PRODUCTS AND SERVICES GUIDE

AdEdge Water Technologies

Founded in 2002 and headquartered just north of Atlanta, Georgia, AdEdge Water Technologies specializes in the design, development, fabrication, and supply of water treatment solutions, specialty medias, legacy, and innovative technologies that remove a wide range of contaminants from water Our mode of work and technologies allow our customers to understand how to manage the elements in a variety of industries with outstanding results. These industries include drinking water, industrial process, mining, dewatering, construction, chemical, remediation, and general tertiary wastewater treatment.

We have extensive experience in the removal of arsenic, iron, manganese, hydrogen sulfide, fluoride, nitrate, and uranium from water and we've sold hundreds of water systems ranging from 5 gallons per minute to over 20 million gallons per day in North America and locations throughout the world including Canada, India, Africa, and countries in Latin America.

We recently expanded our engineering and manufacturing capabilities to design and build all systems in our manufacturing facility. The USEPA awarded us twelve arsenic demonstration projects, more than any company in the industry.

We work with 75 percent of the top twelve design firms in the United States and with hundreds of engineering firms throughout the world. ◆

ADEDGE WATER TECHNOLOGIES

2055 Boggs Road NW • Duluth, GA 30096 • 866.8ADEDGE • www.adedgetechnologies.com

ARSENIC IS NOT A GAME

Ready to make the right move?

AdEdge is your one-stop resource for arsenic treatment systems for any size community. We now supply Bayoxide E33 adsorptive media and E33 media replacements for the largest and the smallest systems. As always, AdEdge offers competitive pricing, experienced engineers, and unparalleled support.

With AdEdge's arsenic treatment systems' global success history, why would you go anywhere else?

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AdEdge™ water technologies

www.AdEdgetech.com

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Terminal Blocks

Safety

For over 20 years we've been saving our customers time and money on industrial automation products including PLCs and HMIs, pneumatics, sensors and even wire. We have a huge inventory that is constantly growing in order to provide you with the quality components you need to keep your projects moving. We have also invested heavily in new infrastructure that will allow us to continue offering the service and support you deserve. So don't put that project off any longer...buy direct today and save with AutomationDirect!

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- Four form factors to choose from
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- Built-in discrete, analog and high-speed I/O
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- Internal RAM and microSD data logging
- Free PLC programming software with over 200 easy-to-use instructions, integrated video help and a convenient project simulator

CUSTOMER REVIEWS:

"When performance and capability are mapped against price, there is no better PLC on the market than the BRX. It can do everything. The BRX is lightening fast, is easy to program, has an extensive library of instructions, and can hold an enormous program. More and more of my clients are turning to the BRX as their PLC of choice..." Scott in Huntsville, AL

"The DoMore series of PLCs is the world's best. I would do nothing but DoMore-based projects if I had the choice. Watch out A-B! DoMore is going to show you how PLCs are done!"

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Bradleys, Inc.

Leading the industry in electric motor repair, rewind, and load testing

With ninety years of small to 50,000 horsepower motor repair and rewinding experience, 7,000 horsepower full load testing, no load testing, and small and large vertical motor load testing, Bradleys is leading the industry in innovation and experience. Bradleys quality procedures and processes have earned the company ISO 9001: 2015 certification, EASA Accreditation, and Green Motor Rewinds Certification.

Services offered in our state of the art 110,000 square foot facility:

- Electric Motor Repair and Rewinding
- Horizontal and Vertical Motor Load Testing
- 12 and 8 Foot Diameter VPI Tanks
- Epoxy and Polyester Resins
- 30,000 Square Foot Climate Controlled Storage Facility
- Bradleys Automated Lubrication & Monitoring Systems
- Vibration Analysis and Thermography
- On Site Electrical and Mechanical Engineers
- Dedicated Project Managers
- Remote Monitoring of Your Repair via the Web
- Hands-On Craft Training Facility (3,000 square feet)

Bradleys Rewind and Testing facilities include a 6,000 square foot climate-controlled winding area. We adhere to time-honored ideals, based on EASA Recommended Practices, to rewind your electric motor or generator. We consult with our ISO 9001:2015 Certified coil manufacturer to verify the specification for the best wire size, turn insulation, and ground wall insulation package for every set of coils. The shape of coils extensions, the coil radius, knuckle ties, and other properties are considered to ensure the coils are made to fit.

Three temperature-controlled burnout ovens with up to 4,000 cubic feet and 50 ton capacity ensure your motor can be rewound in our facility. Bradleys burnout oven process is approved for nuclear motor stators.

Avoid the expense of installation and startup delays by load testing your recently repaired critical motor to identify performance or site related issues. Load testing ensures reliability, verifies performance, ensures compatibility between motors and drives, validates the design of your repurposed motor, and is recommended prior to storage of your critical motor.

Vertical motor load testing is performed with your motor in the upright position. You may monitor your load test on site in our comfortable observation room or remote monitor via the web.

CERTIFIED LOAD TESTING CAPABILITIES

- AC -7000 horsepower
- DC-2500 and 4500 AMP 750 V
- 480 V -13.2 KV
- 65,000 lbf ft maximum torque, 38,000 lbf ft measured torque
- Locked Rotor
- Speed, Torque, Current Curve
- 100 -4200 RPM
- Efficiency
- 10 x 52 Foot Test Bed
- Water-Cooled Motors
- IEEE 112 and 115 Standard Testing
- VFD/Motor System Testing
- Generators up to 7MW

NO LOAD TESTING CAPABILITIES

- 3.8 KVA
- 7MVA – MG Set
- 35,000 Horsepower Full Voltage

Lubrication and maintenance of your motor is critical to ensure optimum performance. Bradleys' Automated Lube system ensures your motor is never over or under lubricated.

WHAT DOES THE BRADLEYS DIFFERENCE MEAN TO YOU?

Each customer has a project manager who is in constant communication with you, providing web-based daily reports with photos as your job progresses through the repair process with our highly trained team of motor experts. Our mission of exceeding customer expectations requires constant corporate commitment to quality, investing in training for our team and your staff, and the latest equipment and adherence to ISO 9001:2015 standards of performance. See why industry giants in the petrochemical, manufacturing, mining, and water industries trust Bradleys with their critical motors. To learn more, visit **www.bradleysmotors.com**. ◆

REPAIR. REWIND. RE-ENGINEERING. REAL TIME MONITORING.

For over 90 years, Bradleys has led the industry of electric motor repair, rewinding and re-engineering of small to ultra large electric motors.

- » Small to Ultra Large Electric Motor Repair & Rewinding
- » High Voltage Global VPI Rewind
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- » 15KV Epoxy Resin & 240C Polyester Resin
- » Horizontal & Vertical Load Testing
- » Re-Engineering, Redesign & Remanufacturing
- » 100 Ton Single Lift Bridge Crane
- » Dedicated Project Managers
- » Monitor Your Repair in Real Time 24/7

See why the nation's leading industries choose Bradleys!

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EASA ACCREDITED AR100 BRADLEYS' INC.

Crane Pumps & Systems

The next generation of grinder

BLADE NGV and XGV grinder pumps by Barnes

Crane Pumps & Systems, a Crane Co. Company, is excited to announce an extension of the BLADE grinder pump line to include explosion proof (XGV) and non-explosion proof (NGV) options. Backed by the dependability and longevity of the Barnes reputation in submersible pumping, BLADE grinder pumps are Barnes solution to high head waste water grinding applications in commercial and municipal environments.

BLADE NGV and XGV grinder pumps are available in 3-, 5-, 7.5-, 10-, and 15-horsepower models with 2-, 2.5-, and 3-inch discharge sizes.

All BLADE pumps are equipped with patented Barnes Slicerator™ technology, an innovative radial cutting grinding technology in the market. The shredding ring and cutter are made of 440C stainless steel with a hardness of 55 HRC. At 172,500 grinding cuts per minute, BLADE grinder pumps shred all solids found in the waste stream like rags, ropes, cloth, diapers, and napkins.

BLADE NGV and XGV grinder pumps were designed with the following valuable features and benefits:

- Plug-n-play cord simplifies pump installation with its quick disconnect capability
- Oil-Filled Motor for optimal motor cooling and maximum bearing life
- Stainless steel hardware provides resistance against corrosion to extend pump life
- Moisture detection probe alerts pending seal issues before water can enter the motor
- Vortex impeller design greatly reduces clogging issues due to troublesome objects
- Exclusive Slicerator™ slices with the full torque of the motor acting on a small area to provide the ultimate solution in solids reduction
- Available in vertical or horizontal discharge (18 Frame only) for simple installation and replacement
- Double mechanical seals provide maximum motor protection
- Heavy duty, oil-lubricated bearings extend pump life
- Large lifting Bail allows for easy installation

BLADE grinder pumps are available with a plethora of features and options including dual/tri-voltage motors, single phase and three phase models, three different seal material options, and four cord length options. In addition, the efficient operation of the Barnes Slicerator™ radial cutting technology reduces torque required to process solids. The hardened stainless steel cutting blades placed in a staggered position against a cutting ring provides a unique design to prevent clogging due to particularly troublesome solids like plastics, strings, ropes, sanitary napkins, disposable diapers and cloth materials.

Like most of the Barnes product line, NGV and XGV grinder pumps are manufactured in the United States. Crane Pumps is proud to design, engineer, and manufacture products domestically in the small town of Piqua, Ohio. Crane has been a part of the Piqua community since 1965, providing job opportunities and philanthropic service to the surrounding area. With engineering, operations, customer service, and sales under the same roof, Crane Pumps is able to control the quality of our products and quickly and effectively service our customers.

Learn more about the NGV and XGV Blade grinder pumps and the rest of the CP&S product portfolio and services by visiting **www.cranepumps.com**. ◆

When life gives you lemons...
We'll handle it.

Barnes Grinder pumps, built to handle the daily grind.

BARNES®

www.cranepumps.com

BLADE BY BARNES®

Gorman-Rupp Pumps

For more than eighty-five years, Gorman-Rupp has manufactured the high performance, high quality pumps and pumping systems required for lasting service in the municipal, water, wastewater, sewage, industrial, construction, petroleum, and OEM markets. Our extensive line of pump products include self-priming centrifugal pumps, standard centrifugal pumps, submersible pumps, trash pumps, priming-assisted pumps, and rotary gear pumps. Gorman-Rupp also manufactures a complete line of state-of-the-art packaged lift stations and booster stations that include pumps, motors, controls, piping, accessories, and enclosures.

Through the years, our continued growth has focused on superior pump design, engineering, and customer service. As a result, Gorman-Rupp has become a company known for market innovations and improvements that continue to set standards for the pump industry.

Gorman-Rupp operates two manufacturing plants, producing a full line of pumps and sewage pumping stations with custom-made fiberglass enclosures and electrical control panels.

Gorman-Rupp has over 1,000 distributors throughout the United States and the world that are qualified to give expert advice on pump selection and applications. If you have a service problem, a factory-trained distributor is only a phone call away. Our distributors are backed by the fastest parts service in the industry. Gorman-Rupp stocks more than 60,000 pumps and parts and ships 99 percent of them within twenty-four hours so your parts will be there when you need them.

GORMAN-RUPP PUMPS

The Pump People®

CONSTRUCTION MARKET

Gorman-Rupp is the leading manufacturer of pumps for the construction market. Offering nearly 3,000 models, we have one of the largest selections of fluid-handling products in the world. We have built our reputation on the workhorses of the construction pump market: self-priming centrifugal trash pumps. These dependable, versatile performers help contractors move large volumes of water quickly. We also manufacture an extensive line of submersible, diaphragm, and priming-assisted pumps that offer maximum reliability and service life.

INDUSTRIAL MARKET

You will find Gorman-Rupp pumps operating in the most hostile industrial environments—down in the sub-basements; in the waste sumps; in the heat, steam, grease, and grime; handling the corrosive and abrasive industrial wastes other pumps cannot. Performing reliably month after month, year after year, in all types of waste control systems, pumping solids and debris that would shut other pumps down, Gorman-Rupp industrial pumps are designed for the people who service them.

MUNICIPAL MARKET

Gorman-Rupp sets the industry standard for sewage pumping systems including pumps, motors, and controls (complete sewage lift stations). Our solids handling self-priming and submersible sewage pumps offer maximum dependability and ease of service. Our commitment to "total system responsibility" means you only have to make one call should you encounter a problem with your system, from pumps and controls to the lights and fans in our enclosure. We simply offer the best sewage pumps and pumping systems in the industry. ◆

NOT ALL PARTS ARE CREATED EQUAL.

WHEN YOU NEED THE MOST RELIABLE PARTS IN THE INDUSTRY, ASK FOR GENUINE GORMAN-RUPP OEM REPLACEMENT PARTS.

When a pump goes down, we understand that time is money. That is why we have invested our time and money into ensuring a complete inventory of Gorman-Rupp OEM pumps and parts is always in stock.

When you place an order for one of our 60,000 parts, we ship it directly from our inventory within 24 hours, 99% of the time. That is service you can count on.

To order genuine Gorman-Rupp OEM replacement parts contact your distributor or visit GRpumps.com to find a distributor near you.

GORMAN-RUPP PUMPS

The Pump People®

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Liberty Pumps

Liberty Pumps is a leading U.S. manufacturer of pumping products for ground water and wastewater removal in residential and commercial applications. With a focus on innovative product design, our wide range of pump styles includes sump pumps, sewage pumps, effluent pumps, drain pumps, grinder pumps, complete pre-assembled sewage packages, and pump accessories. Utilizing a vast network of Plumbing Wholesalers and Pump Distributors, Liberty's products are relied on by hundreds of professional contractors each day.

HISTORY

Bergen, New York, a rural upstate community better known for its farming and agriculture than for its manufacturing, is home to Liberty Pumps. A company making a name for itself in the world of pumps; from its very humble beginning in 1965 to its present state, Liberty Pumps continues on the path of growth and innovation, decade by decade.

As a family-and employee-owned company, Liberty Pumps works hard to provide a level of service that is second to none. "We are fortunate to have a complete team dedicated to serving our customers - from assembly to shipping and engineering to customer service, all members are dedicated to this one goal," states Randall Waldron, VP of sales & marketing. "Without this high level of service – it would not matter how great our products are. You have to back them up with the best team available in all areas of the business."

Through the years, the company has introduced several leading products such as the PRO-Series sewage packages with QuickTree® technology, SumpJet® water powered back-up pumps, NightEye® web enabled products, and the very successful Omnivore® and ProVore® series of grinder pumps. These pumps are produced in Bergen, New York in a very efficient lean-manufacturing environment. "Material flow and efficiency are key to streamlining the manufacturing process. These efficiencies directly impact our customers – both in helping to reduce the cost of our products and to assure quick delivery of our products."

Liberty strives to ship all orders from their factory in just 24 hours. In addition, they support several rep warehouses with consigned stock strategically located throughout the U.S. and Canada.

IN 2015 THE COMPANY ANNOUNCED THE ESOP

In the early 1990s, Liberty started to make use of the principles of member involvement, lean manufacturing, and other advanced manufacturing concepts. The brand continued to strengthen and demand for Liberty products continued to increase. To respond to this growth Liberty Pumps built a 60,000 square foot facility at its current location. Through innovative product development, aggressive marketing and a high level of service—Liberty continued its rapid growth in the market, requiring major expansions of its facility in 2008 and again in 2016, bringing the total square footage of the facility to 244,000. With a new focus on global sales, Liberty expanded into international markets with exports to more than thirty-five countries and most recently launched the Liberty Engineered Product division featuring higher horsepower products.

The emphasis at Liberty today is on continuing to improve the quality of our existing products, to develop innovative new designs, to give prompt, knowledgeable service to our customers, and to further improve our production efficiency utilizing the latest technologies. These are goals that each of our members work hard to achieve. ◆

LIBERTY PUMPS ANNOUNCES EMPLOYEE OWNERSHIP

Liberty Pumps, a leading manufacturer of sump, sewage, and effluent pumps and engineered pump systems, is pleased to announce it has implemented an Employee Stock Ownership Plan (ESOP). Liberty Pumps has been a family owned company for the past fifty years. The ESOP continues Liberty Pumps' commitment to local ownership.

"The ESOP will not change company operations," says President/CEO Charlie Cook, "our current Leadership Team is just outstanding and will remain in place. The ESOP will enhance an already-positive culture where our members (employees) feel empowered, appreciated, and respected. We believe the ESOP will take this to the next level. When a customer calls in, they will now be speaking to an owner."

Employees are very excited about the plan and now have even more incentive to provide the high level of quality and customer attentiveness that Liberty Pumps has become known for.

Don't get caught in a jam

(Patent: See www.libertypumps.com/patents)

Omnivore® Grinders

The only patented V-Slice® cutter technology.

Setting the new standard in grinder pump performance.

Single stage and 2-stage models available. Heads to 185'

Liberty Pumps®

A Family and Employee Owned Company

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NOV

Backed by strong legacy brands, National Oilwell Varco (NOV) provides pumping and mixing solutions in various industrial markets around the world. We have been manufacturing pumping and mixing equipment and systems since the early 1900s, and over time have expanded our product lines and aftermarket support. With decades of application experience, equipment and solutions, we're ready to work with you to understand your unique challenges and provide Moyno™ and Mono™ pumps, screens and grinders, and Chemineer™, Kenics™, Greerco™, and Prochem™ mixing equipment to help you improve productivity, efficiency, quality, and performance.

PUMPS, SCREENS, AND GRINDERS

Our Moyno and Mono pumps provide global leadership in the design and development of progressing cavity pump technology. Delivering superior performance and operating efficiency, our pumps are ideal fluids handling solutions for a wide range of applications including slurries, viscous, shear sensitive, two or tri phase mixtures, or when applications require significant suction lift capabilities.

While continuing to engineer industry-leading pump ranges, we also offer Moyno and Mono grinders and screens specifically designed for industries requiring solids reduction or waste conditioning.

MIXING TECHNOLOGIES

Our Chemineer agitators, Kenics static mixers and heat exchangers, Greerco high shear mixers, and Prochem belt-driven side entry mixers bring superior, highly engineered mixing solutions to your industrial processes. Our fluid mixing knowledge, supported by the best application software, proprietary mixer designs and state-of-the-art laboratory allows us to be the preferred supplier of fluid mixing equipment. With many of the original gearboxes still in service today, we are recognized for producing dependable, heavy-duty equipment.

SERVICES AND AFTERMARKET

Service expertise drives predictable uptime that is critical to your operation. In every situation, you can rely on us to provide quick and effective support throughout the entire life of your project. Our deep knowledge of your processes ensures you have the latest technology for your application to get the job done right, with trusted products you can depend on. From consulting and field services to spare parts and training, let us be your strategic partner. ◆

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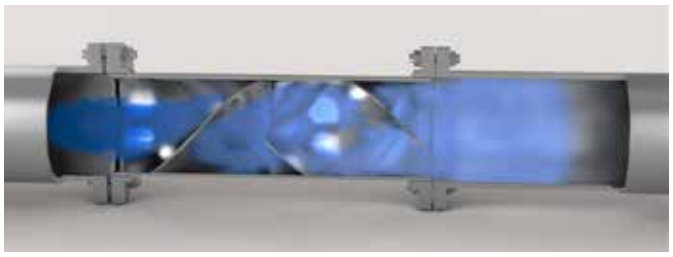

As strong as our legacy.

Our Mono/Moyno progressing cavity pumps, screens and grinders, and Chemineer, Kenics, Greerco and Prochem mixing equipment have stood the test of time. Now part of the global NOV family, our industrial brands are leaders in providing the right solution for your process.

Learn more at **nov.com/industrial**

Moyno™ | Mono™ | Chemineer™ | Kenics™ | Greerco™ | Prochem™

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Sims Pump Valve Company, Inc.

SINCE 1919

For one hundred years, Sims Pump Company has been a leader in pump technology. Sims Pump has an excellent reputation for offering innovative solutions for marine and industria pump applications. Sims specializes in solving balance, cavitation, corrosion, electrolysis, erosion, and radial thrust problems by upgrading existing pumps and impellers to the patented Simsite® structural graphite composite technology.

These two impellers operated for eighteen months in salt water. The Simsite® Impeller is unaffected by corrosion, erosion, cavitation, or electrolysis!

THE SIMSITE® ADVANTAGE

Sims Pump manufactures Simsite® Structural Graphite Composite Engineered Pumps, Impellers, Casing Wear Rings, Guide Bearings, Mechanical Seals and many other pump components. These unique and patented Simsite® Pumps & Pump Parts are "Technology Upgrades" for new, or existing pumps. SIMS Pump has the ability to make any centrifugal pump Energy Efficient and long lasting. SIMSITE® Pump Products Out-last and Out-perform traditional metallic pumps by many years! All SIMSITE® Pumps and pump components improve performance, longevity, efficiency. They eliminate corrosion, erosion, electrolysis and cavitation problems! SIMSITE® Pumps and Parts are light weight, self-lubricating—the Simsite® advantage—the capability to adjust performance to maximize efficiency and performance—Sims can adjust the design of the impeller to maximize efficiency at the actual rated operating point required by the customer.

INDUSTRIES SERVED

Sims primary customer base consists of Customers who are pumping corrosive products. These customers include the U.S. Navy (Certified) and other navies around the world, the marine and offshore, chemical, power generation, wastewater, and oil and gas industries. Simsite® products are also used in a broad range of industries including, chemical, food processing, paper and pulp, refining, petrochemical, sewage treatment, mining, plating, skiing, steel, farming, water treatment, textile, and utilities.

PRODUCTS

Sims products include a complete range of precision machined and engineered pumps, (vertical and horizontal) impellers, casing rings, guide bearings and sleeves wet ends, and other replacement parts for all centrifugal pumps. Sims specializes in upgrading impellers and rings, for any centrifugal pump. All products are 100 percent made in the United States!

TECHNICAL SERVICES

Application engineering, service, and support are provided from the corporate headquarters in Hoboken, New Jersey. Sims has hydraulic design, FEA, and CFD capability and SIMS specializes in corrosion resistance, life-cycle extension, efficiency, and troubleshooting centrifugal pumps. All of the Sims design engineers are specialists in pump and impeller design, and in the design of structural composites. The Sims engineering service and support staff can design replacement parts and/or complete pumps to meet your specific needs and performance requirements. ◆

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Smith & Loveless EVERLAST™ Pump Stations

Revolutionizing Operations With Above-Ground Access To All Pump Equipment

Wouldn't It be really hard to get good grades in school if you didn't have the tools to succeed academically like text books, paper, and computers? Likewise, for school district maintenance departments and small utilities that manage sewage systems, not having the right operator safety and maintenance tools or resources can make a significant difference on the bottom line.

Just ask Steve Cox, maintenance supervisor for mechanical, electrical, and plumbing at Klein Independent School District near Houston. He's responsible for managing all facility maintenance for a burgeoning school district comprised of 50,000 students, thirty elementary, nine intermediate, and four high schools—and twenty wastewater lift stations. However, as time progressed and employee safety requirements tightened, the specialized maintenance and service protocols required for certain lift stations have become impossible for district staff to handle internally and become too costly.

"Unless it winds up being an electrical issue above ground, which is very rare, we are calling a contractor 95 percent of the time," Cox says.

That's because the district has historically installed typical submersible pumping systems. These systems require protocols that can include multiple personnel and significant amounts of specialized equipment to meet OSHA and other Class1 Div 1 standards, like hoists, safety harnesses, gas monitoring equipment, and a vac truck.

These items are simply not feasible for Klein I.S.D. to possess. Because of this, the district is forced to outsource submersible pumping system repairs to outside contractors at a considerable cost.

"When a submersible goes out, it's contractor time," says Cox. "My technician lets them in the gate and that's about it. We don't even have the equipment to pull the pump."

In almost every instance this has required the total draining and cleaning of the wet well with a vac truck, renting of a temporary pump, and a significant cost related to the repair or total replacement of the pump, Cox says.

To become more self-sufficient and minimize operations costs, Klein I.S.D. is in the process of converting as many of these pumping systems to above-grade EVERLAST™ Wet Well Mounted Pump Stations from Smith & Loveless. These systems feature all pumps, piping, valves, and controls installed outside of the wet well, at grade level, making operation and maintenance simpler, safer, and more economical than other systems. Wet Well Mounted Pump Stations require none of the tools or safety protocols associated with submersibles. Their pre-engineered standard designs promote superior operator knowledge and common troubleshooting practices. Twelve of the district's twenty lift stations have been converted to Wet Well Mounted Pump Stations so far, according to Cox.

Because of the operational advantages afforded by its above-grade Pump Stations, one single full-time Lift Station Technician is now able to operate and maintain all of the district's lift stations. The technician easily and safely inspects each of the district's twelve above-grade stations on a regular basis by simply walking up and opening the lightweight enclosure. The technician immediately has total access to all mechanical and electrical equipment—including the pump internals after removal of just four bolts. And when desired, remote monitoring and station communication is also available.

This allows the technician to easily follow the manufacturer's operation instructions and minimize downtime. With familiar designs and frequent inspection, the technician has developed a level of operational knowledge that far surpasses any other type of system, and it only continues to improve with every new day and additional lift station conversion. There have been zero repairs or replacements by outside contractors to S&L pumps over the last decade

"With the S&L [above-ground] stations, we can do just about everything no problem with just one guy," Cox says. "Problems are not a very common occurrence. The S&L stations run very well." ◆

You'll Retire Before It Does.

EVERLAST™

Wet Well Mounted Pump Stations

S&L EVERLAST™ Wet Well Mounted Pump Stations are designed for easy O&M, reliability, long service life, and when the time comes... easy upgradability. Backed by the longest warranty in the industry, the result is a pump station built to last—for decades or even longer.

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Smith & Loveless Inc.

Vaughan Company

Your source for reliable chopper pumps and systems

OUR COMMITMENT TO YOU—RELIABILITY

As a pump user, you count on your equipment performing well every day. Who wants to worry about pump operations, especially when the pump is submerged in a greasy sump or stinky manure pit, or is otherwise difficult to reach?

Whether you operate a treatment plant that needs a cost-effective means of mechanical hydraulic mixing of sludge tanks, or you're a dairy farmer or corrections facility manager who needs to avoid clogged pumps to keep the water flowing, Vaughan has you covered.

WE CHOP—AND MIX—IT ALL

We could simply tell you, "trust us, our pumps can chop—and mix—it all," but here's a real-world story that shows how our pumps can handle the most demanding challenges.

The three standard pumps in the main lift station serving the wastewater treatment plant in Morgan's Point, Texas, often became clogged with shop rags, lumber, plastic bottles, gloves, and wet wipes when rainfall exceeded two inches. The city spent about $100,000 to maintain and service those pumps over seven years. After the city installed a Vaughan Company SE-Series Submersible Chopper Pump in July 2016, they have experienced over 100 inches of rainfall with no plugging incidents or other issues. And, during 2017 Hurricane Harvey, the Vaughan pumps ran continuously for seventy-two hours with no plugging incidents and no problems while pumping more than 2.5 million gallons of unscreened sewage through the lift station.

"I just wish we had purchased these pumps years ago to eliminate the maintenance headaches we endured, and the costs we incurred keeping our previous pumps in operation," says Brian Schneider, city administrator for Morgan's Point.

WHY YOU SHOULD CARE THAT WE'RE FAMILY OWNED AND MADE IN THE USA

Adding to exceptional pump reliability and performance, with Vaughan Company you get the advantages of buying from a family-owned, made-in-the-USA company. We source nearly all of our materials in the United States and manufacture 100 percent of our pumps here. We support American jobs and American companies, and by sourcing U.S. materials and making our pumps here, we reduce the costs incurred from international suppliers.

A HISTORY OF CONTINUAL IMPROVEMENT BENEFITING OUR CUSTOMERS

In 1960, company founder Jim Vaughan invented the world's first chopper pump to solve the problem of clogged manure pumps for local farmers in Washington. Nearly sixty years later, Vaughan Company is still making the world's most reliable chopper pumps and pump systems—and providing unique solutions for farmers, treatment plant operators, and other pumping professionals.

Today, we continue to live Jim's philosophy of "what could make this better?" From in-house 3D computer modeling to Computational Fluid Dynamics (CFD) analysis, Vaughan Company is committed to continuous product improvement to maximize pump performance for our customers.

Further, all of us at the Vaughan Company understand the importance of exceptional customer service; take time to understand your needs; and work closely with you to tailor pump solutions that solve your unique challenges.

Contact us to learn how Vaughan Company can help you ensure reliable operations. ◆

VAUGHAN COMPANY
888.249.CHOP (2467)
info@chopperpumps.com • www.chopperpumps.com

LAY WASTE
TO WASTE.

Since 1960, Vaughan has delivered solid solutions for solids and solutions.

Our innovative, dependable pumps and mixers provide guaranteed performance in the toughest applications. Learn more about our unmatched reliability. Contact us today to see why our versatile pumps and systems are perfect for your next project.

Let's Talk! Contact Us Today

Conditioning Pump | Rotamix | Chopper

Vaughan
Unmatched Reliability

ChopperPumps.com | 360.249.4042 | info@chopperpumps.com

MANUFACTURED IN THE USA

Yaskawa The Yaskawa Quality Experience

YASKAWA

Yaskawa is the leading global manufacturer of low and medium voltage inverter drives, servo systems, machine controllers, and industrial robots. Our standard products, as well as tailor-made solutions, are well known and have a high reputation for outstanding quality and reliability.

We're the only industrial drives manufacturer to win the Deming prize—the most prestigious quality award in manufacturing. But we know that tells only part of the quality story. What about innovative design, knowledgeable, responsive engineers who understand your business, and superior support and training? Those crucial assets are a vital part of how a company is ultimately judged and what we mean by the Yaskawa Quality Experience.

At Yaskawa, Quality is more than numbers, more than awards—it's the total experience of purchasing and owning Yaskawa products and working with Yaskawa people. ◆

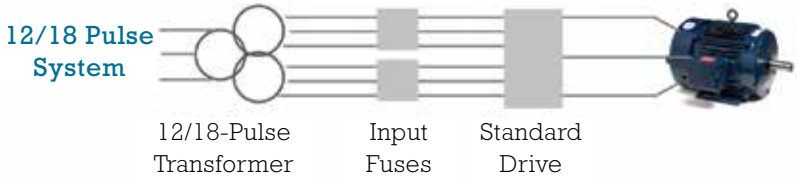
U1000 INDUSTRIAL MATRIX DRIVE

Increase efficiency in your industrial pumping applications with Yaskawa's U1000 Industrial Matrix Drive, the product that goes beyond conventional drives, providing outstanding harmonic performance and regeneration in a single standalone compact drive solution.

Enjoy low harmonic distortion and regeneration in a space-saving design, completely without the need for additional components.

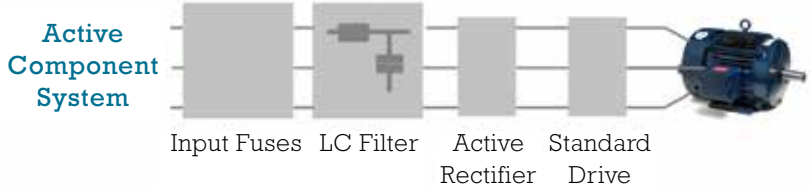
Unlike conventional drives, Yaskawa's Matrix technology creates a variable output by switching directly from the input power (AC to AC), eliminating the DC bus. Additionally, the Matrix drive is a member of the Yaskawa industrial drive family, and provides the same user experience.

CONVENTIONAL LOW HARMONIC SOLUTION



U1000 INDUSTRIAL MATRIX DRIVE

CONVENTIONAL LOW HARMONIC & REGENERATIVE SOLUTION



3 WIRES IN, 3WIRES OUT

- Fewer Components
- Less Space
- Faster Setup
- Higher Efficiency

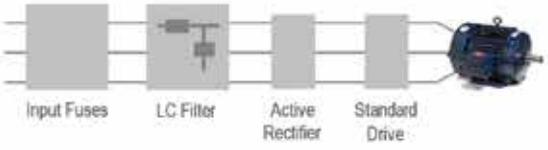
YASKAWA

Discover the Matrix

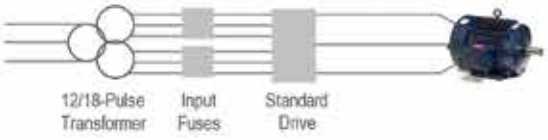
Using complicated systems for low harmonics or power regeneration? Try the efficient way with the U1000 Industrial Matrix Drive.

Our greenest drive ever, the U1000 goes beyond the performance of conventional drives. Enjoy extremely low harmonic distortion and regeneration in a space-saving design, completely without the need for additional components.

ACTIVE COMPONENT SYSTEM



12/18-PULSE SYSTEM



U1000 INDUSTRIAL MATRIX DRIVE SYSTEM

Anue Water Technologies

Innovative solutions for improving the processing and treatment of water and wastewater. We serve the global market with a network of sales representatives and service providers to actively support applications development, leading to optimized solutions. Our company works with municipalities, wastewater operating and industrial companies who encounter challenges with wastewater, to create tailored, highly effective solutions for treating odor, corrosion, and fat, oil, and grease issues.

Our company develops, manufactures, markets and services our unique technologies. In order to assist our customers in identifying the best solution, matching the application requirement to a specific system, our network of applications and sales professionals provide local support to consult with engineers and users.

PROPRIETARY SYSTEMS

At the core of our designs, Anue Water Technologies focuses on the delivery of technology that is highly effective, sustainable, and provides cost-savings. Our FORSe 5 system for odor and corrosion control in wastewater collection systems use onsite oxygen and ozone generation, providing a truly sustainable approach to lift station or force main treatment. As well, our EnviroPrep™ and HydroSpear™ systems provide both cost savings and a sustainable solution for fat, oil, and grease (FOG) remediation in wastewater lift stations. Users can automate lift station clean-out and benefit from lower maintenance costs and consistent lift station operation.

ENVIRONMENTALLY SUSTAINABLE SOLUTIONS

ANUE's innovative ozone and oxygen generation applications, and efficient low-cost well washing products for FOG control, are designed to virtually eliminate odor and corrosion in municipal wastewater treatment systems including force mains, wet wells, and lift stations.

New Geo-Membrane Odor Control system is for anything needing odor control. ◆

ANUE WATER TECHNOLOGIES
5123 S. Royal Atlanta Dr., Tucker, GA 30084
706.727.2683
info@anuewater.com • www.anuewater.com

Carver Pump

Eighty years of pump experience

Since our inception, we've become recognized as one of the leading centrifugal pump companies, building to the most demanding engineering specifications and military standards in the world.

We were one of the first American pump companies to attain ISO 9001 certification, the most recognized standard for quality in the world: your assurance that our commitment to quality includes not only our hardware, but also superior customer service, leading-edge R&D, and continuous improvement in everything we do.

So whether the job is refueling fighter jets on the deck of an aircraft carrier, supplying paint to an auto assembly line, or bringing water to the fountain in a city park, we put our reputation on the line everyday with every pump we build.

CUSTOM-ENGINEERED SOLUTIONS

Our specialty is addressing the most challenging performance requirements using advanced design tools: the latest solid modeling software for analyzing structural problems, and exceptional hydraulic design capabilities.

We've refined our expertise by delivering tens of thousands of pumps into a wide variety of applications, routinely developing new products for very specific usage. Many of our standard products can be highly customized for specific OEM applications, such as parts-washing systems and boiler/heat-exchanger cleaning systems.

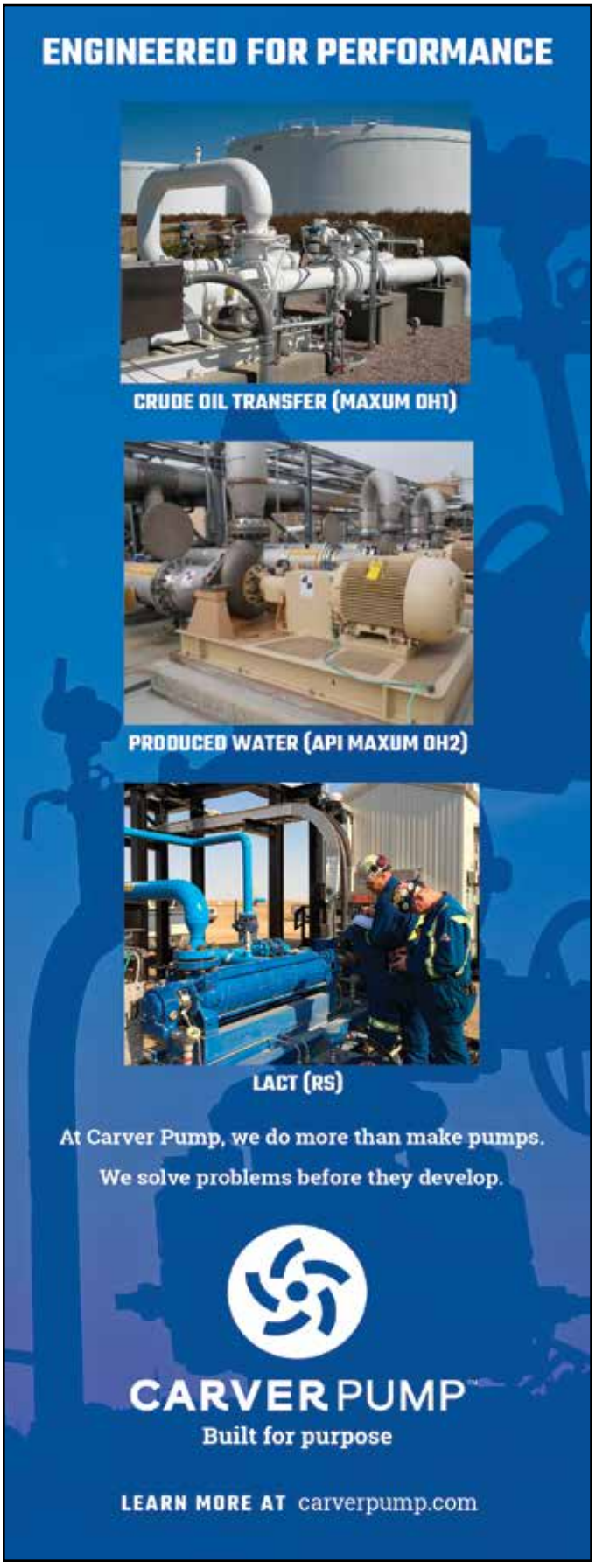
Whether the challenge is pump efficiency, difficult suction conditions, or extreme environments, we'll engineer the best solution to meet your goals for reliability, quality and performance.

THE LATEST TECHNOLOGY

Every new pump design undergoes a series of rigorous tests using computer simulation, as well as in-laboratory testing. Using the latest finite element analysis (FEA) and computational fluid dynamic (CFD) software and advances in processing speed, we optimize our designs and troubleshoot before building a prototype.

AFTERMARKET SUPPORT

Our pumps are backed by unparalleled support, and our network of stocking distributors, manufacturer's representatives, and certified service centers throughout the world means that no matter where your pump is installed, local sales and service people are ready to support your aftermarket needs. ◆



Check-All Valve Mfg. Co.

Since 1958, Check-All Valve Mfg. Co. has manufactured a complete line of in-line spring-loaded piston-type check valves. With worldwide service, Check-All Valve serves a wide range of industries including the chemical, petrochemical, pharmaceutical, food and beverage, water treatment, OEM, MRO, and many others. Lightweight, efficient, and rugged, every Check-All valve is designed and built to perform to exact needs and specifications. The company is ISO 9001-2008 certified and manufactures product lines compliant with CE/PED requirements, Canadian Registration Number guidelines, 3A Sanitary Standards, and others.

Check-All valves are engineered for silent operation. They close quickly and smoothly to eliminate hammer noise. They are designed to function equally well in either a vertical or horizontal position, with proper spring selection. They are also designed to reduce installation costs. The insert series check valves easily fit into existing line components, which reduces initial cost and installation time. The seating surfaces are parallel to each other thereby eliminating the excessive wear occurring in plug, cone and ball seats. Check-All valves can also be used as low-pressure relief valves and vacuum breakers.

With many styles available, Check-All Valve provides check valves for practically every service application. Valves are offered with metal-to-metal or soft seats in sizes ranging from 1/8-inch NPT to 20-inch flange connections. Pressure ratings are available from full vacuum to 10,000 PSI. Standard or exotic materials are available and you can choose from a wide variety of spring settings and seat materials for any valve. Most options are available with fast delivery. Specially designed valves are another option that Check-All Valve performs on a regular basis. Check-All Valve Mfg. Co. is staffed to supply you with a quality product as well as personal technical services. ◆

CHECK-ALL VALVE MFG. CO.

Contact us for a complete catalog or see us at www.checkall.com.

JWC Environmental

Legendary performance only a Muffin Monster® grinder can provide

IN-LINE MUFFIN MONSTERS

JWC Environmental's 30K and 40K In-Line Muffin Monster grinders have been providing peace of mind to plant operators for over forty-five years. They cut their teeth protecting pumps in wastewater treatment plants around the world and today are used in a wide range of municipal and industrial applications. Wastewater professionals repeatedly turn to JWC's Monster grinders as the ultimate sludge grinder solution to cut down troublesome solids. It is ready to shred down rags and other debris that can damage pumps, clog valves, and foul treatment equipment—causing costly damage and excessive repairs.

THE 30K MUFFIN MONSTER

The original 30K Muffin Monster is a workhorse sludge grinder for biosolids processing systems, waste to energy applications, and pulp and paper plants, just to name a few. It covers flows from 450 to 2,450 gallons per minute (102-556 cubic meters per hour). This Monster will not only cut through rags and other solids in fluidized sludge systems but also precondition the sludge to give it a uniform consistency prior to digestion or dewatering. The 30K units are also commonly installed within dry wells of pumps stations to protect pumps from solids found in wastewater collections systems.

THE 40K MUFFIN MONSTER

The big brother to the 30K, the 40K Muffin Monster is the even stronger grinder offering with robust 2 ½-inch (64 millimeter) hex shafts, larger cutters. It is equipped with a standard 10 horsepower (7.5 kW) drive motor. The 40K is for the highest solids loading environments like prisons and combined flow sewer pumps stations as well as industrial operations like oil sludge systems. With flow capabilities up to 6,860 gallons per minute (1,560 cubic meters per hour), it is a perfect fit for high flow applications and will excel in biosolids systems for larger treatment plants.

POWERFUL CUTTING FORCE

All dual shafted grinders have two rows of hardened steel cutters that rotate at slow speed and with incredibly high-torque. This means they are capable of grinding down large, pump clogging solids into small particles. 30K Monsters are also available with Wipes Ready® technologies which are specifically designed for shredding wipes and rags. Wipes Ready cutters shred rags and disposable wipes into small pieces that will not weave back together and form long ropes and rag balls. ◆

Lovato Electric Where Technology Meets Tradition

For nearly 100 years, Lovato Electric has been designing and manufacturing low voltage electrical devices for industrial applications.

Established in 1922 in Bergamo, Italy, Lovato Electric is a private company, managed by the same family of entrepreneurs for four generations.

Among the first companies in Italy to obtain ISO 9001 certification in 1992, Lovato Electric has a range of over 10,000 products complying with the strictest requirements of international standards including UL and CSA.

Manual motor protectors, contactors, overload relays, electro-mechanical starters, softstarters, variable speed drives, pushbuttons and selector switches, signal towers, limit switches, cam switches, disconnect switches, miniature circuit breakers, time relays, protection relays, level control relays, general purpose relays, micro PLCs, power supplies, battery chargers, metering, automatic power factor controllers, automatic transfer switch controllers, engine and generator controllers, supervision, and energy management software are the types of products and solutions designed and produced by Lovato Electric.

To provide competitive products and services in the industrial automation and energy management fields is our company's mission.

Our thirteen branches abroad and a network of over ninety importers guarantee the availability of Lovato Electric products in more than 100 countries all over the world.

Lovato Electric, Inc. (USA) is headquartered in Chesapeake, Virginia, and supports the U.S. market through authorized distributor partners. ◆

LOVATO ELECTRIC INC. (USA)
757.545.4700
sales@lovatousa.com • www.lovatousa.com

Megator Corporation and Pumps 2000 America

Your best source for positive displacement pumps, pumping systems, and pollution control solutions

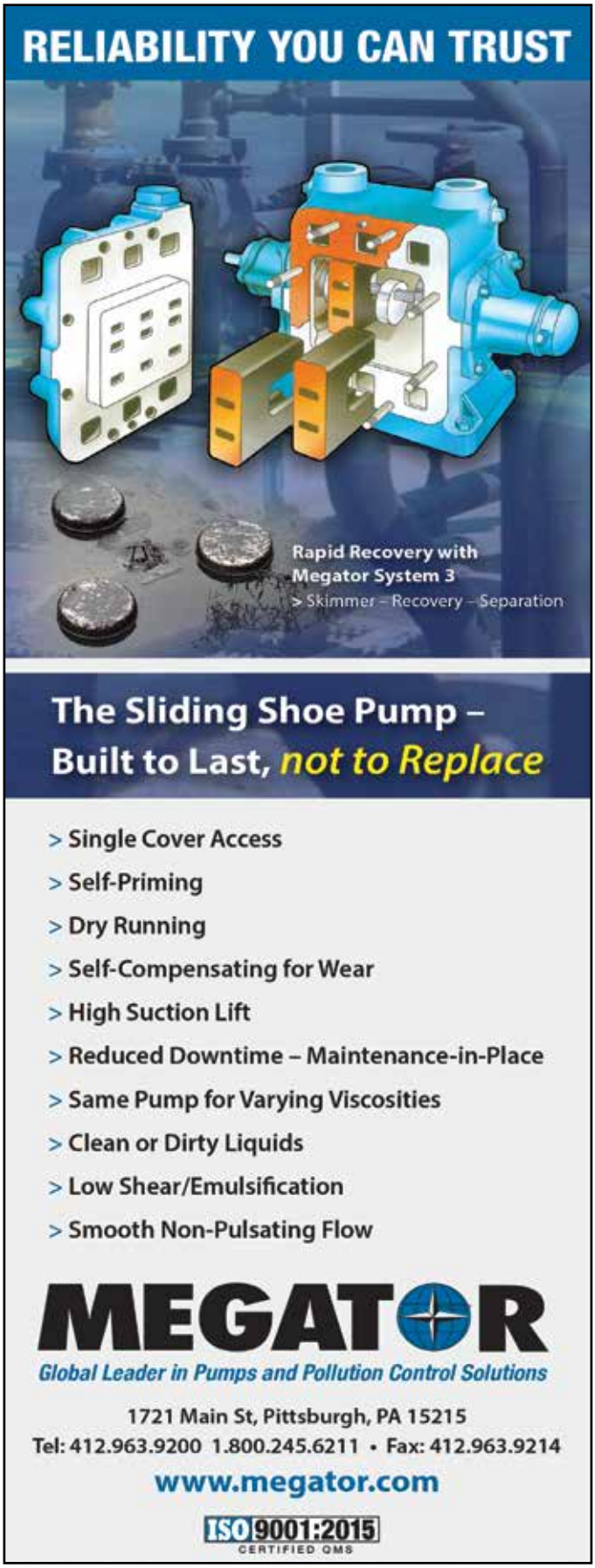
Megator is a leading manufacturer of innovative and unique positive displacement pumps, pumping systems, and pollution control solutions. Our products and systems have continually exceeded our customers' expectations for quality, performance, and reliability. Megator products are the first choice for many demanding applications worldwide. Megator has built a global reputation for manufacturing innovative and unique positive displacement pumps and pollution control solutions for some of the harshest environments. The performance, quality, and reliability of our products in general industry, marine, mining, and pollution control applications continually exceed our customers' expectations.

Since 1946, we have been helping customers choose the best equipment and solutions for their specific needs. Our pumps and systems are used in thousands of demanding locations, including merchant fleets and in navies such as the U.S. Navy and the British Royal Navy.

Today, Megator Corporation and Pumps 2000 America are merged entities with headquarters for North and South America in Pittsburgh, Pennsylvania. From this location, we support our authorized independent representatives and distributors. Although mining and marine applications are a major focus, our product line has gained wide acceptance in the process industries, oil and gas, petrochemical, general industrial, and municipal sectors.

While always a participant in the oil spill market, in recent years we have increased our presence in that sector. Megator is the North and South American headquarters for Salarollpump peristaltic hose pumps and Truxor amphibious vehicles. Both of these products offer capabilities that are unique to the industry and further diversify our offering.

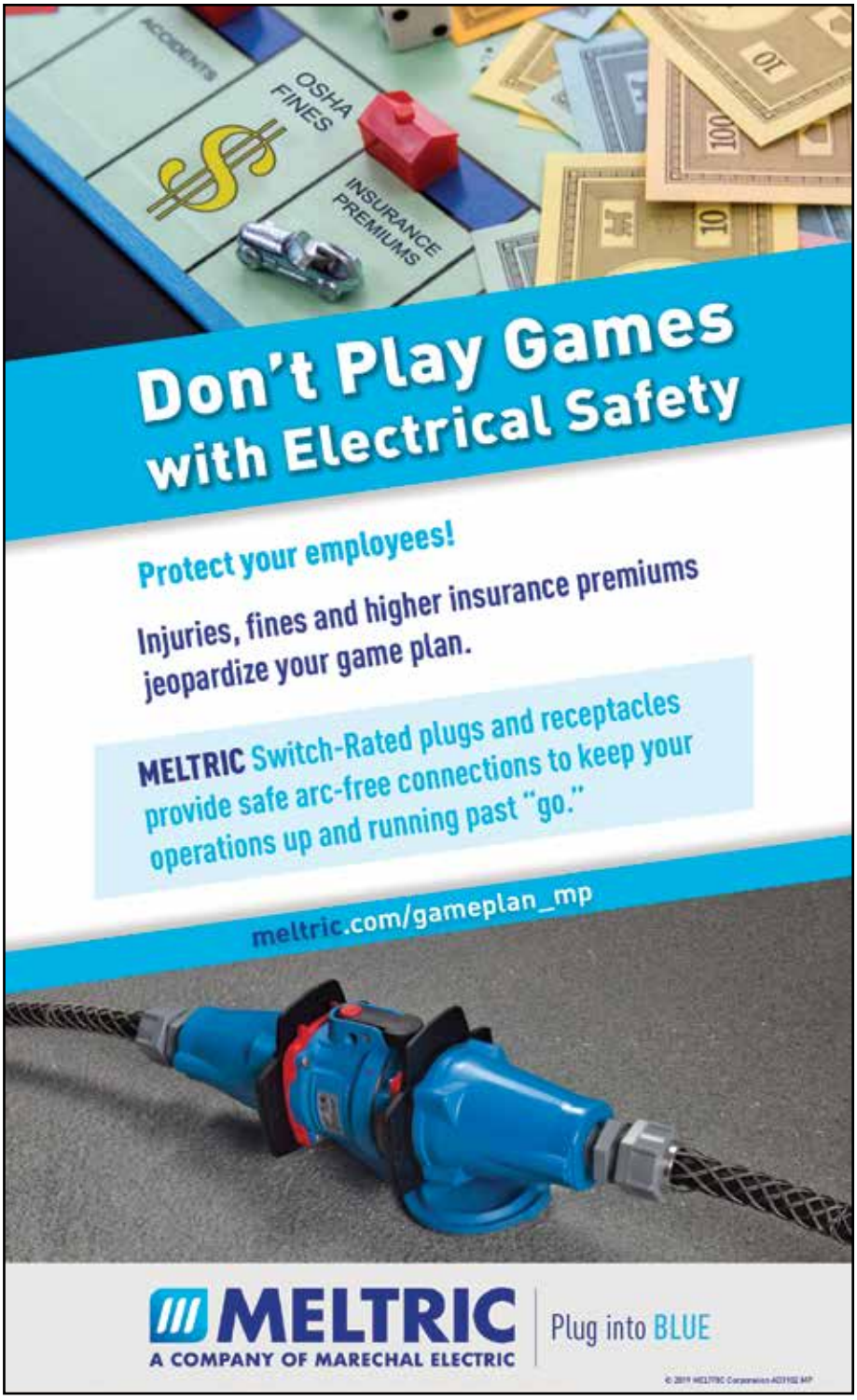
At Megator, our top priority is helping customers solve their pumping and pollution control problems. It's why we've been in business for more than sixty-seven years, and it's what motivates us to achieve excellence in everything we do each and every day. ◆



MELTRIC

Safe, reliable electrical connections made easy

MELTRIC's DSN Switch-Rated plugs and receptacles with Decontactor™ technology and push button circuit disconnection provide the safety and functionality of a disconnect switch with the convenience of a plug and receptacle.



Type 4X/IP69 environmental ratings help ensure watertight connections. Corrosion-resistant spring-loaded, silver-nickel, butt-style contacts deliver superior electrical connectivity, even in dusty or dirty environments.

A dead-front safety shutter prevents access to live parts, while an enclosed arc chamber eliminates electrical arcs and protects users from exposure. Push-button separation of the plug and receptacle verifies de-energization without voltage testing or cumbersome PPE.

Lockout/tagout capability and optional integral pilot contacts help make plant operations safer and more efficient. DSN devices are NFPA 70E "line of sight" compliant, and are ideal for fast, easy plug-and-play motor and equipment changeouts. MELTRIC's DSN devices are UL/CSA switch- and HP-rated; available in models from 20-150 amps.

MELTRIC stands by the quality of our products, providing a 5-year warranty on electrical contacts.

MELTRIC manufactures a comprehensive line of industrial plugs and receptacles, including a full line of UL/CSA switch-rated devices. Other product lines include high amperage, multipin, and hazardous location plugs and receptacles. A wide variety of power distribution options, including multigang, rubber boxes, SB enclosures, and panel assemblies are also available.

Visit **www.meltric.com** to learn more about our industry-leading products. ◆

Plug into safety with MELTRIC.

Milton Roy, LLC

Built on a strong reputation of reliability, Milton Roy combines vast industry experience, a proven track record, and a culture of continuous technological improvement to deliver the most comprehensive portfolio of metering pumps, mixers and control systems for chemical metering applications used in upstream applications as well as every aspect of industrial water and wastewater treatment.

Milton Roy's PRIMEROYAL® Series pumps are the industry's most powerful metering pump, capable of delivering 20,000 psig to overcome the extreme pressures associated with ultra-deep offshore applications. The API 675 compliant PRIMEROYAL pump is designed for the consistent and accurate delivery of flow assurance chemicals used to enhance offshore product recovery, eliminate corrosion, and prevent the formation of hydrates or wax deposits. The PRIMEROYAL® range provides accurate dosing of a broad spectrum of fluids at flow rates that can reach maximum 13,068 gallons per hour (49,470 liters per hour) in the triplex configuration. With its versatile, modular design and a wide range of options, PRIMEROYAL® pumps can be configured precisely for your applications. PRIMEROYAL® pumps are built on a modular technology platform that adapts to a wide range of applications. They feature multiple liquid ends and capacity-control options for the specific requirements of your application. More than a half-century of experience combines with advanced pump-engineering technologies to give you continuous operation with the longest possible time between scheduled maintenance.

The workhorse of the portfolio is the mROY® metering pump. This pump has been upgraded and offers enhanced safety, improved hydraulic efficiency, easier startup and maintenance, and the same accuracy and reliable performance that Milton Roy is known for. Produced in a variety of models and frame sizes that provide capacities from 0.20 gallons per hour up to 87 gallons per hour in a simplex configuration, the mROY metering pump boasts a hydraulically balanced diaphragm with 96,000-hour design life and a three-year warranty.

Milton Roy's PROTEUS® is the most intelligent chemical metering pump for the water and wastewater, chemical, power generation, oil and gas, agricultural, pulp and paper, and textile industries. PROTEUS is built on a universal technology platform with the ability to adapt as technology evolves. It features a mechanically actuated diaphragm driven by advanced variable speed technology for accurate and reliable performance. ◆

Mueller Water Products, Inc.

Mueller Water Products is Where Intelligence Meets Infrastructure®

Mueller Water Products, Inc. is a leading manufacturer and marketer of products and services used in the transmission, distribution, and measurement of water in North America. Our broad product and service portfolio includes engineered valves, fire hydrants, pipe connection and repair products, metering products and systems, leak detection, and pipe condition assessment. We help municipalities increase operational efficiencies, improve customer service, and prioritize capital spending.

Mueller Water Products is one of the only companies that can fulfill the needs of water utilities from end to end—at the source, at the plant, below the ground, on the street, and in the cloud. Built on a solid legacy of innovation, we have the expertise and vision to provide advanced infrastructure and technology solutions for transmitting, distributing, measuring, and monitoring water more safely and effectively than ever before.

MWP brands include Mueller®, Echologics®, Hydro Gate®, Hydro-Guard®, HYMAX®, Jones®, Krausz®, Mi.Net®, Milliken®, Pratt®, Singer®, and U.S. Pipe Valve & Hydrant. Please see **muellerwp.com/brands** and krauszusa.com to learn more. ◆

MUELLER

Peak Mechanical

The company was founded in 1996, and has been in Osburn, Idaho, from the start. For twenty-plus years we have been developing, researching, and manufacturing Apex Heavy Duty submersible dewatering pumps. We began designing and producing submersible pumps in 1996 to meet the needs of construction sites and mines. Over the years, Apex Heavy Duty has earned a worldwide reputation for its high-quality products that are produced in the USA and exported to countries worldwide.

Whatever the application, there's an Apex Heavy Duty submersible dewatering pump to meet your needs. Models are available from 6 to 60 horsepower. Apex pumps flow up to 1000 gallons per minute and pressures up to 150 psi.

Every APEX Heavy Duty submersible dewatering pump built is tested hydraulically and electrically before it leaves our manufacturing facility. A pump performance sheet with hydraulic and electric data is provided with each pump as tested. This ensures the end user is receiving the high efficiency APEX Heavy Duty pump to get the job done. All APEX Heavy Duty submersible dewatering pumps have been tested and carry the ETL Listed Certification Mark for safety and quality.

APEX Heavy Duty pumps and parts are manufactured with premium grade aluminum, stainless steel, urethane, and cast iron and high chrome. Our machining tolerances, heat treating specifications, fabrication, and assembly processes are strictly adhered to. This allows APEX Heavy Duty to provide our valued customers with the highest quality, durable pumps, and parts at an economical price.

All the parts manufactured by APEX Heavy Duty are interchangeable with the Flygt™ BS 2000 series models. If there is a Flygt™ referenced part number associated with the APEX Heavy Duty part number in our catalog, the parts will correctly fit and perform as designed. We stock large quantities of repair parts for immediate shipment. ◆

COME HELL
OR
HIGH WATER

READY TO SHIP.
READY TO WORK.

Submersible Dewatering Pumps
6.0 hp - 60.0 hp, 60 hertz
5.0 kW - 37.0 kW, 50 hertz
Gold Standard manufacturing since 1996

Currently seeking new distributors.
Contact for more information
(208)556-6008

APEXHEAVYDUTY.COM

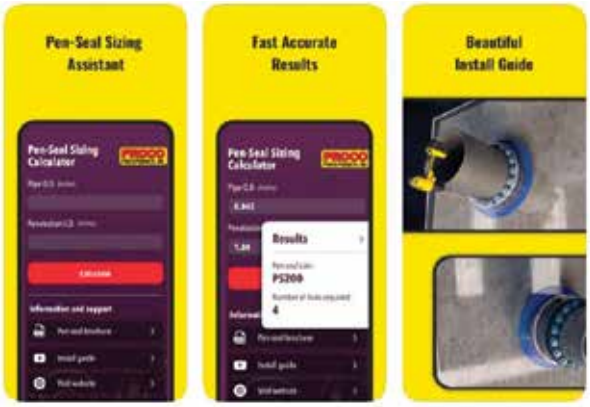
TRADITIONAL QUALITY,
TODAY'S TECHNOLOGY.

APEX
HEAVY DUTY

Peak Mechanical, LLC

Proco Products, Inc.

Proco Products, Inc. is excited to announce the release of a useful tool to help aid in the proper selection and installation of pipe penetration seals (Pen-Seals) into a piping system. The Proco Pen-Seal Calculator is designed to assist in selecting the correct number of links and the correct size of link for pipe penetrations passing through walls or floors. To achieve a 100 percent water or gas tight seal, enter in the pipe O.D and the penetration I.D. to provide the required size/link combination.



What exactly is a Pen-Seal? Pipe Penetration seals have been designed to assist in achieving an efficient, low-cost mechanical seal when piping passes through walls, floors, tanks, pipeline castings, or vaults. The unique design of the Pen-Seal helps to provide a gas or watertight seal, filling any space around a pipe. The standard elastomer for the Pen-Seal is EPDM and can be used in various applications in power generation, HVAC, water and wastewater, mining, and more.

We encourage you to download this exciting and useful tool today on the appropriate platform for your device.

iOS: itunes.apple.com/us/app/proco-pen-seal-calculator/id1447513170
Android: play.google.com/store/apps/details?id=com.procoproducts.pensealcalculator
Installation Video: youtu.be/1UuvkLTRRFo

Within in the new Pen-Seal Calculator, you can also access the company website, view the Pen-Seal brochure PDF, contact a Proco representative, and view an installation video. This video gives you a step-by-step visual of how to properly install a Pen-Seal from Proco. ◆

Pulsafeeder®

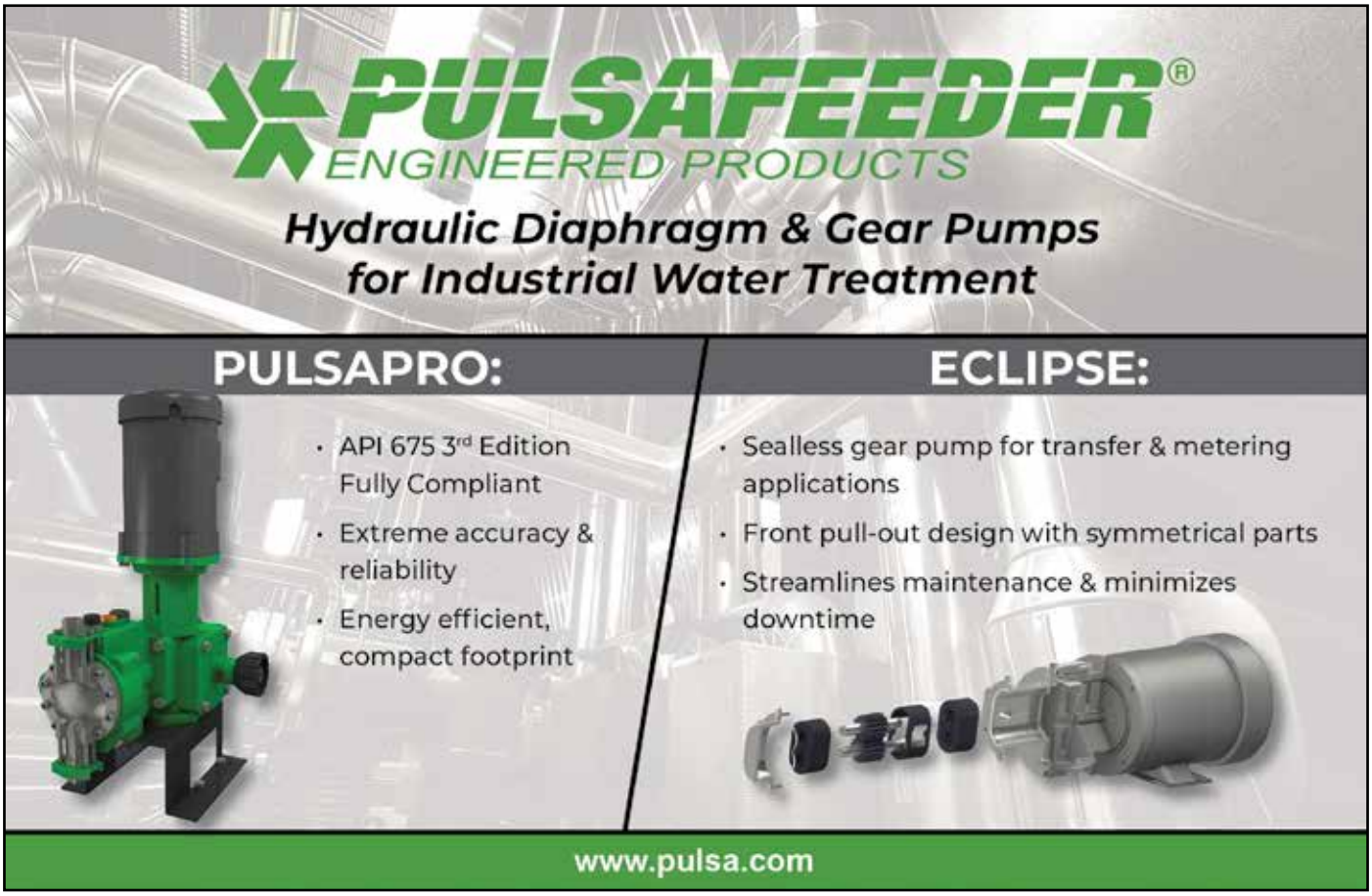
Pulsafeeder® is a global leader at providing engineered pumping solutions to fluid handling challenges. Larry Wilson pioneered the hydraulically actuated diaphragm metering pump principle in 1942. His Pulsafeeder pump was the first of its kind to feed chemicals at an adjustable flow, accurately, without leakage.

With seventy-five years of experience in multiple industries and chemical injection applications, Pulsafeeder Engineered Products' major markets include chemical and petrochemical processing, water and wastewater treatment, oil and gas, and OEM applications. Its pumps and systems are manufactured to serve the unique requirements of its customers. The company's ingenuity led to the development of the HYDRAtube® and HYDRAcone® diaphragm designs. Years of refinement have produced designs that are not only reliable and efficient but also exceptionally easy to service. Pulsafeeder backs up its pumping heads with the finest mechanical drive train and best-in-class warranty. The innovative HYPO valve is the solution for the injection of sodium hypochlorite and other off-gassing fluids.

Pulsafeeder offers multiple pump technologies, exceeding industry standards. With its patented replaceable liner and front-pull-out design, Eclipse® non-metallic gear pumps offer nearly universal corrosion resistance at a fraction of the cost of exotic materials. It has the fewest number of components, compared to other external gear pumps on the market, making maintenance easy and reducing downtime. The PulsaPro® hydraulically actuated diaphragm metering pump line is the next technological evolution for Pulsafeeder. It builds from its legendary predecessor, Pulsa Series®, with expanded performance, compact size, API 675 compliance (with no exceptions), and new features to simplify operation and maintenance.

Precisely engineered pumps and superior customer service is why Pulsafeeder technology is specified in highly engineered metering and transfer applications. Its team will create specific pumping solutions to maximize output and safety, while creating long-term value. The company always follows the strategies of quick response time, short lead times for standard equipment, design excellence, and customer support. This culture has fueled its success.

Pulsafeeder is certified to ISO 9001 standards. ◆



Scalewatcher

Developed and patented in the Netherlands by Mr. Jan P. de Baat Doelman, Scalewatcher technology was introduced to the European market in the 1980s. With immediate market success, Mr. Doelman brought the technology to the United States and applied and received a patent in 1991. From that moment on, Scalewatcher North America has been on the forefront of environmentally-sensitive water treatment. Located in Oxford, Pennsylvania, Scalewatcher North America continues to lead the industry in descaling products that do no harm to the environment.

Scalewatcher North America focuses on the elimination of scale and the problems associated with scale build up. Industries know the costs involved in keeping their capital investments running smooth. Scalewatcher is there to help. Scaled cooling towers, chillers, and associated equipment can negatively impact a company's bottom line, and not just in cash. The caustic chemicals used to remove scale only create more problems with the environment. Your company can "GO GREEN" and stay within your budget.

If our product does not work for your application, we will buy it back! With our "Performance Guarantee," you never have to worry about losing cash on a product that does not work.

Scalewatcher North America Inc. manufactures its products in Oxford, Pennsylvania, so you know its MADE IN THE USA! We can treat pipe sizes from ½ inch up to and including 120 inches. Cooling towers, chillers, evaporative condensers, and boilers can all benefit from Scalewatcher water treatment. If it scales up, we can break that scale bond and show you cost savings on maintenance. No plumbing required!

Why keep adding chemicals when Scalewatcher can reduce your chemical dependency?

Break the cycle now and save on energy, water, and maintenance costs with Scalewatcher products!

For more information, call 800.504.8577 and visit **www.scalewatcher.com**. ◆

SERO PumpSystems, Inc.

Side Channel Pumps designed for critical process services

Headquartered in Germany, SERO PumpSystems is the world's only exclusive manufacturer of side channel pumps. Since the issuance of their first side channel pump patent in 1929, SERO has continued to revolutionize the industrial pump industry with cutting edge side channel pump design and technology. To service the North American market, SERO PumpSystems, Inc. was established in 2007 with headquarters and a parts distribution center near Houston, Texas. Sales and service activities are handled through a network of industrial pump distributor partners.

LOW NPSH PUMP SOLUTIONS

Low flow rates. High vapor pressure. Limited NPSH. 40 percent entrained gas. Tough conditions!

Side Channel Pumps fill the hydraulic performance void between positive displacement pumps and centrifugal pumps. Fully open "star" impellers interact with the side channel casing creating an intense transfer of energy to the pumped liquid or liquid / gas mixture. The corresponding pressure increase (pump head) equals 5 to 10 times the amount generated by a similar size centrifugal pump at the same RPM. Additionally, the centrifugal effect of the impeller combined with the unique SERO internal flow patterns allows our pumps to effectively handle fluids with gas entrainment of up to 50 percent and also allows them to be self-priming. With a flow range of 1 to 180 gallons per minute and head generation up to 3,400 feet, SERO pump hydraulics target difficult pump applications in oil and gas production and NGL processing. Sealed and environmentally friendly sealless pump designs are both available. ◆

Find a true solution with SERO Side Channel Pump technology.

For details, please contact sales@seropumps.com.

SERO PUMPSYSTEMS, INC.
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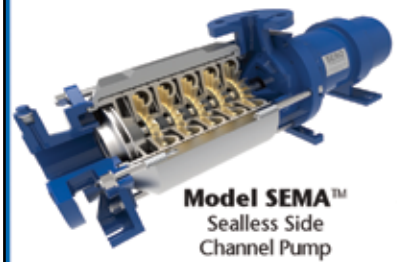
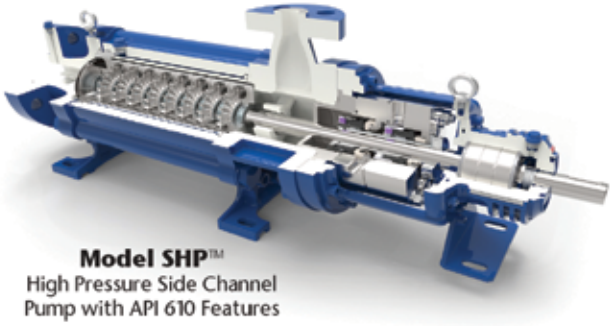
Low NPSH Pump Solutions

Low flow rates · High vapor pressure · Limited NPSH · 40% entrained gas! · Tough conditions!

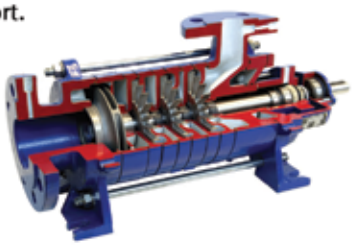
SERO Side Channel Pumps are designed to operate in these unique process services.
With a flow rate of 1 to 185 GPM and head generation up to 3400 ft.,
SERO pump hydraulics target difficult pump applications in
oil & NGL production, chemical processing and LPG transport.



Model SEMA™
Sealless Side
Channel Pump



Model SHP™
High Pressure Side Channel
Pump with API 610 Features



Model SRZS™
Multifunction Side
Channel Pump

SERO® PumpSystems

Inspiring Technology.
Meeting Your Needs.

CONTACT: *Kevin Hohn at (281) 242-8080 or* **EMAIL:** *sales@seropumps.com* **SEROPUMPS.COM**

Continental Pump Co.

We are a family-owned progressive cavity pump company that has been in business since 1946, George Heath Jr. is the second generation owner. Our 22,000 square foot facility is located in the Midwest, sixty miles west of Saint Louis, Missouri. We house over two million dollars in inventory for quick order processing and shipping.

Our pumps, drive units, and replacement parts are compatible with numerous progressive cavity pump brands. Our sales staff is knowledgeable and offers great customer service and support. Our loyalty to our distributors is unmatched, and we stand behind our products.

You can contact us or visit our website for product information and locate a local distributor. ◆

CONTINENTAL PUMP CO.
636.456.6006
www.continentalultrapumps.com

Ebac Industrial Products

Ebac, located in Newport News, Virginia, was opened in 1978 to serve and support the North and South America markets. With over forty product lines and a new location in Riverside, California, Ebac specializes in providing pre-engineered dehumidification solutions for military, industrial, commercial, and residential applications, such as:

- **Cleaning and Restoration:** A wide variety of portable dehumidifiers used to dry rooms and materials after water damage has occurred.
- **Rental:** Rugged portable and semi-permanent dehumidifiers made available to the public through national tool rental companies.
- **HVAC:** Moisture removal and air quality solutions including residential, pool, industrial processes, archival storage, commercial, and municipal applications.

Ebac strives to provide the highest quality product, service, and application engineering support to each one of its diversified market segments. An active, ongoing research, and development program ensures that Ebac clients are supplied with the latest and most cost effective moisture removal solutions. ◆

Flowrox

For more than forty years, Flowrox has been a leading supplier of industrial pumps, valves, filtration, and digitalized assets and digitalization services. All of Flowrox products differ from competing technologies by offering the lowest OPEX costs. Flowrox now offers a wide variety of products including: peristaltic and progressive cavity pumps, pinch valves, slurry knife gates, duck bill check valves, control valves, filters and filter services, the Flowrox GeoBox™, and Flowrox Smart Solutions™.

Not only do we offer a wide spectrum of products, but you can add Flowrox Smart Solutions™ on any valuable asset regardless of the manufacturer. This allows your entire process to be digitized, and accessible from anywhere. Download our Malibu™ platform on any computer, tablet, or smartphone and access your live analytics from anywhere in the world. Flowrox products aim to save you OPEX costs, increase profitability, and decrease downtime. ◆

FLOWROX
410.636.2250
sales-us@flowrox.com • www.flowrox.com

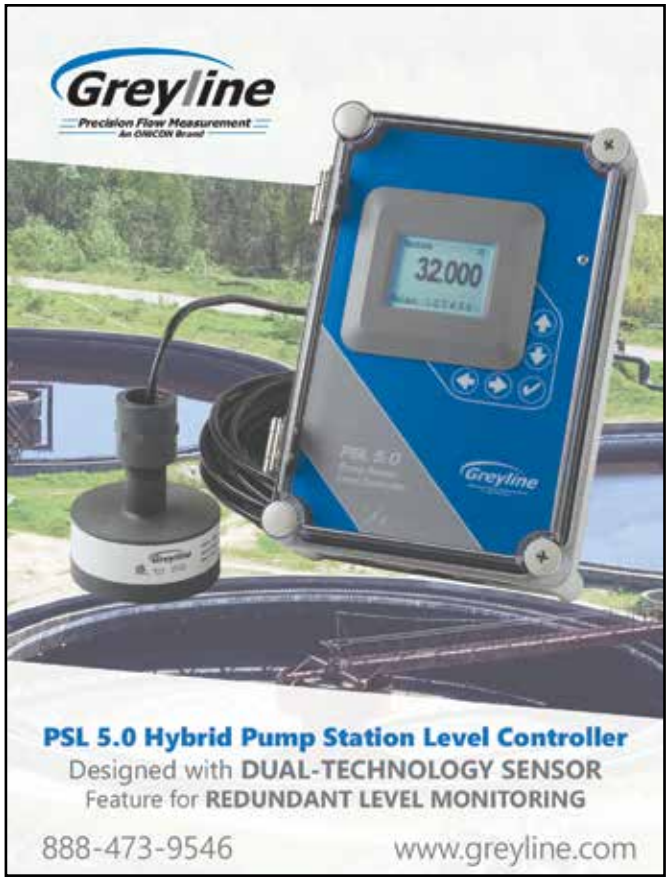
Greyline Instruments Inc.

Greyline is a worldwide leader in ultrasonic instrumentation for industrial and environmental markets. We develop, manufacture, and market industrial flow and level monitoring instruments including ultrasonic level transmitters, flow meters, and open channel flow meters.

Greyline's primary market is environmental—especially water and wastewater treatment systems. Customers include industry and municipalities. Modern research facilities at Greyline include closed pipe and open channel flow systems.

With years of steady growth, Greyline products are sold and supported worldwide. ◆

GREYLINE INSTRUMENTS INC.
info@greyline.com
www.greyline.com



Griffco Valve, Inc.

With more than 370,000 back pressure and pressure relief valves in the field since 1992, Griffco Valve has a proven record of providing quality chemical feed accessories at competitive prices. Two new additions to the product line include "Fusion Dampeners" and pulsation dampeners in larger volumetric sizes.

Fusion Dampeners combine the technologies of the company's back pressure valves and pulsation dampeners. They simplify a chemical-feed system installation because they blend two previously separate accessories and reduce joint leak path opportunities.

There are no flow or fluid restrictions, and the combination of these two devices into one product will also provide for a smooth, nearly pulseless chemical-feed system. They are available in volumetric sizes of 6 and 10 cubic inches.

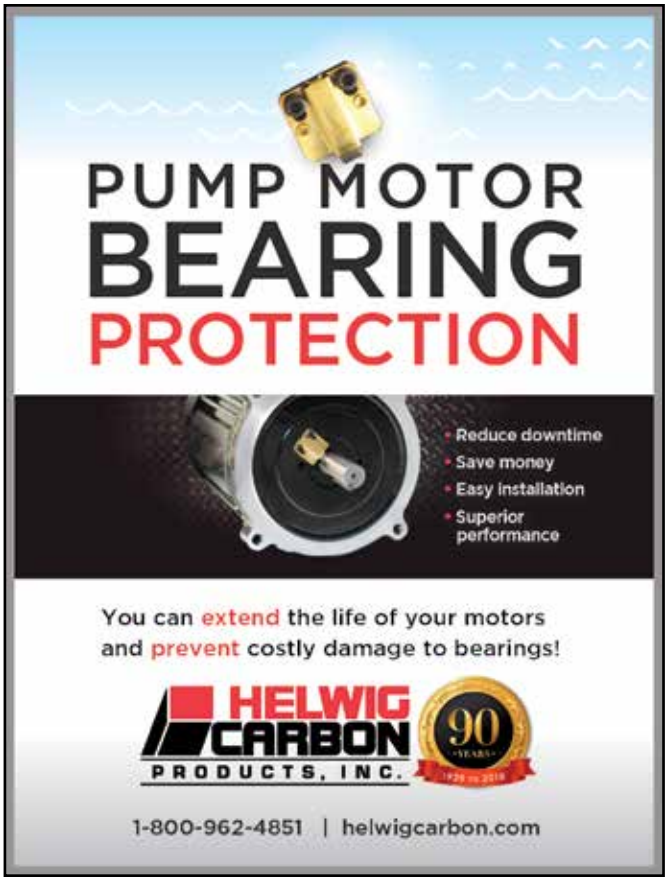
Introduced in nine volumetric sizes from 6 to 125 cubic inches, Griffco pulsation dampeners are now available in eleven sizes up to 350 cubic inches. Dampening effect is +2.5 percent. Sizes include 1/2-, 3/4-, 1-, and 2-inches with NPT, BSPT, Union, or Flange process connections.

The company maintains optimal inventory for quick turnaround on shipments to pump manufacturers and to processing facilities including water and wastewater. Certifications include ISO 9001, CRN, NSF, and CE. ◆

Helwig Carbon Products

One of the fastest growing areas in the pumping industry is bearing protection. When VFD drives control pump motors, you get significant energy savings and longer pump life. The downside is the induced shaft currents that are created in the pump motor will discharge through the motor bearings and cause frosting, fluting, noise, and eventual failure. This downtime can be costly. These induced currents can be mitigated by installing a Bearing Protection Kit (BPK) with a silver graphite brush on the motor or pump. This engineered solution will provide a path of least resistance for the induced currents and lead them to ground without going through the bearings. You will experience longer pump life, less costly downtime, fewer returns, and satisfied end users with a Helwig Carbon Products BPK.

Helwig Carbon also makes mechanical carbons for pump applications. These components are used for vanes, rotors, seals, bushings, and bearings in a variety of pumps. These precision machined carbon components maintain tight tolerances. Carbon graphite bushings are self-lubricated and can operate at high temperatures. A wide variety of grades and sizes are in stock, plus we can manufacture custom parts quickly. For more information, visit **www.helwigcarbon.com**. ◆



Hoosier Pattern

Hoosier Pattern prides itself on being innovative and consistently raising the bar within the industry while maintaining the level of quality they are known for. Back in 2013, Hoosier was the first top service center to own and operate their own 3D sand printer in the United States. As of summer 2018, Hoosier will be the only service provider to own and operate two 3D sand printers under their roof along with maintaining a third printer in their facility as well.

Customers are the driving force behind everything Hoosier does and this expansion is no different. This will allow Hoosier to take on jobs that once had to be turned away due to capacity restrictions. The current turnaround time for printed sand of ten days will remain standard; however, the possibility to turn printed parts around sooner—if needed—for customers has greatly increased.

On top of the addition of the third sand printer in house, Hoosier has recently added a five-axis machining, three Doosan DNM 650's, two Johnford Bridge mills, and most recently, a robotic milling cell to machine plastic patterns to the machining side of the shop. All of these additions allow Hoosier to maintain current customers as well as take on new customers with more complex projects. ◆

InfoSight

In industrial environments, accurately tracking assets means knowing what you have, where it is, and its condition. InfoSight Corporation's metal tags withstand physical challenges including heat, abrasion, and exposure to ultraviolet light and enable error-proof tracking that can be maintained throughout an asset's lifespan.

InfoSight's tags can be used to track a wide variety of assets. One application is for plants that are required to have Leak Detection and Repair Programs. InfoSight's LDAR Tag System gives plants control over each LDAR component's unique ID number and tag supply. Customers order blank tags and print new ones only as needed. Additionally, InfoSight's unique LDAR tag design allows the attached tag to be read from either side.

InfoSight's durable metal tags can be applied directly to the asset or attached using a flexible wire type tie. The software included with InfoSight's laser tag printers allows the user to design tags that include alphanumeric messages, barcodes, and logos. A scan of the barcoded tag can confirm that the operator is checking the correct asset, update service records to show the completed work, or access notes and technical information via a customer's IT system.

InfoSight tags make asset identification and tracking simple. ◆