

Infiltrator IM- and TW-Series Tank Riser Connection Guidance Document

August 2015



Before You Begin

This document provides recommended procedures for the connection of commercially available riser products to Infiltrator Water Technologies' (Infiltrator's) IM-Series 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 Infiltrator IM- and TW-Series tanks 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.

Required Tools

- Screw gun
- Extended drill driver bit (6-12", 150-300 mm) optional
- Caulk gun
- Marker or marking pencil
- Brush
- Rag
- Utility knife
- Latex gloves
- #14 x 1/4 stainless steel screws (supplied with Infiltrator TW Risers)
- #12 x 3/4 stainless steel screws (for IPEX)

General Guidelines

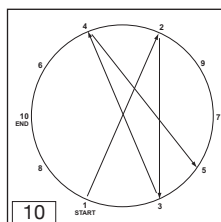
1. Complete riser assembly installation, including installation of adapter ring, riser(s), and lid prior to backfilling tank.

Note: Risers are to be connected to Infiltrator's access port connector ring (referred to herein as "Infiltrator connector ring"). The Infiltrator connector ring is a permanent component of the tank body, and is the connection point for the riser component.

2. Ensure that all connection surfaces are clean and dry.
3. Sealant shall be ISI 1500 Adhesive Sealant or equivalent.
4. Sealants vary between manufacturers. Sealant identified herein 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 Infiltrator connector ring to ensure that it distributes properly during assembly.
8. The ISI 1500 Adhesive Sealant requires 24 hours for proper curing prior to use or testing. Determine curing times for other sealants based on manufacturer's recommendations.
9. Ensure that all screws supplied with riser products are installed for connection of adapter rings, risers, and lids. Insert screws only in prescribed locations.

Note: To speed up the process of fastening the screws Infiltrator recommends the use of an extended drill driver bit (6-12", 150-300 mm).

10. Do not over tighten screws. This may damage the plastic parts being connected, causing the screw connection to fail. This may also strip the receiving hole. Reducing the screw gun torque helps to prevent over-



tightening the screws and stripping the receiving holes. Be sure to insert screws in a "star" pattern, tightening opposite sides of the riser or pipe adapter.

Note: Use #14 x 1/4-inch stainless steel screws unless otherwise noted

11. In addition to the measures shown in this document, additional sealant may also be applied to the exterior joint connection to help establish and maintain watertight connections.

Compatible Products

The Infiltrator IM-Series tanks are compatible with 24-inch (600-mm) diameter riser products from the following manufacturers:

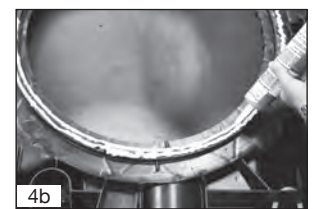
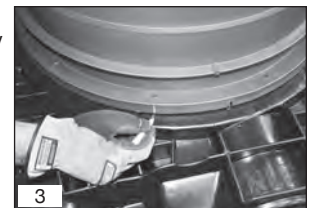
- Infiltrator TW Riser
- EZset by Infiltrator
- Tuf-Tite® Corporation
- PolyLok™ Inc.

The following 24-inch (600-mm) diameter pipe products are also compatible with the Infiltrator IM-Series tanks:

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

Infiltrator TW Riser

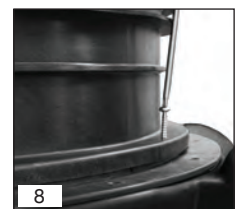
1. Install riser assembly prior to backfilling tank.
2. Place the TW Riser over the Infiltrator connector ring and rotate the TW Riser to the proper alignment. Proper alignment is ensured for the IM-Series tanks when the receiving slots on the bottom of the riser engage the indexing tabs on the Infiltrator connector ring.
3. Once proper alignment has been achieved, mark the riser and tank to identify correct alignment orientation.
4. Apply 2 continuous 3/8" beads of ISI 1500 Adhesive Sealant in alignment with the factory-drilled screw holes in the channel on the top surface of the Infiltrator connector ring. The sealant thickness must be adequate to fill the gap beneath the TW Riser.



5. Invert the TW Riser and center over the Infiltrator connector ring in the proper alignment position determined in step 3.
6. Verify that the sealant remains properly aligned on TW Riser.
7. The 10 holes on the riser should be aligned with the 10 receiving holes on the Infiltrator tank connector ring.
8. Fasten the TW Riser to the Infiltrator connector ring with 10 factory-supplied screws. If the factory-supplied screws are not available, use ten #14 x 1/4-inch stainless steel screws.

Note: To speed up the process of fastening the screws, Infiltrator recommends the use of an extended drill driver bit. (6-12", 150-300 mm).

9. Tighten screws in a "star" pattern, tightening screws on opposite sides of the TW Riser. Repeat the star pattern at least twice, without over tightening screws. This will compress the sealant to the tank evenly during fastening.

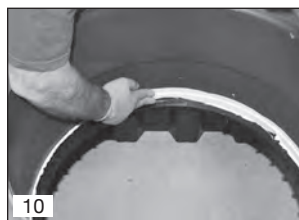


10. Spread excess sealant in the interior joint between the tank and riser with a small putty knife or manually.

11. Connect additional TW Riser sections or the included Infiltrator lid as needed.

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

13. Following tank backfilling, visually examine the riser to Infiltrator connector ring joint for damage resulting from backfill placement. Repair or replace if damaged. Allow a minimum sealant cure time of 24 hours before testing or placing into service.



EZset by Infiltrator Riser

1. Install riser assembly prior to backfilling tank.

2. Align EZset Riser Section over Infiltrator connector ring and mark 10 evenly spaced pilot hole locations so that they match up to receiving holes on the Infiltrator connector ring.

3. Drill 10 new pilot holes into EZset Riser Section.

4. Apply 2 continuous 3/8" beads of ISI 1500 Adhesive Sealant in alignment with the factory-drilled screw holes on the top surface of the Infiltrator connector ring. The sealant thickness must be adequate to fill the gap beneath the EZset Riser Section.

5. Invert EZset Riser Section and center over the Infiltrator connector ring.

6. Verify that the ISI 1500 Adhesive Sealant remains properly aligned on the EZset Riser Section.

7. Align the 10 drilled pilot holes on the EZset Riser Section with the 10 receiving holes on the Infiltrator connector ring.

Note: To speed up the process of fastening the screws, Infiltrator Water Technologies recommends the use of an extended drill driver bit (6–12", 150–300 mm).

8. Fasten the EZset Riser Section to the Infiltrator connector ring with ten #14 x 1/4-inch stainless steel screws.

9. Tighten screws in a "star" pattern, tightening screws on opposite sides of the EZset Riser Section. Repeat the star pattern at least twice, without over tightening screws. Compress the ISI 1500 Adhesive Sealant to tank evenly during fastening.

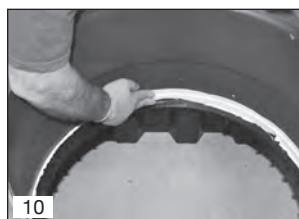
10. Spread the excess sealant into the interior joint between the tank and riser with a small putty knife or manually. Ensure there is even coverage on both surfaces.

11. Connect additional EZset riser sections or EZset lid as needed.

12. **Note: Do not use the supplied Infiltrator tank lid, as it does not provide a watertight seal with the EZset riser. Instead, use EZset lid with the EZset riser.**

13. Backfill tank in accordance with Infiltrator's tank installation instructions.

14. Following tank backfilling, visually examine the riser to Infiltrator connector ring joint for damage resulting from backfill placement. Repair or replace if damaged. Allow a minimum sealant cure time of 24 hours before testing or placing into service.



Tuf-Tite® Corporation Riser

1. Install riser assembly prior to backfilling tank.

2. Align Tuf-Tite adapter ring over Infiltrator connector ring and mark 10 evenly spaced pilot hole locations so that they match up to receiving holes on the Infiltrator connector ring.

3. Drill new pilot holes into Tuf-Tite adapter ring.

4. Apply 2 continuous 3/8" beads of ISI 1500 Adhesive Sealant in alignment with the factory-drilled screw holes on the top surface of the Infiltrator connector ring. The sealant thickness must be adequate to fill the gap beneath the Tuf-Tite adapter ring.

5. Invert Tuf-Tite adapter ring and center over the Infiltrator connector 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 Tuf-Tite adapter ring with the 10 receiving holes on the Infiltrator connector ring.

8. Fasten the Tuf-Tite adapter ring to the Infiltrator connector ring with ten #14 x 1/4-inch stainless steel screws.

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 according to Tuf-Tite's instructions.

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

11. Backfill tank in accordance with Infiltrator's tank installation instructions.

12. Following tank backfilling, visually examine the riser to Infiltrator connector ring joint for damage resulting from backfill placement. Repair or replace if damaged. Allow a minimum sealant cure time of 24 hours before testing or placing into service.

PolyLok™ Inc. Riser

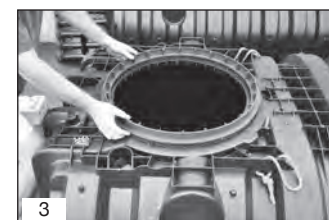
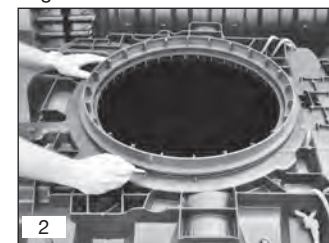
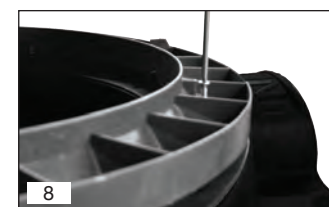
Note: PolyLok riser must be installed using Infiltrator Pipe Adapter Ring.

1. Install riser assembly prior to backfilling tank.

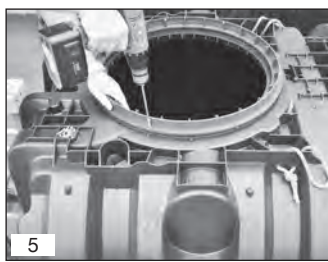
2. Align the 10 pilot holes on the PolyLok Riser-to-Riser Adapter Ring with the 10 receiving holes on the Infiltrator connector ring and mark both pieces to identify proper alignment.

3. Apply 2 continuous 3/8" beads of ISI 1500 Adhesive Sealant in alignment with the factory-drilled screw holes on the top surface of PolyLok Riser-to-Riser Adapter Ring. Sealant thickness must fill gap beneath pipe adapter.

4. Align the 10 blind pilot holes on the PolyLok Riser-to-Riser Adapter Ring with the 10 receiving holes on the Infiltrator connector ring using the marking made during step two. Center and press to create an even seal.

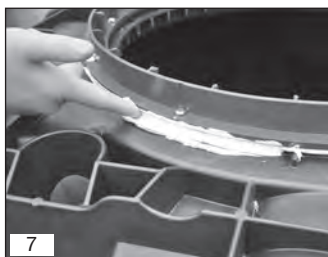


5. Fasten PolyLok Riser-to-Riser Adapter Ring to Infiltrator connector ring using ten #14 x 1/4-inch stainless steel screws.



6. Tighten screws in a “star” pattern, tightening screws on opposite sides of the PolyLok Riser-to-Riser Adapter Ring. Repeat star pattern at least twice, without over tightening screws.

7. Spread the excess sealant into the interior and exterior joint between the tank and riser with a small putty knife or manually. Ensure there is even coverage on both surfaces.



8. Connect PolyLok riser to PolyLok Riser-to-Riser Adapter Ring and install according to PolyLok’s instructions.

Note: Do not use the supplied Infiltrator tank lid, as it does not provide a watertight seal with the PolyLok Riser system.

9. Backfill tank in accordance with Infiltrator’s tank installation instructions.

10. Following tank backfilling, visually examine the riser to Infiltrator Tank Adapter Ring connection for damage resulting from backfill placement. Repair or replace if damaged. Allow 24 hours sealant cure time before testing or putting into service.

24-inch (600-mm) HDPE Pipe

Note: The 24-inch (600-mm) HDPE pipe must be installed using the Infiltrator 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 2 continuous 3/8” beads of ISI 1500 Adhesive Sealant in alignment with the factory-drilled screw holes on the top surface of Infiltrator connector ring. Sealant thickness must fill gap beneath Infiltrator Pipe Adapter Ring.

4. Align the 10 blind pilot holes on the Infiltrator Pipe Adapter Ring with the 10 receiving holes on the Infiltrator connector ring using the indexing tabs on the inside of the ring. Center and press to create an even seal.

5. Fasten Infiltrator Pipe Adapter Ring to Infiltrator reinforcing ring using ten #14 x 1/4-inch stainless steel screws. Tighten in star pattern. Repeat star pattern at least twice, without over tightening screws.



6. Spread excess sealant in the interior joint between the tank and riser with a small putty knife or manually.

7. Center the HDPE pipe over the Infiltrator Pipe Adapter Ring.

Note: Use additional ISI 1500 Adhesive Sealant to fill gap and seal space between the HDPE pipe and Infiltrator Pipe Adapter Ring.

8. Fasten HDPE pipe to Infiltrator Pipe Adapter Ring using four #12 x 1/4-inch (5.5 mm x 31 mm) stainless steel screws from inside the pipe.



9. Tighten screws in a “star” pattern, tightening screws on opposite sides of the Infiltrator Pipe Adapter Ring. Repeat the star pattern at least twice, without over tightening screws.

10. Apply ISI 1500 Adhesive Sealant in the space between the pipe and Infiltrator Pipe Adapter Ring to continuously fill the gap.

11. Use the Infiltrator IM-Series septic tank lid, or equivalent product as a lid for the HDPE pipe. Follow lid manufacturer’s instructions to complete riser installation.

12. Backfill tank in accordance with Infiltrator’s tank installation instructions.

13. Following tank backfilling, visually examine the riser to Infiltrator Pipe Adapter Ring connection for damage resulting from backfill placement. Repair or replace if damaged. Allow 24 hours sealant cure-time before testing or putting into service.

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

Note: 24-inch (600-mm) IPEX pipe must be installed using the



Infiltrator 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 2 continuous 3/8” beads of ISI 1500 Adhesive Sealant in alignment with the factory-drilled screw holes in the channel on the top surface of Infiltrator connector ring. Sealant thickness must fill gap beneath Infiltrator Pipe Adapter Ring.

4. Align the 10 blind pilot holes on the Infiltrator Pipe Adapter Ring with the 10 receiving holes on the Infiltrator connector ring using the indexing tabs on the inside of the ring. Center and press to create an even seal.



5. Fasten Infiltrator Pipe Adapter Ring to Infiltrator connector ring using ten #14 x 1/4-inch stainless steel screws. Tighten in star pattern. Repeat the star pattern at least twice, without over tightening screws.

6. Mark (4) evenly spread locations on the Infiltrator Pipe Adapter Ring for pilot holes to accept screws. The pilot holes should be at a height half way up the interior flange of the Infiltrator Pipe Adapter Ring.

7. Drill (4) 1/8-inch (3.5-mm) pilot holes at marked locations on the Infiltrator Pipe Adapter Ring.



8. Apply (2) beads of ISI 1500 Adhesive Sealant to the Infiltrator Pipe Adapter Ring at the base of the flange.

9. Place the IPEX pipe over the Infiltrator Pipe Adapter Ring until it is sealed at the base of the flange.

10. Insert ISI 1500 Adhesive Sealant into the (4) pre-drilled pilot holes.



11. Fasten IPEX pipe to Infiltrator Pipe Adapter Ring using (4) #12 x 1/2-inch stainless steel screws from the inside of pipe.

12. Tighten screws in a "star" pattern, tightening screws on opposite sides of the Infiltrator Pipe Adapter Ring. Repeat the star pattern at least twice, without over tightening screws.

13. Apply ISI 1500 Adhesive Sealant in the space between the pipe and Infiltrator Pipe Adapter Ring to fill the gap.

14. Apply a generous bead of sealant into the groove at the base of the pipe and then smear the sealant into the groove between the pipe and Infiltrator Pipe Adapter Ring.

15. Use the Infiltrator tank lid, or equivalent product as a lid. Follow lid manufacturer's instructions to complete riser installation.

16. Backfill tank in accordance with Infiltrator's tank installation instructions.

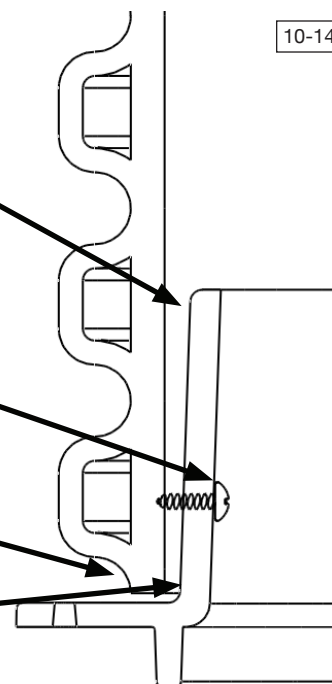
17. Following tank backfilling, visually examine the riser to Infiltrator Pipe Adapter Ring connection for damage resulting from backfill placement. Repair or replace if damaged. Allow 24 hours sealant cure-time before testing or putting into service.

Apply ISI 1500 Adhesive Sealant after installing pipe

Apply ISI 1500 Adhesive Sealant to pilot holes before installing screws

Apply ISI 1500 Adhesive Sealant after installing pipe.

Apply ISI 1500 Adhesive Sealant before installing pipe



Disclaimer: These recommended procedures have been developed to identify best practices for achieving a watertight connection between the 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 the Infiltrator IM-Tank. 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 at 800-221-4436 if difficulty is encountered during riser connection installation. Please contact the appropriate riser manufacturer for concerns associated with anything that does not involve the tank to-riser connection.



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U.S. Patents: 4,759,661; 5,017,041; 5,156,488; 5,336,017; 5,401,116; 5,401,459; 5,511,903; 5,716,163; 5,588,778; 5,839,844 Canadian Patents: 1,329,959; 2,004,564 Other patents pending. Infiltrator, Equalizer, Quick4, and SideWinder are registered trademarks of Infiltrator Water Technologies. Infiltrator is a registered trademark in France. Infiltrator Water Technologies is a registered trademark in Mexico. Contour, MicroLeaching, PolyTuff, ChamberSpacer, MultiPort, PosiLock, QuickCut, QuickPlay, SnapLock and StraightLock are trademarks of Infiltrator Water Technologies. PolyLok is a trademark of PolyLok, Inc. TUF-TITE is a registered trademark of TUF-TITE, INC. Ultra-Rib is a trademark of IPEX Inc.

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