxes, see *External Splice Box (SBEX) Installation Instructions*, NIN-SB-SBEX-1

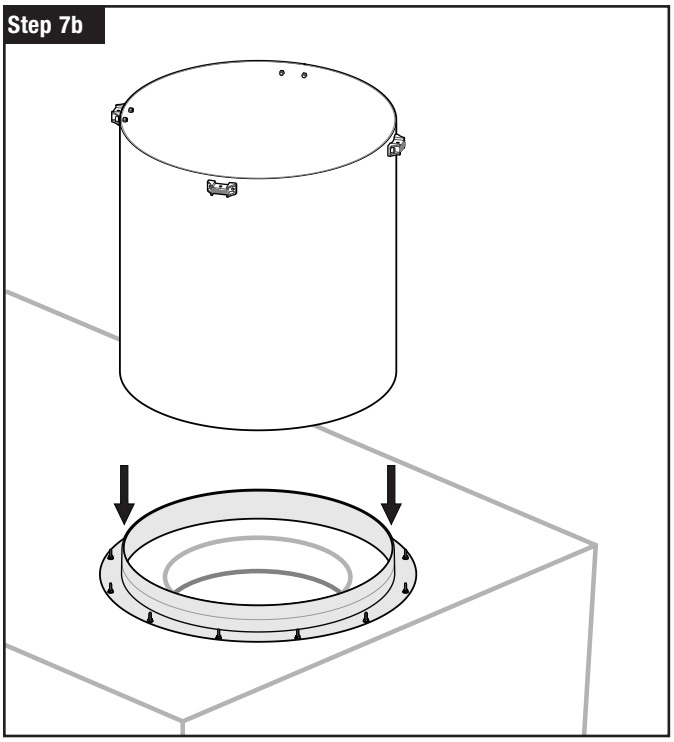
Key Points

- Mode 3 systems require a 1in (25mm) grommet in the tank's inlet riser on the same side of the riser as the AX-RT unit's return line.
- Watertight seams and penetrations are critical for best performance.
- The tank-to-tank-adapter seam has to be watertight.
- Before installing the riser, make sure:
  - The riser is at the correct height to be 2in to 3in (51mm to 76mm) above final grade after installation.
  - The penetrations are at the correct height to make connections.
  - The penetrations are aligned correctly.
- After installing the riser, make sure:
  - All adhesive fillets are smooth, continuous, and void free.
  - The adhesive is set before moving on to the next step.

Step 7a



Step 7b

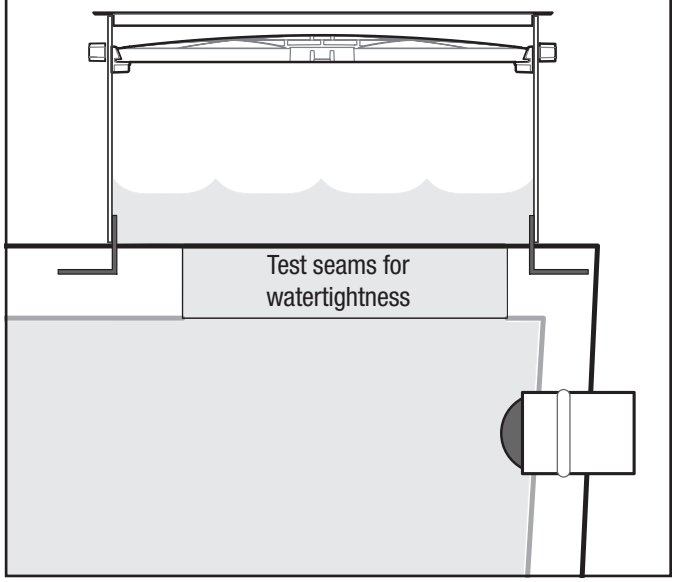


Step 7b

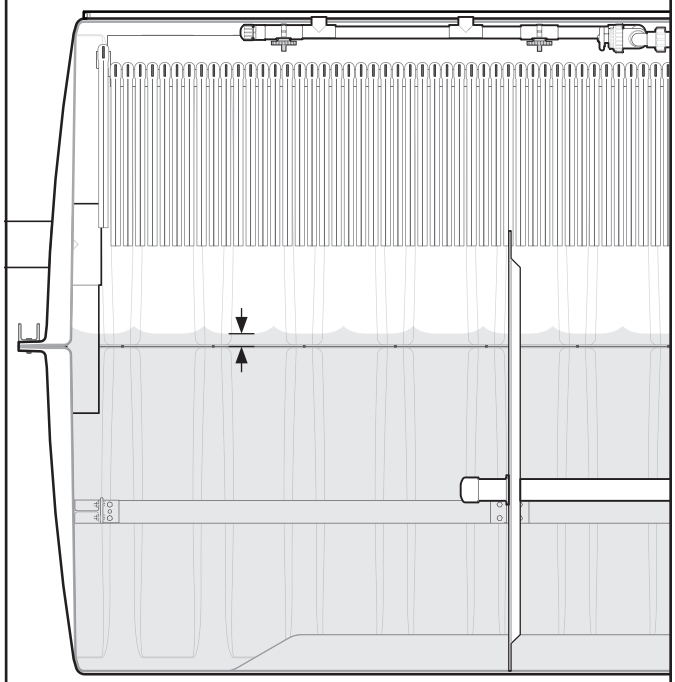
Watertight seams are critical for proper performance

Installation Steps

Step 8b



Step 8c



Fill the unit 1in to 2in (25mm to 51mm) above the midseam on both sides of the baffle

Step 8. Test for Watertightness

Step 8a. Test the tank for watertightness if it hasn't already been tested.

Note — *Follow the manufacturer's recommendations for watertightness testing. Some manufacturers require the tank be fully backfilled before testing watertightness.*

Step 8b. Test the tank-to-riser adapter seams for watertightness.

- PVC risers with Orenco tank adapters, see *PVC Riser Installation Instructions*, NIN-RLA-RR-1
- Orenco FRP risers, see *Orenco Fiberglass Riser Installation Instructions*, NIN-RLA-RF-1

Key Points

- Watertight seams are critical for proper system performance.
- All tank-to-riser seams must pass the watertightness test before you continue.
- Follow all applicable regulations and manufacturer's instructions for watertightness testing.

Step 8c. Make sure the unit is filled with water to 1-2in (25-51mm) above the midseam flange on both sides of the tank baffle.

Step 8d. Wait 15 minutes, then inspect the liquid level and midseam flange for leaks.

- There can be no drop in liquid level and no visible midseam leakage.

Step 8e. If there is any leakage, contact your dealer or Orenco for information on repairing the AX-RT unit before you continue.

Installation Steps

Step 9. Install Effluent Filter

Install the effluent filter after the tank's watertightness has been tested, if this has not been already done.

Step 9a. Verify the model of the effluent filter.

- Orenco's FT_04 or PSC_06 model effluent filters are the only models allowed for use with AX-RT units.

Step 9b. Dry test-fit the effluent filter on the septic tank's outlet pipe.

Key Points

- Make sure the filter is plumb.
- Make sure the filter is snug to the tank wall with enough clearance for easy removal of the filter cartridge.

Step 9c. Secure the filter to the outlet pipe. Use one of the following methods:

- Glue the filter onto the tank outlet pipe with primer and glue.
- Secure the filter with a stainless steel set screw.

Step 9d. If necessary for ease of access, extend the cartridge handle with a longer length of 3/4in diameter Schedule 40 PVC pipe.

Step 10. Connect Transport Lines

Step 10a. Dry fit the 4in (100mm) transport line and any fittings between the outlet of the septic tank and the inlet of the AX-RT unit.

Key Point — Confirm there is a minimum fall of 1⁄8in per ft (10mm per m or 1%) from the septic tank's invert of outlet to the unit's invert of inlet.

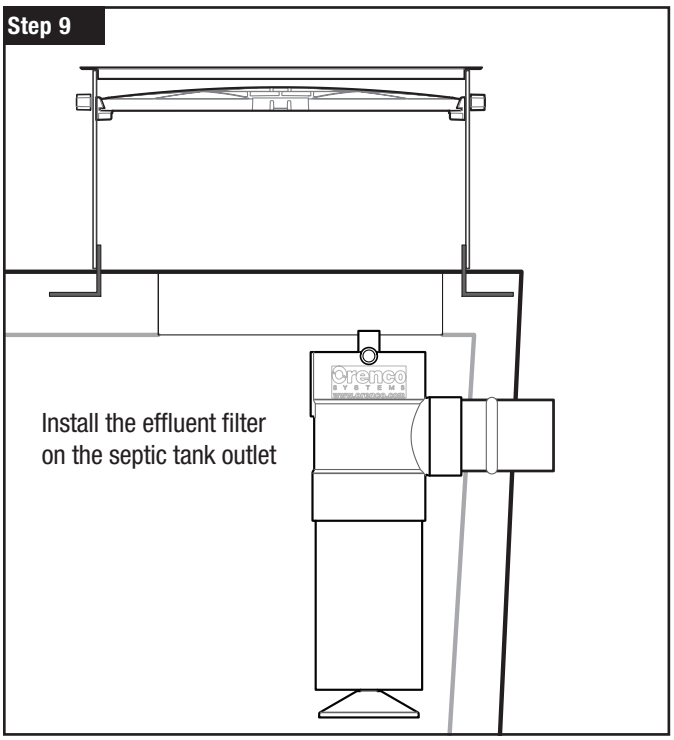
Step 10b. Dry fit the transport line and any fittings between the outlet of the AX-RT unit and the final discharge transport line.

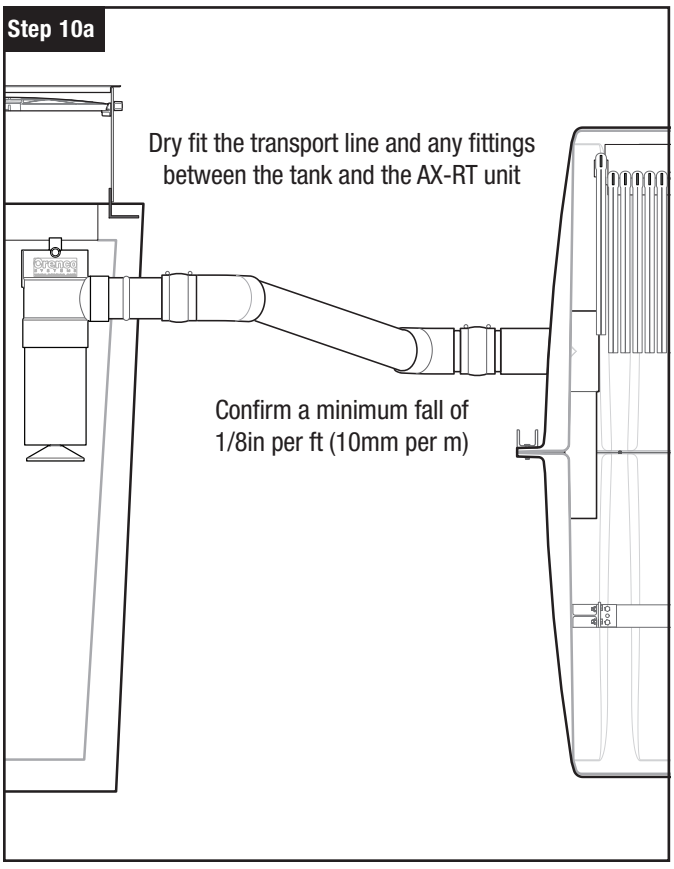
Step 10c. Glue all of the transport line pieces in place.

IMPORTANT — Do not use primer on ABS parts.

Step 10d. For Mode 3 units, glue all of the return line pieces in place.

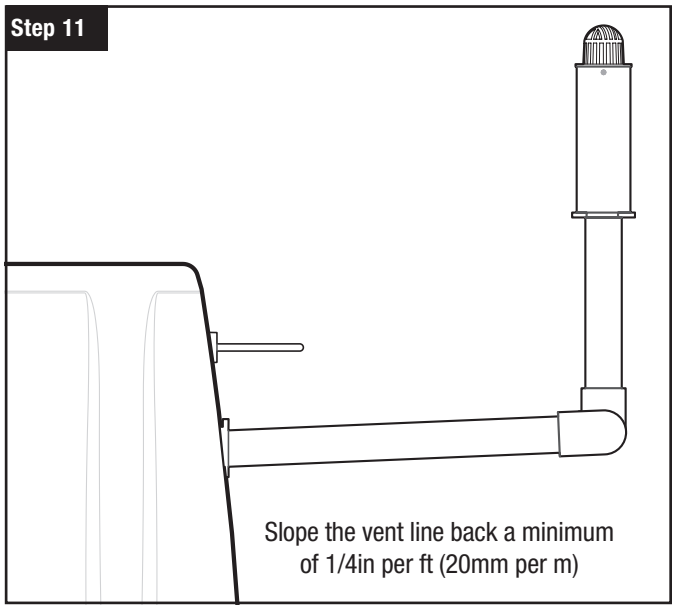
- Install the 1in (25mm) return line between the return line port and the 1in (25mm) grommet for the return line on the tank's inlet riser.
- To avoid siphoning, be sure the return line allows effluent to pour into the tank from the height of the riser grommet.



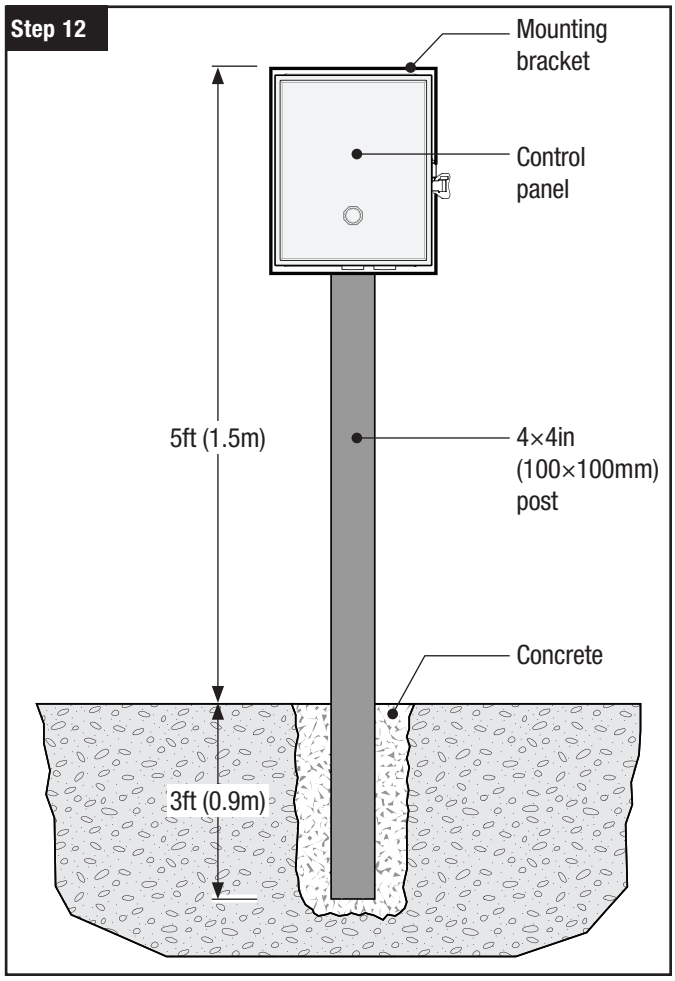


Installation Steps

Step 11



Step 12



Step 11. Connect Passive Air Vent

Use 2in (50mm) PVC pipe to plumb the passive air vent to the 2in (50mm) vent fitting on the outlet side of the AX-RT unit.

Key Points

- Install the vent within 20ft (6m) of the unit, preferably in a location that protects it from damage.
- Make sure that:
  - The vent line is sloped back a minimum of 1/4in per ft (20mm per m) to drain condensation back into the unit.
  - There are no "bellies" in the line that can collect water.
  - The vent's top is a minimum of 3in (76mm) above final grade.

Note — *The air vent can easily be hidden by landscaping and painted to better blend in.*

Step 12. Mount Control Panel

Mount the panel using the instructions that came with it.

- For Orenco's residential control panels, see *Orenco Control and Alarm Panels: General Installation and Wiring Instructions*, EIN-CP-GEN-1.

Key Points

- Installation instructions, schematics, and wiring diagrams specific to the panel and float switch configuration are included with each panel. Contact your dealer or Orenco if any of these are missing.
- DO NOT mount the control panel on an exterior wall other than a garage or shop wall! The motor contactor makes a sound while engaging and disengaging that can be disruptive to residents.
- Follow all applicable regulations for placement of the control panel.
- Mount the panel within sight of the tank in a service-friendly location.

Installation Steps

Step 13. Route and Connect Component Wiring

Key Points

- This step should be performed by a licensed or qualified electrician.
- Installation instructions, schematics, and wiring diagrams specific to the panel and float switch configuration are included with each panel. Contact your dealer or Orenco if any of these are missing.

Step 13a. Install the unit's connection system(s) or splice box(es).

- For ClickTight, see *ClickTight Installation Instructions*, NIN-CLK-2.
- For internal splice boxes, see *Internal Splice Box (SB) Installation Instructions*, NIN-SB-SB-1.
- For external splice boxes, see *External Splice Box (SBEX) Installation Instructions*, NIN-SB-SBEX-1.

Step 13b. Route component wiring into the control panel and connect it inside the panel, as shown in the instructions and schematics.

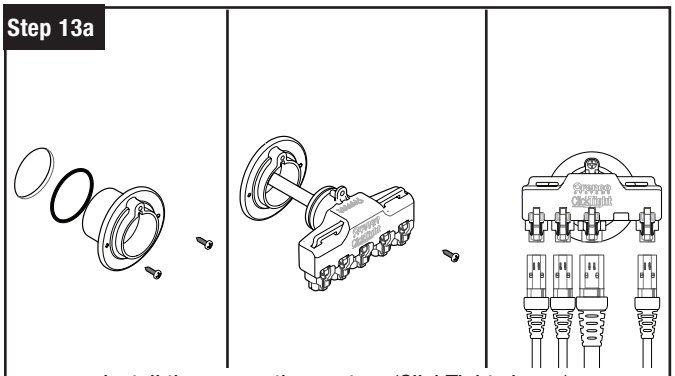
IMPORTANT — Follow all applicable regulations and electric codes.

Key Points

- Use watertight wire connectors (provided) in splice boxes to avoid electrical shorts and other issues.
- Be sure to seal the conduit at the control panel and at the splice box with UL-listed sealing foam, putty, or silicone sealant.

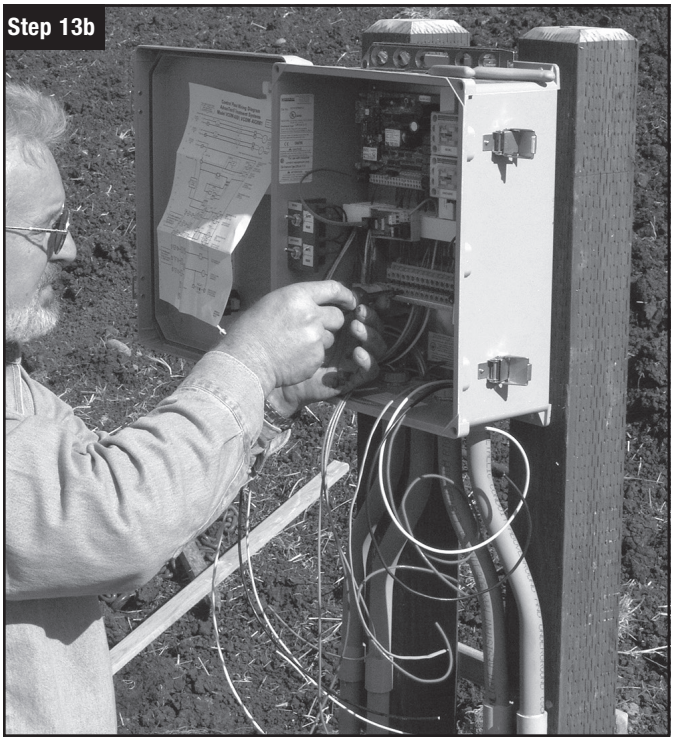
Note — *Using different-colored wires for each component circuit helps to identify wiring runs for individual circuits.*

Step 13a



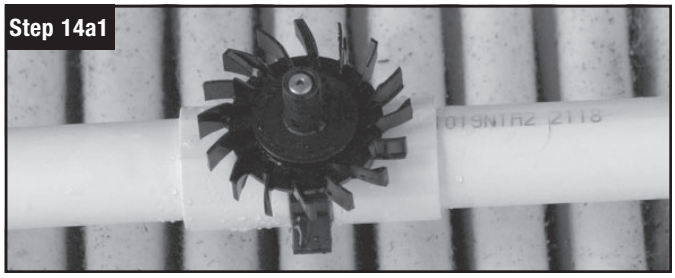
Install the connection system (ClickTight shown)

Step 13b

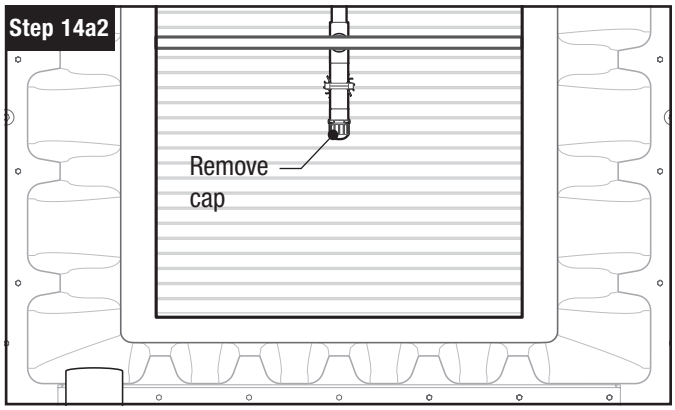


Installation Steps

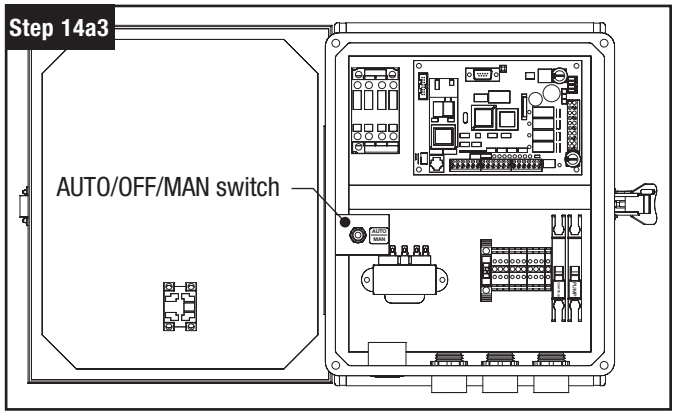
Step 14a1



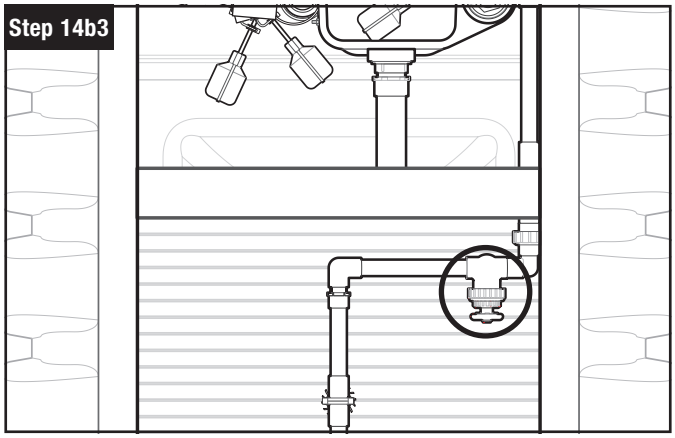
Step 14a2



Step 14a3



Step 14b3



Step 14. Perform AX-RT Operational Test

IMPORTANT

- **Before using a generator to operate a pump, contact your dealer or Orenco to make sure it can supply sufficient starting amperage to the pump.**
- **Always make sure enough water is in the chamber to safely run the pump!**

Step 14a. Flush the manifold and spin nozzles.

1. Rotate the manifold until the spin nozzles face up.
2. Remove the cap at the end of the manifold.
3. Toggle the recirc pump "AUTO/OFF/MAN" switch to "MAN" for 10-20 seconds to flush any debris out of the manifold.
4. Rotate the manifold until the spin nozzle faces down.
5. Reinstall the cap on the end of the manifold.

Step 14b. Adjust the spin nozzle spray coverage onto the textile media.

1. Install a pressure gauge on the manifold (optional).
2. Toggle and hold the recirc pump "AUTO/OFF/MAN" switch to "MAN."
3. While running the pump, adjust the gate valve for consistent spray coverage over the textile area out to the splash guards on the edges of the textile.

Key Points

- The manifold's target residual pressure is about 4psi (0.276bar).
- Adjust the gate valve as needed for consistent spray coverage.
- If the spin nozzles won't properly distribute with the valve fully open, check for the following before contacting your dealer or Orenco for assistance:
  - Debris, line breaks, or damaged valves
  - Sufficient run voltage to operate the pump
  - Correct pump function
4. Return the recirc pump "AUTO/OFF/MAN" switch to "AUTO."

Installation Steps

Perform AX-RT Operational Test, cont.

Step 14c. Test the recirc float switch functions.

- For systems using VCOM control panels:
  - Use the instructions that came with the panel to place the panel in test mode and check pump and float switch functions.
  - Take the panel out of test mode when you are finished testing.
- For systems using MVP control panels, finish the rest of Step 14c.

IMPORTANT — Always make sure enough water is in the chamber to safely run the pump!

1. Remove the float switch assembly from the recirc chamber.
2. Lower and raise the bottom, middle, and top float switches in turn.
   - The alarm sound and light start when the bottom switch is lowered; the alarm sound and light stop when it is raised.
   - The pump starts running when the middle switch is raised; the pump stops running when it is lowered.
   - The alarm sound and light start when the top switch is raised; the alarm sound and light stop when it is lowered.
3. Reinstall the float switch assembly when finished.

Step 14d. Test the discharge float switch functions (if equipped).

IMPORTANT — Always make sure enough water is in the chamber to safely run the pump!

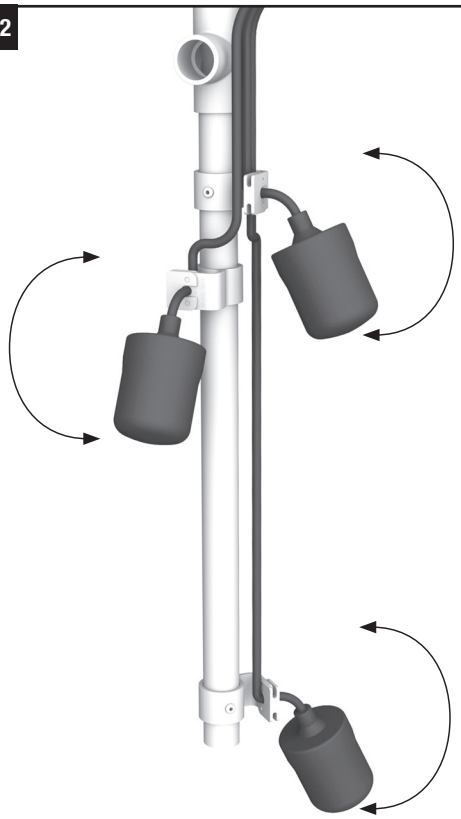
1. Toggle the discharge pump's "AUTO/OFF/MAN" switch to "MAN" and verify the pump runs.
2. Toggle the discharge pump's "AUTO/OFF/MAN" switch to "AUTO."
3. Remove the float switch assembly from the discharge chamber.
4. Lower and raise the bottom, middle, and top float switches in turn.
   - The alarm sound and light start when the bottom switch is lowered; the alarm sound and light stop when it is raised.
   - The pump starts running when the middle switch is raised; the pump stops running when it is lowered.
   - The alarm sound and light start when the top switch is raised; the alarm sound and light stop when it is lowered.
5. Reinstall the float switch assembly when finished.

Step 14e. Make sure the recirc pump and (if equipped) discharge pump's "AUTO/OFF/MAN" switches are toggled to "AUTO."

Step 14f. Close and secure the control panel.

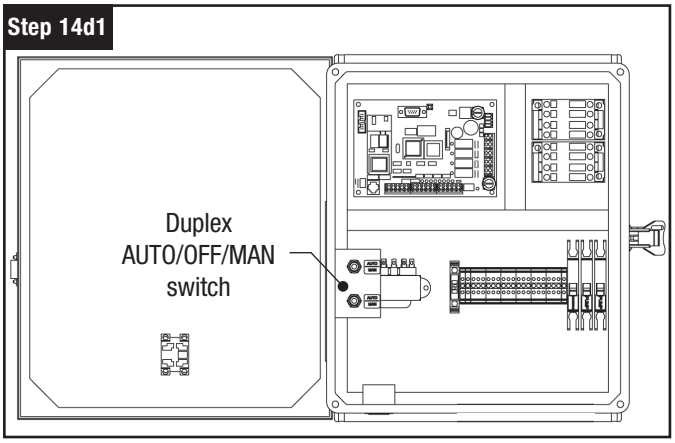
Step 14g. Close and bolt down the lid of the AX-RT unit.

Step 14c2



MVP panels: lower and raise the bottom, middle, and top float switches in turn

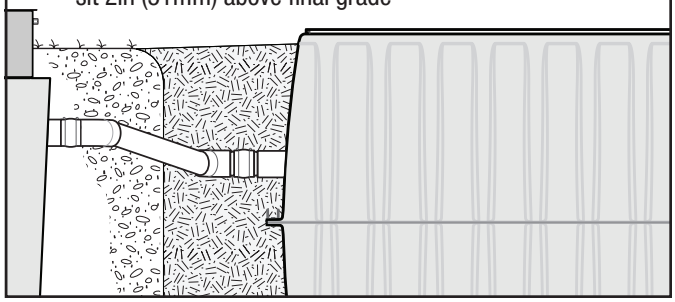
Step 14d1



Installation Steps

Step 15c

The bottom of the AX-RT lid should sit 2in (51mm) above final grade



Step 15. Complete Backfilling

Key Points

- Be careful not to alter the slope of any of the pipes. Brace or place the pipes on a compacted bed and carefully fill around them.
- Before backfilling, make sure the AX-RT unit's lid and all riser lids are bolted down.

Step 15a. Backfill the septic tank excavation if it has not yet been done. Follow the tank manufacturer's guidelines for backfilling.

Step 15b. Backfill and compact around the AX-RT unit in maximum 12in (305mm) lifts.

Key Points

- Do not use native material to backfill if it:
  - Is primarily sand
  - Is very soft or highly expansive clay
  - Contains debris, large (> 3/4in or 19mm) rocks, sharp rocks, peat, or muck
- In these cases, use ≤ 3/4in (≤ 19mm) rounded gravel, crushed stone, or pea gravel that is washed, free flowing, and free of debris.
- Use ≤ 3/4in (≤ 19mm) crushed rock as the backfill material for installations in noncohesive soils with high seasonal water tables.
- If you have doubts about the cohesiveness of the soil, consult a local civil or structural engineer.
- Do not backfill with sand.

Step 15c. Compact the fill thoroughly with a mechanical compactor.

Key Points

- The bottom of the unit's lid should sit 2in (51mm) above final grade.
- After backfilling, call the system's service provider to arrange for the official system start-up.

Step 15d. Be sure the AX-RT unit's lid is closed and secured.

Step 15e. Confirm that the Tank Shield(s) or other secondary safety measures are installed, if the risers are equipped with them.

Step 15f. Be sure the septic tank's access riser lids are secured.