

# TW™-Series Septic Tanks Riser Connection Guidance Document



## Before You Begin

This document provides recommended procedures for the connection of commercially available riser products to Infiltrator® Systems' (Infiltrator's) TW-Series septic and pump tanks. These guidelines are applicable to Infiltrator's TW-300™, TW-500™, TW-900™, TW-1050™, TW-1250™, and TW-1500™ model tanks.

The intent of this document is to provide procedures for making the connection between the riser and tank. Once this connection has been made, the riser manufacturer's standard installation instructions should be used to complete the assembly.

Risers must be installed according to state and/or local regulations, which supersede the guidelines in this document. If unsure of the requirements for a particular site, contact the local health department or permitting authority.

## Parts and Supplies

The parts and supplies necessary for installation of a riser system on an Infiltrator TW-Series tank must be purchased separately from the tank. All parts and supplies are commercially available. Contact Infiltrator or the riser manufacturer for assistance obtaining parts and supplies.

## General Guidelines

1. Complete riser assembly installation, including installation of adapter ring, riser(s), and lid prior to backfilling tank.

**Note: Risers are to be connected to Infiltrator's factory-installed access port reinforcing ring (reinforcing ring). TW-Series tanks are assembled at the factory with reinforcing rings and lids at the inlet and outlet access port locations.**

2. Ensure that all connection surfaces are clean and dry.

3. Sealant shall be ISI 1500 or equivalent.

4. Sealants vary between manufacturers. Sealant identified here-in represents a minimum recommendation. The installer must use discretion in determining the size and amount of sealant needed to craft and maintain a watertight seal.

5. Keep sealant at a temperature (at least 60° F/16° C) that maintains its workability. Keep it free from dirt and debris that may compromise a watertight seal.

6. When applying sealant to a part, ensure continuous application to avoid gaps that may cause leaks. Apply an adequate quantity to ensure a sealed connection.

7. Physically spread the sealant into the channel on the ISI reinforcing ring to ensure that it distributes properly during assembly.

8. Ensure that all screws supplied with riser products are installed for connection of adapter rings, risers, and lids. Insert screws only in prescribed locations.

9. Do not over tighten screws. This may damage the plastic parts being connected, causing the screw connection to fail. This may also strip the screw head. Be sure to insert screws in a "star" pattern, tightening opposite sides of the riser or pipe adapter.

**Note: Use Type 304 1 1/4 #14 stainless steel screws**

10. In addition to the measures shown in this document, a caulk-type sealant may also be applied to the exterior joint connection augment to help establish and maintain watertight connections.

## Compatible Products

The TW-Series Septic Tanks are compatible with 24-inch (600-mm) diameter riser products from the following manufacturers:

- Infiltrator TW-Risers / EZset by Infiltrator
- Tuf-Tite® Corporation
- PolyLock™ Inc.

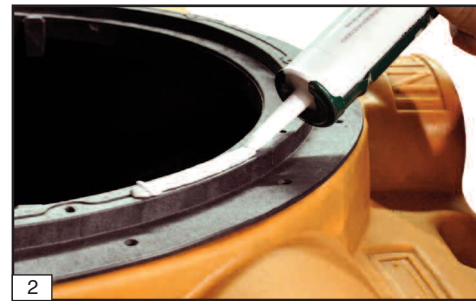
The following 24-inch (600-mm) diameter pipe products are also compatible with the TW-Series septic and pump tanks:

- IPEX Ultra-Rib™ PVC pipe
- Corrugated high density polyethylene (HDPE) pipe

## Infiltrator TW-Riser and EZset Riser

1. Install riser assembly prior to backfilling tank.

2. Apply ISI 1500 Adhesive Sealant in alignment with the factory-drilled screw holes on the top surface of the Infiltrator reinforcing ring. The sealant thickness must be adequate to fill the gap beneath the TW/EZset riser.



3. Invert TW/EZset riser and center over Infiltrator reinforcing ring.

4. Verify that sealant remains properly aligned on TW/EZset riser.

5. Align 10 pre-drilled pilot holes on riser with 10 receiving holes on ISI reinforcing ring.

**Note: The TW-Risers have a series of indexing tabs that ensure proper alignment of screws. Arrows molded on riser and receiving ring must line up for proper connection.**

6. Fasten TW/EZset riser to Infiltrator reinforcing ring with ten factory-supplied screws. If factory-supplied screws are not available, use ten #14 x 1 1/4 inch (6.2 mm x 32 mm) stainless steel screws.



7. Tighten screws in a "star" pattern, tightening screws on opposite sides of the TW/EZset riser. Repeat the star pattern at least twice, without over tightening screws. Compress the sealant to the tank evenly during fastening.

8. Connect additional TW/EZset riser sections or TW/EZset lid as needed.

**Note: Use the supplied Infiltrator tank lid to provide a watertight lid solution with the TW-Riser.**

9. Backfill tank in accordance with Infiltrator's TW-Series septic tank installation instructions.

10. Following tank backfilling, visually examine the riser to Infiltrator reinforcing ring connection for damage resulting from fill placement. Repair or replace if damaged.

## Tuf-Tite® Corporation Riser

1. Install riser assembly prior to backfilling tank.
2. Align Tuf-Tite riser over ISI reinforcing ring and mark 10 evenly spaced pilot hole locations so that they match up to receiving holes on the reinforcing ring.
3. Drill new pilot holes into Tuf-Tite riser.
4. Apply ISI 1500 Adhesive Sealant in alignment with the factory-drilled screw holes on the top surface of the Infiltrator reinforcing ring. The sealant thickness must be adequate to fill the gap beneath the Tuf-Tite riser.



5. Invert Tuf-Tite adapter ring and center over the Infiltrator reinforcing ring.
6. Verify that the ISI 1500 Adhesive Sealant remains properly aligned on the Tuf-Tite adapter ring.
7. Align the 10 drilled pilot holes on the riser with the 10 receiving holes on the ISI reinforcing ring.
8. Fasten the Tuf-Tite adapter ring to the Infiltrator reinforcing ring with ten #12 x 1 1/4 inch (4.9 mm x 38 mm) stainless steel screws.

**Note: The Tuf-Tite adapter ring will seat on or above the screw heads that fasten the Infiltrator reinforcing ring to the tank body. Sealant should be positioned to seal the space around the screw heads.**



9. Tighten screws in a "star" pattern, tightening screws on opposite sides of the Tuf-Tite adapter ring. Repeat the star pattern at least twice, without over tightening screws. Compress the ISI 1500 Adhesive Sealant to tank evenly during fastening.
10. Connect the Tuf-Tite riser to the Tuf-Tite adapter ring and install lid according to Tuf-Tite's instructions.

**Note: The Infiltrator tank lid does provide a watertight seal with the Tuf-Tite riser and may be used.**

11. Backfill tank in accordance with Infiltrator's TW-Series septic tank installation instructions.

12. Following tank backfilling, visually examine the riser to Infiltrator reinforcing ring connection for damage resulting from fill placement. Repair or replace if damaged.

## Polylok™, Inc. Riser

*PolyLock riser must be installed using the ISI Pipe Adapter Ring.*

1. Install riser assembly prior to backfilling tank.
2. Apply ISI 1500 Adhesive Sealant in alignment with the factory-drilled screw holes on the top surface of Infiltrator reinforcing ring. Sealant thickness must fill gap beneath pipe adapter.
4. Align the pre-drilled pilot holes on the Infiltrator Pipe Adapter Ring with the receiving holes on the Infiltrator reinforcing ring. Center and press to create an even seal.
5. Fasten pipe adapter to reinforcing ring using ten #14 x 1 1/4 inch (6.2 mm x 32 mm) stainless steel counter sink screws. Tighten in star pattern. **Note: Counter sink screws are not supplied with Infiltrator pipe adapter.**



6. Center the PolyLock riser over pipe adapter and mark ten even locations on the pipe for pilot holes.
7. Drill 1/8-inch (3.5-mm) pilot holes at marked locations on the PolyLock riser so that screw will connect to adjacent pipe adapter.
8. Center the PolyLock riser over the pipe adapter and apply ISI 1500 Adhesive Sealant in the space between the riser and Infiltrator reinforcing ring to fill the gap.
9. Fasten PolyLock riser to Infiltrator reinforcing ring using ten #12 x 3/4 inch (5.5 mm x 19 mm) stainless steel screws.



10. Tighten screws in a "star" pattern, tightening screws on opposite sides of Infiltrator reinforcing ring. Repeat star pattern at least twice, without over tightening screws.
11. Connect PolyLock riser to PolyLock riser-to-riser adapter ring and install according to PolyLock's instructions.
12. Backfill tank in accordance with Infiltrator's TW-Series tank installation instructions.

13. Following tank backfilling, visually examine the riser to Infiltrator reinforcing ring connection for damage resulting from fill placement. Repair or replace if damaged.

## 24-inch (600-mm) HDPE Pipe

*Note: The 24" HDPE pipe must be installed using the ISI riser Pipe Adapter Ring.*

1. Install riser assembly prior to backfilling tank.
2. Cut HDPE pipe along an inner corrugation to allow lid to fit properly. Cut should be smooth and even.
3. Apply ISI 1500 Adhesive Sealant in alignment with the factory-drilled screw holes on the top surface of Infiltrator reinforcing ring. Sealant thickness must fill gap beneath pipe adapter.
4. Align the pre-drilled pilot holes on the pipe adapter with the receiving holes on the Infiltrator reinforcing ring. Center and press to create an even seal.
5. Fasten Pipe Adapter Ring to reinforcing ring using ten #14 x 1 1/4 inch (6.2 mm x 31 mm) stainless steel screws. Tighten in star pattern.
6. Center the HDPE pipe over pipe adapter and mark ten even locations on the pipe for pilot holes.
7. Drill 1/8-inch (3.5-mm) pilot holes at marked locations on HDPE pipe so that screw will connect to adjacent pipe adapter.
8. Center the HDPE pipe over the pipe adapter and apply ISI 1500 Adhesive Sealant in the space between the pipe and Infiltrator reinforcing ring to fill the gap.

*Note: Use additional butyl sealant or ISI 1500 Adhesive to fill gap and seal space between the HDPE pipe and reinforcing ring.*



9. Fasten HDPE pipe to reinforcing ring using ten #14 x 1 1/4 inch (6.2 mm x 31 mm) stainless steel screws from inside of pipe.



10. Tighten screws in a "star" pattern, tightening screws on opposite sides of Infiltrator reinforcing ring. Repeat star pattern at least twice, without over tightening screws.

11. Use ISI TW-Series septic tank lid, or equivalent product as a lid for HDPE pipe. Follow lid manufacturer's instructions to complete riser installation.

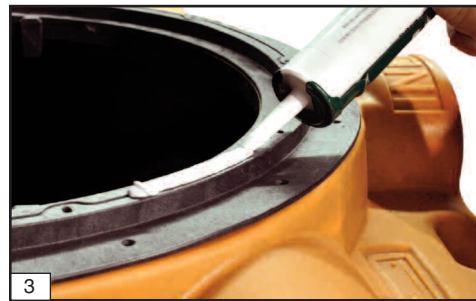
12. Backfill tank in accordance with Infiltrator's TW-Series tank installation instructions.

13. Following tank backfilling, visually examine the riser to Infiltrator reinforcing ring connection for damage resulting from fill placement. Repair or replace if damaged.

## 24-inch (600-mm) IPEX Ultra-Rib™ PVC Pipe

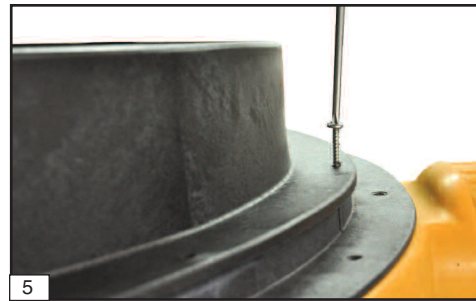
*24" IPEX pipe must be installed using the ISI Pipe Adapter Ring.*

1. Install riser assembly prior to backfilling tank.
2. Cut IPEX pipe along an inner corrugation to allow lid to fit properly. Cut should be smooth and even.
3. Apply ISI 1500 Adhesive Sealant in alignment with the factory-drilled screw holes on the top surface of Infiltrator reinforcing ring. Sealant thickness must fill gap beneath Pipe Adapter Ring.



4. Align the pre-drilled pilot holes on the pipe adapter with the receiving holes on the Infiltrator reinforcing ring. Center and press to create an even seal.

5. Fasten pipe adapter to reinforcing ring using ten #14 x 1 1/4 inch (6.2 mm x 31 mm) stainless steel screws. Tighten in star pattern.



6. Center the IPEX pipe over pipe adapter and mark ten even locations on the pipe for pilot holes.

7. Drill 1/8-inch (3.5-mm) pilot holes at marked locations on IPEX pipe so that screw will connect to adjacent pipe adapter.

8. Center the IPEX pipe over the pipe adapter and apply ISI 1500 Adhesive Sealant in the space between the pipe and Infiltrator reinforcing ring to fill the gap.



9. Fasten IPEX pipe to Infiltrator reinforcing ring using ten #14 x 1 1/4 inch (6.2 mm x 31 mm) stainless steel screws from the inside of pipe.



10. Tighten screws in a “star” pattern, tightening screws on opposite sides of the Infiltrator reinforcing ring. Repeat the star pattern at least twice, without over tightening screws.

11. Use the ISI TW-Series septic tank lid, or equivalent product as a lid. Follow lid manufacturer’s instructions to complete riser installation.

12. Backfill tank in accordance with Infiltrator’s TW-Series septic tank installation instructions.

13. Following tank backfilling, visually examine the riser to Infiltrator reinforcing ring connection for damage resulting from fill placement. Repair or replace if damaged

*Disclaimer: These recommended procedures have been developed to identify best practices for achieving a watertight connection between tank and riser under typical tank installation conditions. These procedures have been shown to result in a watertight connection between the riser assemblies identified in this document and each Infiltrator TW-Series tank model. Infiltrator does not guarantee a watertight connection between tank and riser because achieving a watertight connection is dependent upon a combination of installer practices and procedures, and field conditions. Please contact Infiltrator’s Technical Services Department if difficulty is encountered during riser connection installation. Additionally, Infiltrator developed these recommendations in cooperation with the specific riser manufacturers (excluding the HDPE and IPEX alternatives) referenced above. Please contact the appropriate riser manufacturer for concerns associated with anything that does not involve the tank-to-riser connection.*



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