VPC Tanks | Vertical Tank FAQs

General Information About Vertical Water Tanks

1. What is a vertical water tank? What is a plastic vertical water tank?

A vertical water tank is an upright storage container used to hold and store water so it can be released from the tank by the owner on-demand for water-requiring activities around the property. They are made to be placed above ground and are cylinder shaped with a wide, flat base to provide physical strength and stability. A plastic vertical water tank is a specific class and type of water tank that has been made from certified safe and hygienic BPA-free high-density polyethylene (HDPE). HDPE is a heavy-duty, versatile, and commonly used plastic with strengths and properties well-suited for a water storage container.

2. How does a vertical water tank work?

Vertical water tanks work by collecting and storing water in an upright container capable of holding hundreds, if not thousands, of gallons of water. The tanks are made with an inlet port and an outlet port so the owner can easily add or dispense water as needed. These ports are standard bulkhead fittings that allow connecting PVC pipe, a plumbing valve (such as a ball valve), or a garden hose (when used with an adapter) to the tank. Vertical water tanks also have a 16″ vented manway lid on top to allow for inspection inside the tank or maintenance such as cleaning.

3. Can I use this vertical water tank in my state?

In most cases, yes, you can use Valencia Pipe Company water tanks in your state. Vertical water tanks are not heavily regulated by U.S. state or county rules and codes. This is because they are made only to hold water and are not often connected to an indoor potable water supply system. However, depending on your specific location, there may be certain requirements regarding tank quality, installation, and maintenance. Also, some homeowner's associations (HOAs) do not allow vertical water tanks in their area of oversight.

4. Are there any legal or regulatory concerns when buying and installing a vertical water tank?

Legalities and regulations around vertical water tanks often have to do with maintaining water quality and installation, particularly when the tank will be used in particular setups, such as indoor potable water supply and fire suppression systems. Some jurisdictions require water tanks to be NSF Standard 61 certified. While others may require a dedicated foundation or certain setback distances, meaning how far the tank is from buildings or equipment such as wells or utilities.

If a vertical water tank will supply water indoors, such as with a groundwater well expansion and treatment tank, there will often be specific plumbing and building codes to follow.

5. Can vertical water tanks be completely emptied?

Yes, as they are built for above ground placement and use, vertical water tanks are made to remain physically sound and unaffected by whether they are completely filled or completely empty.

6. Can one or more vertical water tanks be connected together?

Yes, poly water tanks can be connected to increase the total volume of a water storage system. They can be connected by pipes or hoses at either their inlet or outlet, or an entirely new bulkhead fitting can be installed solely for this purpose.

7. What can vertical water tanks be used for?

Above ground, vertical polyethylene water tanks are highly versatile and can be used for a wide range of applications. Common uses for poly water tanks include rainwater harvesting for irrigation or domestic use, residential and commercial gardening and landscaping, agricultural irrigation and livestock care, industrial water storage, emergency water reserves, fire suppression, and recreational purposes like filling pools. When

choosing a tank, considerations should include the intended use, required capacity, and compliance with any relevant regulations.

8. How do I determine the right water tank size for my property?

The right size water tank will be the one that can store and provide enough water, consistently and regularly, for your intended use. Points to consider would include: the volume of water on average that will be used or needed within a certain timeframe, the source of the water that will refill the tank and its availability, and whether not having water in the tank will be a serious concern or not.

9. What is the difference between potable and non-potable water tanks?

The difference between potable and non-potable water tanks resides in the materials they are made from. Potable water tanks are made using only the materials that are approved by the U.S. FDA as safe for contact with food or water intended for human consumption. Potable water tanks are also often NSF 61 certified, which indicates the tanks have been tested and approved for freshwater uses. On the other hand, non-potable water tanks do not meet these same requirements and should not be used for drinking water.

10. Are Valencia Pipe Company's poly tanks safe for storing drinking water?

Yes, Valencia Pipe Company-built polyethylene water tanks are ANSI/NSF 61 certified and made from FDA-approved materials, making them safe for storing drinking water.

11. Can your vertical water tanks be used for both potable and non-potable water storage?

Our poly water tanks can be used for either potable or non-potable water without concern. However, if the tank is used with non-potable water and then you wish to store potable water instead, you should properly clean and disinfect the tank before doing so. This is not due to any concern with the tank itself but rather the non-potable water it stored previously.

12. How resistant are poly water tanks to weather conditions?

Weather conditions include precipitation, (rain, snow, hail), hot and cold temperatures, humidity, and high winds. Poly water tanks are largely resistant to negative effects from these weather conditions as the tanks are watertight, heavy duty durable, and resistant to direct damage from hot and cold temperature extremes.

13. Can I store anything other than water in a poly water tank?

Our vertical water tanks are made for water use applications only. They are built to handle liquids up to 1.1 specific gravity or 9.2 lbs/gal. While this specific gravity rating and the natural chemical resistance of polyethylene could allow use with liquids other than water, this is not their intended use, and this could cause a safety concern.

Specifications and Comparisons

1. What material are the tanks made from?

Valencia Pipe Company's vertical water tanks are made from high-density polyethylene (HDPE), a strong, long-lasting, and lightweight synthetic material. The material is blended with ultraviolet (UV) inhibitors that protect the tank against potential sunlight damage. High-density polyethylene is commonly referred to as "poly" for short.

2. How are Valencia Pipe Company's vertical water tanks made?

Our vertical water tanks are manufactured using rotational molding and state-of-the-art equipment. Rotational molding is superior to other manufacturing methods as it produces a water tank that is one piece, seamless, and free of any structural weak spots.

3. What color options are available for vertical water tanks?

Our poly water tanks are available in black or dark green colors. These colors are chosen to limit the amount of sunlight that passes through and into the tank. This helps to protect the water from sunlight, limiting the amount of heat, energy, and potential growth of algae or other microorganisms inside the tank.

4. Does color affect water quality?

No, tank color does not affect water quality. Valencia Pipe Company only uses poly tank colors that have been approved as safe for drinking water by the U.S. Food and Drug Administration (FDA).

5. How does temperature affect polyethylene water tanks?

Polyethylene plastic, the material used to make a vertical water tank, has a specific heat tolerance before it begins to soften or degrade. This temperature is around 120°F to 140°F. Temperatures above 120°F can compromise the structural integrity of the tank, which can lead to potential deformations, weakening of the tank walls, and eventual failure of the tank, especially if holding large volumes of water.

6. Why should I choose an HDPE water tank over other tank types for water storage?

An HDPE poly water tank for water storage comes with several advantages over other types of tanks, such as steel, fiberglass, or concrete. They are known for their durability, being resistant to corrosion, rust, and UV exposure, which considerably extends their lifespan compared to other materials. Poly water tanks are lightweight, easy to install and transport, and often cost considerably less than other tank types.

7. What are the benefits of plastic vertical water tanks?

Plastic vertical water tanks are a cost-effective and heavy-duty durable solution for water storage needs and are versatile for use in a wide range of applications and property types. Poly water tanks stand out for their affordability, resistance to weather corrosion, rust, cleaning chemicals, and sunlight UV that makes them longer lasting and with minimal maintenance required.

8. Are plastic water tanks safe?

Plastic vertical water tanks are considered safe for storing water, including drinking water, as long as they are made from food-grade, UV-stabilized polyethylene. They have a high tolerance for varying temperatures, the physical strength to hold thousands of gallons of water – our 3000 gallon tank would weigh over 25,000 lbs. when full – and are made with dark colors to protect against algae growth.

Certifications, Warranties, and Manufacturing

1. What certifications are important when purchasing an HDPE water tank?

The certifications and approvals that are important when looking to purchase a poly water tank include NSF/ANSI Standard 61, FDA approved plastic, and certified UV protection. Valencia Pipe Company water tanks check all these boxes.

2. What does it mean for a poly water tank to be FDA approved?

When a polyethylene vertical water tank is FDA approved, it means that the tank's building materials comply with specific U.S. Food and Drug Administration regulations for safe contact with consumables. This certification ensures materials used to make the tank, specifically the polyethylene resin, can store potable water long term without releasing harmful substances. FDA approval indicates a water tank meets Title 21 CFR standards for food contact applications.

3. What does it mean for a vertical water tank to be NSF certified?

When a vertical water tank is NSF certified, it means the tank meets the strict requirements set by NSF International in Standard 61 for a product to be used in drinking water applications. NSF certification ensures the tank and manufacturer have passed rigorous testing to ensure safety, integrity, and that there will be no leaching of contaminants. Having NSF 61 certification guarantees a water tank complies with health and safety regulations and is certified safe for potable water storage.

4. Where are Valencia Pipe Company water tanks made?

Valencia Pipe Company water tanks are proudly made in the USA. Our headquarters is located in Valencia, CA and we have several manufacturing facilities nationwide.

5. Does Valencia Pipe Company have a manufacturer's warranty on their water tanks?

Valencia Pipe Company backs our water tanks with a three (3) year limited warranty against material or workmanship defects from the date of manufacture or proven date of purchase. The warranty will provide an exact replacement of the faulty tank. Warranty does not include expenses related to installation, removal, or any incurred damages. Contact Valencia Pipe Company (661) 257-3923 x 1026 for the correct warranty submission form prior to returning the alleged defective product.

6. Where can I find the serial number on my poly water tank?

VPC water tank serial numbers are located on the weather resistant label found near the tank opening.

7. How can I tell if an HDPE water tank is UV-protected?

There isn't a direct, visual way to tell if an HDPE water tank is UV-protected. This information has to be provided by the manufacturer as a detail of their manufacturing process. Valencia Pipe Company's water tanks are UV-protected.

Product Range and Purchasing

1. What vertical water tanks does Valencia Pipe Company have for sale?

Valencia Pipe Company offers three (3) poly water tank options: 550 gallon, 2500 gallon, and 3000 gallon vertical water tanks, each in either black or dark green color. All water tanks are ANSI/NSF 61 certified and made using FDA approved, BPA free, UV stabilized materials.

2. Where can I buy Valencia Pipe Company's water tanks?

Our water tanks are sold and available for purchase from your local Home Depot®, on homedepot.com, or you may find them for purchase at a plumbing wholesaler in your area.

3. How are your water tanks shipped?

We ship our water tanks directly to a consumer's home or job site, with the exception of the 3000 gallon water tank. Due to their size, the 3000 gallon will only ship to a storefront or wholesaler warehouse for customer pickup. During shipment, tanks are placed on a forklift-ready pallet to streamline handling and reduce the potential for transit damage to occur.

4. How much do Valencia Pipe Company's vertical water tanks weigh?

The 550 gallon water tank weighs 95 lbs. The 2500 gallon water tank weighs 340 lbs, and the 3000 gallon water tank weighs 405 lbs. Note: These are dry weights when the tanks are empty and are approximations that may vary within a few pounds.

5. What should I consider before buying a water tank?

Before buying a vertical water tank, you should consider if there will be any difficulties with a delivery truck reaching your property or installation site as well as any obstacles such as fences that may make tank movement and placement difficult. You should also consider the location where you intend to place the tank, (having the tank site already prepared is recommended), and how you will maneuver your new water tank into position. For a 3000 gallon water tank, as it has to be delivered to a storefront, you should consider how you will transport and unload it.

6. How do I maneuver a vertical water tank for installation?

Our 550 gallon water tanks are lightweight, weighing around 95 pounds, this makes the tank light enough to be handled by two or three able-bodied people. Our 2500 gallon and 3000 gallon tanks weigh 340 to 405 lbs, meaning 5+ able-bodied people will be required for human lifting. Often, these water tanks are put into position via forklift.

Another option is to place the tank on its side and roll it into position. At this point, roll the tank onto the bottom rungs of an extension ladder, then use the far end to slowly tilt the water tank upright. This method converts the ladder into a lever that can make righting a water tank significantly easier. NOTE, rolling a water tank on its side should be done slowly and carefully; do not roll over rocks or other sharp objects; exercise safety and caution as the tanks are heavy.

Installation and Use

1. Do I need to clean or rinse my poly water tank before first use?

In many cases, vertical water tanks do not need to be cleaned before first use. Rinsing the water tank is recommended to remove any dust or leftover material from manufacturing. Cleaning a water tank is recommended if it will be used in a potable water supply application.

2. How do I rinse out my new water tank?

Rinsing a water tank can be done with a simple garden hose or with a power washer. Use a ladder to reach the tank's top, remove the lid, and spray water down the inside side walls. Allow the water to drain out of the bottom outlet fitting.

3. I am going to use my water tank for drinking water. How do I clean my water tank?

Refer to our *Water Tank Cleaning Instructions*.

4. Do your vertical water tanks include any additional fittings or parts?

No, Valencia Pipe Company's vertical water tanks come with all necessary lids and bulkhead fittings to complete installation and begin use. We do have additional fittings available for order.

5. Can custom fittings be added to a polyethylene water tank?

Yes, custom fittings can be added to a vertical water tank. This can include different sized bulkhead fittings, garden hose adapter fittings, and entirely new, additional bulkhead fittings, such as to allow for extra connections. Installing a new bulkhead will require cutting an additional hole in the water tank and cannot be undone. Therefore, always know the proper procedure and have confidence in your abilities before proceeding.

6. Must a vertical water tank be vented?

Yes, a vertical water tank must be vented. Poly water tanks are not pressure vessels and are designed for atmospheric pressure conditions only. Due to normal heating and cooling cycles as well as pressure changes caused by a water pump (if used), a water tank must be vented to prevent too much or too little pressure inside the tank. All out vertical water tanks come with a vented lid.

7. How do I vent my above ground poly water tank?

Valencia Pipe Company's poly water tanks feature an automatic, self-venting manway lid that is designed to keep air pressure inside the tank at safe, atmospheric levels. The vented lid is sufficient for most use cases and often no other means of venting will be needed. In applications with high flow rate water pumps, an additional pressure relief vent may be needed to avoid a suction-like vacuum effect.

8. How do I install a vertical water tank?

Installation is best done with two or more people. Choose a level, stable site that can support the weight of the tank when it's full. The location should be accessible for filling and maintenance. Clear the area of any debris, rocks, or sharp objects that could puncture the tank. It's highly recommended to prepare a solid base for the tank. This can be a concrete slab, compacted sand, or crushed dust base, at least 3-4 inches thick and 2-3 feet wider than the diameter of the tank. If sand, crushed dust, or pea gravel is used, wooden berms are recommended to protect against erosion. Carefully lift or roll the tank onto the prepared base. Avoid dragging the tank to prevent damage. Ensure the tank is vertical using a level and adjust the base as necessary. Install plumbing hookups or any additional fittings. Check the tank for damage. Fill the tank and watch for any leaks. If there are any leaks, address. If there aren't any leaks, the water tank is good for use.

9. How do I transport and handle my poly water tank safely?

Due to their size and low weight, vertical water tanks can be transported by any truck or trailer capable of safely fitting them. Vertical water tanks are recommended to be transported on their side with the top facing the front of the transport vehicle to reduce the amount of air drag on the tank during movement. The water tank should be restrained with the use of tiedown straps tight enough to hold the tank securely but not so tight as to dent the tank.

10. Where is the best place to install an above ground water tank?

The best place to install a water tank will be in a location where the ground can be made clear and level, where there is enough space around the tank to allow access for use, making connections, and maintenance, where the tank will be located as near as possible to the point(s) of use, and where the hours of direct sunlight will be limited. If a dedicated foundation will not be used, always ensure the tank is placed in a location where the ground will not shift, settle, or erode away.

11. Are there any restrictions on where an above ground water tank can be placed?

Vertical water tanks should not be placed on uneven, unlevel ground, on top of rocks, roots, or a platform that does not fully support the tank's base, nor should they be placed on a wooden platform made from untreated wood. Avoid placing tanks over or too close to underground utilities, such as water, gas, electric, and sewer lines.

12. Do I need a base for my poly water tank? If so, what kind?

A flat, level, and strong base is recommended for Valencia Pipe Company's vertical water tanks to ensure the tank remains stable, provides a long service life, and continues to work correctly. Consider that even a 550 gallon water tank will weigh around 4500 lbs when full. The right kind of base will support the weight of the tank when full, prevent settling or shifting, and protect the bottom of the tank from damage. The most common types of bases suitable for our vertical water tanks are concrete slab, compacted sand, crushed dust, or pea gravel. Review our *Installation Best Practices for Vertical Water Tanks* for more information.

13. Can I install a vertical water tank myself or is a contractor required?

Yes, you can DIY install a poly water tank yourself. Exceptions may be if the tank will be used as part of an indoor potable water supply or in a fire suppression system. A licensed plumber or contractor may be required when completing certain connections in these applications.

For all other uses, whether you should install a vertical water tank yourself or hire a contractor will depend on your personal DIY ability as well as the size and complexity of your project. If you are comfortable with, (or have the help), to prepare a base, move and place the water tank, and make all necessary plumbing connections, then consider DIY installing your new water tank.

14. Do HDPE water tanks require any special tools or equipment for installation?

No, above ground poly water tanks do not require any special tools or equipment to complete installation.

Basic tools needed: a shovel (or other means of digging), a tape measure, a level, and a compactor (or other means to firmly compact foundation). Additional tools potentially needed: wheelbarrow (to move foundation material), hammer, nails and wooden planks (to create a wooden berm around the foundation), and/or cement mixing equipment (if making concrete pad).

15. Can a water pump be used with a poly water tank?

Yes, a water pump can be and is commonly used with a vertical poly water tank to increase water pressure, distribute water better to where you need it, and for specific applications that require a steady water flow. Common types of water pumps used with poly water tanks are submersible water pumps, electric diaphragm pumps, and booster pumps (also known as jet pumps).

16. Is a water pump required with a poly water tank?

It depends on the use. If the application requires a high or consistent water pressure (PSI) or flow rate (GPM), then a water pump will be required. If gravity pressure and flow is acceptable, such as in garden hose watering of landscapes or filling water basins for livestock, then a water pump can be considered beneficial but not necessary.

17. Can a poly water tank be used with hot water? What is the maximum water temperature for polyethylene water tanks?

Yes, a vertical water tank can be used to store hot water up to a maximum temperature. For polyethylene (HDPE or high-density polyethylene) vertical water tanks, the recommended maximum water temperature is around 100°F (49°C). While the polyethylene itself can handle higher temperatures, for water use applications, temperatures above 100°F should be avoided.

Accessories and Additional Components

1. What other products or accessories are available?

Valencia Pipe Company offers several tank accessories and parts, including: a 3/4″ male pipe thread (MPT) x garden hose thread (GHT) valve with adapter, a 2″ x 3/4″ reducer bushing, a 2″ male adapter x male thread, a 2″ king nipple MPT x bulkhead, a 2″ poly nipple, a 2″ female coupler x hose shank, a 2″ male adapter x male thread 90 elbow, and a 2″ female x female bolted ball valve with yellow handle.

2. What type of pipe do I use with Valencia Pipe Company's vertical water tanks?

Our vertical water tanks come fitted with a 2″ bulkhead outlet and a 1-1/2″ bulkhead inlet that can be plumbed with a variety of off-the-shelf type IPS fittings. Standard Schedule 40 PVC pipe will fit, work with, and is commonly used with our poly water tanks. For potable water applications, use ANSI/NSF 61 certified PVC pipe and fittings.

Maintenance and Care

1. What maintenance is required for poly water tanks?

Common maintenance for vertical water tanks can include cleaning the interior walls of the tank, inspecting connections and the foundation, and depending on the tank's use, disinfecting the water and cleaning or replacing filtration equipment.

2. Why is water tank maintenance important?

Regular water tank maintenance can ensure the inside of the tank remains clean and fit for storing clean, drinkable water. If the water tank won't be used for drinking water, then regular maintenance can prevent the buildup of algae, biofilm, or sediments which can cause undesirable odors, create poor water quality, or lead to clogs in valves, pumps, pipes, or hoses.

3. How often does my water tank need maintenance?

The frequency of water tank maintenance will depend on what the tank is being used for and the initial quality of the water put inside the tank. In general, a water tank should be deep-cleaned every 5 years; annually if the water tank is used seasonally; if biological growth or substantial sediments are seen inside the tank on inspection; and/or, if there are any sudden and noticeable changes in the water's odor, taste, or color.

4. How do I clean my water tank?

Cleaning a water tank is a step-by-step process. For full details, see our *Water Tank Cleaning Guide*. In general, water tank cleaning will involve: empty the tank, prepare a cleaning solution (if applicable), scrub the interior with a non-abrasive brush and the cleaning solution or use a pressure washer, and thoroughly rinse and drain the tank. If the tank will be used for potable applications, the tank should then be disinfected, rinsed, and allowed to dry before use.

5. Can algae grow in poly water tanks?

Yes, algae can grow in a poly water tank. Algae require sunlight to grow and as sunlight can pass through the semi-opaque walls of the storage tank, algae can reproduce and live in a polyethylene water tank. It is for this reason that above ground water tanks are not white, as this allows the maximum amount of light through. Our water tanks are dark green and black to significantly reduce the amount of sunlight that reaches the water, thereby significantly limiting the chance for algae growth.

6. How can algae growth in a water tank be prevented?

Dark colored water tanks are the best options for preventing algae growth. Also, placing the water tank in a shaded location and/or on the northern side of a building can reduce the amount of direct sunlight on the tank and help prevent algae growth.

7. How long do HDPE vertical water tanks last?

High-density polyethylene (HDPE) vertical water tanks are known for their durability and can offer a long service life when properly maintained. On average, these tanks have a lifespan of about 10 to 15 years; with optimal conditions and care, HDPE water tanks have been known to last up to 20 years or more.

8. Can I paint my black or green vertical water tank?

Yes. You'll want to ensure the entire tank is wiped down with a paint thinner to remove oily residue. Then select a paint that is typically used to paint plastic car parts . . . typically an automotive urethane paint. Since the tank will expand and contract over the years given your specific weather characteristics, the paint may crack over time and should be reapplied.

9. Can I repair my HDPE water tank if it is damaged or starts leaking?

Yes, a high-density polyethylene water tank can be repaired if it becomes damaged or starts leaking. The lasting durability of the repair will depend on the type and size of the damage. For large damages over 12 inches, it is recommended to replace the water tank rather than try to repair. Water tank repair should be done by a qualified professional or ensure you feel confident in your abilities.

Environmental and Safety Considerations

1. Are vertical water tanks dangerous?

No, vertical poly water tanks are not what one would consider dangerous. The largest concerns come from falling inside the tank manway or from the tank wall rupturing, both of which are fairly unlikely accidents.

2. Will an above ground water tank freeze in cold weather or in winter?

The tank itself will not freeze but the water stored inside can during cold weather or during the winter season. Due to the large volume of water inside the tank, outdoor temperatures have to remain below water's freezing point (32°F or 0°C) for a sufficient length of time for the water to fully freeze.

3. Can temperatures below freezing damage my poly water tank?

No, freezing temperatures will not cause damage to a poly water tank. Cold temperatures can, however, make the tank more susceptible to being damaged by severe, physical impacts.

4. Will water freezing inside my tank cause damage?

Freezing only presents a concern to the tank's fittings, lid, and connected piping. As water freezes, it expands, and it is this expansion that can be problematic. In general, as long as there is room inside the tank for the water to expand as it freezes, the tank's fittings should be safe from damage. The tank's fittings are the point of concern as they are where water can escape and because the tank itself can withstand the physical strain caused by water as it freezes.

5. How do I prevent water in my poly water tank from freezing during cold temperatures?

If freezing is a concern, the best option is to keep the water moving using a closed loop water circulation system. Such a setup could use a water pump and PVC pipe to draw water from the tank's outlet and circulate to the tank's inlet at the top. Other options include using an aeration device to bubble oxygen into the water for circulation or install a submersible water heater – for this option, the heater must be kept away from the tank walls.

6. How does sunlight exposure affect a poly water tank over time?

Sunlight exposure, specifically ultraviolet (UV) energy, over time can have a structural impact on the polyethylene material water tanks are made from. UV radiation can cause the poly material to break down or degrade, which can cause the tank's structure to weaken, the color to fade, and the exterior surface to become rougher. To mitigate these effects, UV stabilizing compounds are added to our poly material during manufacturing to greatly enhance the tank's resistance to sunlight exposure.

7. Will a poly water tank affect the pH of the stored water?

Polyethylene water tanks are considered chemically inert and do not significantly affect the pH level of the stored water under normal conditions. These tanks are widely used for storing drinking water as FDA-approved polyethylene does not leach chemicals into the water, making it safe for long-term water storage without changing the water's taste or pH.

8. Does the pH of water kept in a vertical poly water tank matter?

No, the pH of water is not a concern for the water tank itself. Poly water tanks are resistant to a wide range of pH values and do not react chemically with the stored water. Extreme high or low pH levels can, over time, cause damage to certain materials used in tank fittings and seals; however, this is unlikely to happen as it is uncommon for water to naturally be so acidic or caustic that it causes damage to a water tank.

Special Considerations

1. Can a vertical poly tank be buried or partially buried?

No, above ground vertical poly water tanks cannot and should not be buried or even partially buried. They are not engineered to withstand the physical weight load strain put on the tank by the surrounding soil. Burying or partially burying a poly water tank will void the manufacturer's warranty. For underground installation, consider our underground water cisterns.

2. What is the best way to store water long term in a poly water tank?

The best way to store water long term is to keep the water in a dark location away from sunlight where temperatures are stable between 50°F to 70°F. Underground cisterns are an excellent choice for storing water long term as they provide the ideal storage conditions.

3. Can a poly water tank withstand pressure or vacuum conditions?

No, polyethylene water tanks are not engineered as a pressure vessel for use in pressure or vacuum applications caused by either the increase or decrease of internal pressure. They are designed for use, integrity, and stability at atmospheric pressure conditions.

4. What can happen if a poly water tank is pressurized or unpressurized (vacuum)?

Increasing the internal pressure inside the tank without releasing the pressure can cause a swelling effect that can cause the tank to rupture if the pressure increase is sufficient enough and is not mitigated. Decreasing pressure inside the tank by pumping air out of the tank in a closed system will create a vacuum effect that can cause the tank to implode and effectively collapse in on itself. Both scenarios are potentially dangerous and should be avoided. Our water tanks have a vented manway lid that prevents this from happening during normal use cases and when used with a water pump.

5. What is the fire resistance of HDPE water tanks?

HDPE water tanks have several beneficial properties but are not inherently fire-resistant. HDPE is a type of plastic that can melt and deform when exposed to high temperatures. The melting point of HDPE is around 248°F to 356°F. In the case of a fire, an HDPE tank would start to soften and lose its structural integrity as it approaches these temperatures, eventually melting if the fire is intense enough or lasts for a long enough period. While poly water tanks themselves do not readily catch fire or contribute significantly to fire as a fuel source, they cannot contain or suppress a fire if directly exposed to flames.

6. Are HDPE vertical water tanks recyclable at the end of their life?

As vertical water tanks are made from premium grade high-density polyethylene, a commonly used and recycled plastic, the tanks can potentially be recycled at the end of their useful service life. Due to their size and weight, and any special preparation that may be needed, it is recommended you contact local or regional recycling facilities for more details and program availability.