

# Xerxes® Underground Wet Wells

Fiberglass pump vaults and lift stations – watertight and rustproof

For decades, Xerxes Corporation has been a leader in the design and manufacture of high-quality, cost-effective, fiberglass products that help protect the fragile relationship between humans and their environment. A long-time major supplier to the petroleum industry, with more than 150,000 underground tanks installed, Xerxes knows how important it is to manufacture underground products that provide safe storage while protecting the environment.

In recent years, Xerxes has brought its expertise and proven track record to the water and wastewater industry, and today Xerxes is a major supplier to this industry as well. Xerxes is constantly working to provide a full range of products and accessories to each industry it serves. The most recent addition to Xerxes' water and wastewater product line is the fiberglass wet well.

Historically, concrete wet wells have been vulnerable to corrosion and leaking. Xerxes fiberglass wet wells are manufactured with premium isophthalic/terephthalic resin, which provides corrosion resistance. The Xerxes fiberglass wet well comes in a range of diameters that are commonly used in lift station and pump vault applications. Both options are manufactured of long-lasting, rustproof fiberglass. An already durable product becomes even more robust with the addition of ribs. Like all Xerxes products, the Xerxes fiberglass, watertight wet well is designed and manufactured for long-term reliability, as well as for easy shipping and installation. It requires no maintenance.



Taken together, these features make a Xerxes fiberglass wet well a superior choice to the traditional heavy concrete option, which often comes in multiple sections needing to be field-seamed. This can be a time-consuming installation process, without ensuring watertightness. And in the case of potable water storage, a concrete lift station usually requires the addition of a costly liner.

At Xerxes, excellence in service is as highly valued as excellence in product design and manufacturing. Xerxes' commitment to quality is the foundation of the strong, long-lasting relationships we have with our customers. Xerxes operates several manufacturing facilities strategically located to provide prompt delivery and quality service, both economically and efficiently.

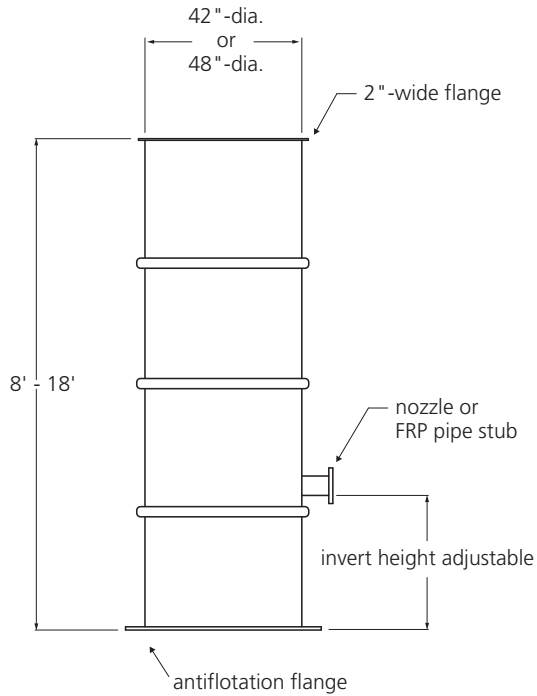
## Features and Benefits of Xerxes Wet Wells

- Constructed of long-lasting, rustproof fiberglass
- Constructed with ribs that provide structural strength and antiflotation benefits
- Manufactured to meet specific site requirements
- Designed and manufactured with antiflotation flange
- Manufactured with premium isophthalic/terephthalic resin
- Can be manufactured with resin conforming to NSF Standard 61 requirements (potable water tanks)
- Available in standard diameters of 42 inches – 12-feet
- Available in standard lengths of 8 – 36 feet \*
- Available with a variety of accessories and piping options
- Lightweight and easy to ship
- Easy to install
- Requires no maintenance

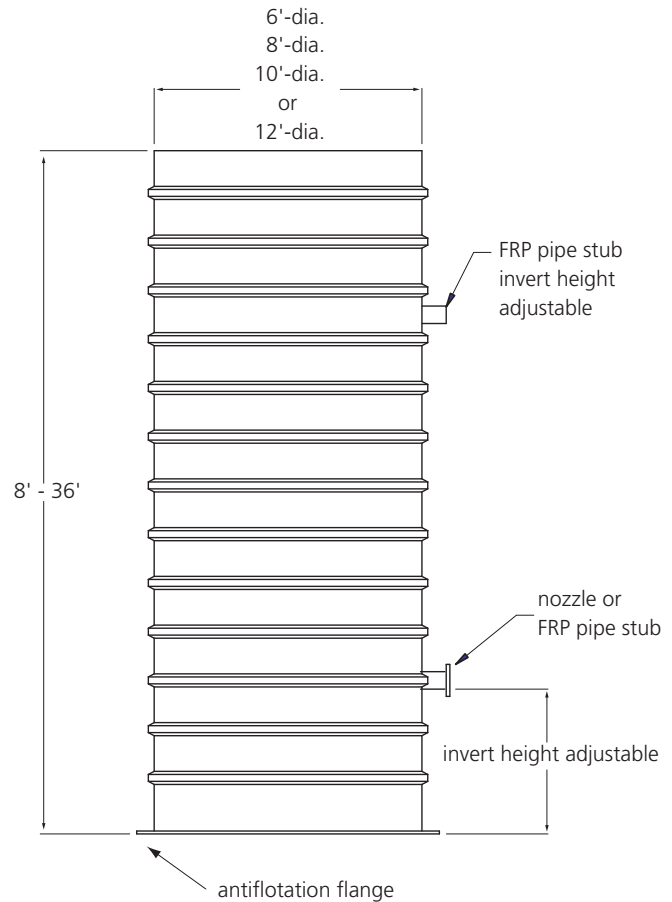
\* Contact Xerxes for information on additional lengths.

# Underground Wet Well Data (nominal)

## Typical small-diameter wet well

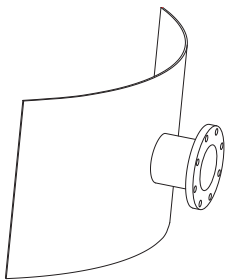


## Typical large-diameter wet well



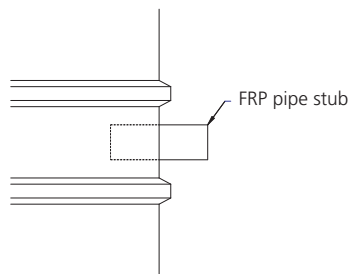
## Typical Wet Well Accessories

### Flanged nozzles



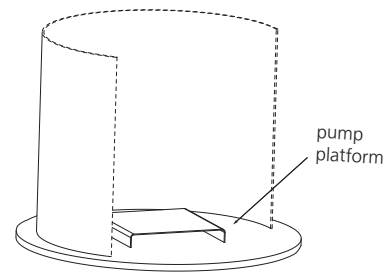
Available in 2"-16" diameters

### FRP pipe stubs



Available in 2"-18" diameters

### Pump platforms

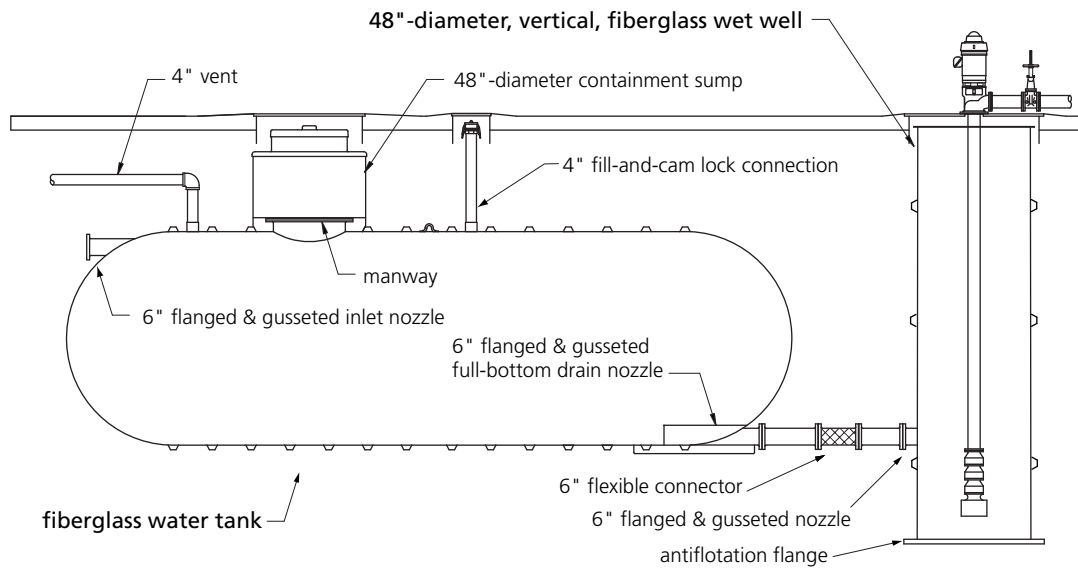


Typically 4" tall – available in 24"x24",  
24"x36", 30"x30" and 36"x36"

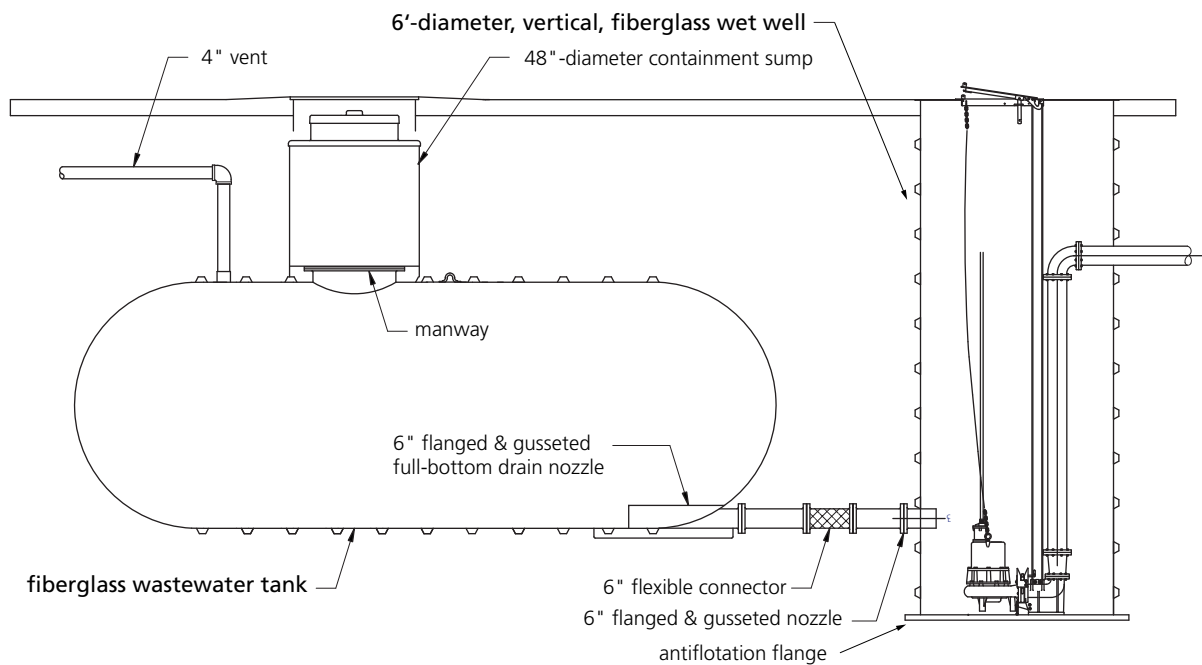
## General Notes:

- 1) A variety of top or cover options are available – open top, friction-fit cover and watertight cover.
- 2) Xerxes wet wells can be manufactured with resin conforming to NSF Standard 61 requirements for potable water tanks. Contact your Xerxes representative for more information.
- 3) Xerxes wet wells can be custom fabricated for a variety of applications, in additional lengths and with various accessories not shown. Contact your Xerxes representative for more information.

## Fire-protection or potable water application with wet well



## Wastewater application with wet well and surge tank



## Guide Specifications – Underground Wet Well

### Short form:

The contractor shall provide a fiberglass reinforced plastic (FRP) underground wet well as shown on the drawings. Sizes and fittings shall be as shown. The wet well shall be a fiberglass wet well as manufactured by Xerxes Corporation.

Wet well shall be installed according to the Xerxes Wet Well Installation Instructions in effect at time of each installation.

### Long form:

#### Part I: General

#### 1.01 Quality Assurance

A. **Acceptable Manufacturer:** Xerxes Corporation

B. **Governing Standards, as applicable:**

1. Wet well manufacturer shall be in the business of manufacturing fiberglass tanks and wet wells.
2. Wet well manufacturer shall be in the business of manufacturing wet wells with materials conforming to the requirements of ASTM D 3753.

#### Part II: Products

#### 2.01 Fiberglass Reinforced Plastic (FRP) Wet Wells

A. **Loading Conditions** – Wet well shall meet the following design criteria:

1. External Hydrostatic Pressure – Wet well shall be capable of withstanding hydrostatic loads and saturated soil loads.
2. Wet well FRP laminate shall be constructed to withstand or exceed two times the assumed loading at any depth of the wet well.
3. Wet well shall support accessory equipment – such as inlet and outlet piping – when installed according to wet well manufacturer's current installation instructions.

B. **Product Storage**

1. Wet well shall be capable of collecting and storing those products identified in Xerxes limited warranty for wet wells in effect at time of purchase.
2. Wet well shall be vented to atmospheric pressure.

## Guide Specifications continued

### C. Materials

1. Wet well shall be manufactured with 100% resin and glass-fiber reinforcement. No sand fillers.
2. Wet well and accessories shall be constructed using premium isophthalic/terephthalic polyester resin.
3. The finished FRP laminate will have a Barcol hardness of at least 90 percent of the resin manufacturer's specified hardness for the fully cured resin.

### D. Wet Well Dimensions

1. Wet well shall have a diameter of \_\_\_\_\_ inches/feet.
2. Wet well shall be \_\_\_\_\_ feet long.

### E. Wet Well Bottom and Antiflotation Flange

1. Antiflotation flange shall have a greater diameter than that of the wet well to provide antiflotation benefits.
2. When installed, antiflotation flange shall be attached with the same FRP resin and glass as that used to manufacture the body of the wet well.
3. The wet well bottom shall be designed for service designated by the project engineer.
4. Optional pump-mounting studs shall be attached to the bottom FRP plate and installed in wet well according to customer's specifications or drawings.

### 2.02 Accessories

#### A. Piping

1. FRP pipe stubs or nozzles shall be used for inlet and outlet piping.
2. All FRP nozzles shall be flat-faced and flanged, and shall conform to ANSI B16.5 150# bolting pattern.
3. Location(s) shall be as shown on wet well drawings.

#### B. Optional Internal Pump Platforms

1. Pump platforms shall be FRP.
2. Project engineer shall provide wet well manufacturer with pump-mounting details, such as dimensions and weight.

### Part III: Installation

#### 3.01 Installation

- A. Wet well shall be installed according to the Xerxes Wet Well Installation Instructions in effect at time of each installation.

### Part IV: Warranty

#### 4.01 Warranty

- A. Warranty shall be manufacturer's limited warranty for underground wet wells in effect at time of purchase.

## LIMITED WARRANTY Underground Wet Wells

Xerxes Corporation ("Xerxes") warrants to ("Owner") that our underground wet wells, if installed, used and maintained in the United States in accordance with Xerxes' published specifications, installation instructions and operating guidelines, all applicable laws and regulations, and the limited wet well applications defined herein, will be free from material defects in materials and workmanship for a period of one (1) year from date of original delivery by Xerxes. Wet well applications for purposes of this warranty are limited to the collection and storage of water, wastewater or solid or liquid organic sewage at temperatures not to exceed 140° F.

Xerxes warrants to Owner that all Xerxes manufactured wet well accessories, if installed, used and maintained in the United States in accordance with Xerxes' published specifications, installation instructions and operating guidelines, and all applicable laws and regulations, will be free from material defects in materials and workmanship for a period of one (1) year following the date of original delivery by Xerxes.

If any wet well is to be removed from an installation, moved to Owner's new location and is intended for active service at the new location, the wet well must be recertified by Xerxes in order to maintain the warranty as originally extended. The foregoing warranty does not extend to wet wells or accessories (collectively "Goods") damaged due to acts of God, war, terrorism, or failure of Goods caused, in whole or in part, by misuse, improper installation, storage, servicing, maintenance, or operation in excess of their rated capacity, contrary to their recommended use, or contrary to the wet well applications defined above, whether intentional or otherwise, or any other cause or damage of any kind not the fault of Xerxes. Xerxes only warrants repairs or alterations performed by Xerxes or its authorized contractors. Xerxes does not warrant any product, components or parts manufactured by others. XERXES OBLIGATIONS UNDER THIS WARRANTY ARE VOID IF A WET WELL HAS BEEN USED FOR PRODUCTS CONTAINING A "HAZARDOUS SUBSTANCE" AS DEFINED BY THE COMPREHENSIVE ENVIRONMENTAL RESPONSE, COMPENSATION AND LIABILITY ACT OF 1980 (CERCLA OR "SUPERFUND") WHICH DESIGNATES CERTAIN CHEMICALS AS "HAZARDOUS SUBSTANCES." SEE 42 UNITED STATES CODE, SECTION § 9601 (14).

Owner's sole and exclusive remedy for breach of warranty is limited at Xerxes' option to: (a) repair of the defective wet well or accessory, (b) delivery of replacement wet well or accessory to the point of original delivery, or (c) refund of the original purchase price. A claimant must give Xerxes the opportunity to observe and inspect the wet well and/or accessory prior to removal from the ground or the claim will be forever barred. All claims must be made

in writing within one (1) year after wet well and/or accessory failure or be forever barred. THE FOREGOING WARRANTY CONSTITUTES XERXES' EXCLUSIVE OBLIGATION AND XERXES MAKES NO OTHER WARRANTY OR REPRESENTATION, EXPRESS OR IMPLIED, WITH RESPECT TO THE WET WELL OR ANY SERVICE, ADVICE, OR CONSULTATION, IF ANY, FURNISHED TO OWNER BY XERXES OR ITS REPRESENTATIVES, WHETHER AS TO MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, OR OTHERWISE. THE SELLER (XERXES) UNDERTAKES NO RESPONSIBILITY FOR THE QUALITY OF THE GOODS, EXCEPT AS OTHERWISE PROVIDED IN THIS CONTRACT. THE SELLER (XERXES) ASSUMES NO RESPONSIBILITY THAT THE GOODS WILL BE FIT FOR ANY PARTICULAR PURPOSE FOR WHICH YOU (OWNER) MAY BE BUYING THESE GOODS, EXCEPT AS OTHERWISE PROVIDED IN THE CONTRACT. THE REMEDIES SET FORTH IN THE ABOVE WARRANTY ARE THE ONLY REMEDIES AVAILABLE TO ANY PERSON OR ENTITY FOR BREACH OF WARRANTY OR FOR BREACH OF ANY OTHER COVENANT, DUTY, OR OBLIGATION ON THE PART OF XERXES. XERXES SHALL HAVE NO LIABILITY OR OBLIGATION TO ANY PERSON OR ENTITY FOR BREACH OF ANY OTHER COVENANT, DUTY, OR OBLIGATION UNDER THIS WARRANTY EXCEPT AS EXPRESSLY SET FORTH HEREIN. IT IS EXPRESSLY AGREED THAT THIS WARRANTY DOES NOT FAIL OF ITS ESSENTIAL PURPOSE. XERXES SHALL HAVE NO LIABILITY FOR COSTS OF INSTALLATION OR REMOVAL OF GOODS, ENVIRONMENTAL CONTAMINATION, FIRES, EXPLOSIONS, OR ANY OTHER CONSEQUENCES ALLEGEDLY ATTRIBUTABLE TO A BREACH OF WARRANTY, OR INCIDENTAL, CONSEQUENTIAL, PUNITIVE OR OTHER DAMAGES OF ANY DESCRIPTION, WHETHER ANY SUCH CLAIM OR DAMAGES BE BASED UPON WARRANTY, CONTRACT, NEGLIGENCE, STRICT LIABILITY OR OTHER TORT, OR OTHERWISE. IN NO EVENT SHALL XERXES' TOTAL LIABILITY HEREUNDER EXCEED THE ORIGINAL PURCHASE PRICE OF THE GOODS WHICH GAVE RISE TO SUCH LIABILITY.

Consumer Notice: This warranty gives you (Owner) specific legal rights. You (Owner) may also have other rights which vary from state to state.

Effective: 2/1/07



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