

**SUGGESTIONS FOR INSTALLATION  
OF ALL TIOGA MODELS**

**1.0 MEASUREMENTS**

**A. Vault (2 each)**

Vault Height: 4'4"  
Vault Width: 6'6" x 2 units = 13'  
Vault Length: 11'11"  
Vault Weight: 15,600 lbs. each

**B. Building**

Floor Dimensions: 0'5" height, 11'11" in width, 14'4" in length  
Total Building: 9'6" height, 11'11" in width, 16'11" in length  
Total Weight: 42,000 lbs.

**2.0 INSTALLATION**

**A. Placement**

The floor of the building and the top of the vaults should be the high spot of the site chosen. Finished floor elevation should be 4-6 inches above natural grade measured at the front entrance of the floor. Both the floor and the top of the vault should be above the surrounding ground level with the pathway sloped up to meet the entryway. Ideally, the back of the building should be slightly higher to allow water to freely drain out of the toilet rooms.

**B. Excavation, Backfill and Compaction**

The hole dug to accommodate the vaults must be large enough to be workable and to allow the floor to the building to fit on the vaults when placed, but small enough to avoid excessive backfill after placement (use your own judgement). Compact the natural ground at the bottom of the vault excavation with a minimum of three passes with a whacker-type mechanical compactor or equivalent approved by the customer. Install aggregate bedding material for building support.

**B. Excavation, Backfill and Compaction (continued)**

Compact aggregate course with two passes with a whacker-type mechanical tamper or equivalent approved by the customer. Install leveling course of sand so there will be no high spots in the middle of the vault bottom. Set vaults in place. Ideally, the containment area end of the vault should be slightly higher;  $\frac{1}{4}$ " per foot of run to allow the building to sit higher. Ensure vaults are level; front to back, side to side and vault to vault. Backfill around the structure. Use excavated material for backfill, rocks larger than 6-inches in maximum dimension shall not be placed within 6-inches of the exterior vault walls. Fill, adjacent to the building entry will have excavated material placed in 8-inch loose lifts and compacted with a minimum of two passes with a whacker-type mechanical compactor or equivalent approved by customer. After the vaults are placed in the hole and backfilled, place the butyl tape supplied around the entire top surface of the vaults. Make sure that the area is free of debris.

**C. Other Important Points**

1. Southern exposure for the vent stack is ideal, as this allows for heating of the vent stack. Heating of the vent stack aids in the venting of the building. Whenever possible, the placement of the building should be chosen with this in mind.
2. Aggregate bedding material provides a solid base for the vault.
3. Sand is preferable for use in leveling the bottom of the hole excavated for the vault, as it is easier to level.
4. Use of softeners when lifting the building is critical to prevent spalling to the roof of the building, if nylon leads are not available.
5. When lining up the vault and the floor of the building, lining up the rear corners of the vault (the containment portion) and floor (by the clean-out and vent stack) is the easiest and best way to set the building. The screen section and sidewalks will overhang the vault by several inches.
6. Important: Check the seal of the containment portion of the vault by getting into the vault through the clean-out cover in the back of the building after building placement. There should be no light leaking through, with the exception of the riser and vent stack holes.
7. Use the caulk provided to seal around the riser and vent stack where it joins the floor and roof panels. When sealing the vent stack, be sure to put a bead of caulk in the floor vent hole, insert vent stack, then caulk around vent stack.

#### **D. Recommended Lifting Equipment**

CXT can provide a drawing of the recommended lifting/rigging arrangement. Four lifting plates and four  $\frac{3}{4}$ " coil bolts 6-inch long for the building can be provided for a refundable deposit of \$1,000.00.

1. Crane of appropriate capacity to lift and place vault (15,000 lbs.) and building (42,000 lbs.) onto designated site.
2. Four equal lengths of cable or nylon leads for a minimum of 25'0 feet.
3. Four lifting plates (CXT can provide).
4. Four softeners (wood or plastic) to protect roof edge where leads make contact if cable is used.
5. Four  $\frac{3}{4}$ " coil bolts 6-inches long (CXT can provide).
6. One spreader bar 18'6".