

# Vertical Turbine Pumping Solutions

## We Custom Build to Meet Your Requirements . . .



. . . and Every Station is  
Dynamic Factory Tested to Insure  
Performance and Reliability

# User-Friendly Watertronics® Controls and Software

Engineered and built specifically for each customer, VT models come with unique features like the unitized skid construction, our high efficiency discharge head and impeller, commercial grade coating and with options such as Electronic Butterfly Valve (EBV) or Variable Frequency Drive (VFD) pressure regulation, Watervision® Remote Control, custom built enclosures, and more.

## Programmable logic controls

Unique algorithms optimize pressure regulation and pump pressure characteristics to reduce pressure surges on the system.

**Fertigation logic** is incorporated into the station PLC which enables calibration, remote monitoring and control.

## Unique Watertronics® algorithm optimizes Variable Frequency Drives (VFD)

Watertronics unique software algorithm tunes the VFD pressure characteristics to each pump and each combination of pumps in the system. This assures near perfect pressure regulation from no flow up to full pumping capacity. Watertronics systems also incorporate ride-through protection to keep your system operational following a loss of power or an alarm condition.

## VirtualVision™ II user-friendly, color operator interface

Watertronics offers an easy-to-use Touchscreen operator interface with full color TFT Active Matrix LCD display for monitoring alarms, changing pump sequencing, adjusting downstream pressure, changing filter flush duration, recording or resetting water usage, calibration and much more right at the touch of your finger.

## Monitor your pump station controls remotely with Watervision®

**Watervision** is a user-friendly monitoring software package to control and monitor the pump station remotely from an office based PC via short haul, phone, radio or fiber optic modem.

**Pump-Link®** integrates with the irrigation central computer and allows you to manage the entire irrigation system including the water distribution controls in one application. It allows the irrigation system and the pump station to react to each other in "real time".

## Lake Level Controls provide repeatability to a fraction of an inch

Watertronics stainless steel level transducer are unaffected by water quality, provide repeatability down to a fraction of an inch, and allow for adjustable start/stop lake level set points, and graphing capability. They can be managed by either Watervision or via VirtualVision II.



VirtualVision™ touch screen - important functions right at your finger tip



Watervision® controls the station remotely from your PC, and Pump-Link® integrates with your irrigation central software



Unique PLC algorithms to optimize pressure regulation and pump curve characteristics to reduce pressure surges on the systems

Fertigation logic is incorporated into PLC enabling calibration, remote fertigation control

Reinforced rolled steel base and commercial grade multi-step coating for appliance-like look and durability



Watertronics® fine tunes VFDs to achieve near perfect pressure regulation



Stainless Steel Filter that is impervious to corrosion, Filter Flushing Mechanism, Flush Valve utilizing an EBV System

# Watertronics® Built-In Performance and Durability



**Optional Patented EBV Electronic Butterfly Valve System used for bypass backup mode for pressure regulation in the event of a VFD fault**

**Every pump station is flow tested under simulated field conditions to reduce set-up time and provide you peace of mind**



## **Unitized skid construction**

Watertronics skids are formed using a single continuous sheet of pre-punched steel that is free of welding seams or cracks and prevents potential for rust right from the beginning. Structural steel is welded underneath to maximize strength.

## **Rust fighting coatings for superior product appearance and durability**

All pump station components are painted individually prior to station assembly. A multi-step coating system which includes metal preparation, rust-inhibitive, baked epoxy prime coat, and a two-part ultraviolet insensitive baked polyurethane finish is used to produce a durable, rust-free product and an appliance-like look.

## **Motors, discharge heads and pumps**

**Motors** are Inverter Duty Energy Efficient VHS.

**High-pressure ductile iron discharge head** offers 65,000 PSI tensile strength with radial discharge flow, for improved efficiency, corrosion resistance. The head features an unique dual-port air release system for complete purging of air.

**Pumps** are designed with porcelain lined cast iron bowls.

**High-Efficiency Stainless steel impellers** have a flow optimized design and a smooth frictionless surface.

## **EBV Electronic Butterfly Valve**

EBV Patented Electronic Butterfly Valve system (bypass backup mode for pressure regulation in the event of a VFD fault) compliments VFD controls by pressure regulating each across the line pump and provides 100% backup pressure regulation in the event of a VFD fault.

## **Filters**

Resist rust and corrosion and utilize pressure transducers upstream and downstream of the filter assembly for superior flushing performance, reliability and accuracy.

**Filter Flush Valve** uses a dirty water tolerant Electric Butterfly Valve rather than a Hydraulic Diaphragm Valve.

## **Freeze-Proof Heat Exchanger**

Automatically self-draining to eliminate freeze damage.



**Inverter Duty Energy Efficient VHS motors**

**Stainless Steel High-Efficiency Impellers in a porcelain lined bowl for optimum flow efficiency**

**High-Pressure Ductile Iron Discharge Heads offers 65,000 PSI tensile strength optimum flow efficiencies**



**Optional Mechanical Seals eliminate water spraying packings and adjustments**



# More Options That Can Make the Difference

Every unit we design is custom engineered to meet individual job requirements. At Watertronics, there are no “standard line” or “off-the-shelf” models.

- **Custom-built corrosion free composite enclosures**
- **Enclosure heaters and air conditioners**
- **Enclosure insulation**
- **Mechanical Seal** to replace stuffing box
- **Sustain and Jockey pumps**  
**Jockey pumps** eliminate the need to run a larger main pump for applications such as syringing and hand watering. Allows main pumps to come on line only when a higher flow is required.  
**Sustain Pumps** keep the system pressurized and allow for hand watering
- **Fertigation equipment and integrated controls**
- **Premium surge protection**
- **Choice of station colors** (Sandstone, Green, custom)



Watertronics composite enclosures are corrosion-free, sound-attenuating, impact-resistant, and have an extended life.

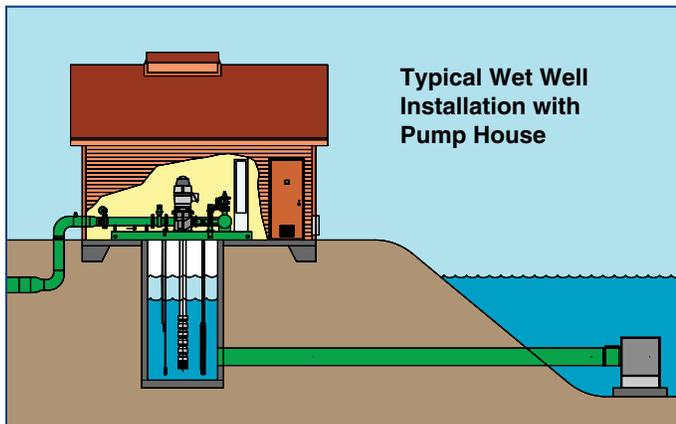
## Mechanical Seals

Designed to eliminate water spraying from worn packings. The mechanical seal offers less maintenance and eliminates shaft wear due to overtightened packings. The integral shaft bearing provides for a smoother operation than conventional packings.



## EZ Feed™ Injection Systems

integrate seamlessly with the pump station control software. You can adjust and monitor at the panel's touch screen or remotely on your office PC.



Typical Wet Well Installation with Pump House

## PSN Pump Service Network

Nationwide Technical Service for installation, start-up, maintenance, winterization, and retrofitting is provided by the PSN Pump Service Network.

