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

INFILTRATOR®
septic tanks

Before You Begin

This document provides recommended procedures for the connection of commercially available riser products to Infiltrator® Systems' (Infiltrator's) IM- and TW-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 1¼ stainless steel screws (supplied with Infiltrator TW Risers)

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 Systems 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 1¼-inch stainless steel screws

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- and TW-Series tanks are compatible with 24-inch (600-mm) diameter riser products from the following manufacturers:
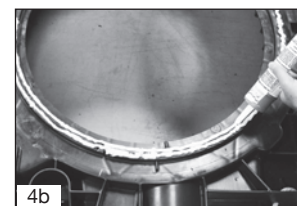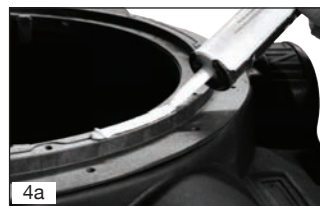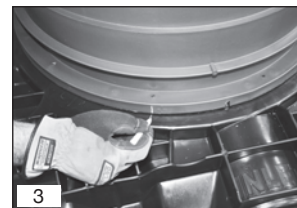
- Infiltrator TW Riser
- EZset by Infiltrator
- Tuf-Tite® Corporation
- PolyLok™ Inc.

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 TW-Series tanks when the indexing tabs on the bottom of the riser drop into the receiving slots of the Infiltrator connector ring and alignment arrows on the riser and tank are aligned. For the IM-Series tanks, proper alignment is ensured 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 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 1¼-inch stainless steel screws.
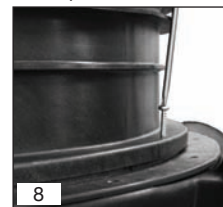
Note: To speed up the process of fastening the screws, Infiltrator Systems recommends the use of an extended drill driver bit. (6–12", 150-300 mm).

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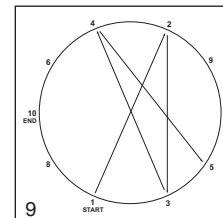
10. Spread excess sealant in the interior joint between the tank and riser with a small putty knife or manually.

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

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

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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 24 hours sealant cure-time before testing or putting into service.
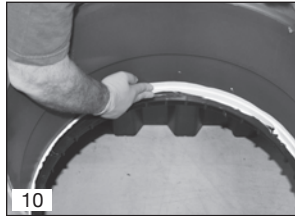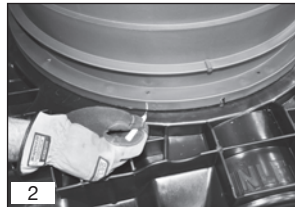
EZset by Infiltrator Riser

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.

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

4. Apply 2 continuous 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.

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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 Systems 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 1¼-inch stainless steel screws.

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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.

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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 24 hours sealant cure-time before testing or putting into service.
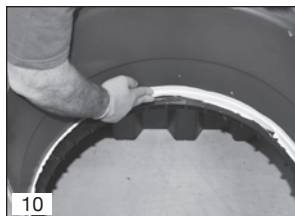
Tuf-Tite® Corporation Riser

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 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.

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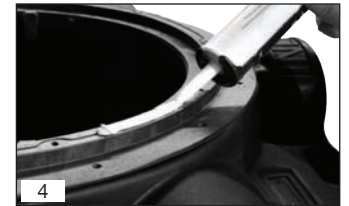
5. Invert Tuf-Tite adapter ring and center over the Infiltrator connector ring.

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 1¼-inch stainless steel screws.

9. Tighten screws in a "star" pattern, tightening screws on

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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 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 24 hours sealant cure-time before testing or putting into service.

PolyLok™ Inc. Riser

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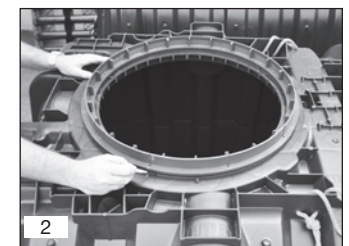
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4. Align the 10 blind pilot holes on the PolyLok Riser-to-Riser Adapter Ring with the 10 receiving holes on the Infiltrator connector ring using the marking made during step two. Center and press to create an even seal.

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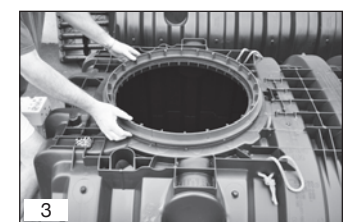
5. Fasten PolyLok Riser-to-Riser Adapter Ring to Infiltrator connector ring using ten #14 x 1¼-inch stainless steel screws.

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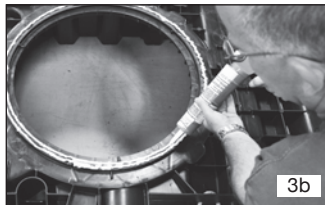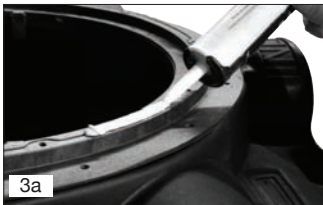
3. Apply 2 continuous beads of ISI 1500 Adhesive Sealant in alignment with the factory-drilled screw holes on the top surface of Infiltrator connector ring. Sealant thickness must fill gap beneath Infiltrator Pipe Adapter Ring.

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 1¼-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 and apply ISI 1500 Adhesive Sealant in the space between the pipe and Infiltrator Pipe Adapter Ring to continuously fill the gap.

Note: Use additional ISI 1500 Adhesive Sealant to fill gap and seal space between the HDPE pipe and Infiltrator Pipe Adapter Ring.
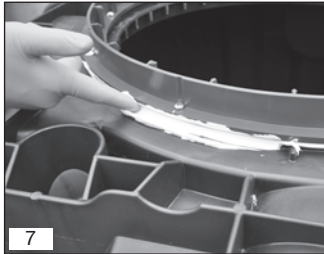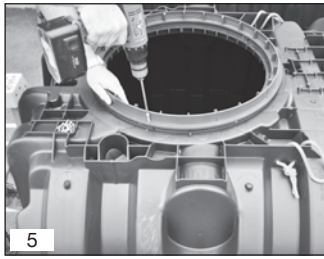
8. Fasten HDPE pipe to Infiltrator Pipe Adapter Ring using ten #12 x 1¼-inch (5.5 mm x 31 mm) stainless steel screws from inside the pipe.

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

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

12. 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.
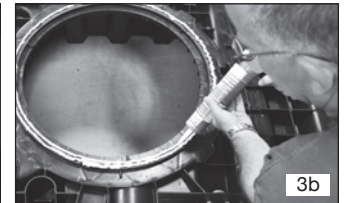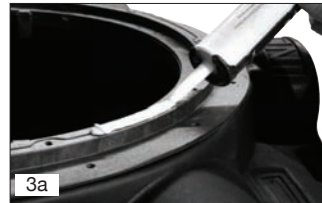
24-inch (600-mm) IPEX Ultra-Rib™ PVC Pipe

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 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 1¼-inch stainless steel screws. Tighten in star pattern. Repeat the star pattern at least twice, without over tightening screws.
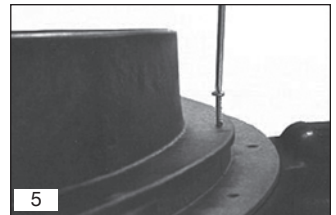
6. Center the IPEX pipe over Infiltrator Pipe Adapter Ring and mark ten even locations on the pipe for pilot holes.

7. Drill 1/8-inch (3.5-mm) pilot holes at marked locations on the IPEX pipe so that screws will connect to the adjacent Infiltrator Pipe Adapter Ring.

8. Center the IPEX pipe over the Infiltrator Pipe Adapter Ring and apply ISI 1500 Adhesive Sealant in the space between the pipe and Infiltrator Pipe Adapter Ring to fill the gap.

9. Fasten IPEX pipe to Infiltrator Pipe Adapter Ring using ten #14 x 1¼-inch stainless steel screws from the inside of pipe.

10. 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.

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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 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.

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 Infiltrator tanks. 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. 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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