Fiberglass Storage Tanks

Scope

This section covers our fiberglass storage tank specifications and handling/installation instructions for aboveground, underground, and semi-buried.

General

Tanks shall be fabricated and assembled in full conformity to ANSI standard D3299-10 and D4097-01 unless exceptions are noted by the customer/engineer. When additional specifications are issued for special application, they shall also be considered a part of this specification as it pertains to the manufacturing of the tanks.

Resin: The resin used is a commercial grade, corrosion-resistant thermo-set that has either been evaluated in a laminate or determined by previous documented service to be acceptable for the service conditions. Potable water storage tanks are made with FDA approvable resin.

Fiberglass: The fiberglass used is a commercial grade, E-type glass fiber with sizing that is chemically compatible with the resin used.

Gel-Coat: The gel-coat (coloring) used on the tanks is approved for UV protection.

Inspection: At the time of delivery the customer shall be responsible for inspecting the tank for damage during transit. Both the inside and the outside of the tank must be inspected. If damage has occurred it should be noted on the delivery receipt prior to signing acceptance, whether it is a Montana Fiberglass truck or common carrier. In the case of a common carrier, a claim should be immediately filed by the customer with the delivering carrier. If delivery is made by a Montana Fiberglass truck, the customer should contact the factory immediately prior to unloading or acceptance. The customer accepts all future responsibility for a damaged tank if the procedures set forth are not followed. Minor damages can be repaired at delivery site.

Product Marking

The tank will be marked to identify the manufacturer, customer, and date of manufacture, capacity, resin used, and design (temperature, pressure and vacuum).

Specs

Manufacturing of any tank cannot be started without knowing the following:

- Placement of any and all fittings/manway
- Knowledge of any extra specs (including but not limited to extra fittings/manways, ladders, etc.)
- Knowledge of material the tank will be used for (i.e. stock water, potable water, chemicals, including temperature of materials)(filters are recommended for potable water systems)
- Knowledge of design of tank (i.e. aboveground, underground, semi-buried)

(If tanks are manufactured for chemicals, in order to ensure that the quality of resin is approved for the chemical we must receive an MSDS classifying the chemical)

A signed diagram showing the placement of all fittings/manway and any extra specs, as well as the material & design of tank must be given before the tank will be manufactured.

Our tanks come standard with the following:

- 1 – 2" inlet
- 1 – 2" outlet
- 1 – 2" vent
- 1 – 24" manway

Aboveground: Aboveground tanks are designed for pressure no greater or lower than atmosphere. Aboveground tanks have been pressure tested to 1 psi of air pressure to check for leaks.

Underground: Underground tanks are designed to be buried, only when following burial specifications. Tanks have been vacuum tested to -6.5 Hg (12' Diameter) and -9.1 Hg (6' Diameter) to test for stress of earth and leaks.

Semi-Buried: Semi-buried tanks are designed as above ground tanks, except for added thickness toward the bottom to allow the tank to sit into the ground approximately 3'. Semi-buried tanks are designed to be an alternate method to tying down above ground tanks.

Thickness: Thickness of tanks may vary depending on the design of the tank.

Aboveground Normal Thickness:

- 6' Diameter: 1/4" thick
- 12' Diameter: 1/4" to 3/8" thick

Underground Normal Thickness:

- 6' Diameter: 1/4" to 3/8" thick
- 12' Diameter: 3/8" to 1/2" thick
  All underground tanks have reinforcement ribs roughly 3' apart

Handling & Installation

The following handling and installation instructions are intended to help customers install tanks both properly and efficiently.

Handling and installation instructions are only recommendations. They do not relieve the purchaser from full responsibility for proper inspection, handling, and installation. Improper handling and/or installation, which results in damage or tank failure, is the sole responsibility of the purchaser. Failure to comply with handling and/or installation instructions will void the tank warranty. Unknown situations or conditions are also the burden of the customer. Any presence of Montana Fiberglass personnel or authorized representative at the installation site does not relieve the purchaser of their responsibilities.

Montana Fiberglass tanks are designed to withstand normal handling.

Note the following handling precautions:

- NEVER roll or slide a tank. Lift the tank using a crane or other approved method.
- Operators of hoist equipment should follow proper rigging procedures at all times.
- NEVER allow tank to swing out of control.
- DO NOT drop or allow hard impact from tools.
- AVOID the use of equipment inside the tank that could scratch or damage the inner corrosion barrier
- NEVER wrap cables or chains around the tank (straps are appropriate)

Bedding & Backfill: Bedding and backfill must be clean, washed sand, or pea gravel (if sand is unavailable)(pea gravel must be rounded and washed 1/8" to 3/4" in size, no larger than 3% passing a 3/8" sieve)

Anchor: It is recommended that concrete runners with straps are used to hold down the tank, or drain tile be installed along the sides of the tank to prevent the tank from popping out of the ground if water fills up the area around tank.

Pipe Connections: Flexible pipe connections should be used where possible. If rigid piping must be used, be certain it is self-supporting. If rigid piping is used and is not self-supporting, and results in damage to a tank fitting, the warranty will be void. If there is rigid piping, the tank cannot be allowed to settle, or the warranty will be void.

Water Fill Testing: Montana Fiberglass recommends that each tank be water-filled (hydro-tested) for a 24 hour time period after the tank is installed, and prior to use.

Required Foundation for Installation of Cisterns

Aboveground: Aboveground tanks must be tied down using cable/guy wires to ensure the wind does not blow them over. Aboveground tanks have two types of installation foundations: either stable soil or concrete.

Stable soil: Be sure to start with a solid level gravel base, compact if necessary. The center of the bottom (where the steel lifting lug/hook is) must be dug out approximately 3" deep and 6" in diameter. There must be a minimum of 2" of sand (recommended) or pea gravel (is sand is unavailable), to set the tank on.

Concrete: Ensure the tank is approved for concrete before installing. The concrete must be swept clean with no debris under the tank before setting the tank up.

Buried: Ensure the tank is approved for buried use before installing. The entire tank must have sand between the tank and the soil to ensure no rock could puncture the tank (2-3" of sand should be sufficient), or pea gravel (if sand is unavailable)

Semi-Buried: Ensure the tank is approved for semi-buried use before installing. Built for depth of 3' in ground (standing upright), the initial procedure is the same as Stable Soil (aboveground) for the bottom of the tank. Be sure to start with a solid level gravel base, compact if necessary. The center of the bottom (where the steel lifting lug/hook is) must be dug out approximately 3" deep and 6" in diameter. There must be a minimum of 2" of sand (recommended) or pea gravel (is sand is unavailable), to set the tank on. The side wall buried under the dirt must have sand between the tank and the soil to ensure no rocks could puncture the tank (approximately 6"), or pea gravel (if sand is unavailable).

Cistern Warranty Label

Montana Fiberglass, Inc. warranties Cisterns/Water Storage tanks against material and workmanship for one year; if the tank is faulty because of poor workmanship or materials, we will replace or repair the tank free of charge. This warranty does not cover failure due to abuse, acts of God, improper installation, or putting a substance in the tank that the tank is not designed or temperature rated for. This tank CANNOT be set on concrete- You MUST adhere to Montana Fiberglass Required Installation Rules for concrete installations.