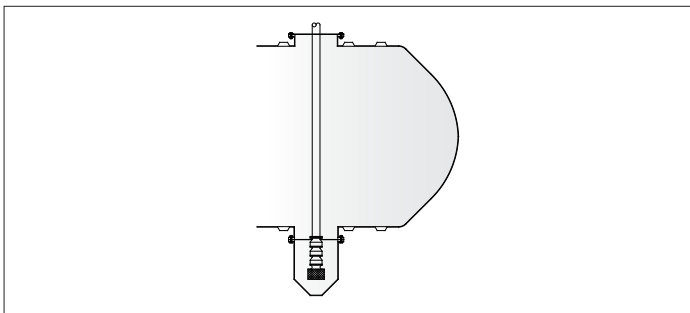


**1. GENERAL**

- 1.1. Before beginning the large bottom sump installation, read through the entire Tank Bottom Sump Installation Instructions and the Containment Solutions, Inc. (CSI) Installation instructions (CSI Pub. No. INST. 6001).
- 1.2. It is the responsibility of the owner, installer and operator to follow all requirements contained in the referenced installation instructions, and comply with all federal, state, provincial and local regulations that may apply to tank installation, operations and maintenance.
- 1.3. No instructions or procedures presented in the referenced installation instructions should be interpreted so as to put at risk any person's health or safety, or to harm any property or the environment.
- 1.4. The bottom sump is designed to allow for the maximum volume of water to be pumped out of the tank. It is available in a 22", 30", and 48" diameter size (see Figure 1-1).

Figure 1-1

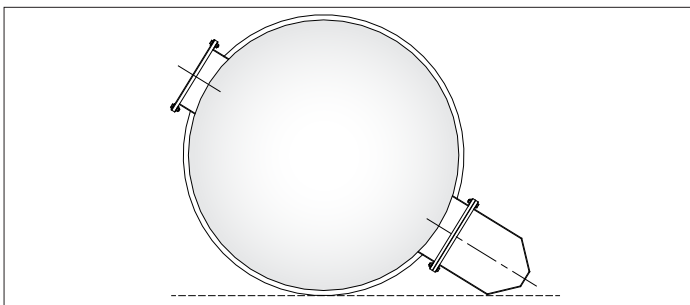


- 1.5. Assembly and installation of the bottom sump is the responsibility of the tank owner.
- 1.6. Before beginning to assemble and install the bottom sump, check the tank (according to instructions in the Installation Manual) to ensure that the tank was not damaged during delivery, unloading and handling on the job site.
- 1.7. Always use lifting lug(s) when lifting the tank.
- 1.8. When handling a tank with a bottom sump, always take extra care so that the bottom sump is not damaged by contact with any other object, such as the truck bed or the ground.

**2. ATTACHING BOTTOM SUMP TO TANK**

- 2.1. The tank comes with bolting flanges at the bottom of the tank and on the bottom sump. These come in separate pieces to allow for shipping. The bottom sump must be attached to the bolting flange before installation. This assembly must be done aboveground.
- 2.2. Using the lifting lugs situated on the side of the tank, set the tank on the ground so it is in a rotated position (see Figure 2-1).

Figure 2-1



- 2.3. Position the bottom sump so that it is in line with the flange on the bottom of the tank.
- 2.4. Place the gaskets on the flange and the sump, and bolt the sump to the bottom of the tank using the bolting pattern.
- 2.5. Tighten the bolts to 50 foot-pounds.
  - 2.5.1. Hand tighten all nuts
  - 2.5.2. Use a criss-cross pattern tightening sequence to torque nuts.
  - 2.5.3. First time around, tighten nuts snug.
  - 2.5.4. Second time around, to 25% recommended torque.
  - 2.5.5. Third time around, to 50% of recommended torque.
  - 2.5.6. Fourth time around, to 75% of recommended torque.
  - 2.5.7. Fifth time around, to 100% of recommended torque.
  - 2.5.8. Continue tightening nuts all around until nuts do not move under 100% recommended torque.

**3. PREINSTALLATION TESTING**

- 3.1. Test the tank and flange joint using the standard pressure/soap test as described in the Tank Installation Instructions (CSI Pub. No. INST 6001).

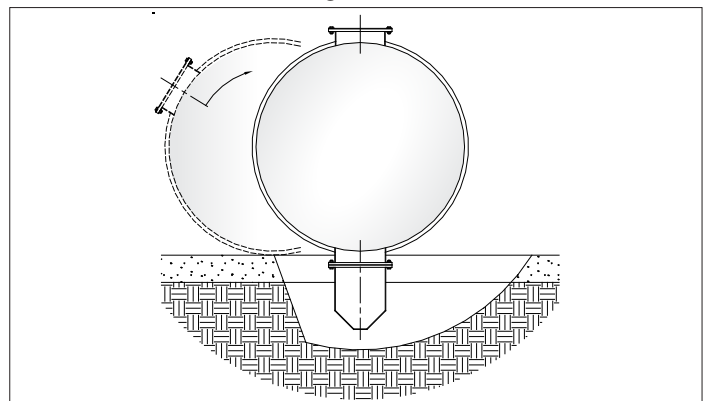
**4. PREPARING THE EXCAVATION**

- 4.1. Dig a hole in the bottom of the excavation that is large enough to accommodate the sump.
- 4.2. Proceed with the installation by adding the required 12" of approved backfill material to the bottom of the excavation (including the bottom sump hole in the excavation) as specified in the Tank Installation Instructions (CSI Pub. No. INST 6001).

**5. ROTATING & SETTING THE TANK AFTER ASSEMBLY**

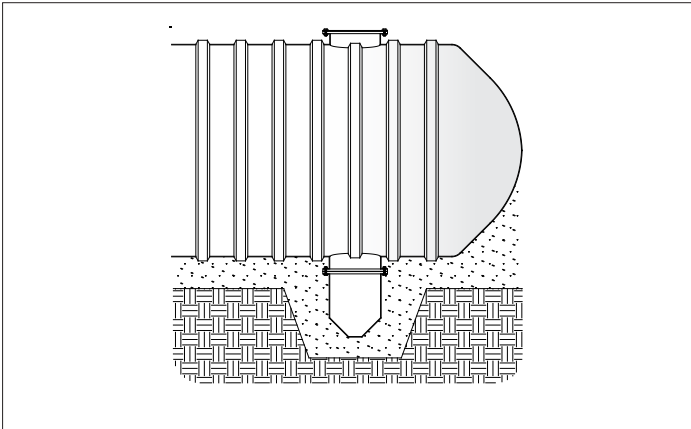
- 5.1. General
  - 5.1.1. Rotate the tank into its upright position. This can be done either inside or outside the excavation hole as conditions permit.
- 5.2. Rotating the Tank Outside the Excavation:
  - 5.2.1. When rotating the tank aboveground (outside the excavation hole), dig a separate bottom sump hole along side the tank. It needs to be large enough to accommodate the sump when rotating the tank (see Figure 5-1).
  - 5.2.2. Slope the sides of the bottom sump hole as shown in Figure 5-1. This allow rotating the tank into position.
  - 5.2.3. Align the tank lengthwise alongside the bottom sump hole so that the bottom sump is lined up with the hole (see Figure 5-1).

Figure 5-1



- 5.2.4. Use the lifting lugs that are situated at the top centerline of the tank to move the upright tank into place in the excavation. (see Figure 5-2)

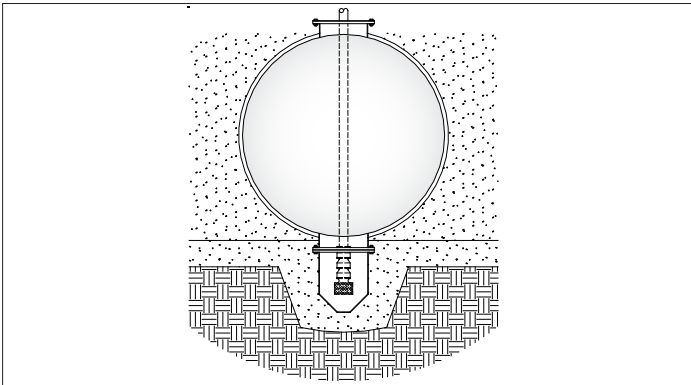
Figure 5-2



## 6. BACKFILLING & PIPING

- 6.1. Using approved backfill material as specified in the CSI Installation Manual (Pub. No. INST 6001), completely backfill the area around the bottom sump. Backfill by hand and hand tamp prior to adding backfill around the tank sides. The use of a long curved handled probe to fill the hole is also approved.
- 6.2. Ensure there are no voids around the bottom sump or under the tank (see Figure 6-1).

Figure 6-1



- 6.3. Add piping as necessary.
- 6.4. Finish backfilling to the top of the tank as specified in the Installation Instructions (Pub. No. INST 6001).

## 7. POST INSTALLATION TESTING

- 7.1. Test the tank according to instructions and requirements of the CSI Installation Instructions (Pub. No. INST 6001).

## 8. PIPING, VENTING, & FILLING TANKS

- 8.1. Follow instructions in the CSI Installation Instructions (Pub. No. INST 6001).

## 9. BACKFILLING TO GRADE

- 9.1. Follow instructions in the tank installation section of Installation Instructions (Pub. No. INST 6001).