



# Product Overview

The EXCEL HDPE Package Lift Stations for sewage and stormwater are made from structurally reinforced polyethylene meeting ASTM F894 and provides a solution to current industry challenges.



The HDPE Package Lift Stations light weight, strength and durability make it the ideal choice for prefabricated pump station applications. The polyethylene wet wells are immune to H2S, pH, corrosion and deterioration.

EXCEL's aluminum No-Vault enclosure eliminates confined space entry and provides a temperature controlled enclosure for the valves and pump controls above-ground.



The EXCEL HDPE Package Lift Stations are delivered 'Turn Key' to the project location with all internal piping and fittings prefabricated within a quality controlled factory environment. EXCEL provides remote and onsite support during installation to ensure seamless execution. EXCEL HDPE Package Lift Stations provide a superior system with a reduced total installation cost.

#### The Sewage and Stormwater Industry is faced with:

- Increasing asset ownerships costs
- Inflated installation costs
- Traditional concrete methods are compromised by Hydrogen Sulfide (H2S) corrosion
- Rehabilitation / maintenance costs for existing infrastructure
- Real estate and project easement costs



# Advantages

EXCEL HDPE Package Lift Stations are the ideal choice for large diameter and deep wet wells; they can be designed to diameters of 11 ft. and depths of 55 ft.

EXCEL provides the wet well structural design, fabrication and on-site support which benefit the end user by faster installation time and reduced overall project cost. In addition to engineering support and project specific drawings, the HDPE Package Lift Stations are infinitely configurable with horizontal or vertical structures depending on hydraulic storage parameters.

The EXCEL HDPE Package Lift Station system's discharge piping, inlets, outlets, break away fittings, guide rails and level controls are prefabricated to strict ISO 9001 quality control standards.

EXCEL's standard range of submersible pumps provides dependable solutions for a wide range of municipal, commercial and industrial applications

#### **Typical Applications:**

- Commercial Sewage Pump Stations
- Municipal Collection Pump Stations
- Industrial Waste Pump Stations
- Stormwater Pump Stations
- Landfill Leachate Pump Stations

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## Package Pump Systems

The Excel HDPE Package Lift Station for sewage and stormwater solutions are made from structurally reinforced high density polyethlene, meeting ASTM F894, while also exceeding current industry challenges at a reduced total installed cost.

The turn key delivery includes all internal piping and fittings prefabricated within a quality controlled factory environment to ensure seemless execution. Ideal for large diameter and deep wet wells, we can supply them to diameters up to 11 feet and depths up to 55 feet.

#### **Features:**

- 1) HDPE Wet Well, monolithic design and lightweight construction provides simple installation.
- 2) HDPE high-performance discharge piping
- 3) Guide rail system allows easy pump removal
- 4) Level control devices, float switches or transducer available as required

#### **Benefits:**

- HDPE wet wells have a design life of up to 100 years
- Prevents groundwater infiltration into wet well
- Eliminates interior coating requirements and maintenance to combat H2S corrosion
- Reduces excavation requirements compared to traditional pump stations

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# Application and Design

EXCEL FLUID GROUP has recommended and specificed complete turn-key HDPE pump station tanks on numerous projects from landfill leachate to sanitary wastewater applications. We invite you to discuss specific projects that are in initial planning or design stage, and our engineering team will assist you by providing the following services:

- 3-D Drawings and Renderings
- Project Specifications
- Design & Application Assistance
- Budget Proposals
- EPA & PTI Assistance
- In-house UL Certification
- Buoyancy Calculations



EXCEL FLUID GROUP

#### A) Alarm Light

- **B)** NoVault Enclosure
- C) Crane
- **D)** Power Pedestal
- E) Flat Top
- F) Discharge
- G) Transducer with Stilling Tube
- H) Inlet
- I) HDPE Piping



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## Installation References

#### Successful Way - Dayton, OH

Sanitary Lift Station with Structural Steel Building

- •Barnes 4 in. submersible Sithe chopper pumps with a flow rate 250 GPM at 38 TDH
- •6 ft. diameter x 25 ft. deep HDPE wet well with aluminum access hatch with safety grates
- •10 ft. x 10ft. prefabricated structural steel enclosure built in our Cleveland facilities





#### 21 Point Firing Range - Joint Base Andrews, MD

Wastewater NoVault<sup>™</sup> Pump Station with HDPE Wet Well

- •Barnes 2 in. submersible explosion proof grinder pumps with a flow rate of 80 GPM at 53 TDH
- •5 ft. diameter x 11.25 ft. deep HDPE wet well with Polymer Concrete flat top
- •ArcSentry<sup>™</sup> duplex control panel with PumpVision<sup>™</sup> PV600 PLC programmed by Excel Fluid Group

## SERE Training Complex - Fort Bragg, NC

Wastewater NoVault Pump Station and HDPE Wet Well

- •Barnes 3 in. submersible grinder pumps with a flow rate of 120 GPM at 175 TDH
- •6 ft. diameter x 15 ft. deep HDPE wet well manufactured per ASTM F894 standards
- •ArcSentry duplex control panel with PumpVision PLC and ethernet module for control and status to SCADA





### Love's Travel Store - Springfield, GA

Sanitary NoVault Pump Station and HDPE Wet Well

- •Barnes 3 in. submersible Sithe chopper pumps with a flow rate of 140 GPM at 24 TDH
- •6 ft. diameter x 19 ft. deep HDPE wet well with Polymer Concrete flat top
- •ArcSnetry duplex control panel with NEMA ATL 5 HP, 480 Volt, Three Phase motor starters



# Maintenance Plus

Is it difficult for you and your team to remember to complete your regular pump maintenance? Have peace of mind with our Maintenance Plus plan. Depending on your plan, we will complete a full service on your pump system annually, semi-annually, or quarterly. If anything goes wrong with your pump, we have the resources to repair, replace, or maintain your pump station for seamless downtime and ideal upkeep. We want to be there for you to help prevent when you'll need us most.

Our pump station preventative maintenance checks include seal and overhaul kits with:

- A detailed pump station electronic inspection report
- Clean and check the level of operations of the controls
- A pump down test for each pump and record of the level drop
- Amperages drawn and checked from each pump
- Each pump motor megged to test the motor's insulation
- An ohm check on each seal fail resistor

#### Maintenance Plus can help with:

Planning downtime and avoiding long delays

Knowing your pump station is running efficiently

Preventative maintenance

Extending your pump station's lifespan

Overall pump station knowledge through training









## **Common Wastewater Industry Challenges**

- Increasing Asset Ownership Cost from Maintenance of Ageing Infrastruture
- Inflated Installation Costs of Traditional Concrete Pump Stations
- Traditional Concrete Stations are Compromised by Hydrogen Sulfide (H2S) Corrosion, unless protected by an interior coating that is costly to install and maintain.

Groundwater Infiltration (I&I) Into Sanitary Sewer System

## **Contact Us for an HDPE Package Lift Station Solution**

#### **Design Criteria for HDPE Package Lift Stations**

- What is the average daily flow rate in gallons per minute (GPM) into the pump station?
- What is the proposed forcemain size, length to discharge point and construction?
- What is the grade elevation at the proposed pump station location?
- What is the grade elevation at the proposed discharge point of the forcemain?
- What is the gravity sewer invert pipe elevation?
- Confirm the jobsite electrical service details.
- Advise if emergency power connection or standby power service is required.
- Advise if remote communication system is required.



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