

Poly Tank Installation Brief

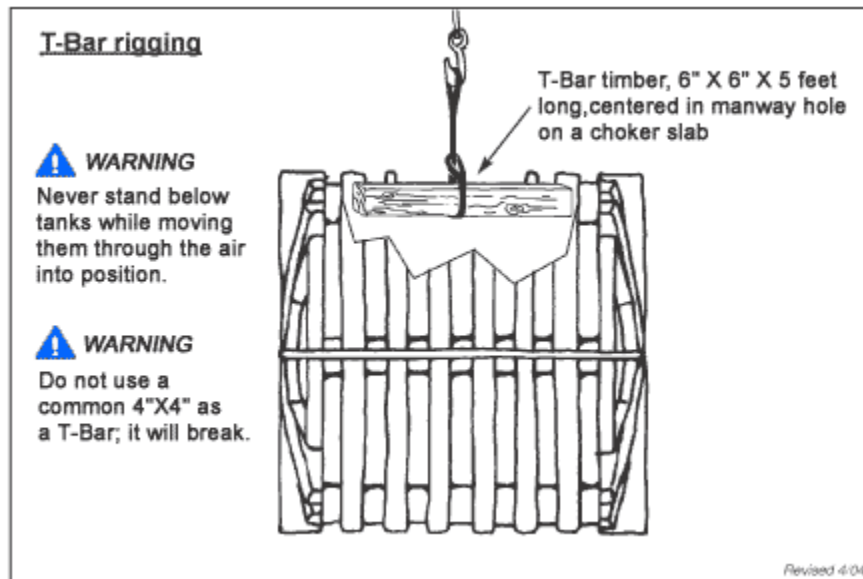
You will find the following preliminary tank installation information helpful when making plans for your water storage project. A complete Installation Manual will be forwarded to you upon receipt of a tankage order. Please review this information with your installation contractor and contact Darco for additional information or specific details regarding this process.

DELIVERY OF POLYETHYLENE OCTANKS

1. Deliveries are made only on or very close to public roadways. Do not expect delivery to remote or difficult to access construction sites.
2. Owner or G.C. must inspect modules and sign shipping documents on delivery.
3. Owner or G.C. will provide man power to assist with delivery truck offload.
4. Avoid rough treatment of polyethylene vessels in sub-freezing weather.
5. Tie tank modules down securely with rope if high winds are likely.
6. Have your C.O.D. payment ready for our driver prior to offload.

PLACING OCTANK MODULES INTO THE HOLE

Rig through manway and lift with wooden 6x6 T-bar as illustrated below.



STANDARD STABLE SOIL SITE REQUIREMENTS

1. Soil bearing must be at least 2000 lbs. / sq. ft. (consult geotechnical engineer).
2. Soil cohesion or backslope angle must be adequate for side wall stability.
3. Follow OSHA 1926.650/P safety guidelines for trenching and tank hole excavation.

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4. If site is subject to seasonal or unpredictable ground water, do consider:
 - *Using deadman anchors to avoid possible floatation.*
 - *Burying the tank above probable groundwater with mounded soil cover.*
 - *Installing a tank bed underdrain ground water collection and discharge pipelines.*

BEDDING AND BACKFILL MATERIAL REQUIREMENTS

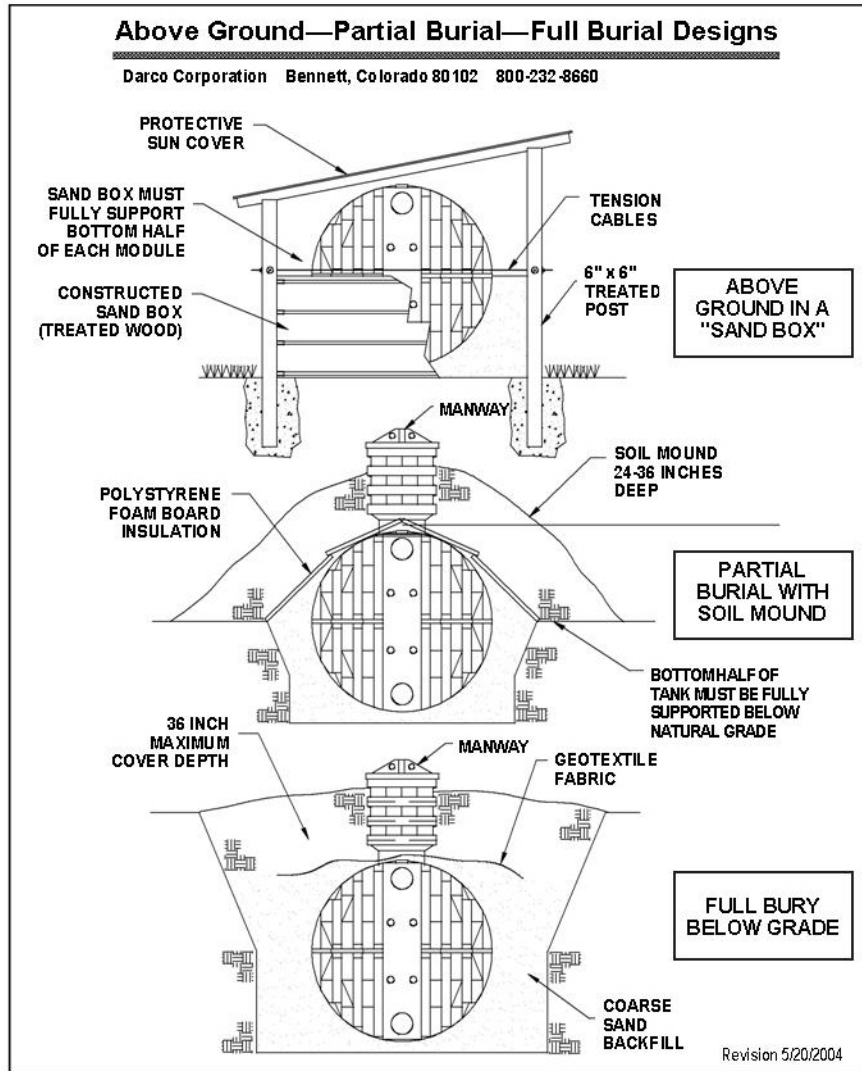
1. Backfill medium must totally surround and cover every module completely.
2. Use only dry, clean, washed and graded material.
3. No individual particles should be over 1/2 inch screen size.
4. Material must be free of trash, ice, snow, and powdered soil fines.
5. The following are examples of common approved materials:
 - *Coarse sand or squeegee*
 - *Pea gravel or B-B gravel*
 - *Crushed and screened rock chips*
6. Do not use generic structural fill, road base, or crusher fines as backfill.

BURY DEPTH OPTIONS

1. Above ground in a constructed "sand box" for support.
Fabricate cover or roof over sand box to reduce direct sunlight exposure.
2. Partial burial to spring line or deeper for proper support of the tank belly.
Mound soil cover to depth necessary for frost protection.
3. Full bury below grade with maximum cover depth of 36 inches.
Insulate with underground rated foam board for frost protection.

See these examples in the next illustration.

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HOLE SIZE RECOMMENDATIONS



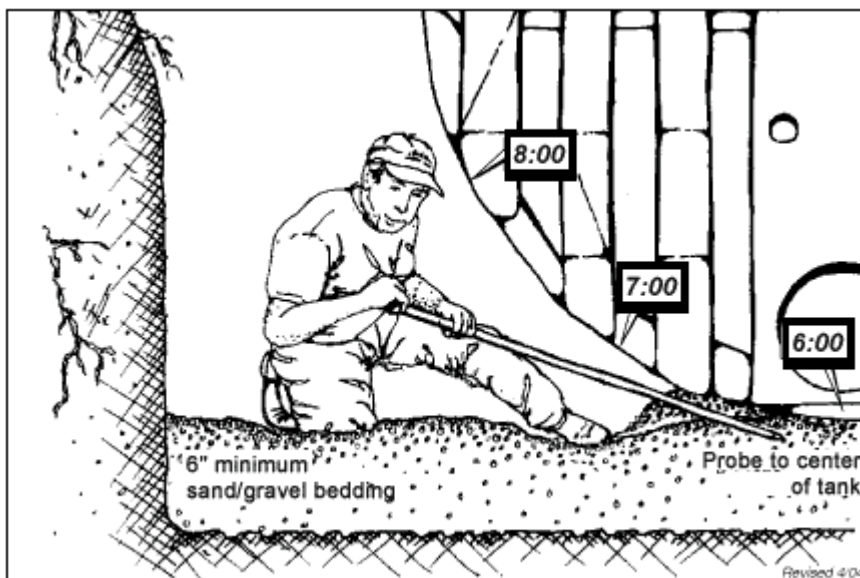
WARNING: Review OSHA 1926.650/P EXCAVATIONS

1. Allow a minimum of 18 inches between tanks and the excavation walls.
2. Tank rows in manifolded assemblies should be spaced 18 inches apart.
3. Bedding depth underneath modules must be at least 6 inches deep.

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FULL BURY INSTALLATION PROCEDURE

1. Always follow the Darco Installation Manual and call if you have questions.
2. Excavate to the appropriate hole size and depth and bed properly.
3. Position and assemble the modules in the prepared excavation.
4. Add 10% water ballast if water is available. **Burial may be done dry (without water).**
5. Backfill in 12 inch deep lifts working evenly around the tank.
6. Hand probe under and around each module as illustrated.
7. Backfill until sand completely covers all modules and rake smooth.
8. Apply geotextile fabric or approved underground foam board insulation.
9. Cover and mound soil to 36 inch maximum bury depth.
10. Fill tank with water immediately after installation to avoid floatation.
11. Chain or bolt the manway at all times to discourage children and vandals.
12. Disinfect potable water systems as directed by your local Health Department.
13. Review the following illustration depicting the probing process.
 - Probe tool is a 3/4 inch metal pipe about 4 feet long with tee handle and flattened tip for easy penetration deep into the sand backfill.
 - No voids or air pockets may exist under the tank for proper support.
 - Probe thoroughly from 4 o'clock around to 8 o'clock along both sides.
 - Probe deeply, but avoid violent tamping which may disturb the tank.

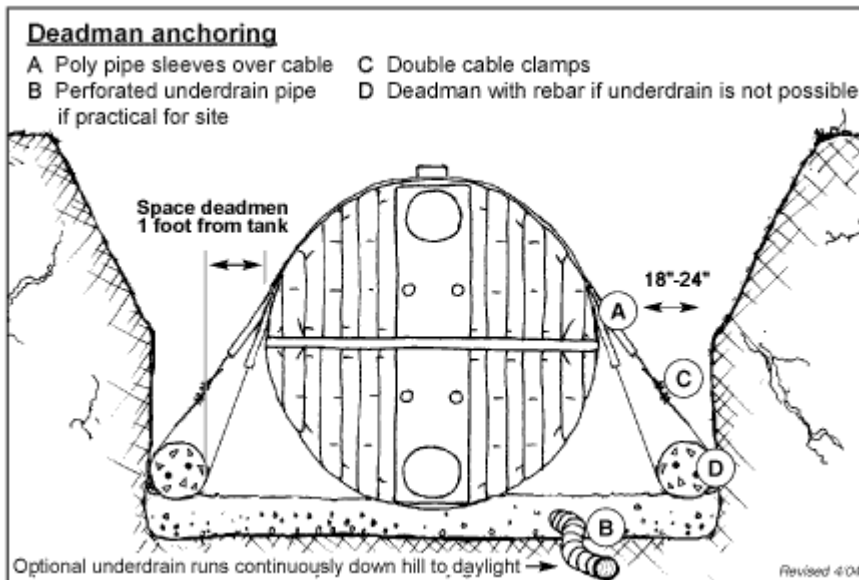


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OPTIONAL DEADMAN ANCHORS

OcTanks are not approved for use in sites known to be subject to high ground water, extreme run off, or riparian flooding conditions. Anchoring is insurance against occasional wet years or unusual temporary conditions when ground water may be elevated for a short period of time.

1. Pour 12 inch diameter reinforced concrete anchors in advance for proper cure.
2. Use only approved hardware as specified in your OcTank Installation Manual.
3. Locate anchor cables at the proper tank locations.
4. Soil cover must be 36 inch deep and extend at least 3 feet beyond tank sides.
5. Deadmen may be eliminated if a bed drain can be used to discharge any water accumulation.

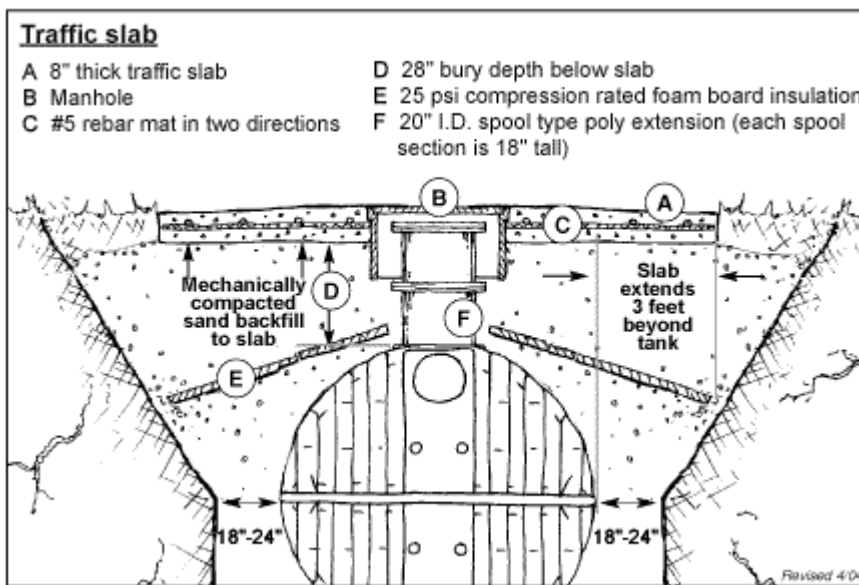


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TRAFFIC SLABS

Install OcTanks under a slab floor or driveway only when there is no other suitable site or option available for the water storage system. Follow our OcTank Installation Manual carefully and call if you have questions or concerns.

1. Bury depth below the 8 inch slab must be approximately 28 inches.
2. Select backfill (sand preferred) must be used exclusively between tank and slab.
No native soil may be used between the tank bed and the traffic slab.
3. Backfill must be compacted in 12 inch lifts using a **vibrating plate** machine.
Do not use a jumping jack style high impact compactor around OcTanks.
4. If insulation is necessary, use 25 psi rated polystyrene extruded foam board positioned just above the tank, as illustrated.



VENTING, WEEP TUBES, AND OVERFLOWS

All OcTank systems must be adequately vented to the atmosphere to avoid potentially destructive internal vacuum or pressure conditions.

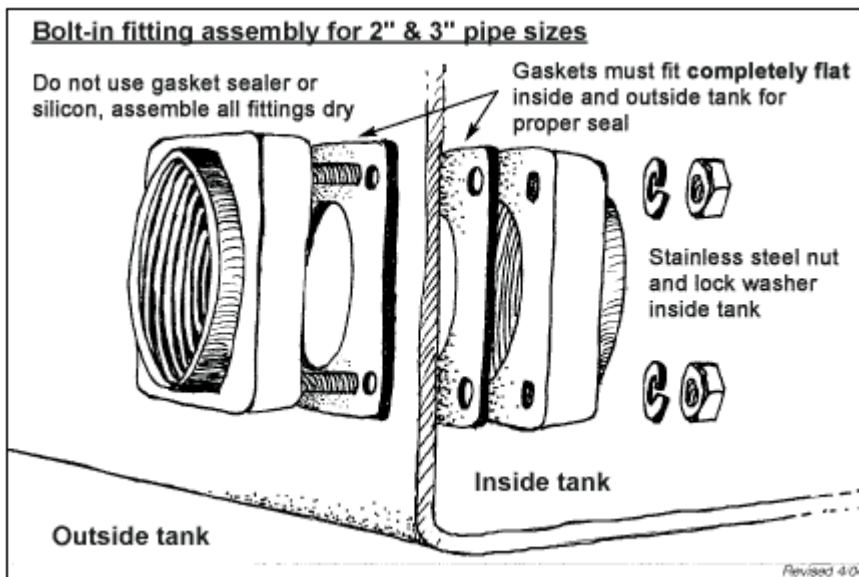
1. Vent size must match or exceed the system's maximum pipeline diameter.
2. A few inches of air space must be maintained at the top of every module.
3. Overflow piping or a weep tube must discharge any excess water.

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"BOLT-IN" STYLE FIELD INSTALLED FITTINGS

Molded polypropylene or stainless steel bolt-in style fittings are well suited to OcTank applications.

1. Fittings are available in 2 and 3 inch pipe sizes with female pipe threads.
2. "Bolt-ins" come with stainless steel hardware and EPDM rubber gaskets.



STANDARD ACCESSORIES

Darco offers many standard and special accessories compatible with OcTanks. Contact Darco or your local tank supplier for additional application information regarding any poly or fiberglass underground water storage system used for:

1. Potable water storage
2. Fire protection
3. Gray water storage for reuse
4. Sewage holding vaults and septic tanks
5. Rain or surface water storage
6. Landscape irrigation
7. Stock watering systems
8. Storm water detention

AREA MFG. AND SHIPPING POINTS FOR DARCO TANKS

Fiberglass Underground Tanks
Houston, Texas

Polyethylene OcTanks
Denver, Colorado