

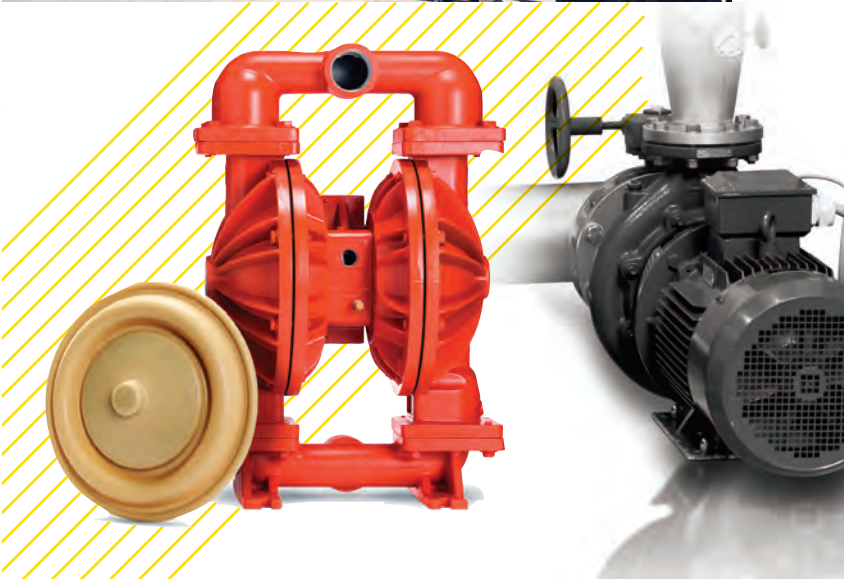


MPT

MODERN PUMPING TODAY®

PROVIDING SOLUTIONS FOR THE WORLDWIDE PUMP INDUSTRY

2022 PRODUCTS AND
SERVICES
GUIDE



Automation24

Automation24 is the premier online supplier for industrial automation components offering a well-rounded selection of products and solutions from sensor to control cabinet. We have been developing a comprehensive range of items from industry-leading manufacturers and offer them to our valued customers at the best prices. Order conveniently and quickly online and benefit from our cost-effective first-class products.

Our current portfolio consists of over thirty brand-named manufacturers that cover a range of products including factory automation, process instrumentation, and safety technology. Reliable process value recording and monitoring is possible with sensors from the industry leaders, ifm efector, as well as WIKA, Endress+Hauser, and Madison Company. Easy-to-install switches and signaling devices from Siemens and PATLITE ensure reliable system control and monitoring. Need to protect your automation components from external influences or the elements? We've got you covered with enclosures and control cabinets from FIBOX and Wiegmann. Ensure the utmost protection of your equipment with circuit protection solutions available from Siemens, LS Electric, and Weidmüller. High-quality PLCs, expansion IO, and communication modules from Siemens are available for both simple and complex automation tasks. Light curtains from Schmersal are offered in a variety of protection heights and safety resolutions to meet the demands of your safety application. Don't see what you are looking for in our portfolio? Let us know—our engineers are happy to help select a possible alternative or discuss getting you exactly what you need.

Throughout 2021 a variety of new items were added to the continuously growing product portfolio.

- Process instrumentation from Endress+Hauser to reliably measure and monitor pressure, temperature level, and more.
- Safety technology from Schmersal to ensure safest work environment for your applications and personnel.



All items in stock in our U.S. warehouse.



FREE application support: Customer Support Engineers standing by!

- Precision transmitters, controllers, and data loggers from NOVUS to accurately measure, control and record.

And more!

By having our own on-site warehouse here in the United States and consistent availability of products, items that are shown as available according to the real-time inventory update on our webshop will be shipped the same working day.

Need it tomorrow? No problem! Expedited delivery services are also available.

To make your purchase with us as pleasant and easy as possible, we place great emphasis on a comprehensive online service. We offer an in-shop search capability, and a filter function that separates products based on technical characteristics to simplify selection. In addition, we have a product comparison function and provide comprehensive product information. You will find answers to frequently asked questions in our FAQ section, but should you have any further questions, our outstanding technical customer service engineers are at your disposal Monday through Friday between the hours of 8:00 a.m. to 6:00 p.m. EST via phone, live chat, email, or fax. They are available to assist with product selection and provide support for your application before, during, and after your order. ■

Industrial components fast
at a price you can afford!



Strong brands available at automation24.com



Endress+Hauser

SIEMENS

WIKAI

LAPP

LED2WORK

Lovato electric

LS ELECTRIC

MENCOM

FIBOX

Weidmüller

PFLITSCH

MOORE

LASCAR electronics

SELEC

microsonic

brother at your side

CONTA CLIP

WIEGMANN

Acme Electric

KNIPEX

SCHMERSAL THE DNA OF SAFETY

IXON

MURR ELEKTRONIK

PATLITE

NOVUS

IME

SIKA

Wera

See what our customers are saying:
Excellent 4.9 out of 5 ★ Trustpilot

“ Easy to use website,
great price, and quick
FREE shipping. ”

“ Fantastic service all around.
Knowledgeable and accessible tech support,
and above and beyond customer service. ”

“ Easy ordering and super
fast shipping. Will order
from them again. ”



Blacoh

BACK PRESSURE AND PRESSURE RELIEF VALVES

Redesigned from the inside out, Blacoh back pressure and pressure relief valves feature patent-pending flow stabilization technology to deliver improved flow, extend valve service life, and eliminate dreaded valve chatter.

Blacoh engineers solved the problem of valve chatter with a better design. Most back pressure valves are based on a pressure relief design where the valve is normally closed. When a set pressure point is reached, the valve opens quickly with maximum flow to relieve pressure. This action doesn't work well for back pressure valves that need to flow continuously to hold pressure upstream. When the valve opens quickly, pressure upstream drops rapidly and the valve slams closed. The sudden stop in flow causes a pressure spike that forces the valve open again. In a back pressure valve application, this cycle occurs many times per second, creating a loud, chattering valve with inferior performance and a shorter service life. Blacoh's flow stabilization technology meters flow when the valve



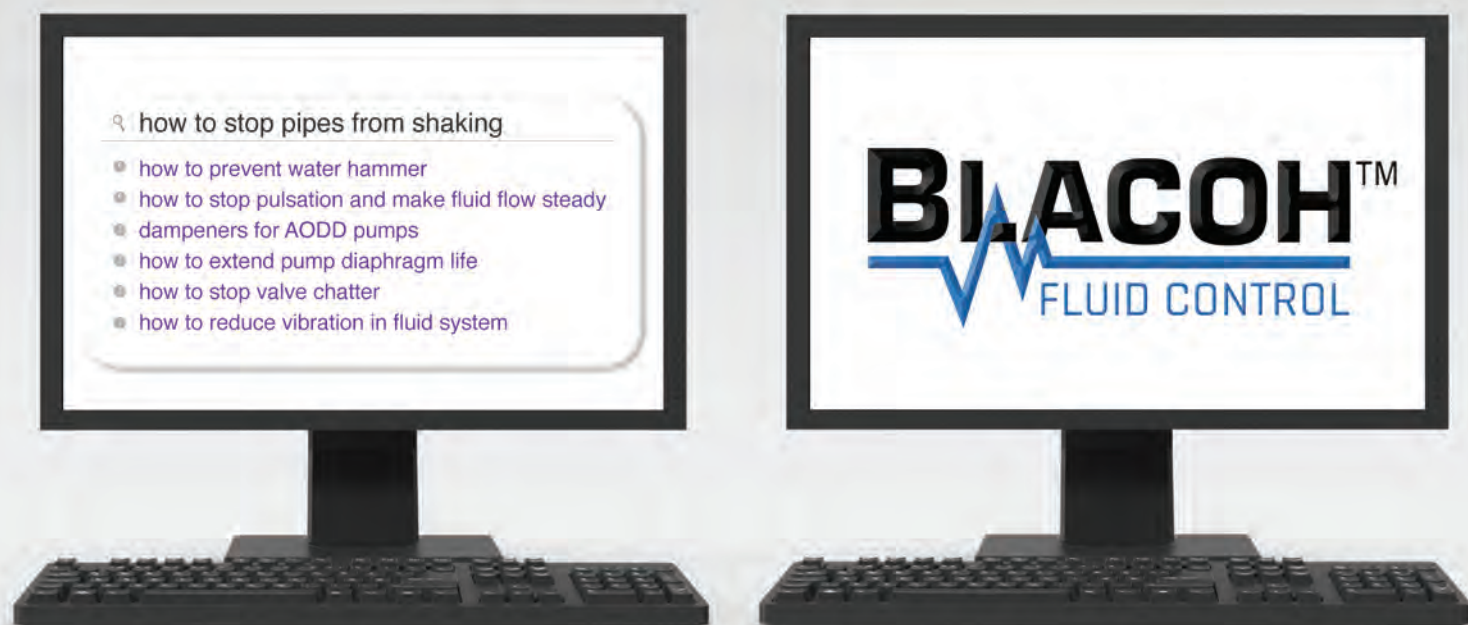
opens to minimize the pressure drop that initiates this cycle. The result is a valve that doesn't chatter, performs better, and lasts longer.

All Blacoh back pressure and pressure relief valves use a unique swiveling spring seat to ensure spring force is applied evenly over the diaphragm for more consistent and complete valve closure. Both plastic and metal valves have a separate

ring attachment that provides a more uniform clamping load and improved seal performance. Standard plastic valves use a threaded connection, eliminating the need for metal fasteners. Blacoh valves are available in sizes from 1/4 up to 2 inches in a variety of materials, port configurations, and inlet options, with spring pressures up to 350 psi. ■



Tired of searching?



We have the solution you're looking for.

We have dedicated ourselves to improving the performance, reliability, and safety of pumping applications through system-wide solutions for over four decades. Contact our sales team today to see how we can put our expertise to work for you.

BLACOHTM
INDUSTRIES

For more information, visit Blacoh.com

Sales@Blacoh.com | 951.342.3100

Environment One Corporation

E/ONE BACKGROUND

For more than fifty years, Environment One Corporation has manufactured 1 horsepower SPD grinder pumps designed specifically for use in pressure sewer systems. From the 200 Series in the 1970s to the 2000 Series in the 1990s to today's Extreme model, almost two million end users in over forty countries rely on E/One grinder pumps daily.

SPD GRINDER PUMP FOR WASTEWATER APPLICATIONS

In a low-pressure sewer system, constant, predictable pump output is the foundation for proper hydraulic design. It enables the engineer to minimize retention time, pump wear, and keep scouring action at effective levels.

The system pressures to be overcome by any given grinder pump in a low-pressure sewer system vary dramatically over the course of a day. E/One's progressing cavity pump readily accommodates these pressure variations while maintaining a nearly constant flow without ever operating at "near shut off"—thus avoiding the wear and motor burnout suffered by other pump types.

E/One's SPD pump has a nearly vertical H-Q curve. It is by far the most "forgiving" pump design—providing predictable flow over the full range of typical system pressures; strengths

critical in large-scale, low pressure sewer systems.

E/One's superior high head capability allows a system to have few, if any, lift stations. And, it easily accommodates additional future connections without compromising system performance. E/One grinder pumps offer reliable operation from negative heads to 185 feet of total head.

SEWER ANYWHERE, IN ANY TERRAIN

Pressure sewer systems are cost-effective and can be installed in any terrain—flat, wet, rocky, even on sites with dramatic elevation changes. They are much more affordable than conventional gravity sewers, which require major excavation, and much safer for communities than septic systems, which can eventually fail, polluting ground and recreational water and endangering public health. Pressure sewer systems can cost as much as 80 percent less to install vs gravity sewers and reduce the number of lift stations required—or even eliminate lift stations altogether.

SEPTIC TO SEWER CONVERSION PROJECTS

E/One sewer systems have been chosen for septic-to-sewer conversion projects both in the United States and abroad, especially in coastal areas

where the soil is not conducive to septic tank usage and as sea levels rise. At Rincon Point in California, failing septic tanks at oceanfront homes polluted the ocean. Surfers were getting sick and avoided the water after rainstorms. One resident could see the tide rise and fall inside his septic tank. Septic tanks were replaced with the E/One sewer system, resulting in a cleaner ocean.

PRESSURE SEWER SYSTEM UPGRADES

E/One offers its grinder pump as a replacement for existing pressure sewer systems. E/One grinder pumps use integrated pressure switches instead of floats, which are less susceptible to grease buildup and eliminate nuisance alarms that result from stuck floats. The Upgrade is a one-piece pump that installs quickly and easily into the existing tank.

Environment One's Upgrade, the aftermarket grinder pump that works and goes on working without any preventive maintenance. It's the original grinder pump design, the one others have tried to copy but they just haven't gotten it right. Maybe that's why E/One's Upgrade has been the pump of choice for many pressure sewer upgrade projects in the mountains of Tennessee, the lakes of the Midwest, and many coastal communities. ■





E/ONE EXTREME

S E R I E S

THE E/ONE *EXTREME* SERIES GRINDER
PUMP FOR PRESSURE SEWER SYSTEMS

The Best Performing Pump in the Industry

Featuring the longest average mean time between service calls with zero preventive maintenance and up to 185 feet TDH.

E/One can help you with design assistance and the strongest factory support in the category.

Get our free design software or send us your topo map for analysis.

LEADING THE INDUSTRY WE INVENTED.

Environment One not only pioneered the grinder pump category, but consistently leads the industry both in system deployment and innovation. E/One remains dedicated to Total Quality, Continuous Improvement, and Extreme Customer Satisfaction.



SEWER SYSTEMS

Environment One Corporation
www.eone.com/sewers

A Precision Castparts Company

Gorman-Rupp Pumps

Gorman-Rupp has been revolutionizing the pumping industry since 1933. Many of the innovations introduced by Gorman-Rupp over the past eighty-five years have become industry standards.

We continue to update our machinery, processes, research and development, and engineering to ensure that our pumps and systems are among the most reliable and efficient on the market. With nearly one million square feet under roof, our facilities house some of the most modern manufacturing, testing, and warehousing facilities in the world. Our experienced engineers take advantage of the latest technologies and innovations to custom-design, manufacture, and assemble our products.

With over one million Gorman-Rupp pumps installed to date, we have the knowledge and experience understand your specific application. We provide solids- and clean-fluid handling pumping solutions for municipalities, industrial plants, construction and rental businesses, refineries and petroleum plants, mining sites, agricultural operations, and a variety of original equipment manufacturers.

One of our most successful and innovative lines of pumps has been our self-priming models. Gorman-Rupp also manufactures complete lines of submersible, priming-assisted (dry-prime), standard centrifugal, horizontal end suction centrifugal, and rotary gear products built for the most aggressive pumping applications. In addition, our ReliaSource® pump packages that incorporate these

products are designed, manufactured, and tested and include pumps, motors, piping, and controls to ensure superior operation and easy installation.

We perform rigorous testing based on Hydraulic Institute Standards and test to customers' actual operating conditions in our one-of-a-kind testing facility guaranteeing innovative, superior-quality products that are ready to tackle your toughest jobs. To ensure you get the right equipment for your requirements,



Gorman-Rupp partners with a worldwide network of distribution and provides them with the most extensive training. Gorman-Rupp distributors will work hand-in-hand with you to recommend, customize, and specify equipment. And Gorman-Rupp is always available should you ever require any assistance.

PHILOSOPHY

Gorman-Rupp stands behind the quality of our pumps to ensure they meet your requirements for the long haul. To maintain industry-leading client satisfaction well beyond product installation, we offer a variety of services to meet your needs, including world-class training, service, and industry-leading warranty.

INDUSTRY-LEADING SUPPORT AND WARRANTY

Gorman-Rupp stands behind the quality of our pumps to ensure they meet your requirements for the long haul. To maintain industry-leading client satisfaction well beyond product installation, we offer a variety of services to meet your needs, including:

INDUSTRIAL

If your application deals with abrasive, corrosive fluids, or liquids containing large solids, we have the right pump for the job. Gorman-Rupp pumps are constructed in a variety of materials to move fluids in steel mills, paper mills, underground mines, food processing, automotive and chemical plants, canneries, power plants, tanneries, glue and resin plants, and any other facility where dependability and ease of service are essential.

MUNICIPAL

When you choose Gorman-Rupp, you benefit from one of the largest and highest quality lines of municipal pumps, engine-driven pumps, sewage lift stations and water booster/reuse stations available on the market. Our ReliaSource® packaged lift and booster stations ship complete from the factory with pumps, motors, and controls and are 100 percent tested before they leave the facility to ensure product efficiency and operation. ■

GORMAN-RUPP PUMPS

P.O. Box 1217
Mansfield, Ohio 44901





GET RID OF WATER... SO YOU CAN GET TO WORK.

INTRODUCING GORMAN-RUPP VALUPRIME® PUMPS

Gorman-Rupp's new line of general purpose, priming-assisted pumps is designed to dewater your job site without taking a bite out of your bottom line. Available in 4" and 6" sizes, ValuPrime® pumps feature 3" solids-handling capability, oil-lubricated mechanical seals and Final Tier IV engine technology.

And, like all Gorman-Rupp pumps, the quality engineering, manufacturing and testing that go into every ValuPrime pump will keep your site dry and your project on track.



> Call Gorman-Rupp at 419.755.1011 or visit
ValuPrime.GRpumps.com for more information.

Mueller Water Products

Mueller Water Products, Inc. is a leading manufacturer and marketer of products and services used in the transmission, distribution, and measurement of water. Since 1857, Mueller has been helping municipalities increase operational efficiencies, improve customer service, and prioritize capital spending, demonstrating why Mueller Water Products is “Where Intelligence Meets Infrastructure®.”

COMMITTED TO SAFE DRINKING WATER

From life-saving fire protection to data intelligence, we are committed to developing products and solutions that help cities and water utilities deliver clean, safe drinking water. Our broad product and service portfolio includes engineered valves, fire hydrants, pipe connection and repair products, metering products, leak detection, pipe condition assessment, and software that provides critical water data.

When you invest in water infrastructure, quality matters. That's why we select rugged materials and build state-of-the-art software to provide products and services that are designed and engineered for the long run. When you choose Mueller, you choose lasting value that can ultimately translate into cost savings.

SERVING ALL YOUR WATER DISTRIBUTION NEEDS

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

Mueller brands provide products and solutions for:

FLOW CONTROL SOLUTIONS

Mueller offers a full line of products for controlling water safely and efficiently across your distribution system, including valves and control systems. And for easy and effective maintenance and repair, we offer superior service line connection products and equipment.

Products in this category include:

- **VALVES:** resilient wedge gate, butterfly, check, plug, cone, air release, knife gate, slide gates, and more
- **WATER NETWORK CONNECTIONS:** drilling and tapping machines, service brass, and pipe repair
- **CONTROL SYSTEMS:** pressure and flow

FIRE PROTECTION SOLUTIONS

Safety is built into every Mueller® solution. All of our fire protection solutions are compliant with Underwriters Laboratories and Factory Mutual requirements.

Products in this category include:

- **VALVES**
- **HYDRANTS**
- **HYDRANT SECURITY**
- **INDICATOR POSTS**
- **TAPPING MATERIALS**

PIPELINE MANAGEMENT TECHNOLOGY

Proven technology that enables utilities to assess and optimize water networks.

Products in this category include:

- **CONDITION ASSESSMENT**
- **LEAK DETECTION AND MONITORING**
- **SOFTWARE:** utility dashboard, monitoring services, notifications

METERING AND COMMUNICATION TECHNOLOGY

Smart metering paired with the Mi.Net® system allows municipalities to enhance how they serve the community. Our Advanced Metering Infrastructure (AMI) system is a

flexible communication network that grows as your needs change.

Products in this category include:

- **METERS:** residential, commercial and industrial, fire service, registers, valves, setters, and boxes
- **COMMUNICATIONS:** nodes and data loggers.
- **SOFTWARE:** water intelligence platform for water utilities to monitor, control and monetize water distribution networks; as well as utility dashboard, billing consumer information software, customer portal, and leak/network operation services.
- **SERVICES:** field operations, network operations center, network-as-a-service

THE MUELLER ADVANTAGE

Mueller solutions are born from the collective products, services, and professionals in our family of the most trusted companies in the industry. Together, we are a consultative, dedicated team of engineering, sales, support, and distribution experts working collaboratively toward one goal—your success.

We go above and beyond what's expected to help your water infrastructure system work harder and smarter and last longer, now and in the future. And we continue to invest in innovative ways to help you see insights across your system so you can proactively address concerns, extend the life of your operations, and improve your customer service and bottom line.

Mueller Water Products brands include Mueller®, Echologics®, Hydro Gate®, Hydro-Guard®, HYMAX®, i2O®, Jones®, Krausz®, Milliken®, Pratt®, Pratt Industrial®, Singer®, and U.S. Pipe Valve & Hydrant. ■

For more information, visit www.muellerwaterproducts.com.

MUELLER RESILIENT WEDGE GATE VALVES & SUPER CENTURION® HYDRANTS - NOW WITH THE HYMAX GRIP® RESTRAINT



4"-12" A-2361 Mueller Resilient Wedge Gate Valves and Super Centurion® 250 Fire Hydrants are now available with the HYMAX Grip® restraint. The HYMAX Grip restraint is a versatile single-bolt coupling capable of joining a wide selection of pipe types and diameters, resulting in easier, more flexible installations using Mueller products you already know and trust.



Easy Installation – No assembly required. The stab-fit design and top-facing bolt enable quick and easy installation.



Flexible Design – The patented gasket transforms the pipe joint into a flexible connection and allows dynamic deflection of the pipe up to 4 degrees per side.

Ready to take the next step towards fast and easy installations with one ready-to-use product?

• Scan the QR code to get in touch.



MUELLER

MUELLER® | ECHOLOGICS® | HYDRO GATE® | HYDRO-GUARD® | HYMAX® | i20® | JONES® | KRAUSZ® | MI.NET® | MILLIKEN® | PRATT® | PRATT INDUSTRIAL® | SINGER® | U.S. PIPE VALVE & HYDRANT

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Pedrollo



“MADE IN ITALY” PUMPS THAT ARE SYNONYMOUS WITH QUALITY, RELIABILITY, DESIGN, AND INNOVATION

Pedrollo S.p.A., founded in San Bonifacio (Verona) in 1974, is one of the major family-owned industrial companies in Italy and is globally recognized as a benchmark in the electric water pumps industry, with more of 2.5 million pumps manufactured every year.

Pedrollo currently distributes products in more than 160 countries around the world through its ten commercial branches and through its parent company, Pedrollo Group Inc, which is led by Giulio Pedrollo, as chairman, and is now officially present in the North American marketplace through its recent acquisition of Superior Pump. Superior Pump is now part of Pedrollo Group Inc. since the majority acquisition in 4Q2020 and is active in the design, production, and marketing of pumps with a particular focus on the United States and Canada markets. Pedrollo USA is headquartered in Minneapolis, Minnesota, and led by Charlie Michel III as president.

Pedrollo is a leading company in manufacturing and supplying electrical water pumps for residential, commercial, agricultural, and industrial use. Pedrollo is a producer of a complete range of electric water pumps, motors, electronic controls—including VSD and pressure systems. With a focus on innovative products, the wide range of pump includes many diverse types of pump products, such as peripheral, centrifugal, horizontal and vertical multistage, self-priming, pool pumps, deep well submersible pump end as well as electric motors, sump, sewage, effluent, and grinder pumps. Pedrollo will also offer a wide array of accessories, electronic controls, including VSP, and pump systems and packages.

Pedrollo's headquarters occupies a significant area of space and is in

continuous expansion, and currently occupies more than 1.6 million square feet with more than 1,200 employees. Pedrollo's physical size and presence makes it a true and proper industrial district, spread over various specialized plants allowing it to offer practically the entire production and supply chain internally.

Pedrollo's highly automated systems guarantee competitiveness and is constantly investing in innovation, accounting for over 16 percent of revenues, and integrating innovative and original solutions in manufacturing, mechanics, design, electronics, and human intelligence.

The research and development performed at Pedrollo does not only concern the final product, which it holds numerous international patents, but is also applied to machinery and the productive processes employed. The required skills on both the engineering and technological levels are so elevated that, in many cases, they require the direct building of ad hoc dedicated production machinery, designed exclusively by Pedrollo Engineering of the same applied to the numerous registered patents—more than 200 exclusive and original patents—which requires maximum protection through the internal realization of processes, machinery, and safe and ergonomic systems. Such a holistic strategic choice determines a positive position of control and guarantee over both the finished products and the entire production process.

Pedrollo's worldwide success is based on a great innovative capacity sustained by constant research and a strong commitment to development. These efforts are ultimately aimed at the technical improvement of systems and products. Upon ensuring the models' functional priorities, Pedrollo continues with regular design updates: a much-appreciated detail in the market and a

distinctive sign of Italian quality. There is also a constant renewal of products also from an aesthetical point of view, making them more pleasing both to the eye and touch as well as being more efficient—another indicator of the complete attention that Pedrollo promises to its customers. Moreover, Pedrollo uses an advanced prototyping center that enables the invention and realization of new increasingly improved performing products and designed to solve to customers' ever-changing requirements. Pedrollo possesses a tradition of creativity and technology that signifies the excellence of “Made in Italy.”

Pedrollo has committed significant investment aimed at guaranteeing its own companies the capability to produce energy from renewable sources with a positive impact on the environment and society, making it almost entirely autonomous from an energy standpoint. Pedrollo has over 2.5 MW of electricity generated by solar panels and the company recovers rainwater and uses it for industrial and commercial purposes in its plants.

Innovation, quality, service, professionalism, self-reliance, and its innovation-focused business model, along with commitment to sustainability and social responsibility (www.pedrollo4people.com), are the foundations of its long-established reputation.

Pedrollo S.p.A. is a part of Pedrollo Group (www.pedrollogroup.com). ■

PEDROLLO USA

45 Maryland Avenue East,
St. Paul, Minnesota 55117
877.PEDROLLO (733.7655)
info@pedrollo-usa.com
www.pedrollo.com



- **Manufacturer of a Complete Range of Electric Water Pumps, Motors, Electronic Controls including VSD and Pressure Systems**
- **Excellent Reliability**
- **Family-Owned and Managed Company**
- **Innovative Designs**
- **100% Made in Italy**
- **High Quality, Efficiency and Performance**

PEDROLLO USA

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Email: info@Pedrollo-USA.com - Phone: 877-PEDROLLO (877-733-7655) - Website: www.pedrollo.com

Vaughan Chopper Pumps

THE VALUE OF MADE IN AMERICA



Pumps should be reliable. Not only do they serve a vital purpose for many industries, but they are also often located in tough-to-reach areas. This makes replacing a broken pump difficult, time-consuming, and expensive—both in terms of the pump itself and the clean-up of the area around it. Vaughan Company's high-performing and exceptionally reliable chopper pumps can handle the severe workloads of correctional facilities, dairy farms, wastewater treatment plants, and more. Because these pumps are American-made and sourced, they support American jobs and companies as well as reduce lead times and costs incurred from international suppliers.

FROM THE PACIFIC TO THE ATLANTIC AND EVERYWHERE IN BETWEEN

In the late 1950s, Jim Vaughan, the company's founder, spent hours in the bay of the service station he owned in Elma, Washington, repairing manure pumps for local dairy farmers. The pumps constantly broke down due to clogs caused by animal bedding and twine. Jim asked himself what could make these pumps better. He knew there had to be a solution, so he invented the world's first chopper pump. After he officially introduced it in 1960, Vaughan Company was born.

In the early years of the company, Jim would strap a pump on the back of his pick-up truck and drive to dairy farms across the United States to give demonstrations. In the decades since, the company has sold Vaughan Chopper Pumps all over the

world and has been awarded over thirty patents. The company is still located west of Elma in Montesano, Washington, and remains committed to precisely manufactured chopper pumps that can withstand the toughest applications. In addition to multiple centrifugal chopper pump configurations like horizontal, pedestal, submersible, and the world's only self-priming chopper pump, Vaughan Company also manufactures the Triton screw pump and the Rotamix hydraulic mixing system.

BENEFITS OF BUYING AMERICAN-MADE

Vaughan products begin with raw materials that are nearly 100 percent sourced locally in the United States. This reduces shipping time and cost, so customers across the nation can get these industry-leading products without the mark-up and wait times associated with imported systems. This is important since each chopper pump or mixing system is custom-built to meet the end-user's specific needs. Even without current supply chain disruptions, global sourcing would not allow for this level of customization within a feasible timeline. In addition to fast builds, the Washington-based manufacturing facility holds a large surplus of spare parts, so Vaughan products are easily maintained.

Knowing every pump user faces a unique situation, Vaughan Company also has local sales representatives across the country to provide exceptional customer service when it is needed most—whether that is working closely with customers to tailor pump solutions for an exact situation or providing post-installation support.

PRODUCTS THAT SUPPORT AMERICA

While Vaughan's locally sourced and American-made chopper pumps keep

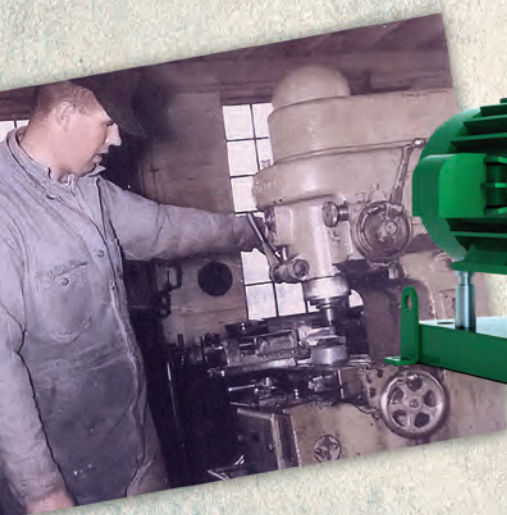
projects moving, their benefits don't stop there. Vaughan Company has been family owned and operated for four generations and is still asking Jim's question, "What could make this better?" The company's commitment to continuous improvement has led to products that are efficient and reliable. The company uses cutting-edge technology like 3D computer modeling, which helps create exacting fits and precision castings for all components. Always pushing boundaries, Vaughan Company also uses both computational fluid dynamics (CFD) to analyze flow patterns and velocities within the pumps to maximize their performance and computer numerically controlled (CNC) automated machining to ensure every Vaughan replacement part fits precisely and consistently.

But the answer to Jim's question extends beyond the walls of the manufacturing facility. As a major, local employer, the company strives to better its community by giving to charities and community organizations. Vaughan Company developed its own scholarship program for graduates of the Elma or Montesano school districts, who are planning to pursue a post-secondary degree or technical certificate and supports many industry associations to help provide scholarship opportunities in the water and wastewater sector. Vaughan products are not just made in America, they also support the future of America. ■

To learn more about American-made Vaughan Chopper Pumps, Rotamix hydraulic mixing systems, and our other specialty products, contact the company at:

888.249.CHOP (2467)
info@chopperpumps.com
www.chopperpumps.com





PROUDLY MADE IN THE USA.

Since 1960, Vaughan Company has been manufacturing the toughest no-clog pumps in the USA. Our 3rd and 4th generation family-owned and operated company builds cutting edge products that are built to last and keep things flowing smoothly.

Choose the unmatched reliability of Vaughan. Ask about our free trial program and on-site demos.

888-249-CHOP | **ChopperPumps.com**

EXPEDITED DELIVERY | ELIMINATES COMMUNUTORS | EXTERNALLY ADJUSTABLE CLEARANCES

Vaughan
Unmatched Reliability

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.

More than a Check valve

It's a Check-All®

SILENT OPERATION!
Our check valves close quickly and smoothly to avoid water hammer noise and vibration.



SPRING-LOADED!
Multiple spring settings as well as seat and body materials available to meet your application needs.



UPSTREAM TRIM!
The upstream trim is protected from corrosive media mixing; thereby, extending valve service life.



And most lead times are less than one week. That's what makes our check valves Check-All®.

Proudly manufactured in the USA



www.checkall.com
Call us at 515-224-2301 or
email us at sales@checkall.com


Proudly manufactured in the USA

EASA

PLAN TO ATTEND THE EASA CONVENTION AND SOLUTIONS EXPO IN JUNE

Gather together your friends and colleagues and travel to St. Louis for the EASA Annual Convention and Solutions Expo June 26-28, 2022, at the America's Center. Plan to arrive on June 24 and take advantage of EASA bonus education on June 25.

This year's education line-up features a wide-ranging program designed to address all areas of the electromechanical sales and repair business, including:

- **VISIONS ON IIOT FOR INDUSTRIAL MAINTENANCE:** The promises of the Industrial Internet of Things (IIoT) are big, but there are limiting factors that may constrain the more optimistic predictions of the impact on the industrial repair business segment.

- **UNDERSTANDING CORROSION IN PUMPS:** Understanding the different types of corrosion and how to identify them will help service centers work with customers to eliminate them or mitigate the damage.
- **CENTRIFUGAL PUMP IMPELLERS:** Those who have had a pump and system not meet performance expectations will want to attend this presentation. This session will include explanations on how a centrifugal pump converts mechanical energy (rotation) into hydraulic energy (head and flow).

Each day of the EASA Convention features the Solutions Expo where the industry's leading manufacturers

and service providers showcase the latest developments in electric motors, drives and controls, generators, and other equipment and services for the electromechanical industry.

"Attendance at the EASA 2022 Convention is open to all, both members and non-members," says Linda Raynes, CAE, EASA president and CEO. "The technical program is a unique opportunity for plant engineering and maintenance personnel to learn about the latest practices to improve their operations and reduce downtime."

To view the full convention schedule, book a hotel room or register for the convention, visit www.easa.com/convention. ■

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- Take advantage of technical, sales, marketing and management sessions - including industry research.
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Electro Static Technology

Electro Static Technology, an ITW Company, is a global manufacturer and the inventor of AEGIS® Shaft Grounding Rings used in electric motors and other rotating equipment to safely discharge stray voltage from variable frequency drives (VFDs) to ground. AEGIS® Shaft Grounding Rings are installed in all ranges of motors from fractional horsepower to large medium-voltage motors.

Our dedication to providing an effective and lasting solution that prevents electrical bearing damage, motor failure, and expensive downtime has led to our adoption by electric motor users in manufacturing, HVAC, energy, water treatment, electric vehicles, and other commercial and industrial applications.

The AEGIS® Shaft Grounding Ring is the standard for protection against VFD-sourced shaft voltage and bearing current. Each ring employs 360 degrees of specially engineered conductive microfibers that surround the motor shaft in a multiple-row design to provide incomparable shaft grounding that keeps motor bearings safe and working.

The AEGIS® SGR product family includes several ring and mounting options to ensure reliable bearing protection no matter the details of your motor system. We have solid and split grounding rings, rings with a clamp-on design or bolt-through mounting, press-fit rings, and the ability to customize a ring for your specific needs.

AEGIS® Shaft Grounding Rings can be specified at the time of motor purchase or installed in the field. Several motor manufacturers include them as standard components on many models. Millions of motors around the world depend on AEGIS® rings because keeping motors running keeps business running. Companies use Shaft Grounding Rings more than any other electrical bearing protection.

The AEGIS® Bearing Protection Handbook details best practices

for protecting VFD-driven motors from electrical bearing damage and preventing costly repairs, downtime,

and lost production. The Handbook can be downloaded for free at www.est-aegis.com/handbook. ■

VFD-Induced Shaft Voltages Destroy Bearings!



Electrical bearing damage causes unplanned downtime

Variable frequency drives (VFDs) are used to control pumping systems. But VFDs create a motor shaft voltage that discharges through the bearings, blasting millions of pits in bearing surfaces. Both motor and pump bearings are at risk. These discharges oxidize the bearing grease and cause bearing fluting, premature failure, and costly downtime.



Fluting Damage

Protect motor bearings with AEGIS® Shaft Grounding Rings

By channeling VFD-induced discharges safely to ground, AEGIS® Shaft Grounding Rings prevent electrical bearing damage. Proven in millions of installations worldwide, AEGIS® Rings provide unmatched protection of motors against electrical bearing damage, motor failure, and unplanned downtime.

See our shaft grounding case studies and resources for pump users, contractors, and manufacturers at: est-aegis.com/pump



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Electro Static Technology™
An ITW Company

Helwig Carbon

BPK: ULTIMATE SOLUTION TO SHAFT GROUNDING

Many pumps utilize a variable frequency drive (VFD) to increase pump motor efficiency. While VFDs lower power consumption, they also induce currents onto the motor shaft. These shaft currents will often discharge through the motor bearings causing fluting, burnt grease, and eventual bearing failure. Downtime, repairs, and warranty claims can be the result of bearing failure and can be extremely costly to any company.

Helwig's BPKs (Bearing Protection Kits) have been leading the industry in shaft grounding solutions for years. Our proven silver graphite brush technology is unlike other shaft grounding system because it eliminates the need for maintenance and will keep bearings protected year-after-year. Helwig BPKs effectively

divert induced electrical currents away from the bearings, protecting them from damage and failure. What's more, our BPKs are economical, easy to install, and can be used on almost any electric motor application!

Another unique feature of the Helwig BPK solution is that one size fits most! While other shaft grounding systems need a different grounding ring for each motor shaft size, the same BPK can be applied to a variety of motor models. Our MultiFit Bracket mounting system allows for a BPK to be attached to multiple bolt designs while keeping constant contact on the motor shaft.

With the success of Helwig's BPK shaft grounding solution, the innovation has continued. Helwig Carbon's Shaft Voltage Detection Device, otherwise known as the BPK-

Probe™, is an instrument designed to measure common mode voltage on a motor shaft. Test results from the BPK-Probe will inform a user if there is current present on the motor shaft, and, therefore, show the risk of bearing damage due to electrical discharges. The patented instrument also has the capability to demonstrate the effectiveness of Helwig's Bearing Protection solution. This feature allows the user to mimic the installation of a BPK and then measure the voltage present on the shaft, proving that the parasitic shaft current is being instantly grounded through the silver graphite brush. The BPK-Probe is an excellent tool for any engineer, technician, or preventative maintenance professional that needs to evaluate motor health on a regular basis. ■

STOP BEARING FAILURE

CAUSED BY VFD-INDUCED CURRENTS

WITH HELWIG'S
INDUSTRY LEADING
SHAFT GROUNDING SOLUTION



BPK



Premature bearing failure is a major cause of motor downtime and costly repairs. Helwig Carbon uses proven silver graphite technology in a variety of bearing protection kits (BPK) for motor shaft grounding. They effectively divert electrical currents away from the bearings, protecting them from damage.

For more info, visit
www.helwigcarbon.com

Hoosier Pattern Inc.

Hoosier Pattern firmly believes that innovation drives productivity. We understand that industries are evolving and staying up-to-date with the latest technological advancements must always remain our highest priority. Located in Decatur, Indiana, Hoosier Pattern started in 1997 in a 3,500-square-foot space with just a couple of machining centers.

Today, we operate a 90,000-square-foot facility with state-of-the-art technology. Our cutting-edge CNC manufacturing and rapid prototyping practices provide manufacturing solutions for businesses throughout the Midwest, United States, and worldwide. Hoosier Pattern provides you with the highest-quality foundry tooling and 3D printed sand molds and cores that our industry demands.

We are one of the only service providers to own and operate multiple 3D sand printers in-house. In addition,





we have over twenty-five machining centers, including multiple vertical machining centers, horizontal machining centers, a five-axis mill, and CNC lathes.

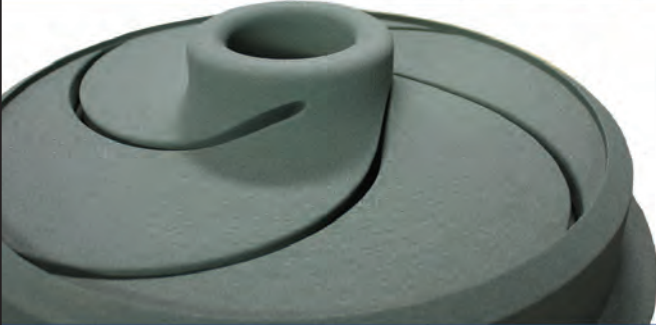
We understand our customers' demand for expedient delivery times, and product excellence is a must. Therefore, these expectations are the driving force behind our day-to-day operations. We are committed to "On-Time Delivery," and we're constantly striving to meet our customers' deadlines.

Regardless of your tooling or 3D printing needs, we will provide your job with the absolute best quality and in-depth knowledge you expect only at Hoosier Pattern. To better understand Hoosier Pattern's technology, go to our website and select our virtual tour located at the top. 📍



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SCHENCK USA CORP

SCHENCK USA CORP. is a subsidiary of SCHENCK CORP. Its parent company is Carl Schenck AG of Darmstadt, Germany; whose shares are ultimately held by Dürr, AG of Bietigheim, Germany.

SCHENCK USA CORP. is the company's new name as a result of the merger of Schenck Trebel Corp. and Schenck RoTec Corporation into one entity that comprises Schenck's Balancing & Diagnostic Systems Group for North America under Schenck RoTec GmbH.

SCHENCK USA CORP. is on four acres in Deer Park, New York, that includes a 22,800-square-foot manufacturing and assembly plant and 17,000 square feet of office space for sales, service, administration, and engineering personnel. The company's Southfield, Michigan, location is also a manufacturing and assembly plant serving the automotive customer base with a local engineering and service support staff.

SCHENCK USA CORP. provides a range of balancing and vibration analysis equipment for the production, maintenance and repair of rotating components, and recent integration of BENZ Tooling, metal division, expands its capacities. The company's engineering staff offers a range of experience for any balancing application and maintains a close presence on the balancing committees of the International Organization for Standardization (ISO) and the Society of Automotive Engineers (SAE), to ensure the latest practices and procedures are applied. The company is ISO 9001:2015 accredited.

The service team is available for the commissioning and calibration of balancing equipment from multiple North American service points, in addition to leveraging a global service support structure.

With the company's acquisition and merger of the legal entity TEST DEVICES INC. (TDI) of Hudson, Massachusetts, into SCHENCK USA CORP. of Deer Park, New York, it expanded its capacities in the spin testing and balancing services areas and streamlined and strengthened its presence in the North American market.

SCHENCK USA CORP. today has further expanded its footprint in the aerospace industry with the acquisition of the building and property site of SCHENCK's business unit Test Devices, situated on 6.8 acres, in Hudson, Massachusetts, operating a state-of-the-art 57,000 square-foot facility with 5,500 square feet of office space, strengthening its trajectory for growth in support of increased activities with local and global markets in the e-mobility and aerospace industries. The successful business unit is an integral part of SCHENCK's business. ■

We are SCHENCK USA

- **BALANCING**



- **SPIN TESTING**



- **APPLIANCE FLUID FILL**



- **CNC TOOLING TECHNOLOGY**



- **AUTOMOTIVE FLUID FILL**



- **TESTING - END OF LINE**



SCHENCK
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LEADING IN PRODUCTION EFFICIENCY

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For thirty years, W&A has worked to offer quality consulting, training, and products to meet the needs of our customers across the country. Our goal is to provide excellent service—whether through our books, manufactured products, representative products, seminars or speeches, customer satisfaction remains our priority. Nick Westerberg has been in the industrial community for thirty years, teaching, consulting, and servicing industrial equipment.

DOC'S PUMP JOURNAL

Doc's Pump Journal is the handbook everyone involved with pumping will want to have in their library! This book, with over 700 pages, will make your pumping life much easier. Doc's Pump Journal includes information on hydraulic principals, simple sizing equations, packing, seals, bearing,

foundations, grout, piping, alignments, reliability, pump types, and more... and you don't need a PhD to read it!

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Nothing can replace experience: It is the best, sometimes the hardest, teacher—but the lessons of experience last a lifetime. In Doc's Steam Journal, readers will find over 500 pages of resources, graphs, charts, and images to help in a variety of situations, as well as specific information on steam generation, steam traps, manufacturers, installation, assessment, and engineering. Doc's Steam Journal is the resource you will go back to again and again throughout your career!

THE ARMADILLO PALM GUIDE™

The W&A Armadillo Palm Guide™ face is one of the toughest "rodents"

on the market! They have been known to run over fifteen months with no wear at 6,000 FPM. The skin on these palm guides is what makes them unique. The Armadillo is so hard that it must be finished with diamond treatments to provide the 16RMS prox. finish.

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The first Vibration Data Collector Pole off the shelf that you can safely use to take the vital information you need! Our Data Collector Poles come with a patented spring loaded adjustment pin for quick and easy adjustment, anodized head finish for long lasting service, fiberglass handle for operator safety, cable management system for easy and safe cable placement, and a bushing kit that allows for the use of different sensor sizes. These poles improve safety for the user and can be fitted for any cable connection. ■

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Graphite Metallizing Corporation

GRAPHALLOY® case rings and bushings allow pumps to survive repeated "run-dry" conditions, slow roll operation, and frequent stop/starts—conditions where metal and plastics fail.

GRAPHALLOY can improve the reliability and efficiency of your pumps. In horizontal and vertical pumps, GRAPHALLOY will not seize or gall if run dry or with marginal lubrication. The GRAPHALLOY fitted pump is able to survive upsets, dry running, loss of suction, slow roll on standby, and other transient conditions that would damage a conventionally fitted pump.

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P2

Sun-Star Electric, Inc.

Sun-Star Electric, Inc. is a Texas corporation established in 1977 and is the principal worldwide distributor for Hitachi submersible motors.

Sun-Star Electric, Inc. designs and manufactures its own Sun-Star branded oil-filled and wet-wound submersible motors for standard and special applications along with the deep-ocean-capable Aqua Star motor.

Sun-Star Electric is an expert for rapid service and repair of the power generation industry's critical, high-pressure water-filled boiler water circulating pump motors.

Sun-Star Electric, Inc. maintains a 75,000-square-foot manufacturing facility, which is fully equipped for the manufacture and repair of submersible electric motors and includes full fabrication, machining, winding, and in-house testing capabilities. In 2011, Sun-Star Electric, Inc. transitioned to an employee-owned company (ESOP). ■



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7722 W. 34TH STREET
LUBBOCK, TEXAS 79407
SUNSTARUSA.COM

PHONE: 806.793.2812
800.782.9675
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AN EMPLOYEE OWNED COMPANY
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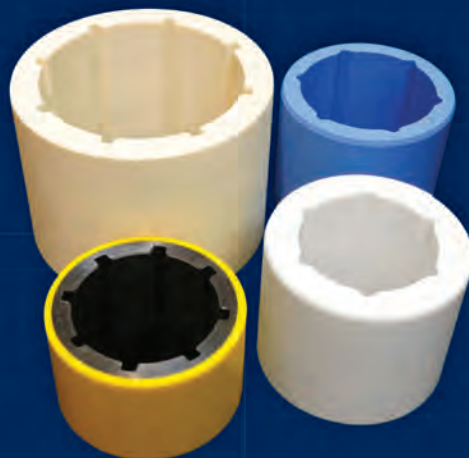
Thordon Bearings

Thordon is the world's leading manufacturer of long-lasting non-metallic bearings that require no oil or grease. They are easy to design, safely machined, and install quickly. Our vertical pump bearings provide long wear life, high abrasion resistance and can provide dry start up capability. Thordon's proven performance in vertical pumps, power plants, sewage and wastewater treatment, refineries, mining, agriculture, and any industry moving water has lowered operating costs.

Our polymer bearings can also be used in aerators, flocculators, screens, butterfly valves, or virtually all applications where greased bronze bearings are currently installed. ThorPlas-White is the newest material in the Thordon bearing family, specifically developed to operate as a drinking water system component used in the treatment and distribution of potable water. It has International Certification for NSF/ANSI 61 Drinking Water System Components and NSF/ANSI 51 Food Equipment Materials, as well as WRAS.

By providing engineered, customizable solutions, our bearings improve efficiency results in saving companies both time and money by eliminating grease, lowering life-cycle costs, improving equipment downtime, and increasing mean time between failure (MTBF). Thordon bearings are available and supported globally by its worldwide network of factory-trained authorized distributors. ■

**Replace your bearings less often
with Thordon's long wear life,
abrasive resistant pump bearings.**



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