

# CUSTOMIZED PUMP STATIONS FOR AG IRRIGATION

## IMPROVING IRRIGATION ROI THROUGH EFFICIENT PUMPING SOLUTIONS

HIGHER YIELDS... LOWER ENERGY AND LABOR COSTS...  
ENGINEERED EFFICIENCY



NOW INTEGRATED WITH  
FIELDNET™ WEB-BASED  
PUMP CONTROL



# Easy control and monitoring

NOW INTEGRATED  
WITH FIELDNET  
PUMP CONTROL

Watertronics® customized pumps stations for agriculture come equipped with automated control and monitoring technology.



USER-FRIENDLY TECHNOLOGY  
FOR FULLY AUTOMATED CONTROL

Pre-engineered and factory-tested prior to shipment, Watertronics pump systems and control technology save you time and money by keeping you from physically checking the pump station. Installation is quick and easy, so that your irrigation system is operational within the shortest period of time.

## Precise water pressure control and monitoring

Watertronics' user-friendly software automatically tunes water pressure to each pump and combination of pumps in your system. This provides near perfect pressure regulation from no flow up to full pumping capacity. Reduced pressure surges and less wear and tear on your pumps and irrigation systems means longer system life and better ROI.

## VirtualVision™ III user-friendly, full-color operator interface

Watertronics offers an easy-to-use touchscreen operator interface with full color LCD display for monitoring alarms, changing pump sequencing, adjusting downstream pressure, recording or resetting water usage, calibration and more. Looks and feels like Windows software.

## Now improved with FieldNET™ Web-based pump control

Add FieldNET's wireless irrigation system to access a single on line portal to monitor and control the entire pump and center pivot irrigation system. This integrated solution provides information allowing you to monitor and maintain each pump for peak performance. FieldNET automatically tracks and reports start-ups and shutdowns and sends alerts for any disparity of normal operations, such as flow alarms.

The **Premier for Pumps** service level provides monitoring and control of the Watertronics pump controller. It features the unique integrated water management feature called Dynamic Demand Control (DDC) for maximizing energy savings using dynamic pressure set points.

The DDC dashboard includes pump station pressure, flow, set point, total volume, pivot status and more – all on one screen for easy operation.

If you have a Watertronics pump station, **Advanced for Pumps** service level offers monitoring of pump sensors and optional start/stop control for booster pumps.



FieldNET can automatically adjust pump station pressure set points to best match demand from the pivots that are irrigating.

Know pump run status, measure and report water usage, and track pressures and water levels with optional sensors.

Add FieldNET's advanced power meter to any system for accurate measurement (kW and kW/H) to meet the needs of energy management and performance contract applications.

## Chemigation/fertigation

Fertigation equipment with control logic fully integrated into the Watertronics pump station controls for easy set-up, calibration, monitoring and control.



Touch screen control with easy-to-understand interface programming and quickview color graphics



# How Watertronics improves ROI

A leader in design and control innovation, Watertronics offers complete, integrated pump stations that help you maintain consistent water delivery from river stations, irrigation reservoirs, canals and lagoons.

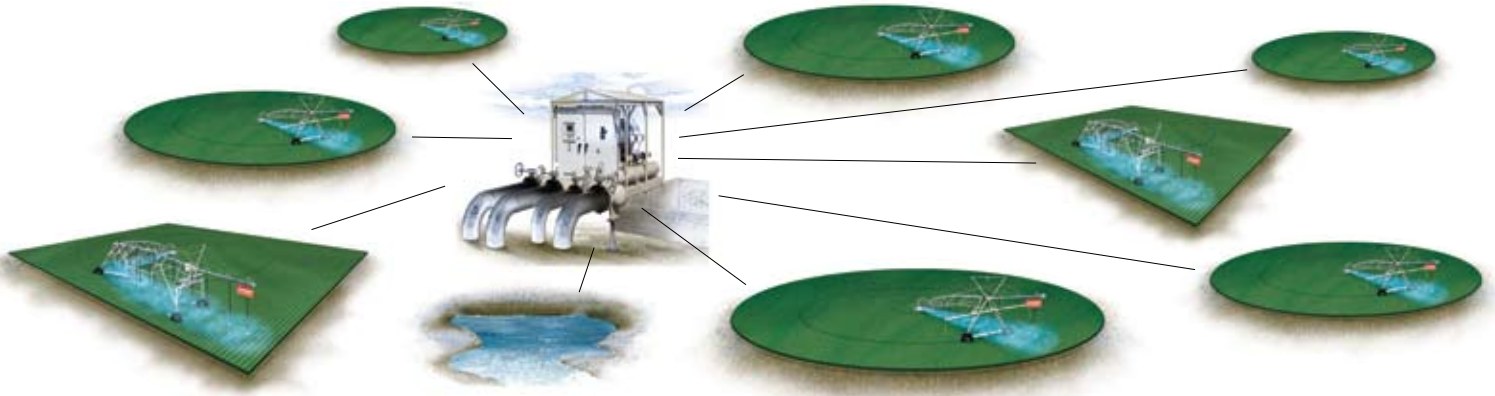
Each Watertronics pump station is custom engineered based on your needs and field conditions, reducing set-up time and ensuring peak performance.

Energy savings are realized through integration of your irrigation water source and your water distribution system. Watertronics' water pump sequencing, unique dynamic demand pressure controls (DDC) and Variable Frequency Drive (VFD) technology ensure near perfect water pressure regulation – no matter what the pumping capacity.

Watertronics pumps are controlled automatically to provide water

## Main benefits of Watertronics pump stations

- Customized
  - Integrated pump and pivot control
  - Multiple irrigation system operation
  - Engineered system to save energy, water and labor
  - Delivered as a factory-assembled unit for fast installation
- Consistent water delivery



## Lower energy, water and labor costs

Now you can operate multiple irrigation systems from a single pumping station. Combine that with Lindsay's FieldNET wireless irrigation control system, and you have full control of the irrigation water on your land, resulting in energy, water and labor savings.

through the most efficient means possible and only according to your irrigation system demand requirements.

Watertronics control technology is also available as an upgrade to any existing pivot, pump or pumping station, including VFD and single-phase to three-phase electrical conversions.

- Lower cost of production
  - Reduced energy costs
  - Simple monitoring and control to save time and labor
- Higher yields through more uniform water application
- Immediate energy savings
  - Surge-free pressure regulation
  - VFD matches pump output to demand
- Consistent reliability
  - Performance tested prior to delivery
  - Complete installation and service
- Higher returns—save up to 25 percent on water and energy costs



WATERTRONICS PUMP STATIONS CAN BE USED WITH:

# The Watertronics advantage

Watertronics is a leader in designing, manufacturing and servicing pump controls for agriculture, golf, landscape, municipal and water conservation markets.

## Integrated customization

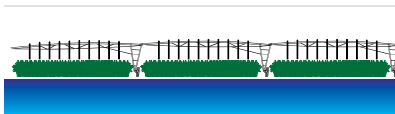
Each pump station is engineered for your needs and field conditions, reducing set-up time and ensuring peak performance. All components are integrated and housed in one complete unit. Pressure, flow, voltage, amps, power factor and KW are recorded and then verified by you.

## Precision energy efficiency

Watertronics specifically tunes the VFD pressure characteristics to each pump and combination of pumps in the system to ensure optimum pressure regulation—no matter what the pumping capacity. Pump stations also incorporate ride-through protection, which is the ability to deliver power during an outage to keep systems operational.

## Conversions from single-phase to three-phase

Watertronics VFD not only provides precise pressure control for your pumps, it also allows you to convert single-phase power sources to three-phase electrical hookups. With VFD, you have the opportunity to upgrade your irrigation power sources from combustion engines to highly-efficient electrical motors.



Uniform water application

Watertronics' water pump sequencing, dynamic pressure controls and VFD technology provide near perfect water pressure regulation. This ensures uniform water application throughout the field and on any terrain.

## Continuous surge-free operation

To further enhance efficiency, our optional patented Electronic Butterfly Valve (EBV) regulates pressure, prevents pump overload and anticipates and eliminates surges for a smoother ramp-up of irrigation pressure.

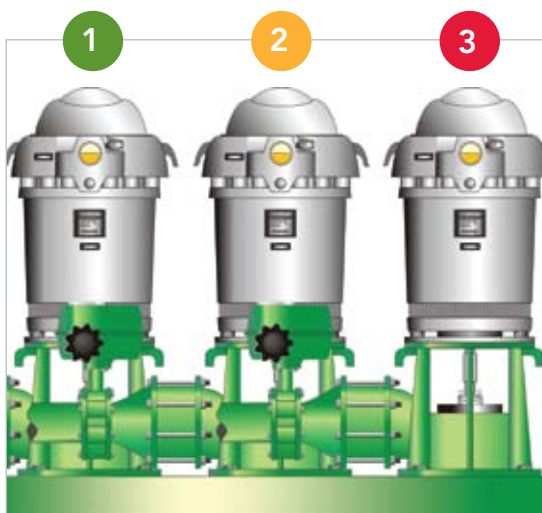
## Consistent reliability

Each pump station is performance tested prior to shipment and backed by a trained dealer network who offer complete installation, preventative maintenance programs and station retrofitting. Plus, all pump station components are treated to be corrosion-free and durable for years to come.

## Designed and engineered by ag irrigation experts

Backed by Lindsay's expertise and experience in irrigation and agronomic practices, Watertronics engineers and your local Zimmatic dealer can help you design a state-of-the-art water pump control and irrigation system to meet your field conditions and needs.

## DYNAMIC SEQUENCING PUMP CONTROL



Example illustrates a three 100 hp high efficiency pumping system with EBV and VFD control configuration.

- 1 System demand requires capacity from only one pump, with the other pumps idle.
- 1 2 Pump 1 running at 100% capacity and pump 2 at 50% capacity.
- 1 2 3 All three pumps running in combination at up to 100% full capacity.

Pump sequencing and dynamic pressure control provide consistent water delivery and save energy, as shown in this example. Variable Frequency Drive allows pumps to run in any combination from 0% up to 100% capacity. The pump sequencing also saves on system wear and tear.

# Anatomy of an efficient pump station

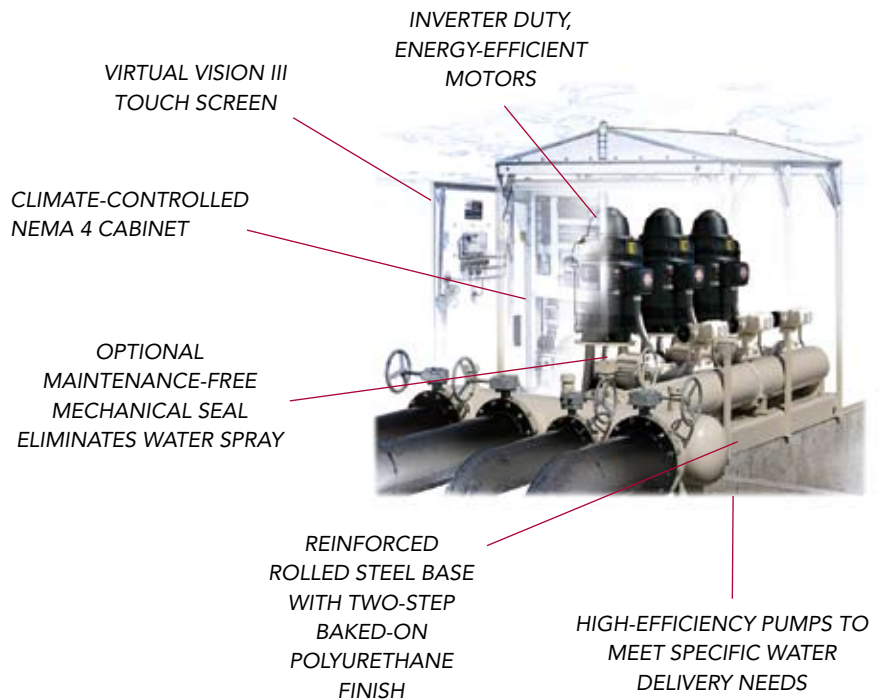
Every Watertronics pump station is factory tested to meet your specific irrigation needs.

## Pump station features

- Virtual Vision III touch screen with full-color active matrix LCD display
- Climate-controlled NEMA 4 cabinet
- Inverter duty, energy-efficient motors
- High-efficiency pumps to meet specific water delivery needs
- Dual-port air release system for purging air
- Stainless steel pressure transducer provides reliable pressure and level monitoring
- Reinforced rolled steel base with two-step baked-on polyurethane finish

## Optional upgrades

- FieldNET with Web-based pump control
- Electronic Butterfly Valve (EBV) pressure regulation
- Corrosion-free filtration system with integrated control and monitoring
- Maintenance-free mechanical seal eliminates water spray
- Fertigation equipment with control logic fully integrated into the pump station controls for easy set-up, calibration, monitoring and control



## Economical solutions for improving efficiency of existing pumps

Watertronics control technology is available as an upgrade to any existing pivot or pumping station, including single-phase to three-phase electrical conversions. An economical way to make your current irrigation system more user friendly and save energy, water and labor.



### Variable Frequency Drive

Specifically tunes pressure characteristics to each pump and combination of pumps in the system, ensuring near perfect pressure regulation.



### Electronic Butterfly Valve

Patented EBV complements VFD controls by pressure regulating each pump and provides 100% backup pressure regulation in the event of a VFD fault.

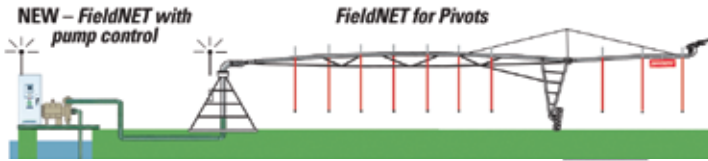


### Horizontal and Vertical Pump Stations

Versatile and reliable, the horizontal centrifugal pumping station is a flexible and cost-effective solution for large- and small-capacity irrigation requirements.

The workhorse of the Watertronics line, the vertical turbine pumping station offers rugged reliability with capacities up to 30,000 GPM (113,550 liters/min).





## Proven, integrated irrigation solutions by Lindsay

Lindsay offers custom, turnkey solutions for your irrigation and pump system needs. Whether you want to upgrade an old system or install a new system with the latest technology, Lindsay or the Zimmatic dealer network can help you design a durable system that maximizes your efficiency.



## An international irrigation leader

Lindsay has a worldwide dealer network with warehouses in Nebraska, Texas and Idaho; factories in the United States, China, Brazil, France, and South Africa; and additional sales offices in Argentina, Australia, China, Egypt, Guatemala and Mexico.

We can coordinate a variety of resources to implement turnkey irrigation systems wherever they're needed, through our dealer network or Lindsay resources.

**For more information, visit [www.zimmatic.com](http://www.zimmatic.com) or talk to your Lindsay dealer.**



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**Lean, Clean and Green.** Lindsay Corporation is committed to developing environmental awareness and implementing sustainable practices to reduce the use of and protect energy, water, and all other resources.



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