Intelligent Pumping Equipment Solutions
A strategic advantage for your business

Energy Efficiency

Make the most of your energy℠
Your partner for intelligent, energy saving pumping applications.

From the most basic application to the most complex project, Schneider Electric™ is committed to your success in the pumping marketplace. To meet the challenges ahead in today’s complex market, you need more than an equipment supplier – you need a solutions provider.

Schneider Electric is an innovative partner committed to helping you solve your most complex challenges while working with you to adopt the latest technology for your needs. We are dedicated to helping your company find a strategic edge in the market, whether you’re focused on water/wastewater, commercial and industrial building, industry, irrigation, or residential.

We have the right solution for your application requirements and the expertise to make it work!
Energy efficiency is an important component of all pumping equipment applications, and Schneider Electric is on the leading edge of those solutions. From variable frequency drives to power monitoring/power management systems, we provide smart strategies to optimize your energy efficiency. We are your pumping equipment energy management specialist.

Our Water/Wastewater Competency Center (WWCC), works with municipalities and consults with engineers providing complete value chain expertise - including pumps and pump systems - to position Schneider Electric as a leading supplier to this key pumping market; while our commercial and industrial buildings expertise helps you enhance the value of your pumping equipment offer. Schneider Electric is a recognized market leader, with extensive coverage of the value chain including consultants and contractors.

Schneider Electric focuses on key industrial markets such as Oil & Gas and Mining, which ensures our solutions are specific to applications including rod pump control and dewatering. In addition, our extensive experience in the irrigation market, both water extraction and application, provides a solid foundation for enhanced solutions.

We then take it one step further with our OEM Technology and Solutions Center. This center removes the complexity of machine building by offering start-to-finish project lifecycle expertise, including project management, electrical panel design, application co-design, joint marketing, testing, training, and services resources.

Our Customer International Support (CIS) program provides global partners access to services including commissioning and troubleshooting. It allows you to provide quick response and service to customers around the world. And we offer an extensive distributor network that is well trained and easily accessible to ensure readily available product and technical support.

We have resources to help you succeed...

Whether you are concerned about pumping equipment energy efficiency, controls, functionality, or codes and standards compliance, Schneider Electric has resources for you!
Improve your machine and business performance with MachineStruxure.

Your challenges:

- Reduce design cycle time
- Reduce time to market
- Personalize your pump systems to your pump/system offer

...while reducing your costs
Your customers are more demanding and your machines more intelligent.

To take on your competitors you must supply machines with shorter lead times that are more efficient, productive, and reliable, at a reduced cost.

Your choice of automation solutions is now, more than ever, a determining factor in distinguishing yourself at each stage, from the design and development to implementation and maintenance of the machine.

**MachineStruxure™** helps you design more energy efficient and cost-effective pumping systems and installations while maximizing performance. Based on flexible hardware platforms and a comprehensive single software suite, MachineStruxure uses proven architectures with application function block libraries.

MachineStruxure, an automation solution for pumping systems, is one of the mainstays of **EcoStruxure™**, a system based on Active Energy Management™ architectures, from an electrical power plant to a single electrical socket. EcoStruxure enables you to benefit from intelligent and simplified energy management systems, to reduce your investment and operational costs, and reduce waste resulting in energy savings up to 30%.

What’s more, we take it one step further with our **OEM Technology and Solutions Center**. This center removes the complexity of machine building by offering start-to-finish project lifecycle expertise, including project management, electrical panel design, application co-design, joint marketing, testing, training, and services resources.

Schneider Electric pump solutions offer **architectures and application function blocks** (AFBs) targeted to your business. These tailored architectures facilitate design, reduce time to market, and simplify the solution to your pump system challenge. Our AFBs include line fill, jump frequency, flow scaling, sequencers, and flow totalizers along with more than 15 additional options currently in development. Using an AFB specific to your needs can facilitate design time and work within a custom architecture to further improve your speed to market and create a more cohesive, energy efficient solution.
Building your solution.

Schneider Electric has a comprehensive and intelligent solution offer for the pumping equipment industry – whether a pump OEM, pump skid builder, or pump controls manufacturer, we strive to provide scalable alternatives for intelligent and energy efficient pumping applications.

Industries

1. Irrigation
2. Industrial
3. Water/wastewater
4. Buildings
5. Residential

This document provided by Barr-Thorp Electric Co., Inc.  800-473-9123  www.barr-thorp.com
Customer challenge: efficient irrigation
An OEM manufacturer of turf irrigation equipment had a need for a simplified solution that could reduce vendors, cost, and panel space. He was faced with a competitive market and needed a cost effective, simple, and robust solution for his customers.

The Schneider Electric solution
- We provided an off-the-shelf solution, Altivar™ 61 VFD, that includes an onboard PLC for pump application customization.
- The Schneider Electric engineering and design team, working in the OEM Technology and Solutions Center, facilitated the development of the program and provided training for the turf irrigation OEM.
- The robust, open software allowed the customer to program and modify environments specific to the needs of the irrigation system.
- We provided software and hardware flexibility that the irrigation OEM needed with a standard off-the-shelf solution.

Customer challenge: replace diesel-driven pumps
Due to environmental concerns and rising fuel costs, pump solution providers needed to adopt and market a simple solution to replace diesel-driven pumps. In a relatively unsophisticated market that is not ready for increased electrical demand, the local utilities needed support to develop programs that would increase awareness and motivate local growers to make the transition to an electrically-driven pump solution.

The Schneider Electric solution
- Schneider Electric pump experts developed a complete motor control offer including pump panels, soft starts, and drives that were well suited and specifically designed for pumping applications.
- We provided a solution with service entrance ratings and promoted a white paper that provided more specific details surrounding the complete offer.
- In conjunction with the pump solution provider, we implemented a mailing campaign to increase the acceptance of the migration, saving time and money for the user.
Customer challenge: manage a bid/spec process
A pump OEM lacked the resources and confidence to manage a bid/spec process for a customer. The customer needed to partner with a major drives supplier that was widely accepted in the water/wastewater industry. They needed to enhance their offer in response to the increasing trend for consultants to specify pump OEM supply drives.

The Schneider Electric solution
- Schneider Electric provided dedicated assistance with their bid/spec take off and proposal process.
- Submitted a “take off” from Dodge Reports, notified the customer of an active project where they are acceptable, and requested a bid proposal.
- Provided a scope letter, documenting a drives bid that the customer could insert into their bid package ensuring an accurate and timely proposal.

Customer challenge: electrical design
A major pump station manufacturer, in the midst of a product redesign, was searching for several electrical suppliers to provide design options. They were under tight deadlines with a specified budget for migration. They lacked the in-house electrical design experience to create a new design for their market.

The Schneider Electric solution
- Schneider Electric offered the assistance of the Technology and Solutions Center (TASC) for engineering and design expertise.
- Reviewed the current design with the customer to determine what modifications could be made to optimize the new design.
- The TASC recommended and validated a new control architecture that enhanced performance, reduced cost, and time to market.
Commercial and industrial buildings

Customer challenge: standardizing a VFD offer

A pump OEM needed to standardize their variable frequency drive (VFD) offer for booster pump stations. Initially, they selected a customized VFD with firmware that could only be programmed/modified by the VFD supplier. This resulted in a cumbersome change process with volatile delivery problems. They needed a VFD with flexibility in software design and dependable lead time to quickly provide their customers with a viable solution.

The Schneider Electric solution

- We provided an off-the-shelf solution, Altivar 61 VFD, that includes an onboard PLC for pump application customization.
- The Schneider Electric engineering and design team, working in the OEM Technology and Solutions Center, facilitated the development of the program and provided training to the pump OEM.
- Robust software, provided by Schneider Electric, allowed the customer to program and modify environments specific to the needs of the booster station.
- We provided the flexibility the pump OEM needed with a standard off-the-shelf solution.

Customer challenge: bundled drive and control system

A pump representative had an urgent need for a bundled drive and control system for a green building solution. They were responsible for working with consultants and building owners, specifying the drive, and developing the solution for installation. They needed a supplier to support their specification efforts, provide accurate and timely proposals, and deliver the enclosed drive solution for the building market segment.

The Schneider Electric solution

- Schneider Electric provided the S-Flex™ drive, specifically designed for commercial and industrial building pump and fan applications.
- Assistance was provided through a vast network of consultant sales engineers that were available to drive preference for Schneider Electric solutions.
- An extensive network of drives and specialists in the field helped the pump representative review specifications and proposals.
Customer challenge: community well

A leading pump OEM manufacturer needed to develop a community well solution that was simple to install, startup, troubleshoot, maintain, and provided energy efficiency. Due to the varying pump load demands of community wells, a one-size-fits-all approach was not viable. They needed a customizable, easy-to-install solution.

The Schneider Electric solution

- We provided an off-the-shelf solution, Altivar 61 VFD, that includes an onboard PLC for pump application customization.
- The Schneider Electric engineering and design team, working in the OEM Technology and Solutions Center, facilitated the development of the program and provided training for the well pump OEM.
- This allowed the well pump OEM to preload pump parameters prior to installation, resulting in quick and easy startup.
- This differentiated solution allowed OEMs to outpace their competition for community well applications.

Customer challenge: constant-pressure pumping solution

A well pump OEM was facing increasing demand to provide cost competitive, scalable, constant pressure solutions that were energy efficient, easy to install, and maintain. In a market where control technologies continue to evolve and market competitiveness is essential, delivering a constant-pressure pumping solution was critical for the pump OEM to remain competitive.

The Schneider Electric solution

- The Schneider Electric engineering and design team, working in the OEM Technology and Solutions Center, took on the challenge to develop a cost effective, scalable solution.
- They developed a solution that included a variable frequency drive (VFD) and XMLG pressure transducer for constant pressure pumping.
- Created a field testing environment to test and validate the space-saving energy efficient offer.
- Delivered a cost competitive, scalable, constant pressure solution that helped the pump OEM to remain competitive.
Choose your solution.

Schneider Electric has a comprehensive and intelligent solution offer for the pumping equipment industry – from the pump OEM to the distribution channel, we strive to provide scalable alternatives for intelligent and energy efficient pumping applications.

The Schneider Electric drives offer provides pump applications specific functionality.
- IMC Card for greater efficiency
- Complete offer of AC variable frequency drives to increase pump system efficiency
- Reduce energy consumption, reduce mechanical stresses
- Designed for both variable/constant torque applications across all end markets – water/wastewater, building, industry, irrigation, residential

The Schneider Electric enclosed drive offer provides a bundled, plug-and-play solution.
- Environmentally protected offers in type 12, type 3R, and type 4 ratings
- Provide energy efficiency, harmonic reduction technology, service entrance ratings for outdoor applications
- Commonly used in applications where protection against environmental conditions is crucial, such as HVAC, water/wastewater, irrigation, and industry

The Schneider Electric soft starts offer provides longer life to your machine.
- Wide range of soft start solutions – including the new mid range Altistart™ 22
- Reduce peak energy demands, reduce water hammer with advanced torque control, reduce pump wear and tear
- Predominant solution in applications such as irrigation, where starting considerations are the primary concern

From circuit breakers to ground fault protection, our comprehensive motor protection/circuit protection offer is tested to the highest standards.
- Wide variety of both molded case and miniature circuit breakers to provide protection for your pump systems when your motor exceeds its current limitations
- Provides preferable solution for pumping equipment systems protection from short circuit and overload conditions
- Used across all pumping applications, based on code and system design standards

Schneider Electric NEMA and IEC motor control offer provides robust performance and enhanced reliability.
- NEMA solutions rated for challenging application with robust performance, an industry standard
- IEC Solutions that enhance motor management and reduce panel space
- A universal offer, found wherever pumps are applied
- TeSys™ T, a complete motor management solution

Schneider Electric pump panels are designed for water and oil field applications.
- NEMA rated, type 3R enclosed, simplex and duplex offers with service entrance ratings specifically aimed at pump control
- Additional space provided for necessary monitoring and protective equipment to meet your application needs
- Two common applications include irrigation and Oil & Gas pumping, but can be applied wherever pumps require complete control solutions

The motor control center (MCC) offer from Schneider Electric provides advanced motor management and protection for your pumping applications.
- Space effective, centralized motor control solutions
- Integrated motor protection, including motor starters, soft starts and drives, along with PLC/HMI solutions required in pumping applications
- Commonly used in water/wastewater and various industrial applications, where centralized control solutions provide value
A full automation offer provides just the right solution for your pumping needs. 
- Full range of PAC/PLC offers – with new mid range offers M238/M258 PAC controllers 
- M168 is especially well suited for building applications as it offers direct communication options to building management systems via BACnet®, for example 
- Networking connectivity, our Ethernet enabled solutions provide access to pump status/information, faster commissioning, easier connectivity, and lower costs of post-installation support 
- Key tools for all manufacturers of “smart pumping systems,” increasing in all industries 
- Our communication software fully integrates with building management systems

Schneider Electric is the world leader in bright, easy-to-read human machine interface (HMI). 
- Easy to install/set up 
- NEMA 4x touchscreens that can be used in wash down environments 
- Withstands high temperatures (50° C) 
- Brilliant, high-visibility display 
- Communication options for all major network protocols 
- Integrated HMI/PLC to reduce panel space 
- Easy-to-install version mounts similar to a pushbutton - using the same 22mm hole punch

Schneider Electric provides telemetry and pump control solutions for lift, booster, and tank station applications and are designed for standalone use or integration within existing SCADA/telemetry systems. 
- Robust hardware designed for use in extreme environments (–40°C to 70°C) 
- Industry-standard protocol support 
- Comprehensive security suite including encryption and authentication 
- Time-stamped event logging and alarm reporting for accurate data reporting 
- Ethernet, serial, and USB interfaces add communication flexibility 
- Licensed and license-free data radios extend network reach 
- Three-year warranty for added confidence

The Schneider Electric operator interface offering provides the right information at the right time. 
- Complete line of operators - including new LED indicating devices which increase visibility, prolong life, and reduce costs 
- Used wherever local control and indication are required, and include NEMA 4/4X ratings encountered in many pumping applications 
- An integral part of all pumping control systems, ultimately required in all industries

The Schneider Electric complete line of pressure switches/controls includes pressure switches/transducers, float switches, and level controls providing you the broadest offer in the industry. 
- Complete line of pressure, float, and level controls – including new pressure transducer/transmitters specifically designed for pumping applications 
- Key system feedback devices that allow for accurate control of pumping systems 
- Universally used in residential, water/wastewater, building, and industrial

Schneider Electric relays, timers, terminal blocks, and power supplies are designed and manufactured to provide reliability and performance. 
- Extensive offer of complementary components to allow complete control system design - allows you to consolidate vendor relationships 
- Used to integrate logic, control circuitry, and connectivity and provide appropriate control power in control systems 
- Found in all packaged pump systems across all end markets

Schneider Electric surge protection equipment and products prevent damage to your pump system from voltage spikes and transients. 
- Extensive line of surge protection – complete voltage range, single- and three-phase 
- Used to prevent damage to pump systems from voltage spikes and transients 
- While applicable for all pump systems, one primary example is in the irrigation segment, where voltage fluctuation is a real issue
Support solutions

At Schneider Electric, we are more than a component supplier. We are your partner for a full range of technical and support solutions.

OEM knowledge base – dedicated support for your success
Providing expert project management skills to you and your company is one of the OEM Technology and Solutions Center's greatest values. We’re committed to our mission of giving you a leg up on the competition and saving you time and money by utilizing our comprehensive project management services to ensure your project’s successful execution. We are your solution partner throughout the entire project lifecycle, providing a single point of contact, while developing and managing customized solutions, and delivering clear communication and project reporting.

Testing and project management
Schneider Electric provides prototyping and testing capabilities to make sure your solutions function the way you believe they should. We also offer complete project management services to ensure we effectively cover all phases of development projects in a timely manner that meets your deadlines.

Solutions Testing and Training Center
Learn how to simply and easily build and commission flexible machines that reduce costs and time to market — all by the time you complete training.

Basic and advanced training classes, hands-on testing, and demonstrations offered through the OEM Technology and Solutions Center will give you the opportunity to learn about OEM universal, industry segment-specific, and motion solutions. On-demand training, which we schedule at your request, will allow you to customize a solution for your specific machine and application needs.

Innovation Center
Demonstrated excellence and proven solutions mean added value for your business. The Innovation Center is a hands-on demonstration center where multidisciplined teams run live, working solutions that demonstrate their first-hand experience in solving automation and control challenges for our OEM customers in a variety of industries.

Product repair and replacement
The repair services team at Schneider Electric is dedicated to keeping your business running smoothly and productively. We’re here to help, with a one-stop shop for all of your repairs, which can fix and/or replace malfunctioning equipment, as well as give you insight into the root cause of the error. We can also help you manage your spare parts inventory to minimize the downtime of critical operations.
To learn more, visit [www.schneider-electric.us/go/pump](http://www.schneider-electric.us/go/pump) or call 1-888-778-2733