U-Channel Containment Sump Assembly & Installation Instructions

Using Pourable Epoxy Adhesive Provided by Xerxes

1. INTRODUCTION

1.1. Before beginning the installation, read through this entire U-Channel Sump Assembly and Installation Supplement (hereafter referred to as "U-Channel Sump Supplement"), and all sections of the Xerxes Installation Manual and Operating Guidelines (hereafter referred to as "Tank Installation Manual") referenced in these instructions.

1.2. It is the responsibility of the tank owner and the installer to follow all requirements in this supplement and the Tank Installation Manual in effect at the time of installation, and to comply with all federal, state, provincial and local safety regulations.

1.3. No instructions or procedures in this U-Channel Sump Supplement, or the Tank Installation Manual, should be interpreted as putting anyone's health or safety at risk or causing harm to people, property, or the environment.

1.4. The following materials are provided in the Xexes-supplied adhesive kit:

- Xerxes-approved two-part pourable adhesive
- Mixing container and paddle
- Emery cloth for surface preparation

1.5. The following additional materials (not provided by Xerxes) are required:

- Power drill
- Marker pen
- Measuring tape
- Clean, dry cloths
- Required personal protective equipment

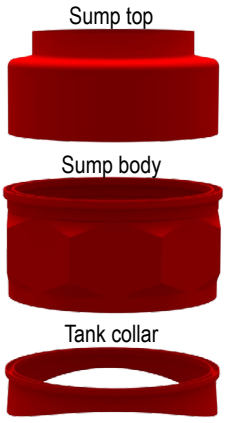
⚠ WARNING

The U-channel sump system is a confined space and may contain hazardous vapors. Follow confined space requirements. Failure to follow this warning may result in death or serious injury.

⚠ CAUTION

Do not drop the U-channel sump components or allow them to roll. Secure components in windy conditions. Failure to heed this caution may cause minor or moderate injury or property damage.

1.6. This supplement details the procedure for installing a single-wall U-channel sump onto a Xerxes U-channel tank containment collar using pourable epoxy adhesive provided by Xerxes.



1.7. The Xerxes limited warranty applies only to a Xerxes tank and Xerxes-manufactured accessories that are installed according to the Tank Installation Manual and relevant installation supplements, including this document.

1.8. The containment sump is a termination point for secondary piping systems. It is designed to be monitored continuously for leaks using electronic sensors. Consult federal, state, provincial and local codes and regulations to ensure proper monitoring compliance.

1.9. Before beginning installation, visually inspect all sump components to make sure that no shipping or handling damage has occurred.

- If any components are missing, contact your Xerxes sales representative.
- If damage is detected, contact your sales representative.
- Do not attempt any repairs to damaged containment sump components.

1.10. If conditions may cause groundwater to rise above the top of the containment sump or may cause surface water to drain into the containment sump, use a watertight containment sump cover.

1.11. When a watertight system is used, the system must be vented to atmosphere, above the groundwater level.

2. TANK INSTALLATION

2.1. The installing contractor is responsible for installing the tank according to instructions in the Xerxes Tank Installation Manual

2.2. After backfilling to the top of the tank, proceed with the installation of the containment sump.

2.3. The burial depth of the tank determines the length of the containment sump top, which can be trimmed in the field if needed to achieve proper elevation. *See Section 5 for trimming instructions*.

2.4. Dry fit the sump assembly and mark the sump top for trimming if applicable.

NOTE: If trimming is needed, trim only sump top, not sump body.

3. POURABLE ADHESIVE GUIDELINES

3.1. When sealing the joints during sump installation, only use the approved pourable adhesive supplied by Xerxes. Follow all instructions on the adhesive manufacturer's label as well as these instructions.

3.2. Observe all safety and personal protective equipment (PPE) guidance stated in the adhesive datasheet.

3.3. The adhesive must be stored at a minimum of 46° F (8° C) and maximum of 82° F (28° C), and used within 6 months of receiving the material from Xerxes.

3.4. The adhesive can only be used if it meets the following conditions:

- It has been stored within the temperature and time range stated above.
- It does not contain gelled particles or grit.
- It is used on surfaces that are clean, dry and free of contamination.
- It is mixed at a temperature above 60° F (15° C).

3.5. The adhesive must be fully cured before performing the hydrostatic test. *See Section 6 for test instructions.*

4. SEALING THE SUMP BODY TO TANK COLLAR

4.1. Confirm that the U-channel collar installed on the tank is undamaged before starting work.

4.2. Thoroughly abrade the entire inside surface of the U -channel section on the tank collar to remove all gloss, achieving a uniform, matte finish with visible glass fibers.

4.3. Abrade the entire circumference of the inside and outside surface of the sump body a distance of at least 2 inches up from the point where the sump body meets the collar.

4.4. Wipe the abraded surfaces clean with a dry, clean cloth before pouring adhesive. Do not use oil-based solvents or water to clean surfaces.

4.5. Mix the two-part adhesive thoroughly to the manufacturer's specifications.

4.6. Mark the interior surface of the U-channel at a depth of 1 inch along its circumference to indicate the adhesive level during pouring.

4.7. Evenly pour the adhesive into the prepared U-channel of the tank collar, ensuring that the channel is filled to a depth of at least 1 inch.

4.8. Placing the sump into the U-channel requires two people. Carefully lower the flat-sided sump body straight into the U-channel, keeping the sump body centered.

4.9. If needed for proper placement, slightly lift recenter the sump body to ensure that the adhesive is evenly distributed on both sides of the body.

4.10. With a dry rag, remove any excess adhesive that drips out of the U-channel.

4.11. Do not bump or move the sump components after pouring the adhesive. Allow the adhesive to be fully cured before installing piping or performing a hydrostatic test (if applicable). Curing typically takes a minimum of 24 hours at 60° F (15° C).

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⚠ WARNING

The tank must be isolated when pressure-testing external piping. The test pressures for external piping could cause tank failure. Failure to follow this warning could result in death or serious injury.

5. SEALING THE SUMP BODY TO THE SUMP TOP

5.1. Dry fit the sump top on the sump body's U-channel to verify fit and elevation.
5.2. If the sump top needs to be trimmed, use a carbide-tipped blade or masonry saw to cut the bottom of the sump top.

⚠ WARNING

If using any equipment not powered by air to trim the sump top, move it a safe distance from the tank, piping or any other source of flammable liquids or vapors before beginning the trimming to avoid sparks, fire or explosion. Failure to follow this warning could result in death or serious injury.

5.3. Abrade the areas to be joined to remove all gloss, achieving a uniform, matte finish with visible glass fibers.
5.4. Thoroughly abrade the entire inside surface of the U-channel on sump body to remove all gloss, achieving a uniform, matte finish with visible glass fibers.
5.5. Abrade the entire circumference of the inside and outside surface of the sump top a distance of at least 2 inches up from the point where the it meets the sump body.
5.6. Wipe the abraded surfaces clean with a dry, clean cloth before pouring adhesive. Do not use oil-based solvents or water to clean surfaces.
5.7. Mix the two-part adhesive thoroughly to the manufacturer's specifications.
5.8. Mark the interior face of the U-channel at a depth of 1 inch along its circumference to indicate the adhesive level during pouring.
5.9. Evenly pour the adhesive into the prepared U-channel of the tank body, ensuring that the channel is filled to a depth of at least 1 inch.
5.10. Placing the sump top into the U-channel requires two people. Carefully lower the sump top straight into the U-channel, keeping the sump top centered.
5.11. If needed for proper placement, slightly lift recenter the sump body to ensure that the adhesive is evenly distributed on both sides of the body.
5.12. With a dry rag, remove any excess adhesive that drips out of the U-channel.
5.13. Do not bump or move the sump components after pouring the adhesive.

NOTE: The adhesive must be fully cured before installing piping or performing a hydrostatic test. This typically requires a minimum of 24 hours at 60° F (15° C).

6. HYDROSTATIC TEST

6.1. Ensure that all penetrations through the containment sump assembly and all connections to the tank within the sump are properly sealed.
6.2. Ensure that the adhesive applied to assemble the sump has fully cured before performing the test.
6.3. Follow this testing procedure:

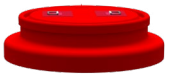
- Fill the containment sump with water to 3 inches below the sump top opening.
- Mark and record the water level and check it after one hour.
- Inspect all joints and penetrations for leaks.
- If no leaks are found, remove the water and continue the installation process.

6.4. If a leak is found in any of the containment sump joints, contact engsupport@mattr.com.

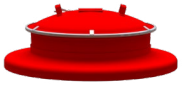
⚠ WARNING

Do not pressurize a watertight containment sump. Failure to follow this warning could result in death or serious injury.

7. CONTAINMENT SUMP COVER INSTALLATION



Watertight cover



Lever-lock cover

7.1. When installing a J-gasket watertight cover, follow this procedure:

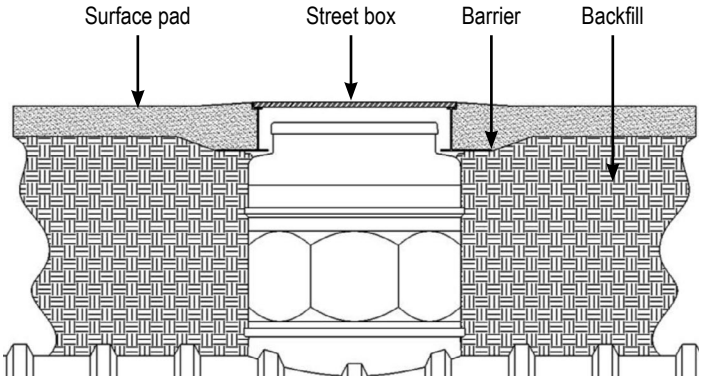
- Inspect the gasket on the sump body.
- Brush away any debris and make sure the gasket is clean.
- Check the cover for nicks or cracks, and clean as necessary.
- Set the cover on the opening, apply even pressure to seat it in place.

7.2. When installing a lever-lock cover, follow this procedure:

- Inspect the gasket in the groove on the underside of the cover.
- Brush away any debris and make sure the gasket is clean.
- Check the top lip of the sump top for nicks or cracks, and clean as necessary. If damage is detected, contact your sales representative.
- Open the locking ring and fit it around the cover and upper lip of the sump top.
- Do not use excessive force to close the locking ring. If the locking ring binds?, rotate the cover and ring, and try again.

NOTE: The gasket in the lever-lock cover may require periodic replacement.

8. FINAL CONTAINMENT SUMP INSTALLATION



NOTICE

Make sure that no heavy objects are allowed to distort the containment sump top after final assembly. This includes the street box and concrete pad. No weight should be transferred to the containment sump assembly. Failure to heed this notice may result in property damage.

8.1. Backfill to the top of the containment sump system and around the outside edge of the sump, making sure that no backfill is on top of the sump.
8.2. Isolate the containment sump from all traffic loads.
8.3. The contractor must install a concrete form or barrier to allow a minimum 3-inch clearance between any load-bearing item (for example, a concrete pad or street-box frame) and the top of the containment sump.
8.4. Choose a street-box size that allows enough clearance around the containment sump opening for proper operation of a cover and set it on top of the barrier.
8.5.Continue with backfill, as required, to subgrade.
8.6. Pour the surface pad to grade.
8.7. Maintain good drainage of water away from the opening of the containment sump top.