



Franklin Electric

WATER SYSTEMS

FOR MINING APPLICATIONS



ENGINEERING TRUE **PARTNERSHIPS**



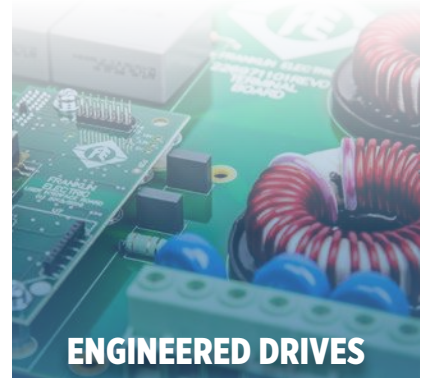
HIGH-PERFORMANCE PUMPS

Our proven portfolio of submersible and surface pumps are designed for superior durability, efficiency and performance.



LEGENDARY MOTORS

Unrivaled performance powered by over 75 years of expertise as the world's largest manufacturer of submersible motors.



ENGINEERED DRIVES

An innovative line of starter and drive panels designed specifically for ease-of-use in water pumping applications.



Franklin Electric

Franklin Electric makes choosing the right products for your water system needs easy. We collaborate with our customer partners to determine the best product solution suited for your specific application. With Franklin Electric, you have confidence in knowing our team of water system experts is here for you every step of the way.

Water systems in the mining industry require extreme performance and reliability. Franklin Electric's diverse product portfolio, combined with industry-leading technical support and service tools, help you save time and money. Our proven products are designed to maximize performance in a wide array of mining applications including dust suppression, dewatering, source water, evaporation equipment and more.

OUR BRANDS



PRODUCTS FOR MINING APPLICATIONS



DIESEL
PACKAGES



ELECTRIC
PACKAGES



PUMPS



MOTORS



DRIVES





PUMP PACKAGES



DIESEL-DRIVEN PACKAGES



Pioneer Pump®, a brand of Franklin Electric, offers a comprehensive range of diesel-driven pump package options for fixed and portable installations. These packages are built for the toughest environments and are available with vacuum-assisted priming, self-priming and standard centrifugal pump ends. Available in sizes up to 18", Pioneer centrifugal pumps are designed to provide better flow, higher head and greater efficiency to meet your unique challenges.

Our trailer packages are Department of Transportation (DOT) compliant and have sound-attenuated enclosure options on select models. From material selection to final concept, these units are designed with your needs in mind. Each package configuration offers easy access to what matters and the convenience you need to maximize pumping profitability.



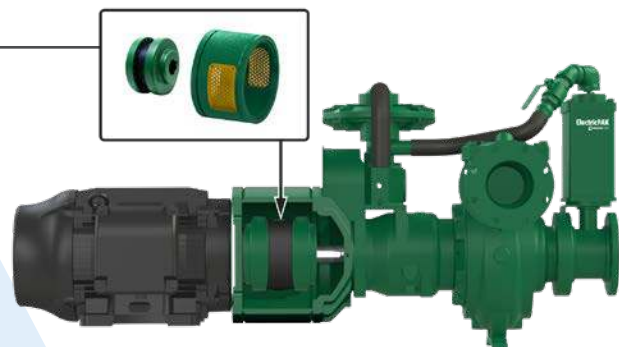
ELECTRIC-DRIVEN PACKAGES



The Pioneer Pump® ElectricPAK™ delivers a modular design that can arrive on-site and startup quickly. From initial selection to installation to a lifetime of operation: durability and performance are built into every component. Each configured assembly includes high-performance pumps and electric motors that provide better flow, higher head and greater efficiency.

NEVER LOSE ALIGNMENT

Like all Pioneer Pump systems, the ElectricPAK is engineered for performance and serviceability. The robust design includes a rigid bracket, known as a motor stool, that keeps the pump and motor permanently aligned, saving countless hours of service time. No need for time-consuming alignment work upon delivery or whenever the unit is moved. The modular design can also be disassembled quickly for reduced service and maintenance time.





SUSTAINABLE SOLUTION: ELECTRICPAK

With environmental regulations becoming more stringent, pumps need to be safer, cleaner and more efficient than ever. ElectricPAK is a sustainable solution for mining applications, offering a variety of advantages to owners and operators, including:

- Electric motors eliminate the concern of fuel, coolant or DEF spillages, provides fewer moving systems parts, and removes extreme temperature operating conditions*
- The modular design reduces maintenance interactions for overall improved safety
- Cost savings realized from the rigid motor stool design that eliminates the need for pump and motor alignment upon installation and after transport
- Energy savings achieved by using electric kW*

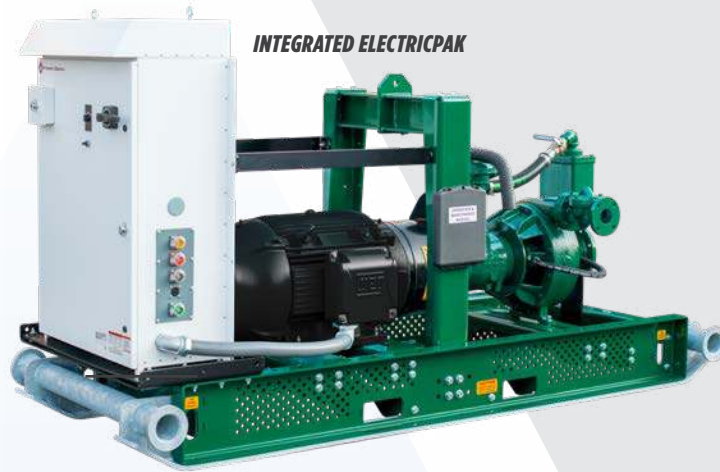
** These benefits are applicable to all electric-driven pump packages and are not unique to ElectricPAK.*



VARIABLE FREQUENCY DRIVE PACKAGES



A variable frequency drive (VFD) on the jobsite needs to be as tough as the environment it's in. That's why we've taken the best features of our most popular VFD system and re-packaged it to withstand the demands of transport and deliver a more intuitive startup experience with our SmartPrime™ touchscreen interface. You get the operating performance you need, packaged the way that works best for you: full ElectricPAK™ system or standalone skid.



INTEGRATED ELECTRICPAK

SMARTPRIME INTERFACE

Handle all aspects of operation from a streamlined central hub with easy-to-navigate graphics. Get fast startup and simple monitoring – eliminating the need for complex keypad setup and programming.

Two SmartPrime mode choices help operators get packages up and running with just a few clicks:

- Manual mode lets users adjust basic pump parameters using simple on-screen tools. Includes analog sensor monitoring for up to four control and data variable
- Auto mode lets users set up pre-programmed behavior including: maintain level, 2-float level control, constant pressure output, drain wet well, and more.

Alternative Hand Mode allows users to operate the panel with tactile pushbuttons and door-mounted speed potentiometer.



ELECTRICPAK VFD



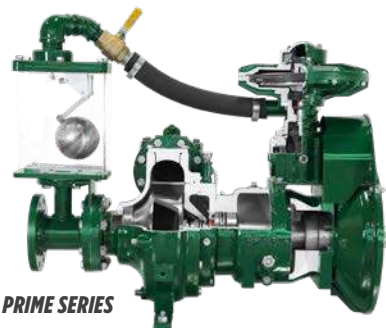
PUMPS



STANDARD CENTRIFUGAL & VACUUM-ASSISTED



Pioneer standard centrifugal pumps provide superior performance in a variety of high pressure, wastewater or dewatering applications. All Pioneer standard centrifugal pumps can be upgraded to a Pioneer Prime vacuum-assisted self-priming pump that delivers extreme flows with high head capability and utilizes our advanced priming system. This dry prime system is capable of rapid (50 CFM) unattended priming and operation for the ultimate in reliable performance, even in run-dry situations and suction lift applications.



PIONEER PRIME SERIES

SELF-PRIMING



Pioneer self-priming pumps are designed for reliable solids and clear liquids handling. After initial priming, they continue to re-prime for low maintenance and cost-effective performance. Constructed with the best materials including a standard heavy-wall ductile iron volute and a 17-4 PH stainless steel shaft for durability and peace of mind.

VR SERIES

GT SERIES



BOOSTER PUMPS



Available in high- and low-speed models for superior durability, efficiency and performance in a wide array of applications. The FPS booster pump portfolio includes horizontal and vertical multi-stage pumps that are ideal for truck washing and process water in mines.

ELECTRIC SUBMERSIBLE PUMPS



Minetuff® Series electric submersible pumps deliver proven reliability in the world's harshest environments. Whether you need a submersible that moves with your crew or one that stays in place, every pump is engineered for optimal performance and rugged durability to keep your site operational. As part of the Pioneer Pump portfolio, you can trust these pumps are fully supported with local resources and digital tools dedicated to your business.



MINETUFF SERIES



VERTICAL LINESHAFT TURBINES



From deep-set vertical lineshaft turbines delivering 2,500 feet of head—to axial-flow turbines moving 40,000 gallons per minute—our array of pumping solutions is engineered to handle the toughest applications. Vertical lineshaft turbines are ideal for mining applications where water supply is readily available in ponds or water wells. Plus, they come in a variety of configurations, including mixed or axial flow. Outfitted with ASTM A48 high tensile cast iron bowls, investment-cast 304 stainless impellers, and bronze bearings standard, you get superior materials for proven durability, aligned with a highly efficient broad operating range.

SUBMERSIBLE TURBINES



With flows up to 22,000 gallons per minute and heads up to 2,500 feet, Franklin Electric offers a wide selection of strapped, cast iron and cast stainless submersible turbines that help you cover almost any pumping application. Pair these products with our legendary motors and engineered drives to maximize performance beyond the pump.

WATER TRUCK PUMPS



Franklin Electric has the pump you need for a variety of water truck applications: over-the-road, large off-road or self-filling. Our water truck pumps include a heavy-duty cast iron construction volute with a back-pullout design that can be rotated for ease of installation. They also feature a cast iron enclosed impeller for high efficiency and are double keyed for improved reliability.

FVT SERIES

FST SERIES

SSI SERIES

SR SERIES





MOTORS



ENCAPSULATED MOTORS



Franklin Electric offers a complete line of submersible motors for mining and other submerged pumping applications. Our 4-inch submersible motors (1/3 through 15 hp) feature the industry's widest range of voltage and frequency ratings in both single- and three-phase models. For deep well dewatering and water management applications requiring higher flow ratings, Franklin's 6-inch and 8-inch submersible motors are available from 5 through 200 hp.

REWINDABLE MOTORS



Available in 10-inch and 12-inch sizes, these rewindable motors are manufactured in ISO 9001 certified facilities, are built for dependable operation in 12-inch diameter or larger water wells. Each motor is fitted with water lubricated radial and thrust bearings for maintenance-free operation. It's also filled with a special FES93 fluid, providing frost protection down to -15 °C storage temperature. A unique diaphragm ensures pressure compensation inside the motor.

PERMANENT MAGNET MOTORS



Power your systems at peak efficiency with permanent magnet technology. Franklin Electric's MagForce High Efficiency Motor offering is engineered for high performance and long-term cost savings in submersible applications.





DRIVES



VARIABLE FREQUENCY DRIVES



Designed for variable torque applications up to 600 hp, the Cerus® X-Drive is Franklin Electric's all-inclusive drive solution. Available as a standalone drive and in multiple enclosed configurations, these panels are built to last, with every detail and component centered around your requirements. Pair this product with our legendary motors and pumps to maximize the performance of your application.

STARTERS & CONTROLS

For large or small mining applications, Franklin Electric offers innovative starter and control options that require minimal adjustments for simple installation and operation. From providing constant pressure for dust suppression applications to moving mass volumes of water for mine dewatering, our starters and controls protect your pump and motor from adverse conditions.



SUSTAINABLE SOLUTION: HIGH EFFICIENCY SYSTEMS

MagForce™ High Efficiency Systems are engineered for high performance, simple startup and incredible long-term cost savings. The advancement and use of variable speed technology within the pumping systems coupled with the benefits provided by permanent magnet motors mean engineers can trust that this sustainable solution provides cost-effective and efficiency gains, including:

- Electrical cost savings as a result of 90% efficiency rating in the motor for an investment payback of less than two years in most long- or continuous-run applications*
- Each system is powered with a permanent magnet motor that operates at a fraction of the energy consumption when compared to traditional induction systems
- Systems paired with an innovative Franklin Electric engineered drive offer intuitive startup and reliable protection for submersible pumping applications

**Results based on field trial data.*



APPLICATION SPOTLIGHTS



SUBMERSIBLE PUMPING SYSTEMS FOR WATER TREATMENT

THE CHALLENGE

A Pennsylvania treatment plant used submersible turbine pumps with 10-inch 250 and 200 hp wet-wound motors controlled by variable frequency drives (VFDs) in four wells drilled into old coal mining shafts. The motors were experiencing failures due to overheating in the windings—leaving pumps down for weeks at a time. The wet-wound motors were not capable of running less than 55 Hz and were not optimized to be paired with the VFDs. As a result, the original pumps were over pumping and could not be controlled to vary the flows as expected. While the existing pumps were designed to handle the max flow—the motors were not capable of operating at lower hertz to reduce the flow enough.

THE SOLUTION

FPS 11-inch FST Series submersible turbine pumps paired with Franklin Electric 8-inch 175 and 200 hp encapsulated motors capable of operating between 30 and 60 Hz.

THE RESULTS

The facility benefited from the new system immediately. The smaller motors not only delivered reduced energy consumption but also operated more efficiently—allowing the facility to vary flow from each well site to the treatment plant for long-term energy savings. The wells now operate for optimum performance, meaning greater reliability and no downtime to service the systems.



DIESEL-DRIVEN PUMP PACKAGES FOR MINE DEWATERING

THE CHALLENGE

A mine in Arizona needed a portable dewatering solution that could easily be transported to multiple pits, each with its own unique application requirements.

THE SOLUTION

Pioneer Pump 108S17 diesel-driven trailer package assembled with a Pioneer Prime vacuum-assisted self-priming system.

THE RESULTS

The versatility of this pump end allowed the package to not only be used for dewatering multiple pits, but also to be relocated for emergency backups. Additionally, the Pioneer Prime hydraulic design maximized lift capability and offered faster priming time compared to compressor-driven priming systems.



YOUR FRANKLIN EXPERIENCE RUNS BEYOND THE PUMP

SELECT & PURCHASE

GET WHAT YOU NEED, HOW AND WHEN YOU NEED IT

Whether you need to spec an entire system or replace a single part, Franklin Electric's tools and resources put convenience, product availability and order management at your fingertips.

- **FE Select:** Size. Configure. Quote. Input your performance requirements or specs, and our industry-leading online tool will help you find the right Franklin Electric product for the job.
- **FE Direct:** Your 24/7 online resource for viewing prices and availability, ordering products, tracking orders and accessing your account's details. Do business with Franklin Electric at your own pace whenever it's convenient—even from your smartphone. **For Franklin Electric distribution partners only.*



FE SELECT



FE DIRECT

TRAINING & EDUCATION

STRENGTHEN YOUR TEAM — AND THEIR KNOWLEDGE

Get your team up and running or enhance their skills. Online, in-person—on-site or off. Our educational tools are designed for a variety of learning needs.

- **On-Demand Learning:** Visit FranklinTECHOnline.com and sign up to learn about products and industry best practices. Webinars are also available for both live and on-demand viewing.
- **On-Site Training:** We come to you! Whether in a classroom or with our Mobile Training Facility, our Franklin Electric experts are equipped to provide information and hands-on demonstrations on our products.



SERVICE & SUPPORT

HANDS-ON ADVICE THAT KEEPS YOU UP AND RUNNING

Franklin Electric's dedicated support teams are known throughout the industry for their commitment to getting you the answers you need—in the field, over the phone or online.

- **On-site Field Service:** When you work with Franklin Electric, you have access to the industry's leading Technical Support professionals and Field Service Engineers located throughout the nation to assist you with on-site troubleshooting and other service needs.
- **Technical Support Team:** Help is a phone call away. With decades of collective industry experience, our team is made up of real people, offering real answers, in real time. For answers to your water systems questions, contact our technical support team by phone at **1-800-348-2420** or email at techsupport@fele.com.
- **Mobile Apps:** Discover intuitive support for your technical needs, from accessing motor specifications and calculators to monitoring, assisted setup and troubleshooting select Franklin Electric drives and protections. Our apps are now available on Google Play and the App Store.

Franklin Electric is a global leader in the manufacturing and distribution of products and systems focused on the movement and management of water. We offer pumps, motors, drives, and controls for use in a wide variety of agricultural, commercial, industrial, municipal, and residential applications.

Connect with Us!

