PO Box 220, Asquith SK S0K 0J0
PH: (306) 329-4884 Toll Free: (866) 722-6246 FAX: (306) 329-4886
Email: quotes@frpmocoat.com Website: http://www.frpmfg.com

LARGE VOLUME TANKS

Underground Installation Instructions
Anchor Kit Assembly and Warranty Information

LIMITED WARRANTY

Manufacturer's Warranty applies only to products manufactured by FRP Manufacturing

FRP/Mocoat Fiberglass Ltd. (FRP) fibreglass tanks are warranted against defects in material and workmanship and will perform according to our specifications provided that assembly and installation has proved satisfactory to FRP or agents.
Should any part (or parts) prove defective within five (5) years from the date of purchase, (proof of purchase required) it will be replaced or repaired by FRP without charge. Permission must be obtained from the factory prior to any warranty work being done.
Transportation to and from a dealer or factory will be at the owner's expense.
No allowance will be made for labour or other charges in replacement of defective parts.
Consequential damages, if any, are specifically excluded from this warranty.

What is not covered?

This warranty does not cover:

1. A product which has been repaired or altered without written authorization from the manufacturer or authorized Dealer or Distributor as to affect its use or operation.
2. Equipment or accessories, which are not manufactured by FRP, whether or not warranted by other manufacturers.
3. Leakage from customer tanks that have been improperly assembled or improperly installed.
4. Product that has been abused, mishandled, accidentally damaged or operated contrary to printed instructions provided.
5. Loss of time, inconvenience, travel expense or other matters not covered hereunder.
6. Excavation, landscaping, or other installation/removal costs.
7. Products not paid in full per terms of sale.
8. Any act of God.

No oral or written information or advice given by Dealers, representatives, agents, or employees shall create a warranty or in any way increase the scope of this warranty. The manufacturer does not authorize any person to extend the time of this warranty or to create or assume for it any other obligation or liability with respect to its products. No person, including Dealers and Distributors is authorized to make repairs or replacements under this warranty without the prior written approval from the Manufacturer. This warranty in not transferable or assignable.

THE MANUFACTURER SHALL NOT BE LIABLE FOR CONSEQUENTIAL, SPECIAL OR INCIDENTAL DAMAGE RESULTING FROM A BREACH OF THE EXPRESSED OR IMPLIED WARRANTY WHICH IS NOT DISCLAIMED HEREIN NOR ANY OTHER LOSS OR DAMAGE, EXCEPT AS SET FORTH ABOVE.

CONTACT INFORMATION FOR ANY WARRANTY INQUIRIES:
PHONE: (866) 722-6246 or (306) 329-4884
FAX: (306) 329-4886
EMAIL: **quotes@frpmocoat.com**

Return Form To Factory

TANK INSTALL CHECKLIST AND WARRANTY REGISTRATION FORM

This form must be completed at the time of installation and returned to FRP/Mocoat Fiberglass Ltd. for warranty approved and validation within ten (10) days of burial.

Customer Name: _____ Phone No.: _____

Address: _____
STREET ADRESS/BOX NO. CITY STATE/PROV

Tank Site Location: _____ Site Phone No.: _____

Tank Model No.: _____ Tank Invoice No.: _____

Contractor/Installer: _____Phone No.: _____

Address: _____
STREET ADRESS/BOX NO. CITY STATE/PROV

1. PREINSTALLATION

Completed By

- Read Burial Instructions On Tank _____
- Air Test: Air test completed as per installation guidelines _____
- Visual Inspection: No evidence of physical damage to tank (check for holes, cracks, crazes.). If any physical damage is found do not install tank! Contact FRP/Mocoat Fiberglass Ltd. _____
- Backfill Material: Backfilling must be maximum ¾" pea gravel or ½" crushed stone. Any other type of backfill must be pre-approved by FRP Manufacturing. **FAILURE TO USE SPECIFIED BACKFILL WILL VOID WARRANTY.** _____
- Excavation: Hole dimensions meet requirements from installation instructions._____
- Hole Condition: Indicate condition of hole: _____
  - ☐ Dry Hole: Water is not anticipated to reach tank. Area is not subject to flooding.
  - ☐ Wet Hole: Excavation may trap water. Area is subject to flooding. (If wet hole, please refer to special wet hole instructions)
  - Deflection measurements recorded on reverse

1. DURING INSTALLATION

Completed By

- Backfill material bed must be minimum of 12" _____
- Inspect tank for physical damage after setting into hole _____
- Backfill layers in 12" lifts and probed under tank and between ribs to eliminate all voids _____
- Tank is properly ballasted during installations (Wet-hole installation only) _____
- Indicate final backfill depth over tank. _____
- Piping connections are flexible connections where required. _____

I CERTIFY THE INSTALLATION OF THE ABOVE TANK AT THE ABOVE LOCATION MEETS ALL INSTALLATION REQUIREMENTS OF FRP MOCOAT AND ALL INFORMATION IN THIS INSTALLATION FORM IS TRUE.

Signature of Owner: _____ Date: _____

Signature of Installer/Contractor: _____ Date: _____

CONTACT FRP/FIBERGLASS LTD FOR ANY TECHNICAL INQUIRIES PHONE:
(866) 722-6246 or (306) 329-4884 FAX: (306) 329-4886
EMAIL: quotes@frpmocoat.com

Tank Deflection Checklist

	Tank#1	Tank#2	Tank#3	Tank#4
Tank Model #	_____	_____	_____	_____
Tank Deflection Measurements				
First Deflection measurement (tank in hole/no anchors)	_____	_____	_____	_____
Second Deflection measurement (tank in hole/anchors)	_____	_____	_____	_____
Third Deflection measurement (backfill to top of tank)	_____	_____	_____	_____
Measurement A-deflection with backfill at top 3rd measurement minus 1st measurement	_____	_____	_____	_____
Fourth Deflection measurement (backfill to subgrade)	_____	_____	_____	_____
Measurement B-deflection at subgrade 4th measurement minus 1st measurement	_____	_____	_____	_____

Deflection Table

Tank Diameter	Max Deflection
8’	1”
10’	1-1/2”

IF MEASUREMENT A OR B ARE GREATER THAN THE ABOVE MAXIMUM DEFLECTION LIMITS, IMMEDIATELY CONTACT FRP/MOCOAT FIBERGLASS LTD PRIOR TO INSTALLATION AT 1-866-722-6246.

CONTACT FRP/MOCOAT FIBERGLASS LTD FOR ANY TECHNICAL INQUIRIES
PHONE: (866) 722-6246 or (306) 329-4884 FAX: (306) 329-4886
EMAIL: quotes@frpmocoat.com

1. INTRODUCTION

- It is the responsibility of the owner, installer, and the operator to follow all requirements contained in this Installation Manual. In addition, they must comply with all Local, Provincial/State and Federal safety regulations that may apply to tank installations and operations.

- Instructions or procedures in the Installation Manual should not be interpreted to place any person's health or safety at risk. **Working in and around excavations can be dangerous!**

    - If you do not have the proper experience, contact a licensed contractor.

    - Proper installation is required to assure the longevity of FRP Storage Tanks. These instructions **must** be followed.

2. GENERAL

- Follow the directions provided by this Manual for safe and proper installation of fibreglass underground tanks. **Failure to follow these instructions will *void* the tank warranty and may cause tank failure**.

- Local Provincial/State and Federal Codes/Regulations always take precedence over FRP/Mocoat Fiberglass Ltd. requirements and/or recommendations.

- It is necessary to retain all correspondence regarding variations to installation requirements for a valid warranty claim. Photographs are welcome and suggested.

- Your tank Warranty Registration Form must be completed and returned to FRP/Mocoat Fiberglass Ltd. within 10 DAYS OF DATE OF INSTALLATION. Retain a copy of the completed form for your records. (See Appendix).

- All returns must have an RMA (Return Material Authorization) provided from FRP/Mocoat Fiberglass Ltd. Returned goods must be shipped prepaid and will be subject to a 25 percent restocking fee. Special made-to-order fibreglass products and/or components are non-refundable.

- FRP/Mocoat Fiberglass Ltd. does not design or engineer the actual installation. It is the owner's responsibility to hire a licensed Professional Engineer and that Engineer may provide specifications that exceed these minimum requirements and is responsible for the final installation design.

3. HANDLING

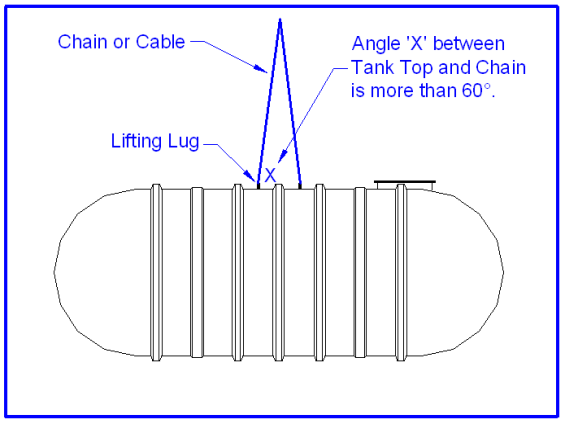
Tank Inspection

- Prior to unloading the tank, visually inspect the tanks entire exterior surface to ensure that shipping or handling damage has not occurred. Then sign the shipping document to accept the tank as delivered. **DO NOT ATTEMPT REPAIRS**, for any damaged areas, contact your Factory Sales Representative immediately.

Unloading of Tank

- ***Warning*** – Do not release the ratchet straps securing the tank to the truck or flat bed trailer until the lifting equipment is secured to the tank's lifting lug(s). **FAILURE TO DO SO COULD RESULT IN DEATH OR SERIOUS INJURY.**

- Tanks must be lifted by using the lifting lugs only. Use a spreader bar for lifting a tank that has two or more lifting lugs. Use a lifting cable instead of a spreader bar if the angle between the cable and the tank top exceeds 60 degrees. (from horizontal).



- *Do not* drop, impact, roll the tank or cause sudden stops while lifting the tank. Handle the tank with care.

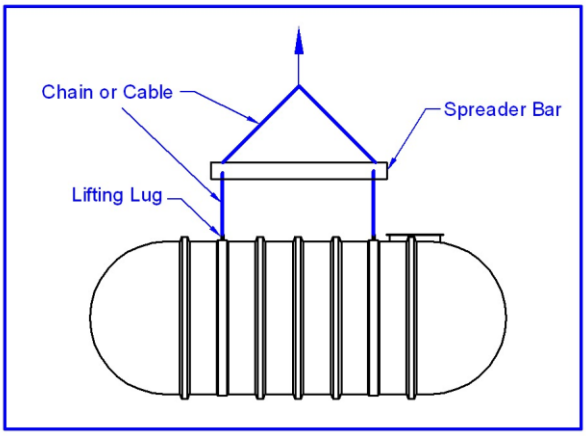


FIGURE 3-1

- Some tanks may be rotated on the truck for shipping purposes. They may have extra lifting lug(s) to aid in the loading and unloading. When the tank is rotated and has extra lifting lugs, use all the lifting lugs that are located on top of the tank in its rotated position to unload the tank.

- Install the tank using all the lifting lugs that are located on top of the tank in its upright position.

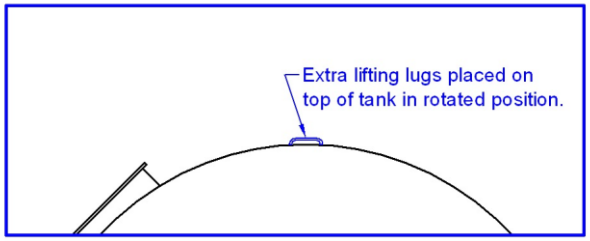


FIGURE 3-2

- Be sure to use equipment that is load rated to handle the weight of the tank.

Storing Tank

- Select a solid, level area to place the tank. Make sure the area is clear of rocks and debris.

- Securely anchor the tank at each end with a rope to prevent it from moving in high wind.

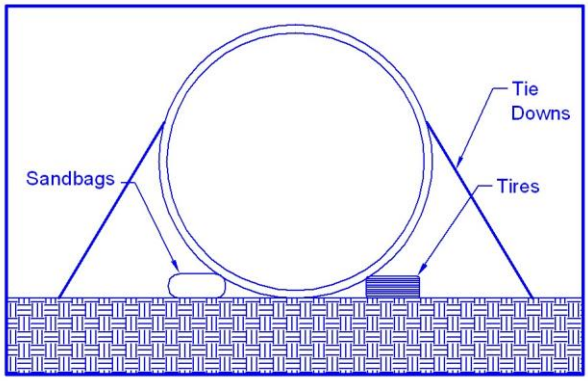
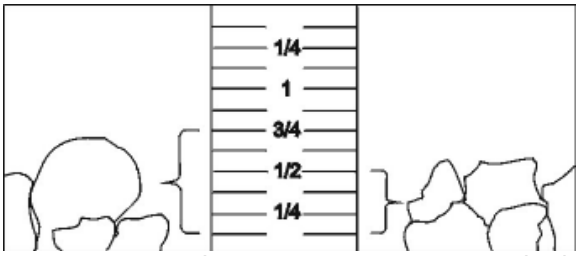


FIGURE 3-3

4. BED AND BACKFILL MATERIAL

The object of backfill is to construct a uniform, homogenous envelope of firm, aggregate material around the tank.

Approved Backfill Material



- Pea Gravel: A natural, rounded aggregate, clean and free flowing, with particle size not less than 1/8 inch or more than ¾ inch diameter. Backfill should be well graded (Uniform distribution in size of material).

- Stone or Gravel Crushings: Stone or gravel crushings, clean and free flowing with angular particle size not less than 1/8 inch or more than ½ inch diameter.

  Note: Using other than approved bedding and backfill materials without prior written authorization from FRP/ Mocoat Fiberglass Ltd. will ***void*** the tank warranty.

- Use only specified backfill material throughout. The backfill material must **not** contain any foreign material, such as but not limited to rocks, brick, clay, wood, native soil, ice or other foreign debris.

- Sharp objects must not contact the tank at any time. Remove any supports used for the installation of piping prior to backfilling to grade.

- If the tank must be filled with fluid while placing the backfill, the fluid level inside the tank must not exceed the level of the surrounding backfill material by more than 24 inches.

The use of approved backfill material is critical to long term tank performance.

- Do not mix approved backfill with sand or native soil.
- Do not backfill tank with sand or native soil.
- Require your backfill supplier to certify, with a sieve analysis, that the backfill meets this specification.
- Sieve analysis must be attached to the Tank Installation Checklist.
- Keep backfill dry and free of ice in freezing conditions.

Use only approved pea gravel or crushed stone!

5. PRE INSTALLATION TESTING

DO NOT PRESSURIZE 8' DIAMETER TANKS OVER 5 PSIG (3 PSIG FOR 10' DIAMETER TANKS). TANK DAMAGE, PHYSICAL INJURY OR DEATH MAY RESULT.

VISUAL AIR SOAP TEST

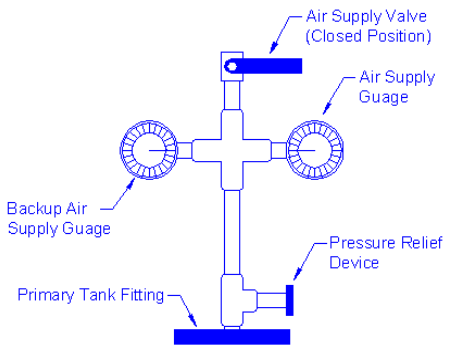
All FRP tanks are tested prior to shipping, but the air soap test is to be performed on all tanks after unloading from the truck at the job site and prior to installation in order to verify the absence of shipping or handling damage.

- Tanks must be vented at all times except during testing.

FOR ALL TESTS:

- Contractor/Installer must provide a test manifold with two air supply gauges, as shown (in figure below). Each air supply gauge must have a maximum full-scale reading of 15 psig with 1/4 psig or 1/10 psig increments and a pressure-relief device set at 1 psig above test pressure.

Tank Test Manifold



- Prepare for testing.
- Replace all fitting plugs with plugs suitable for the product to be stored in the tank.
- Clean factory pipe dope from plugs and fittings.
- Apply pipe dope suitable for the material being stored in the tank.
- Reinstall and tighten fitting plugs.
- Assemble the required number of "Tank Test Manifolds" (Figure C-1).
- **Gauges must have a maximum full-scale reading of 15 psig (40 kPa) with 0.25 psig (1 kPa) or smaller increments.**
  - Pressure-relief device must be sized and set to prevent the tank from being pressurized in excess of the maximum allowed test pressure.

- **DO NOT HOOK UP TESTING MANIFOLD TO UNLIMITED AIR SUPPLY. BE SURE TO HAVE AIR SUPPLY REGULATED.**

Before starting test, notify all people on test site to remain in safe location. ALWAYS ATTEND TO THE TANK DURING THE TEST. Do not stand on or approach endcaps, manways, or fittings while tanks are under internal pressure. Do not lift or hoist tank under pressure. These actions could result in death or serious injury.

- Never pressurize 8' diameter tanks over the allowable pressure of 5 psig (33 kPa).
  Never pressurize 10' diameter tanks over the allowable pressure of 3 psig (20 kPa).
- Pressure gauge readings can be affected by changes in ambient air temperature. Allow for pressure fluctuations when tanks are subject

to temperature changes. An increase in temperature will increase the internal tank pressure, which could lead to tank damage, injury, or death. A decrease in temperature will decrease the internal tank pressure, which may lead to false tank reading.

- Prepare Soap Solution.

Warm weather soap solution

- 5 gallons of water
- 8 ounces of household liquid dishwashing detergent.

Freezing conditions soap solution

- 4 gallons of water
- 8 ounces household liquid dishwashing detergent
- 1 gallon windshield washer solution.

- The entire tank surface must be covered with the soapy solution and visually inspected for leaks, as indicated by the presence of active air bubbles.

- Anytime bubbles are observed around fittings, plugs, and gaskets; tighten and retest.

- In the unlikely event a tank leak is discovered, discontinue the installation and immediately call FRP/Mocoat Fiberglass Ltd.

TESTING TANKS

Perform the following in the order listed.

1. Comply with the requirements of Section C.
2. Connect "Tank Test Manifold" to a tank fitting.
3. Connect the pressure source to the "Tank Test Manifold."
4. Pressurize tank to (5) psig maximum (3 psig for 10' diameter tanks).
5. Monitor the pressure readings for 30 minutes for any loss in pressure from the initial reading which may indicate a leak.
6. While under pressure, cover tank outer surface, including fittings and manway(s), with soapy solution and inspect.
7. After completing air test, release pressure.
8. Remove all gauges, valves, and hose assemblies.
9. Replace and tighten fitting plug(s).
10. Replace the plastic vent plugs in the open fittings.

7. EXCAVATION PARAMETERS

- Slope hole sides as required by by OH&S/OSHA & other local, provincial, state and federal regulations.
- FRP Tanks shall be installed between 2' and 7' of cover depth including pavement or concrete slab thickness. Contact FRP Manufacturing (2010) Inc for a cover depth exceeding 7'.

Tank Spacing

Stable Soil Condition

- Holes must be large enough to allow for the minimum required distance between tank at ribs, and the minimum required distance from the ends and side of the tank to the walls as specified in Provincial/State Requirements. *Under no circumstances should the distance between the tank and the hole walls be less that 18 inches.*

Unanchored tanks
-Minimum clearance between tanks and tank to hole side is 18".

Anchored tanks
-Minimum clearance between anchored tanks is 24" or two times the wideth of one concrete deadman and the greater of 18" or deadman width or tank hole clearance.

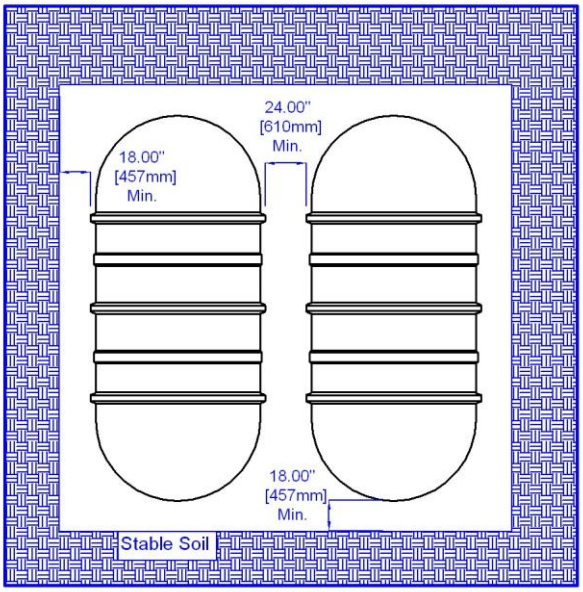


FIGURE 4-1

Bedding Requirement

- A minimum of 12" of specified backfill shall be uniformly placed under each tank

Unstable Soil Condition

- FRP/Mocoat Fiberglass Ltd. recommends that the tank owner seek advice from a licensed Geotechnical Engineer if the soil is extremely soft, unstable, expansive clay, quicksand, or other difficult and/or weak soil condition. Do not install tanks in loess.

TANK LOCATION - NEARBY STRUCTURES

- The tank owner is responsible for determining the proper location of a tank excavation. FRP/Mocoat Fiberglass Ltd recommends contacting a local foundation professional engineer for technical guidance and recommendations for tanks located close to buildings or other structures. When selecting a
- tank site, care must be taken to avoid undermining the foundations of new or existing structures.
  Contact a qualified structural
- engineer if tanks must be located close to buildings or other structures than could transmit soil stress to a buried FRP tank.

8. GEOTEXTILE FABRIC

Geotextile fabric allows the passage of water but helps prevent the migration of approved backfill into the native soil and vice versa. Migration may compromise the backfill support of the tank.

Do not use plastic sheeting, or any other material that may tear or degrade over time, as a replacement for geotextile fabric. A geotextile fabric must permit the flow of water while maintaining segregation of the backfill from the native soil.

GEOTEXTILE FABRICS ARE REQUIRED FOR ANY OF THE FOLLOWING INSTALLATIONS

- Areas subject to frequently changing ground water levels.
- Water conditions with silty soil.
- Muck, bog, peat, swamp, landfill type areas or any other situations where the soil is inherently unstable.

GEOTEXTILE FABRIC INSTALLATION

- Line the side and bottom of the excavation with geotextile fabric.
- Overlap adjoining geotextile panels a minimum 12".
- Place backfill on top of the geotextile fabric to hold it in place.
- In wet hole conditions, backfill on top of the geotextile fabric is necessary to sink and hold it in place.

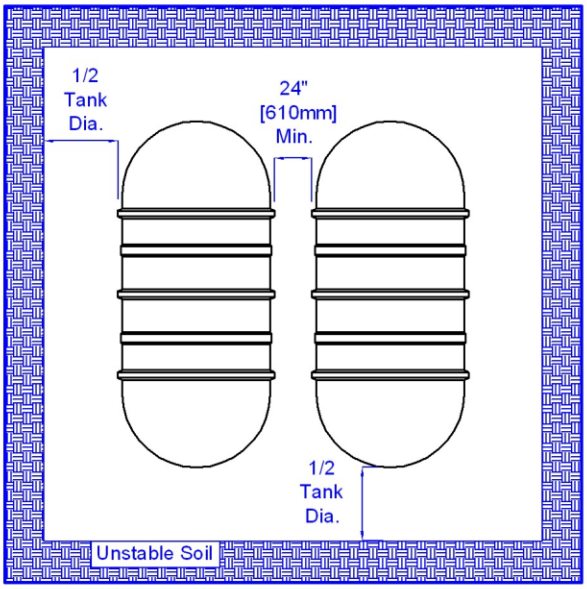


FIGURE 4-2

9. PLACING TANK IN HOLE

- Carefully lower end of the tank into the excavation by using lifting straps and/or a spreader bar as required
- **DO NOT USE CHAINS OR WIRE SLINGS AROUND THE TANK**
- Use guy ropes to guide the tank to prevent tank from rotating.
- **DO NOT** roll the tank to move it.
- Always take extra care when handling a tank with a bottom fitting or sump to prevent damage to the fitting.

10. COVER

Minimum Cover – No Traffic

- Two (2) feet of approved backfill material is the minimum cover required if there will be no vehicle load over the tank at any time and if the tank is properly anchored.

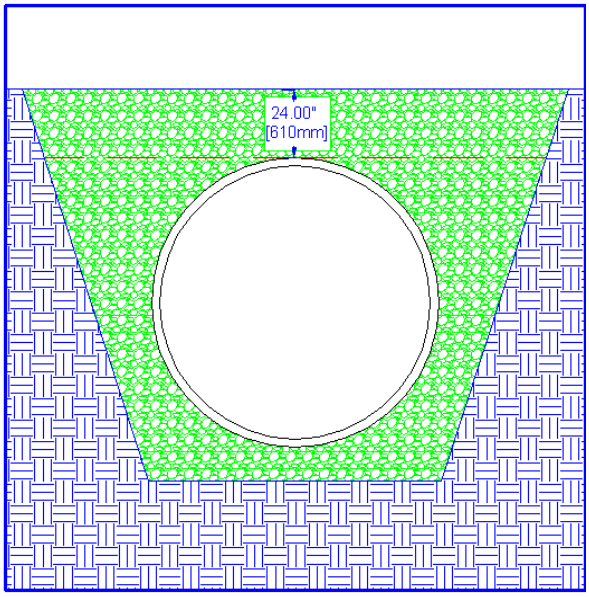


FIGURE 7-1

****Minimum Cover – Traffic Loads (Light)**

- Three (3) feet of backfill material on top of the tank with a reinforced concrete surface pad at least eight (8) inches thick. No traffic loads permitted without designed concrete traffic pad.

- The concrete pad must extend horizontally at least one (1) foot beyond the tank in all directions. Asphalt pavement is not a substitute for concrete pads.

- The concrete pad should be designed be a qualified and licensed structural engineer.

Note: **No H20 Wheel Loads shall be subjected to tank unless tank is designed for such loads and it is installed according to specifications.**

11. INSTALLATION – Dry Hole

- Excavate the site to allow for a two (2) feet clearance around the outside of the tank.

Note: A seven (7) feet burial tank must not have any more than seven (7) feet of specified backfill material measuring from the top of the tank to ground level.

Backfill Bed

- Ensure hole is deep enough to provide a 12 inch minimum backfill of approved backfill material over the hole bottom or concrete slab.

- ***Do not*** place the tank(s) directly on concrete slabs.

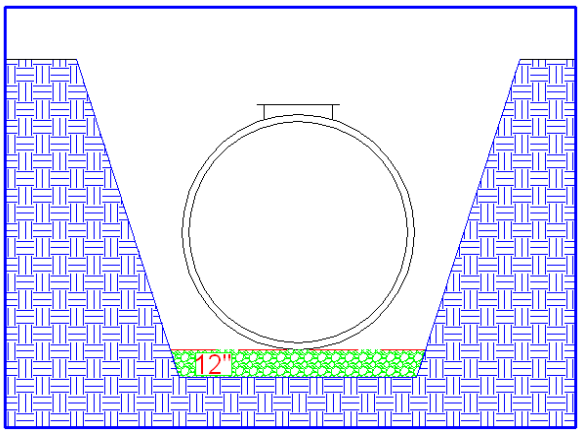


FIGURE 8-1

- ***Do not*** use timber, beams, or cradles to support the tank(s).

Warning: **USE ONLY SPECIFIED BACKFILL MATERIAL FOR BEDDING.**

Side/End of Tank

- After placing the first 12” lift of approved backfill, use a long probe from the edge of the hole to push the backfill in place. (a 4x4 post works well) Ensure that all voids between ribs and under the tank are completely filled to ensure the tank is fully supported.

  Take extra care when probing the backfill not to strike tank since tank damage may result.

- Continue backfilling the tank with the same backfill material. Backfill in uniform layers no greater than 12 inches thick.

- The quality of backfill material around the tank between the 4 and 8 o'clock positions (see illustration below) is critical to ensure quality tank performance.

- Rounded smooth pea gravel is free flowing and will normally flow easily around the tank haunches. Crushed stone often requires some manual placement and effort to ensure that the haunches are uniformly supported.

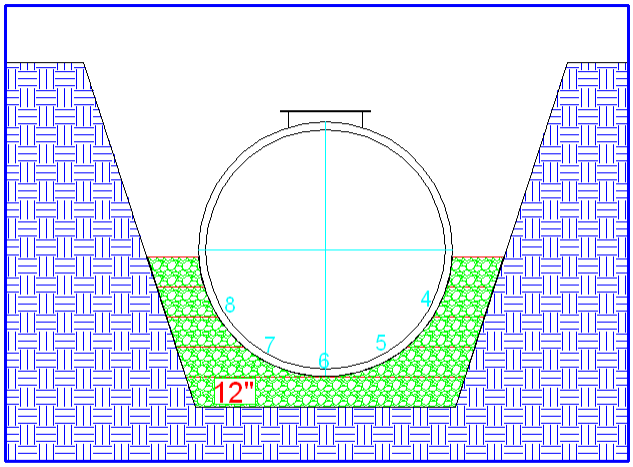


FIGURE 8-2

Top of Tank

- Continue backfilling with the same backfill material above the top of the tank in maximum lifts of 12 inches to finished grade or to level of bottom of concrete traffic slab.

  Warning: Do not permit vehicle traffic or other types of heavy loads on the tank; this will void the warranty!

- Contact FRP/Mocoat Fiberglass Ltd. for special order tanks that can accommodate heavy wheel loads or extreme conditions or any other heavy load performance requirements. Examples are heavy jet air craft and crane loads.

12. INSTALLATION – Wet Hole

Water Level, Pumping, Bed

Install well point or pump out wells

- Excavate at the corners of excavation. Pump until water is *below tank bottom.*

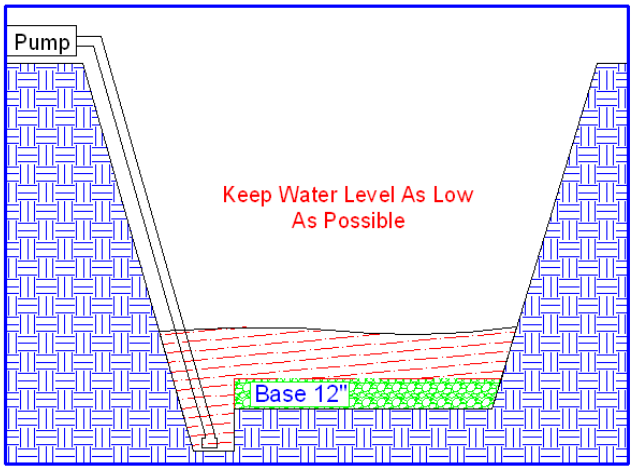


FIGURE 9-1

- Install a 12 inch bed of specified backfill material and position the tank on the bed.

- *If extremely difficult water conditions* at the site are suspected, such as underground streams, surface run-off locations, shorelines or wide fluctuations in water level, increase the bed thickness to 18 inches and

clearances between the tank and hole walls to a minimum of 24 inches.

Ballasting

- If the ground water level is expected to exceed the tank bottom level at any stage during the placement of the backfill, ballasting is required until the tank is anchored and completely backfilled to grade.

- The tank must not float or move after starting the backfill placement.

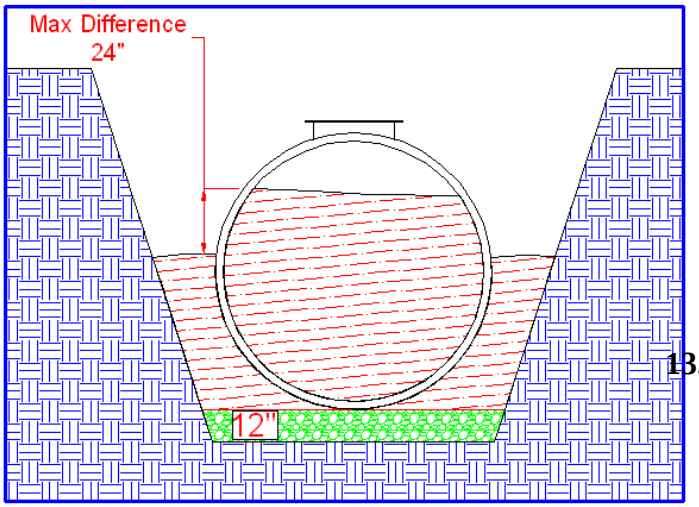


Figure 9-2

- Maintain water ballasting level in the tank to a maximum of 24 inches above the water level in the hole.

- A lifting cable may be used to guide tank as it sinks. DO NOT PERMIT THE GUIDE CABLE TO BECOME TOO TIGHT TO PREVENT OVERLOADING OF THE LIFT LUGS

Backfill Placement

- Ensure that the minimum required clearances are maintained before starting backfill placement. See Section 4.

- Proceed with the backfill placement as per the Dry Hole Installation in Section 11 using specified backfill material.

- To prevent the tank from floating during spring thaw or high water table condition, leave the tank approximately 1/3 full during the winter months. This weight will keep the tank in place. Freezing of sewage of water when the tank is 1/3 full will not affect the tank as ice will have room to expand beyond the 1/3 level. Do not permit liquid to freeze beyond the 1/3 full level!

13. INSTALLATION – Freezing Weather

- Ensure the aggregate is free flowing without the use of calcium chloride.

- DO NOT USE FROZEN CLUMPS OF BACKFILL MATERIAL (**Caution:** Steaming may cause subsequent refreezing of fill material).

- Ensure that the hold bottom and sides are free of snow and/or ice.

14. ANCHORING

General

- ***<u>THE DECISION WHETHER OR NOT TO ANCHOR THE TANK AND THE SELECTION OF THE ANCHORING METHOD IS THE SOLE RESPONSIBILITY OF THE OWNER.</u>***

- Minimum depth of cover (with anchors) is 2 feet. Minimum depth of cover (without anchors) is 5.5 feet, including an 8" structural concrete slab, or 6' 2" without slab.

- In high groundwater conditions use minimum cover of 4' with anchors.

Use of Deadmen

- Deademen are typically reinforced concrete beams. Deadmen sections must contain at least two anchor points.

- Lay the deadmen in the excavated hole parallel to the tank and outside of the tank "shadow".

- Bottom of deadman shall sitting on floor of excavated hole.

- Ensure that the deadmen are outside of the tank "shadow".

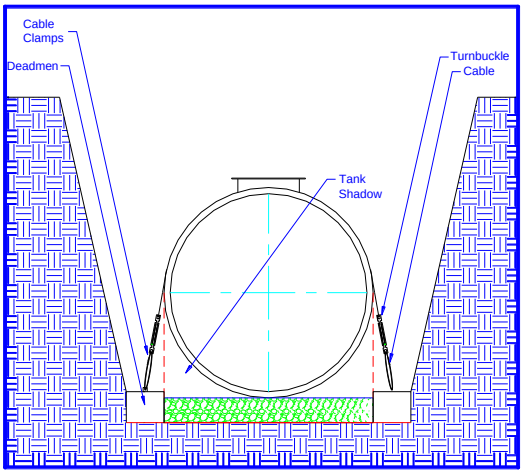


FIGURE 11-1

Use of Anchor Pad

- An anchor slab is typically a reinforced concrete base.

- Anchor pads shall be designed by a licensed structural engineer

- The total length of the slab must extend at be the same length of the tank and extend at least 12 inches beyond the tan in all directions.

- The thickness of the reinforced slab should be a minimum of eight (8) inches.

- Provide a separate anchor point for each hold down strap.

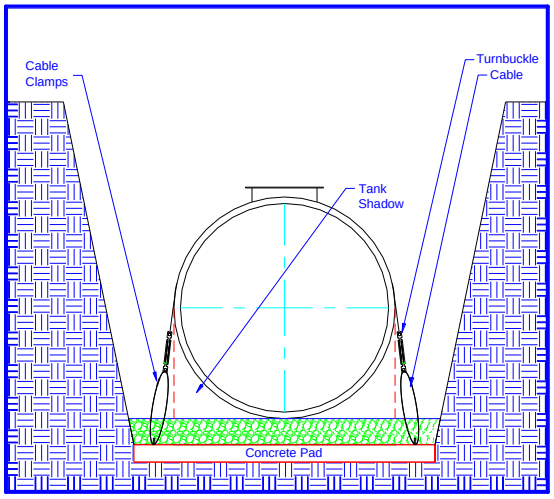


FIGURE 11-2

- Allow for sufficient depth in the excavation for 12 inches of approved bedding material between the base of the tank and the anchor slab.

Hold-down Straps

- Only a FRP/Mocoat Fiberglass Ltd Tie-Down Kit may be used when anchoring an FRP/Mocoat Fiberglass Ltd. tank.

- Place the fiberglass reinforced plastic (FRP) straps atop the structural ribs **only** at the designated ribs. If FRP straps are ordered at time of tank order, there are anchor guides on the designated anchor ribs. These guides assist in properly placing the straps over the ribs.

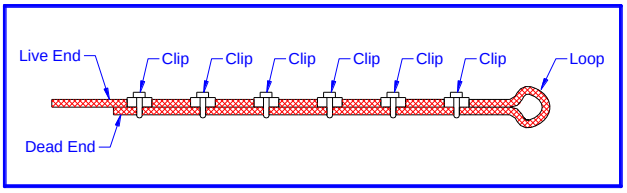


FIGURE 11-3

- Place hook end of FRP strap onto anchor point of deadmen/concrete pad.

- Place the turnbuckle between the D-ring end of the FRP strap and the anchor point of the concrete deadmen/pad.

- Hand tighten the turnbuckle to a snug position and then tool tighten using the same number of turns on each turnbuckle to maintain a consistent tension on each FRP strap.

- Evenly distribute loads by tightening all hold-down straps uniformly until they are snug without causing deflections in the tank.

DO NOT OVERTIGHTEN TO PRECLUDE EXCESSIVE TANK DEFLECTION.

- Included in the Tie-Down Kit are (2) ½" diameter by 10' long cables. If this is required:

    - Using the steel cable, loop through the turnbuckle and around the deadmen, or concrete pads, steel tie-down rods.
    - Use six (6) cable clamps and clamp the cable together.
    - The saddle of the clamp must go over the live portion of the cable (AS SHOWN IN FIG 11-3).
    - Do not permit steel cables to contact the tank shell wall.

Tie-Down Kit Content – 8’ Diameter

1 – Fibreglass Reinforced Plastic (FRP) Strap (3/16” thick x 2” wide x 181”L)
2 – Galvanized Aircraft Cables (1/2” diameter by 10 feet long)
12 – Galvanized 1/2” Cable Clamps
2 – Galvanized Turnbuckles ¾” by 9” (5200 pounds working strength)

Tie-Down Kit Content – 10’ Diameter

1 – Fibreglass Reinforced Plastic (FRP) Strap (3/16” thick x 2” wide x 223”L)
2 – Galvanized Aircraft Cables (1/2” diameter by 10 feet long)
12 – Galvanized 1/2” Cable Clamps
2 – Galvanized Turnbuckles ¾” by 9” (5200 pounds working strength)

Number of Kits Required – 8’ Diameter

8 Foot Diameter Tank	Kits Required
B2000	1 Kit
B2500 – B5000	2 Kits
B6000 – B-11000	4 Kits
B12000 – B15000	6 Kits

Number of Kits Required – 10’ Diameter

10 Foot Diameter Tank	Kits Required
BX5000 – BX6000	2 Kits
BX7000 – BX12000	4 Kits
BX13000 – BX20000	6 Kits
BX22000 – BX30000	8 Kits
BX34000	10 Kits

- Tank anchor length should equal tank length.