## 2016 BUYERS CUIDE

Company Profiles · Products & Services Directory



## **Baldor Electric Company**

Baldor Electric Company, headquartered in Fort Smith, Arkansas, is a leading marketer, designer, and manufacturer of energy-saving industrial electric motors, drives and mechanical power transmission products. Founded in 1920, Baldor has a long rich history dating back to 1878.

#### INDUSTRIAL ELECTRICAL MOTORS

Baldor offers the broadest range of industrial AC and DC electric motors to value-minded customers. Baldor-Reliance® motors range from 1/50th through 15,000 horsepower, as well as the entire line of ABB IEC motors and medium voltage motors up to 100,000 horsepower,

providing Baldor-Reliance and ABB packaged solutions for most industrial applications.

Baldor-Reliance Super-E® motors are optimized for efficiency, ensuring the lowest operating costs. We also offer broad lines of brake-motors, explosion-proof, C-face, pump-motors and gear-motors to provide solutions for any purpose or environment. Custom

motors to meet specific requirements with the shortest lead times in the industry are a Baldor specialty.

#### MOUNTED BEARINGS, ENCLOSED GEARING, AND MECHANICAL POWER TRANSMISSION COMPONENTS

Baldor is a leading producer of mechanical power transmission products including Baldor-Dodge® engineered mounted bearings, enclosed gear products, and power transmission components, including couplings, sheaves, bushings and pulleys, designed to thrive in the most rugged environments, with the lowest total cost of

> ownership over the lifetime of the product.

In 2011, Baldor Electric Company was acquired by ABB Ltd. and is a proud member of the ABB Group. Together, Baldor and ABB can offer complete industrial solutions to local and global customers more effectively than any other single industrial supplier.

#### **BALDOR ELECTRIC COMPANY**

5711 R.S. Boreham Jr. St. • Fort Smith, AR 72901 479.646.4711 • www.baldor.com



## Right Choice. Unparalleled Reliability.



Whether you're designing a new material handling machine or replacing a unit that's seen better days, Baldor • Reliance® industrial gearmotors are the right choice to put your application in motion.

With unlimited custom capabilities and a wide array of drop-in replacement configurations in stock, every Baldor • Reliance industrial gearmotor features proven technology, quieter operation and unparalleled reliability.

baldor.com 479-646-4711

- Drop-in Replacement
- Unlimited Custom Designs
- · Right Angle and Parallel Shaft
- Industry Proven Technology
- Unmatched Quality





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### **Blacoh Industries**

It is an exciting year for us at Blacoh Fluid Control; we are celebrating forty years of business. Our endeavors have grown, with the introduction of Blacoh Surge Control and Blacoh Metal Solutions we strive to be innovators and the people who challenge the status quo in order to solve the problems in an ever evolving industry. We look forward to these segments working together to succeed as the world's premier source for fluid solutions.

Blacoh Industries is led by a global team of skilled professionals; Blacoh stands alone as the leader and foremost expert in the manufacture of fluid control products for municipal and industrial process industries. Wherever water hammer, pulsation, vibration, pressure fluctuation, nonsteady flow, noise, or rapidly wearing pump components are a problem

or a significant disadvantage in the application, Blacoh can solve those problems to improve both the efficiency of the pump and the longevity of its components by offering a fully comprehensive line of products in the fluid industry:

#### Blacoh Fluid Control provides:

#### SENTRY™ **Product Line**

- Pulsation Dampeners
- CIP Sanitary Dampeners
- Inlet Stabilizers
- Accumulators

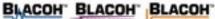
#### SENTINEL™ Product Line

- Diaphragm Seals
- Back Pressure Valves
- Pressure Relief Valves
- Ball Check Valves
- Calibration Columns
- · Injection Ouills
- AODDampener™
- SPILLSTOP™ Leak Containment

#### Blacoh Surge Control provides:

- Computer Surge Analysis
- Transient Monitoring Systems
- Surge Vessels











- Air Release/Vacuum Valves
- Check & Control Valves
- Control Panels
- Peer Review Services

What makes Blacoh's services unique to the industry is our system modeling and proof of design to ensure that the vessel is specific to your application and solves your configuration's unique needs. We also offer our patented SurgeWave™ Transient Monitoring System, which can detect and record transient pressures up to 100 times per second, provide graphical analysis of all recorded data and send alerts as soon as the desired boundaries are exceeded.

Surge Shield™ is the latest advancement of pump and pipeline protection from Blacoh. This new standardized line of surge bladder

> vessels ranges from 25 to 500 gallons, and is specifically designed to address challenging water hammer conditions found in large pumping systems. Surge Shield™ is ready to provide you with a long term solution for maintaining pump and piping integrity.

> Blacoh is committed to bringing you customized and personalized assistance for your fluid application. Visit www.Blacoh.com to explore Blacoh Fluid Control, Blacoh Surge Control and Blacoh Metal Solutions and to learn why we say "Don't Pump Without Us." ◆







#### **BLACOH INDUSTRIES**

951.342.3100 • sales@blacoh.com • www.blacoh.com





#### WHAT CAUSES WATER HAMMER?

The sudden closure of a valve with the pump running or the loss of power to the pump creates a dramatic change in pressure, which can often have dangerous and catastrophic results. Surge Shield™ can give and accept the pressure energy change to keep your pump's piping safe and running smoothly. When coupled with Blacoh's patented SurgeWave™ Transient Pressure Monitoring System, you have the comprehensive answer to show what is happening to the system during a surge event and how to protect it.



BLACOH<sup>M</sup>
INDUSTRIES

### **GEMÜ Valves**

GEMÜ Valves is one of the leading manufacturers of valves, measurement and control systems. The globally focused, family owned enterprise was established in 1964 with the Atlanta, Georgia, manufacturing facility opening in 1988. Today, GEMÜ continues to be a market leader with its innovative products and customized solutions. With several manufacturing centers and a presence all over the world. GEMÜ is committed to the pursuit of quality and excellence in the development, production, and manufacturing of their products. GEMÜ specializes in the following sectors with products and services: pharmaceutical, biotechnology, and cosmetics; food and beverage;

water treatment; processing and

power generation.

GEMÜ is proud to assume a leading role in the development and introduction of optimized valve design, superior sealing and instrumentation technology.

concepts, material development Innovative technology is evident in leading edge instrumentation,

including process controllers, valve positioners, flow measurement, and valve communication / control modules for network control systems.

Automation options include Communication and Control Modules that facilitate commissioning and optimize diagnostic benefits of

> control network architecture. Unprecedented precision, repeatability, and reliability in communication and control are provided as a result of advanced sensor and microprocessor based control technology.

GEMÜ's ground breaking design and leading edge manufacturing technology provides engineered solutions to complex process challenges. GEMÜ's overriding philosophy is to ensure that each and every customer contact is a quality experience.







## GEMÜ Quality Products... GEMÜ Quality Service

#### 4212 & 4242 Automation features:

- Class 1 DIV 2, UL & CSA
- Multiple control options: 24 VDC, AS-I, DeviceNet
- Super bright LEDs indicate valve position

#### Multiport Diaphragm Valve features:

- Thousands of block designs to solve process challenges
- Minimize dead leg and hold up volume for optimal process efficiency

#### Globe Valve features:

- High cycle life
- Variety of end connections, materials of construction and actuation









## Gorman-Rupp Pumps

When you specify Gorman-Rupp, you benefit from worldwide service centers, knowledgeable engineers, and a selection of nearly 3,000 pumps. Gorman-Rupp has been manufacturing pumps and pumping systems since 1933. Many of the innovations introduced by Gorman-Rupp have become industry standards.

#### THE PUMP PEOPLE

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.

Gorman-Rupp's extensive line of products includes self-priming centrifugal pumps, standard centrifugal pumps, submersible pumps, trash pumps, primingassisted pumps, and rotary gear pumps. In addition, Gorman-Rupp manufactures a complete line of state-of-the-art packaged lift stations and booster stations that include pumps, motors, controls, piping, accessories, and enclosures.

Gorman-Rupp sets the industry standard for sewage pumping systems with our line of ReliaSource lift stations, which include 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

#### Gorman-Rupp serves a variety of markets:

- Industrial
- Construction
- Mining
- · Municipal Sewage
- Municipal Clean Water
- Petroleum
- Agriculture
- OEM

Gorman-Rupp has close to one million square feet of the most modern manufacturing and warehousing facilities found throughout the world. As we continue to provide pumps and pumping systems to customers around the globe, we never lose sight of the original philosophy that started our company: INNOVATION. IMPROVEMENT. AND SUPERIOR PRODUCTS.

Gorman-Rupp's 825,000-squarefoot manufacturing facility and corporate headquarters located in Mansfield, Ohio, accommodates the most advanced technology available. State-of-the-art, fully automated machining centers provide highspeed, high-quality machining of pump castings.

We have an experienced staff of engineers dedicated to the design and construction of the most efficient and serviceable pumps in the industry. Our representatives are trained to help you select the proper pumps and related equipment for your specific application. They are also available to offer suggestions on maintaining your equipment for maximum performance. Should a problem occur, Gorman-Rupp is available to provide service and fast parts supply for your pump. Gorman-Rupp pumps are constructed to handle the toughest jobs. Cast iron, bronze, 316 stainless steel, CD4Mcu. and G-R Hard Iron are available to handle your corrosive and abrasive fluids. Gorman-Rupp pumps are at home anywhere where dependability and ease of service are essential.

That's what makes Gorman-Rupp THE RIGHT PUMP FOR THE JOB. ◆





#### **GORMAN-RUPP PUMPS**

419.755.1011 grsales@gormanrupp.com www.grpumps.com



# CHANGE YOUR EXPECTATIONS

GORMAN-RUPP'S
END SUCTION CENTRIFUGAL PUMPS
JUST GOT BIGGER





Introducing the 6500 Series® by Gorman-Rupp. These large end suction centrifugal pumps are perfect for pumping wastewater, cooling tower recirculation, HVAC and most other water transfer pumping applications. The line offers pumps from 3" through 16", heads to 500 feet and flows to 15,000 gpm. And like all Gorman-Rupp pumps, they're engineered to last with features like double volutes, heavy-duty alloy steel shafts, and oversized, oil-lubricated bearings. Unique features like a clean out access port and adjustable Smart Scroll® discharge design, and the addition of a five-year warranty, make the 6500 Series one of the best pumps in the industry.

### **Grundfos**

Since its founding in 1945, Grundfos has flourished from one small factory in Bjerringbro, Denmark, to a global corporation with more than 16,000 people in more than 80 companies worldwide. To complement its global presence, Grundfos is committed to the North American market and is continually expanding its regional expertise. Headquartered in Downers Grove, Illinois, Grundfos North America also has operations, sales and service facilities in Olathe, Kansas; Allentown, Pennsylvania; Fresno, California; Brookshire, Texas; Indianapolis; Selma, Alabama: and Aurora, Illinois, In Canada, Grundfos has a sales facility in Oakville, Ontario, and in Mexico, Grundfos operates a manufacturing facility in San Luis Potosí and sales offices in Monterrey and México City.

#### **PRODUCTS**

With an annual production of more than 16 million pumps, Grundfos is a global leader in advanced pump solutions and a trendsetter in water technology, specializing in circulator pumps for heating and air conditioning as well as other centrifugal pumps for industrial applications, water supply, sewage, dosing and fire protection. In addition to pumps, Grundfos produces standard and submersible motors as well as state-of-the-art electronics for monitoring and controlling pumps.

#### **APPLICATIONS**

Grundfos serves the following markets:

· Domestic and Commercial Buildings: Grundfos circulators and other pumps provide energyefficient solutions for heating, water supply and wastewater for one- and two-family residential applications. The company's commercial portfolio

- focuses on intelligent solutions and complete, energy-saving systems for several applications: air conditioning, fire protection, pressure boosting, water treatment and wastewater, and cooling tower
- Industry: Grundfos offers industrial pumps for boosting pressure and handling water and other fluids in light-industrial and process applications. Industries served include automotive, industrial water treatment and wastewater. manufacturing, mining, machining and marine. Grundfos Digital Dosing pumps offer a high level of accuracy with effective turndown ratios, permitting a relatively small number of models to cover a wide range of applications.
- Groundwater/Irrigation: Grundfos offers irrigation pumping solutions that reduce energy costs, conserve water and maximize productivity. For applications both large and small, variable speed pumps and easily integrated controllers automatically react to changing conditions and demands to reduce operating costs and boost efficiency.
- · Water Utility: Grundfos offers technologically advanced transport, distribution and treatment solutions for both clean water and wastewater. The company can supply pumps and controls for the entire water distribution system, including main and local pumping stations, ensuring reliable management of pressure zones throughout the piping network and minimizing costs and water loss.
- Fire Protection: Grundfos offers state of the art fire protection systems including complete service, from engineering assistance to inhouse fabrication to field start up.

Products are designed from a broad selection of pumps, drives, controls, baseplates and accessories. The industry's most comprehensive product line includes inline, end suction, horizontal split case and vertical turbine models.

#### **BRANDS**

Today Grundfos provides comprehensive market coverage in North America through a number of marquee product brands with a combined accumulated service record of 765 years. Together, Grundfos, Peerless Pump, PACO, Yeomans, Chicago, Sewer Chewer, Morris Pump and LaBour Taber offer a complete portfolio of products and solutions to the markets we serve.

#### INNOVATION & RESEARCH

While many companies focus on the short-term bottom line. Grundfos looks at the market for the next two decades, investing heavily in innovation. The company reinvests between 4 and 5 percent of its annual revenue back in research and product development. For Grundfos, high profitability is not just an objective but a means to achieve arowth.

#### SUSTAINABILITY

High on Grundfos' agenda is an aim to improve the environment, both in terms of the changing world and the company's own footprint. By replacing the average pump with an energyefficient Grundfos product, consumers can reduce energy consumption by up to 60 percent. Grundfos provides environmental solutions for problems like water scarcity, mismanagement of natural resources, inefficient infrastructure and rising CO<sub>2</sub> emissions.

#### GRUNDFOS PUMPS CORPORATION

913.227.3400 • Fax: 913.227.3500 • ordersupport-gpu@grundfos.com • grundfos.us

## THINK PUMP SOLUTIONS THINK GRUNDFOS



Grundfos provides comprehensive market coverage in North America through a number of marquee product brands with a combined accumulated service record of 765 years.

Together, Grundfos, Peerless Pump, PACO, Yeomans, Chicago, Sewer Chewer, Morris Pump and LaBour Taber offer a complete portfolio of products and solutions to the markets we serve.

GRUNDFOS X















## **International Products Corporation**

International Products Corporation (IPC) produces and markets two lines of specialty chemical products: precision cleaners and P-80 temporary rubber assembly lubricants. The company serves an international market with customers in the commercial. industrial, governmental, and academic sectors. It reaches these markets through distributors and direct-sales.

The full-line of precision cleaning products features IPC's flagship cleaner, Micro-90® Concentrated Cleaning Solution. The line also includes biodegradable, alkaline, acidic, neutral, and enzyme cleaning products for a broad range of industries and applications. All cleaners are registered with NSF as USDA Al Cleaners.

IPC makes some of the most effective membrane cleaning products worldwide. Our proprietary formulated cleaners work effectively at restoring 100 percent flux at safe pH ranges. We have a wide range of chemistries available for all membranes and soils. and an on-site R&D laboratory that offers free support and assistance. Our laboratory has membrane specific testing equipment and can provide compatibility test results for different membrane types. Our cleaners are compatible with UF, RO, ceramic, and many other types of membranes, and can be used to clean membranes used for food and beverage, heavy oil, automotive, wastewater, water recycling, desalination, medical, and many other applications. IPC has been selling cleaners to the filter membrane industry for over thirty years and has







worked with some of the largest membrane system manufacturers in the world. Our cleaners can save you time and money by reducing cleaning frequency, restoring membrane flux, prolonging membrane life, and decreasing the number of cleaning products and steps used.

IPC's P-80® Temporary Rubber Lubricants are uniquely formulated products to assist with the assembly of rubber and soft plastic parts (such as belts, bushings, grips, grommets, hoses, O-rings, and seals to name a few) for the automotive, agricultural, appliance, aerospace, heavy equipment, marine, pump, tool, truck, and other industries.

IPC is committed to manufacturing products that are water-based and designed to replace solvent and petroleum based cleaners and lubricants. IPC avoids the use of known carcinogens and target organic chemicals, using materials found on the TSCA and EINECS inventories. In addition, IPC maintains a ZERO discharge policy; this includes wastewater, emissions, and hazardous waste. Plus none of the products are considered toxic or corrosive. It is company policy to keep abreast of environmental regulations, such as the removal of flame-retardants. phenols, and certain metals (cadmium, mercury, chromium, and lead) in products. IPC is an ISO-Certified Company. All products are made in the USA.

For more information or to request a free sample, visit our website at www.ipcol.com, call us at 609.386.8770. or send us an email at mkt@ipcol.com.

#### FORMULATED DETERGENTS TO DEFOUL YOUR MEMBRANES

MATCH CLEANER TO INDUSTRIAL SOIL		
IPC CLEANERS	CLEANER pH	TYPICAL SOILS REMOVED
Micro-90 <sup>®</sup> Alkaline Cleaner	9.5	Greases, Oils, Metals
Micro <sup>®</sup> Green Clean Biodegradable Cleaner	9.5	Greases, Oils
Micro <sup>®</sup> A07 Citric Acid Cleaner	3.0	Hard water salts, scales
Zymit <sup>®</sup> Pro Enzyme Cleaner	7.5	Biological, protein, polysaccharides



#### PRODUCT ADVANTAGES

- Fast, effective soil removal
- Reduce or eliminate membrane replacement
- Save TIME, ENERGY & LABOR COSTS
- Eliminate multiple step cleaning cycles
- Concentrated liquid formulas for easy dilution

International Products Corporation (IPC) has been selling cleaners to the filter membrane industry for over 30 years. Our proprietary formulated cleaners work effectively at restoring 100% flux at safe pH ranges. We have a wide range of chemistries available for all membranes and soils and an on-site R&D laboratory that offers free technical support and assistance. All of our cleaners are free of solvents, phosphates, silicates, phenols, and Substances of Very High Concern.



EXTEND THE LIFE OF YOUR MEMBRANES. Restore 100% FLUX to your UF, RO, Ceramic and NF Systems.

#### Try Before You Buy! Request your FREE SAMPLE!

Email: membrane@ipcol.com Website: www.ipcol.com Telephone: 609-386-8770 Fax: 609-386-8438

#### P-80° Temporary Rubber Lubricants are ideal for use in maintenance and repair.

Many critical pump components are made of rubber. P-80 lubricants provide a high degree of lubricity when wet, but because they do not contain silicon or other persistent ingredients, once dry the slipping action goes away. P-80 lubricants are free of petroleum distillates, so they will not dry, crack or otherwise harm rubber parts.

#### P-80° is effective in assembly operations involving:

- · Boots
- Hoses

- Bushings · Bumpers
- Insulators · Mounts
- Seals Sleeves · Tires

- Diaphragms
- O-rings
- · Rubber washers

- . Foam grips
- Plugs
- Wire harnesses

- Grommets
- Rubber moldings
- ...and hundreds of other parts!

#### A P-80<sup>®</sup> formula for every need!

4 industrial and 2 NSF for incidental food contact.

#### Request your FREE P-80 sample kit and test it for yourself!



P-80" EMULSION

"The Original." A biodegradable emulsion

that provides a thin film of lubrication to

significantly reduce friction.

A biodegradable, non-dripping thixotropic oel that is ideal for overhead and vertical assembly operations. Provides excellent lubrication.

P-80° THIX

A quick-drying, mixture that dries tacky to help parts stay in place. Excellent for use on pressure-tested hoses.

P-80 GRIP-IT

A biodegradable, low-residue lubricant designed for use on non-porous and coated rubber surfaces. Lubricates well but dries quickly and completely.

P-80° REDILUBE

#### 4 WAYS TO CONTACT US:

PH. 609-386-8770

Manufacturing Specialty Cleaners and Lubricants since 1923

WWW.IPCOL.COM @FAX. 609-386-8438 MKT@IPCOL.COM





## **Murphy** by Enovation Controls

Dedicated to creating the best products and working to meet customers' needs, Murphy by Enovation Controls has introduced its newest control panel designed for industrial applications and tight budgets.

"We really had our customers in mind when developing the PowerCore TEC-10 control panel," says Robbie Captain, product manager for Murphy. "Ease of use, along with effortless installation and setup were among the key driving factors in the development."

The PowerCore TEC-10 offers Turnkey Engine Control with incredible versatility. It provides a panel solution for all engines in a customer's fleet while offering a common, simple interface for operators. The TEC-10 can be configured easily from the front face of the panel or via Murphy's free PC configuration tool, depending on the operator's preference.

Murphy, known for its rugged, reliable products, built those same qualities into the TEC-10. It's sealed and IP67-rated to withstand harsh industrial stationary environments and boasts CE approval. The TEC-10 can withstand water, vibration, dust and wide temperature ranges allowing it to be free-standing or to be mounted directly to an engine.

The control panel allows for fully automated start/stop and engine throttling and covers Final Tier 4 engine support all the way down to mechanical engine support in one package. It can also be used on 12and 24-volt systems without adding components.

"It's the perfect option for applications where additional I/O is needed," Captain says.

Another new feature is the absence of internal wiring for the TEC-10.

"All of this goes back to ease of use for the customer," he says. "It



means fewer parts to troubleshoot in the field. It's a truly revolutionary development in our panel solution. By eliminating the internal wiring it allowed us to hit a pivotal cost in the product allowing for a lower price to our customer."

Quick and easy installation is another important feature with the

"Imagine installing your panel in approximately twenty minutes or less," says Captain. "Connect your Murphy industrial harness, and you are up and running. The TEC-10 has molded-in connectors on bottom that perfectly mate with industry-standard Deutsch HDP series connectors making it simple and quick."

By using the TEC-10 on multiple applications, customers can reduce training time.

"We're confident operators will find the TEC-10's flexibility across a variety of applications provides them consistency and familiarity,

making their job so much easier," says Captain.

The PowerCore TEC-10 also boasts an amazing price especially considering its high degree of functionality and the quality built into it.

"The degree of engineering development that went into a reduced-cost panel without sacrificing quality and customer experience is a game changer," says Captain.

In addition, the TEC-10 minimizes the variety of panels a customer needs to keep stocked and supports both electronic and mechanical engines.

The TEC-10 joins the robust lineup of PowerCore products Murphy builds in its Tulsa, Oklahoma, and San Antonio, Texas, facilities.

In addition to the TEC-10 panel, the MPC-10 and MPC-20 controllers bring ruggedness and power to many industrial applications as well.

## GANE CHANGER

## Murphy's newest panel, the PowerCore® TEC-10,

brings turnkey engine control for manual/auto start and manual/auto throttling applications.



With no internal wires, the TEC-10 has fewer parts to troubleshoot in the field and is the perfect option for applications where I/O is needed. Its molded-in connectors mating with industry-standard Deutsch HDP series connectors aid in simple and quick installations.

This rugged, affordable panel puts the control in your hands allowing easy parameter and setting changes from its face. For use with the simplest mechanical engines to the most advanced, fully electronic Tier 4 engines, the plug-and-play panel provides you with a reliable solution for many applications.



## Pruftechnik Passion for precision

With intelligent and precise measurement and testing systems, PRUFTECHNIK offers innovative solutions to customers in machine alignment condition monitoring and nondestructive testing. We are driven to set global standards in precision measurement for the maintenance of rotating equipment and quality assurance.

Established in 1972 by Dieter Busch, PRUFTECHNIK is a familyowned business now under the second generation stewardship of Dr. Sebastian Busch. Even as an established market leader in our field, we have retained our medium-sized business roots and traditions. With a lean structure. we remain flexible and efficient. Customers can trust PRUFTECHNIK, as we pride ourselves in being a reliable and competent partner—always available and responsive to their needs.

The spirit of discovery among the PRUFTECHNIK team, our drive to innovate and openness to new ideas, has only one goal: to offer our customers the perfect solution, anywhere in the world. Twenty operational marketing, service, development and production locations—exporting to more than seventy countries and employing more than 60 people worldwide—are more than sufficient proof.

Through the merger of its North American operations in Canada and USA, PRUFTECHNIK further establishes its presence on the North American territory. The company currently operates four offices in North America: PRUFTECHNIK Philadelphia and San Diego, which focus on sales, distribution and support of the company's alignment and vibration lines as well as machinery services including the PARALIGN roll alignment service; PRUFTECHNIK Montreal, which will continue its operations on Canadian soil out of its Laval office; and PRUFTECHNIK'S 100-percentowned group member Eddytech Inc. in Cleveland, which represents the

company's nondestructive testing business unit. The extensive local distribution and support network comprising twenty representatives across the territory guarantees a seamless transition for our existing

The future has long since begun and PRUFTECHNIK is not only prepared for it bus also shaping it.

#### PREMIER SOLUTIONS FOR ALL INDUSTRIES

With our products and services for condition monitoring and availability optimization, we make sure that your rotating machines run with optimum efficiency to help you save costs and increase the reliability of your assets and plants. Our solutions also include systems for automatic process control and quality assurance that are integrated directly in your productions

PRUFTECHNIK core activities are: Precision Alignment: Laser measurement systems and services for optimum alignment of rotating equipment.

Condition Monitoring: Measurement systems for machine condition monitoring—including vibration analysis and fault diagnosis.

Nondestructive Testing: Systems and services for quality assurance and process control in production.

Service and Support: We offer services anywhere in the world to support our customers with alignment and condition monitoring. Our service and diagnostic center is certified by DNV GL (formerly Germanischer Lloyd).

#### ALIGMENT SYSTEMS

We keep your world rotating! When shafts are well-aligned—with their axes colinear—machines run smoothly. Misalignment is the underlying cause for around 50 percent of all machine failures. The ensuing downtime, production losses and repairs can generate staggering costs.

The answer to these problems is laser-based precision measurement.



#### CONDITION MONITORING

Low-vibration, high-efficiency! Optimal production and smooth processes are only possible when machines run without vibration. Identifying problematic machine conditions and, more importantly, eliminating their causes is our business. We provide innovative vibration analysis and monitoring systems as well as experienced field specialists for a high service level.



#### A TRADITION OF EXCELLENCE

Innovation and know-how The PRUFTECHNIK Group employs more than 600 people worldwidethe high quality of our products and services rests on our commitment and know-how. We are also proud of our measurement laboratory that features a unique set of technical specifications the granite measurement table and the 36-foot (11-meter) measurement bench, together with their foundation, tip the scale at 66 tons—with the sole purpose of ensuring the high precision of our measurement systems. •





## ONE THOUSANDTH OF AN INCH IS WORTH A MILLION DOLLARS.

ROTALIGN

PRUFTECHNIK is a leading single-source solution provider for machine laser alignment, condition monitoring and nondestructive testing.

PRUFTECHNIK's technical innovations optimize the availability of your rotating equipment—and stop small amounts weighing heavily on your bottom line.

www.pruftechnik.com





PRUFTECHNIK Inc. 7821 Bartram Ave. Philadelphia, PA 19153 Phone: (267) 337-6021 usa@pruftechnik.com

## R+W Coupling Technology

As a leading-edge manufacturer of high performance shaft couplings and torque limiters, R+W strives to be ahead of the curve by predicting market trends and listening to customers' demands. This has led to releases of a new series of disc pack couplings, designed specifically for API 610 requirements and a wide addition of industrial torque limiter models. All of these designs are completely customizable and can suit nearly every application.

The design of the LP series disc pack couplings consists of two precisionmachined coupling hubs and a precision

spacer tube mounted to the disc packs by means of high strength screws and bushings for alignment and frictional clamping of the assembly. The disc packs are highly elastic, corrosion-resistant spring steel materials, while the hubs and spacer are made from high strength steel materials. The new API Disc Pack coupling has a friction drive design that eliminates shear load on the connecting bolts. enhancing system reliability. Preassembled disc and spacer cartridges, which are easy to install and remove, mean that maintenance work on pump seals and motors can be completed with ease. This model also meets all the requirements of API 610, ISO G6.3, and AGMA class 9 for minimum balance quality.

The new and upgraded product line is different from the original because it is now available in sizes that more closely reflect customers' needs. R+W has doubled the sizes on offer, but stayed within the same torque capacity as before, with ranges from 300 to 12,000 Nm rated torque and maximum torque ranging from 700 to 24,000 Nm. About half of what this company

makes is outside of what is shown in the catalogue, and this is expected to continue. The new added sizes will provide a better starting point for a larger number of customers however.

The ST torque limiter line has also seen quite an improvement and expansion. R+W has focused on providing more connection methods and mounting systems in order to find optimal solutions for its customers. Five sizes have been added across the board to broaden the range from 2 KNm to 250 KNm. These additional sizes will keep inertia of torque limiters as low



as possible while also making the units more cost efficient. Connection methods such as flange-to-flange, bellows, elastomer, and disc pack have now become part of the standard offering. Torque limiters for higher speeds is another area that R+W is exploring with its new enclosed ST models. These will keep internal components contained within the torque limiter at disengagement and prevent damage to the unit even at speeds of up to 10,000 RPM. The goal is giving customers the opportunity to use overload protection in almost every application no matter the size.

R+W's coupling products stand out as a preferred choice in the market

because instead of working with select customers when it comes to specializing couplings, the companywide philosophy prefers to give each and every customer that special treatment. R+W enjoys working with new customers and is extremely flexible when it comes to meeting their requirements. It is easy to customize all catalog products and even having couplings made from scratch if necessary. They truly want to design and engineer the right coupling for any application. The local stocking program will also expand in order to

> meet customer's delivery requirements. The US office located in Bensenville, IL will now stock LP hubs, spacers, and disc packs in order to machine and assemble full disc pack couplings within days of an order.

A large portion of R+W's focus has also been on quality and process improvement. With both ISO and AS9120 certifications, this company plans on taking on even more demanding and unique

projects. Almost all couplings are also available with ATEX certifications for hazardous environments. The design and production headquarters (located in Klingenberg, Germany) has expanded and added a stand-alone building for torque limiter construction. This will make it easier to keep up with increasing growth in the years to come. This company has worked closely with the University of Aachen and the University of Bayreuth located in Germany in order to test its designs and ensure that newly released coupling models will perform as expected. This relationship is important to R+W and will be ongoing in order to stay at the forefront of coupling technology. •

#### R+W AMERICA, L.P.

630.521.9911 • info@rw-america.com • www.rw-america.com

## LP

DISC PACK COUPLINGS NEWLY DEFINED 350-20,000 NM.



### Rosedale Products Inc.

Rosedale Products, Inc. is a leading technology developer in the field of liquid filtration systems and waste minimization products for customers around the globe. With more than fifty years of experience, Rosedale offers an exceptional product line that includes high-performance filtration solutions for multiple industries. Rosedale technicians help customers find the best, most cost-effective approaches to their filtration needs.

Our product line sets the industry standard in versatility and reliability and includes bag and cartridge filters, basket strainers, automatic back washing filters, filter cartridges, and many special application products. Together with ongoing consulting, troubleshooting, and support from our team of in-house experts, Rosedale provides comprehensive solutions for every critical industry filtration need.

We are generalists. Rosedale manufactures industrial filtration products for virtually any industry where liquid and gas flows are present.

We have a vast product line that suits many needs, as well as the flexibility to customize standard products. Our sales staff has knowledge of many industrial practices, giving customers the confidence that their filter solution is the best available for their specific need. Our most popular products are bag filters, pleated cartridge filters, and basket strainers.

#### MULTI-BASKET STRAINERS AND MULTI-BAG FILTERS

Multi-basket strainers and multi-bag filter housings offer a wide range of flow capacities and contaminantholding capabilities. They contain from 2 to 23 baskets. To serve as a strainer, a unit is ordered with perforated

stainless steel baskets (mesh-lined if desired). When ordered as a filter, it's fitted with perforated stainless steel baskets designed to hold filter bags or pleated cartridges. Industry-standard size bags are used: the standard 30 inch baskets accept bag size 2, the optional 15 inch baskets take size 1.

The standard pressure rating for all models is 150 psi. All multi basket strainer and multi bag filter housings can be supplied with an ASME code stamp, if required.

#### Features include

- Multiple housing styles available (standard, quick access, low profile, hinged)
- · Permanently piped housings are opened without tools and without disturbing the piping
- Machined cover gasket groove provides positive O-ring sealing
- Carbon steel, 304 or 316 stainless steel construction housings
- · Large-area, 30 inch deep, heavyduty, 9/64 inch perforated baskets
- Easy to clean
- Low pressure drop
- Four cover seal materials: Buna N, Ethylene Propylene, Viton®, and Teflon®
- Pressure rating 150 psi
- · Flanged connections for 2 through 12 inch pipe
- · Vent, drain and gage connections

Available with the following options:

- ASME code stamp
- Higher pressure ratings
- · Corrosion allowances
- · Steam jackets
- Special connection locations
- Inner baskets for dual-stage straining or filtering
- · Cleanable wire mesh lined or

perforated strainer baskets

- Special alloy materials
- · Hydraulic cover lifting assembly
- · Sanitary fittings
- Differential pressure indicators

Quick Access Cover (QAC) features a clamp and spring assisted hinged cover that is quick and easy to open and close with no tools required. This will significantly reduce changeout time and lower operating costs. The QAC is rated to 150 PSI and constructed to meet ASME code requirements. Built-in safety features ensure that the cover cannot be opened unless the internal pressure is first released. The QAC is offered with our low profile design making bags more accessible and easy to remove.

Low Profile Design (SLP) Housings are compact and space saving, allowing for ease of bag changeout. Standard operating height is reduced, resulting in a safe design by eliminating platforms and ladders. The SLP is manufactured in any housing version, including our standard davit arm cover, QAC design, and spring assisted hinged cover.

Spring Assisted Hinged Cover (HLP) opens and closes without effort. Simply loosen the swing bolts and lift the cover up to open. An automatic cover stop is provided. This design saves time by eliminating the labor intensive handwheel. It is offered standard with our low profile design, or can be ordered in the QAC design.

Standard Housing Design (STD) is durable and economic. It includes a davit arm and handwheel to facilitate cover removal. It is our most versatile housing design offering a variety of options, including our low profile design.

#### ROSEDALE PRODUCTS INC.

3730 W. Liberty Rd. Ann Arbor, MI 48103

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### **SEW-EURODRIVE**

As a world leader in drive technology and a pioneer in drive-based automation, SEW-EURODRIVE has established a reputation for quickly solving the most difficult power transmission and motion control challenges. We introduced the gearmotor in 1931. In the eigthyfive years since then, we have been bringing the best in drive technology to our customers. That commitment has led to a history of innovations—the first variable speed gearmotor, early development of electronic drives, some of the first successful efforts to decentralize control. and the first motor with energy-efficient copper rotors.

Exceptional solutions have made SEW-EURODRIVE the standard for drive performance and reliability in the United States since we first began working here in the early 1970s. Enthusiastic customer response to our variable speed gearmotors led us to open our first assembly center in Troy, Ohio, in 1975. Within a few short years, SEW was operating

four additional regional assembly centers across the United States. Today, we provide expert application assistance and products from our five regional assembly centers, more than sixty technical sales offices, and a nationwide distributor network.

#### WHAT SETS US APART

Quickly solving problems so that our customers can be more productive and profitable continues to be our priority. We offer the broadest product line in the industry—from gearmotors and heavy industrial gear units to electronic drives, software, and complete drive-based automation systems. Our products are based on a unique system of modular components that can be assembled in literally millions of different configurations so every drive solution is custom built to our customer's exact specifications. And our regional assembly centers stock millions of dollars of our modular inventory for quick delivery of drive solutions and spare parts anywhere in the United States.

Of course, at SEW-EURODRIVE our expertise doesn't stop with the sale of our products. We offer one of the most accessible customer support systems in the industry. Our trained product specialists are readily available for on-site start up assistance and applications support. In addition, our exclusive PT Pilot® online selection tool quickly selects the drive for your specific needs. Our customer service personnel, engineers, product specialists, and service technicians are available to answer questions and troubleshoot problems. SEW-EURODRIVE offers on-call emergency technical support around the clock.

#### WHY CHOOSE ANYONE ELSE?

SEW-EURODRIVE brings together everything you need to drive performance for your systems: A superior family of products, unsurpassed engineering, technical support, and innovative new technologies. We invite you to experience the SEW difference.

#### SEW-EURODRIVE

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## The key to productivity...

Stop wasting time on the phone or fumbling through catalogs and price books to specify a C-Face or integral gearmotor for your pump. Simply go online to the PT Pilot® selection tool from SEW-EURODRIVE!

PT Pilot® quickly provides quotes, parts lists, 3D CAD drawings, motor options, gear options and inverters with just a few keystrokes.

You can also obtain an immediate quote anytime, anywhere using your smartphone or tablet!



## Sims Pump Valve Company, Inc.

For more than 97 years, Sims Pump Valve Company has been a leader in pump technology and has worked to develop an excellent reputation for offering innovative solutions for marine and industrial applications. SIMS specializes in solutions for corrosive applications such as sea water and waste water. Sims has an excellent reputation for offering innovative solutions

for marine and industrial pump applications, which improve pump performance, reliability, and longevity! Sims provides engineering solutions for pumps, which extend operating time and reduce maintenance and operating costs. From the outset, SIMS offered its unique guarantee of customer satisfaction—introduced by the founder of Sims, the guarantee continues today as an integral part of operations nearly a century later.

These two impellers operated for 18 months in salt water. The Simsite® Impeller is unaffected by corrosion!

#### SIMSITE®

Manufacturing their proprietary material, Simsite®, Sims has the unique advantage of being able to offer Structural Graphite Composite Pumps and Pump Parts which NEVER CORRODE in salt water, wastewater, or chlorinated water. Patented and offered exclusively by Sims, Simsite® products are lightweight, energy efficient, and are far more superior against erosion, cavitation, and corrosive environments than metallic pumps and parts. Simsite® is a graphite combination-fiber that is a continuously interwoven and reinforced composite with a hybrid phenolic/epoxy thermoset resin. The fibers in the Simsite® Structural Composite are interwoven in a tri-directional weave providing the highest strength and flexibility available on the market today. In addition, Simsite® products are NEVER cast or molded. All materials are manufactured starting with a solid block of material, and then machined from the center point using 5 to 8-axis CNC machines.

Simsite® products outlast and outperform other products on the market, and will therefore significantly improve performance, reliability, longevity, as well as increase energy savings. These unique products have been produced in the form of advanced pumps, impellers, wear rings, and more since 1955. At merely 1/6 the weight of bronze, lasting 3-5 times that of metallic. Sims provides the capability of adjusting the customer's equipment to achieve maximum efficiency and performance by finding the true BEP, or Best Efficiency Point. With a dedicated staff of knowledgeable engineers, the design of an impeller can be adjusted to the actual rated operating point required by the customer. Furthermore, the Simsite material contains self-lubricating properties that allow Simsite® products to withstand dryrunning for a certain period of time.

#### INDUSTRIES SERVED

With a wide variety of products available and a reputation for leading the industry, Sims is proud to serve a multitude of different industries, with a customer base spanning the globe. Sims has had the honor of being onboard over 75 different United States Navy vessels and operations, as

> well as working with multiple foreign navies including the German Navy and British Admiralty. In addition, Sims has worked with a plethora of cruise lines, including some of the biggest names in the business, such as Carnival, Caribbean, Celebrity, Norwegian, Royal Caribbean, and over 25 more.

Sims also works with a broad range of industries including chemical, food processing, paper and pulp, refining, petrochemical, sewage treatment, mining, plating, skiing, steel, farming, water treatment, textile, utilities, oil and gas, airlines, merchant marine vessels, waterparks, aquariums, hotels, and more.



Sims Vertical In-Line Pump

Sims Close Coupled Horizontal Pump

#### **PRODUCTS**

Sims offers a vast variety of top-of-the-line products. Sims produces over 15 different types of pumps, including vertical, horizontal, vertical in-line, vertical sump, regenerative turbine, ANSI, multi-stage and more. But Sims Pump is so much more than just pumps. In addition, Sims manufactures Simsite® Impellers and Rings, Guide Bearings and Bushings, Sleeves, Mechanical Seals, Valves, HusHeaters (efficient steam diffusers/preheaters with silencers), and Heat Exchanger Doors. Sims offers several grades of engineered structural composite for different applications and temperatures. All grades of Simsite® possess excellent mechanical properties and chemical resistance.

#### TECHNICAL SERVICES

Application engineering, service, and support are provided from corporate headquarters in Hoboken, New Jersey. Sims offers hydraulic design, finite element analysis, and computational fluid dynamics capability. The company specializes in corrosion resistance, life-cycle extension, efficiency, and troubleshooting of centrifugal pumps. All of Sims' design engineers are experts in pump and impeller design, as well as the design of structural composites. Sims' engineering service and support staff can design replacement parts and/or complete pumps to meet customers' specific needs and performance requirements, including through both reverse and re-engineering. •





For ALL Centrifugal Pumps
INCREASE Performance,
Efficiency, Reliability, and
Longevity



## **Sims Pump Company**

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#### **Smith & Loveless** Built for you. Built for life. Built for pumping.

Smith & Loveless revolutionizes the way municipalities, private developments, and industry tackle wastewater and stormwater pumping. Featuring specially-crafted non-clog solids handling pumps and innovative factorybuilt above-grade pump station designs, S&L systems offer the important benefits of single-source responsibility, ease of operation and operator-safe maintenance.

The result is efficient pump station performance, long service life and realized savings. S&L's proven track record of longevity, verified by decades of successful installations sustained by robust construction and operatorfriendly features, has lead the company to brand their newest pump station series as **EVERLAST™** Wet Well Mounted Pump Stations. Offering redesigned tip-up and rolling enclosure options, convenient packages and durable pumping accessories like the **DURO-LAST™** stainless steel baseplate, the EVERLAST™ provides peace of mind with the industry's longest service life and warranty protection, including ten-year protection for various pump, baseplate and enclosure equipment.

Key to the success of the Wet Well Mounted concept are S&L's speciallycrafted, vertical, Non-Clog Pumpswhich helps users save, and stay, green.

These pumps, with their exclusive oversized stainless-steel pump shafts, oversized bearings, and bronze seal housings, are some of the most durable and efficient wastewater pumps in the world. These pump components work together to reduce the potential for shaft deflection and seal failure overtime. The larger diameter of the shaft provides increased rigidity, while its stainless steel composition eliminates the possibility of corrosion, one of the leading contributors to shaft deflection and eventual pump failure. The pumps are simply designed to run-both efficiently and for decades.

These pumps are industry-leaders in clog-busting pump technology, as well, and can eliminate problems caused by

flushables and other trashy materials. The **X-PELLER®** Impeller passes 3' solids in flows up to 1,700 gallons per minute (107 liters per second).

Key to the X-PELLER® success is its mono-port design, which effectively expels high volumes of stringy materials, rags and other unusual trashy items. Applications of all types have called on the X-PELLER® to eliminate clogs, including prisons, fairgrounds, college residence halls and auto repair shops. The standard Smith & Loveless impeller rarely clogs; however, if you are faced with a high volume of trash pumping application, it is nice to know there is the X-PELLER® to fall back on.



S&L Non-Clog Pumps are primed through a process known as vacuumpriming, which creates fluid suction-lift in order to prime the pumps residing at grade level. All of the pumping equipment, valves, and controls are immediately accessible without special safety gear or harnesses.

The Wet Well Mounted concept offers numerous safety and ease-ofuse benefits. During the installation sequence, requirements for entering the existing wet well are severely reduced. Stations arrive factory-built and tested and are simply set in place, with all piping and electrical connections made quickly and easily. Installation and startup can usually be achieved within a few hours. Long term, maintenance and inspection can be performed without accessing a confined underground space, which is prevalent with other types of pumping systems. Routine maintenance can be performed onsite by existing staff, without the use of outside contractors or pricey pump

maintenance centers. This reduces maintenance time and cost. These savings, when combined with the higher wire-to-water efficiencies provided by non-clog pumps, result in significantly lower life-cycle costs for **EVERLAST™** Wet Well Mounted Pump Stations.

#### SIMPLER, SAFER, MORE ECONOMIC, LONGER LASTING...

**EVERLAST™** is the obvious choice when all the factors that go into pump station operation are considered. Simpler, safer, more economic... It all adds up to a longer, better pump station

#### **ABOUT SMITH & LOVELESS**

Founded in 1946. Smith & Loveless is a U.S. manufacturer of water and wastewater pumping and treatment systems for municipal and industrial applications. Available in 2-pump, 3-pump, and 4-pump series arrangements, S&L Pump Stations provide pumping capacities of up to 20,000 gallons per minute (1,260 liters per second) & 500 feet TDH. They also offer semi-recessed and underground pump station configurations.

At their world headquarters in Lenexa, Kan., in metropolitan Kansas City, S&L operates division offices and affiliated companies in metropolitan Los Angeles, Atlanta, Denver, London and Auckland. The S&L Engineering Department boasts more than 30 fulltime engineers, including several that are licensed professionally.

Smith & Loveless maintains extensive manufacturing capabilities. They not only give customers products assembled in a quality-controlled environment, they provide singlesource responsibility and support throughout the life of the product. The manufacturing process takes place in a controlled environment encompassing 115,000 square feet (10,638 square meters). Their ability to test complete systems before they ship delivers significant value and peace of mind to customers.

# NOTHING EVEN COMES CLOSE.



S&L Above-ground EVERLAST<sup>™</sup> Pump Stations are never submerged—
in sewage or the associated pit of submersible pump 0&M costs and
requirements. EVERLAST<sup>™</sup> elimintates confined space burdens, pump
stocking and replacement, and inconvenient pump clogs several feet
underground. EVERLAST<sup>™</sup> promotes superior wire-to-water pump
efficiencies, operator-convenient QUICKSMART<sup>™</sup> touch-screen controls,
and the industry's longest pump life and warranty protection. This translates
to real savings in 0&M labor time and costs—and it's not even close.



Smith & Loveless Inc.

## **TECO-Westinghouse Motor Company**

TECO-Westinghouse Motor Company (TWMC) takes great pride in their commitment to provide the highest quality and premium craftsmanship of AC & DC motors and generators. In addition to motors, TWMC is proud to provide quality variable frequency drives (VFDs) and soft starters, as well as large motor repair services for a myriad of businesses in all industries including petroleum, chemical, water/ waste water, mining, marine propulsion, steel, and electric utility production. Ranging from ¼ to 100,000 horsepower, TWMC's durable high-quality machines are used to power projects of all sizes.

TECO-Westinghouse offers a wide variety of motor product lines to better serve customers' needs. Proven experience in providing custom engineered vertical and horizontal induction and synchronous motors for the electric utility, petrochemical and water/ wastewater industry speaks for itself. In recent advancements, TWMC extended the stocked product line for low and medium voltage, vertical hollow shaft and solid shaft motors up to 800 horsepower. These Max-VHP® vertical motors meet or exceed NEMA Premium Efficiency levels. We recommend pairing one of these vertical motors with a reliable F510, low voltage Pump & Fan VFD for optimal performance. Customers save as much as 50 percent on power by reducing motor activity to 25 percent!

Other product introductions include medium voltage VFDs that are manufactured in the US in NEMA 3R and NEMA 12 enclosures and medium voltage, horizontal, Quick Ship motors from 800 to 3000 HP that are carried in stock. Low voltage VFD options include the L510, an advanced micro drive; the E510, which is designed for NEMA 4 applications; and the A510, a heavy duty drive





that is versatile enough to be used for general applications and tough enough for demanding applications like reciprocating pumps, compressors, and other high torque loads

Most recently, TWMC has added a new product line of gearing solutions that offers customers highly modular, inventory saving designs that are industry leading in efficiency and cost effectiveness. Unique aluminum housing designs are reinforced and robust to give high performance with excellent heat dissipation that performs well in lower horsepower, higher torque applications. The Helical, Parallel Shaft, and Helical Bevel gear products were designed to directly interchange with the critical dimensions that are commonly used in industry. These gear reducers are suitable for handling a broad range of power

> requirements from fractional to several hundred horsepower and are complementary to our motor and controls product lines offering our customers a powerful complete solution with system responsibility to drive their applications.

TWMC continues to evolve and looks forward to serving customers' needs by promoting motor and drive solutions that optimize customer efficiencies and needs. The capacities of the Round Rock factory, synthesized with TECO-Westinghouse's global manufacturing resources has uniquely positioned the company to be internationally recognized with an American tradition for excellence in quality.

#### **TECO-WESTINGHOUSE MOTOR COMPANY**

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## TECO W Westinghouse

## **Motor, Drive & Gear Solutions** for the Pump Industry



**Engineered Capabilities to Meet Your Industry Demands** 

- Complete Product Line of Motors & Drives from 1/4 HP to 100,000 HP
  - USA Manufactured Medium Voltage Drives in NEMA 3R & 12
  - Medium Voltage SG Motor Line, in Stock from 800 HP to 3000 HP
  - EQ7 & 510 Series Low Voltage Drives in Stock Up to 1000 HP
- ✓ Low & Medium Voltage MAX-VHP® NEMA Premium® Motors in Stock
  - Vertical Hollow Shaft & Solid Shaft Motors up to 800 HP
- Broad Selection of Gear Reducers Covering Worm, Helical, Parallel Shaft & Helical Bevel Styles
- Westinghouse Legacy Driven by TECO Experience
- Service & Repair Capabilities with a Full Line of Renewal Parts
- Dedicated Customer Service & Knowledgeable Technical Support Team
- Superior Product Reliability

## **Watson-Marlow Fluid Technology Group**

Watson-Marlow Fluid Technology Group is the world leader in niche peristaltic pumps, Sinusoidal pumps and associated fluid path technologies for food, pharmaceutical, chemical and environmental industries. Our nine established brands each have their own area of expertise, but together offer our customer's unrivalled solutions for their pumping and fluid transfer applications.

Watson-Marlow Pumps: peristaltic tube pumps including the new Qdos pumps which negate the need for ancillaries, boost productivity and cut chemical waste via more accurate. linear and repeatable metering than conventional solenoid or stepperdriven diaphragm metering pumps. The launch of our New 530 and 630 pumps builds on a platform of precise, high purity peristaltic technology. For the user, their enhanced operator and control system interface contributes to step-change improvements in validated process security.

Watson-Marlow Tubing: precision tubing including Pumpsil platinumcured silicone plays a key role in biotechnology and pharmaceutical manufacturing processes. Tubing manufactured in our ISO 14644-1 Class 7 clean room, provides absolute sterility throughout the fluid handling process.

Flexicon Liquid Filling: aseptic filling and capping systems ease customer validation in demanding contamination-free pharmaceutical and clinical diagnostic applications. Designed for small to medium sized batch production, systems provide filling accuracy of ±0.5 percent over volumes from 0.5 to 250 milliliters.





Bredel Hose Pumps: heavyduty hose pumps which are selfpriming, dry running, and with no internal valves. Hose pumps improve processes by eliminating troublesome and costly ancillary items like anti-siphon valves, back-pressure valves, degassing valves, or run-dry protection in high viscosity sludge handling and abrasive fluid duties.

#### MasoSine Process Pumps:

sinusoidal pumps designed specifically for the food industry. Pumps produce powerful suction with low shear and low pulsation, to safely transfer delicate products without risk of degradation. The highly efficient MasoSine pumps' working principle means they can contribute to energy savings and a reduction in CO2. The new Certa pump from

Masosine has been designed to set a new benchmark in clean pumping for all food and beverage industry applications. Certa offers EHEDG (Type EL Class I) and 3A certification as a standard.

BioPure: single-use tubing connector systems for biopharmaceutical customers. There is clear synergy and a significant growth opportunity presented by bringing together BioPure's product range and WMFTG's products to meet the needs of the rapidly growing single-use biopharmaceutical market.

Asepco: specializes in the design and manufacture of high purity aseptic valves and magnetic mixers for the biopharmaceutical industry. Asepco utilizes patented, marketleading technology to improve sterility within the biotechnology production process.

Flow Smart: a range of reinforced platinum silicone hoses and high performance sanitary gasket products.

Alitea: pumpheads and panelmount drives for OEM customers, equipment and machinery manufactures who need to bring products to market faster and with less engineering cost. Genuine "fit and forget" solutions providing long and predictable service life. •

#### WATSON-MARLOW **FLUID TECHNOLOGY GROUP**

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## HEAVY DUTY SLUDGE PUMPS



Pumps with no rotors, stators or lobes to replace, providing superior abrasive handling

Just one wearing part - the hose

Flows to 300 GPM

Suction lift to 30 feet, dry running and reversible

Eliminate ancillary equipment

Ideal for centrifuge and belt press feed

No mechanical seals or packing to leak







## WorldWide Electric Corporation

WorldWide Electric provides you, the distributor, immediate delivery on high quality products at competitive prices from three major divisions with extraordinary customer service. Our Electric Motor Division features a complete line of general and special purpose motors. Our Motor Controls Division features Across Line and Solid State Reduced Voltage starters, Variable Frequency Drives, and many other types of motor controls. Our Gear Products Division features a full line of worm gear right angle reducers, helical inline reducers and shaft mount reducers. Servicing these three divisions are some of the very finest and most experienced people in the industry.

Stocking \$25 million of electric motors in five major warehouses nationwide, our large and diverse line of electric motors will meet your motor needs. Our vast line of electric motors includes three-phase T-frame, TC-frame motors, oil well pump motors and rock crusher motors up to 600 HP. WWE now carries a complete line of motors and inverters from Hyundai Heavy Industries. Motors include NEMA Premium TEFC, IEEE-841 and explosion proof with all CSA and UL Certifications.

All Hyundai motors and drives are manufactured under the world class Hyundai quality system the company is known for.

The Hyundai N700E VFD is a solid, robust, drive packed with features. Sizes 1/2-500 HP available. The HHI drive is available as a chassis mount only or enclosed drive built specifically to your application.

The WWE softstart line features the most robust line-up of products in the industry. Applications include but are not limited to deep well, rock crusher,



irrigation as well as many other heavy and light duty applications.

The WorldWide Electric Gear Products Division offers you three high quality categories of gear products. Our line of right-angle worm gear reducers features all cast-iron housings, no-leak rubber seals on both input and output shafts, precision-ground long-life gears and drop in replacement capability for all major makes. In addition, we offer a new line of lightweight, no-rust aluminum housing right-angle worm gear reducers. All popular box sizes and speed ratios are

Our line of highly efficient, helical inline speed reducers is available from stock in all popular box sizes and speed ratios. These inline reducers

can also be ordered as a gearmotor combination. Color matched to the Hyundai Crown Triton motor, gearmotor combinations will be assembled and shipped complete as a single combination unit direct from our warehouse.

Our shaft mount gear reducers offer the very best competitive value in today's concrete aggregate marketplace. WorldWide shaft mount units are exact drop-in replacements for all major makes in the heavy-duty cast iron line of reducers. This line is available in sizes 2-9 in both 15:1 and 25:1 ratios. WorldWide Electric also carries a full line of accessories for our shaft mount reducers including tapered bushing kits, backstop assemblies, motor mounts and torque arms. •

#### WORLDWIDE ELECTRIC CORPORATION

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### ▲ HYUNDAI CROWN TRITON™ MOTORS

## THREE CRITICAL FACTORS THAT MAKE THIS THE BEST MOTOR IN THE MARKET ...



0

#### CONSERVATIVE DESIGN PHILOSOPHY

Hyundai has very conservative engineering and design philosophies, they do not accept the 'Nominal Approach' of making motors. Every motor, not just the average of a group of motors, must meet or exceed the target requirements such as temperature rise, efficiency, noise and vibration.

The Nominal Approach: NEMA or other specifications may require that a motor have a max temperature rise of 80°C at the rated load. The Nominal Approach allows that the average of the entire lot not exceed 80°C, meaning that some motors may exceed the requirement. All that matters is that the average of all motors does not exceed the required value.

Summary - The Hyundai Approach: Hyundai requires that every single motor produced does not exceed 80°C so they set their internal target at 7-8% less. This assures that every motor produced meets the requirement. Hyundai uses this same philosophy for many other critical attributes such as efficiency, noise level, vibration, full load speed, locked rotor and breakdown torques.

2

#### LOW OPERATING TEMPERATURES COUPLED WITH A PREMIER INSULATION SYSTEM

Heat is the largest factor leading to premature insulation failure - the larger the buffer between the actual motor temperature and the temperature rating of the insulation system is, the longer the insulation life will be.

Hyundai's approach for a reliable insulation system is to use Class N varnish, which is rated for 200°C and limits the temperature rise to ~74°C. This results in a larger buffer between the actual temperature and what the insulation system can handle without breaking down. With a 40°C ambient and a motor running at the nameplate load this buffer for an HHI motor is a whopping 86°C (200-74-40 = 86). Compare this to a typical motor with an 80°C rise and Class F insulation, the buffer is only 35°C (155-80-40=35). Remember the old adage, for every 10°C cooler electrical products run, the life expectancy of the insulation system doubles. An 86°C buffer is a big deal if you want a motor that will last a long time.

Summary - Hyundai motors run cooler and provide a larger buffer of protection for the insulation system which results in long life. An additional benefit of this design allows you to apply a stock motor in higher ambient conditions and still provide a good buffer.

6

#### LOW VIBRATION

Vibration leads to premature bearing failure and can damage the coupled equipment.

Hyundai's approach to a low vibration motor ... Shoot for less than half of the NEMA requirement, don't cut cost with lighter weight end bells, machine all motors with a precise foot flatness and use only the best bearings.

NEMA requires a finished motor to have a vibration level that does not exceed .15 inch/second peak. Hyundai's conservative approach sets the target at ".07 inch/second peak. All motors are precision balanced, feet are machined to a flatness of "0.005", end bells are heavily ribbed and only premium bearings such as NSK, SKF or FAG are used.

Summary - heavy cast iron frames, precision balance rotors and precise foot flatness leads to lower vibration and thus longer bearing life and less damage to other equipment.

Contact Us For More Information 1-800-808-2131 WorldWideElectric.net

## AdEdge Water Technologies, LLC

Founded in 2002 and headquartered just north of Atlanta, Georgia, AdEdge Water Technologies, LLC specializes in the development and supply of innovative technologies, specialty medias, membranes, and integrated systems that remove contaminants from process or aqueous steams. Our technology and products enable our customers to manage the elements in a variety of industries with outstanding results. These industries include

- · drinking water
- · industrial process
- mining
- environmental

- · chemical
- medical
- pharmaceutical
- · general wastewater

AdEdge has extensive experience in the removal of arsenic, iron, manganese, hydrogen sulfides, fluoride, and uranium from water and has sold hundreds of water systems throughout North America and locations throughout the world including countries in Asia and Latin America.

AdEdge has expanded their engineering and manufacturing capabilities and is able to design and build all their systems in their manufacturing facility. To date, AdEdge has been awarded twelve EPA demonstration projects, worked with 75 percent of the top 12 design firms in the United States, and with hundreds of engineering firms throughout the world.

We work with the customer to design and manufacture a customized solution that fits into their budget and treatment goals. AdEdge has over 500 water treatment installations throughout the globe treating a wide range of contaminants. We aim to exceed customer expectations by providing timely, responsive service with integrity.

#### **ADEDGE WATER TECHNOLOGIES**

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### Adsorption Ion Exchange Coagulation Filtration Membrane Technology

### intelligent thinking...clean water







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## **Bartlett Bearing Company**

Bartlett Bearing Company is a family owned independent distributor that specializes in the electro mechanical repair industry, focusing on pumps, electric motors, and gearboxes. Tom Bartlett and his wife, Gladys, founded Bartlett Bearing in Philadelphia in 1951. Our ownership and employees are committed to the Bartlett tradition of providing excellent customer service, innovative solutions, and top-quality products at competitive prices.

For over sixty years Bartlett Bearing has continued to grow while maintaining the same core values on which it was founded. Starting from a small warehouse, we have grown to five fully stocked and staffed locations in Philadelphia, Pennsylvania; Gastonia, North Carolina; Hebron, Kentucky: Pelham, Alabama; and Tampa, Florida. We are excited about the future and look to continue to expand our geographic footprint in 2017.

Bartlett Bearing Company has one of the most extensive and complete breadth of bearings and related components in the industry. Our inventory is composed of grounding rings,



bearing isolators, oil seals, mechanical seals, insulated and housing repair sleeves, grease, couplings, belts, pulleys, and sheaves, housed units, all types of anti-friction bearings and more.

Dependable service, that you can trust, is our top priority. As application specialists, we offer technical support, same day shipping, and after hours' emergency service 24/7. We believe

knowledge is the driving force behind our unsurpassed customer service. We continually invest in internal training of our staff plus explore new designs as well as technical product advances. Our hands-on approach in educating customers gives them an in-depth understanding of the products we offer and assists them in being successful with their end users.

Bartlett's unique combination of quality products, innovative technology, and our experienced sales staff makes us the number one choice for repair facilities in the electro mechanical repair market throughout the United States. We are extremely proud to say that many of our satisfied customers are our best salespeople. Give us a call and see for yourself!



## **Brook Crompton**

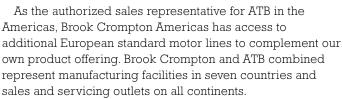
Brook Crompton has been a leading manufacturer of electric motors for the global industrial market since 1878.

Brook Crompton provides motors for a broad range of pumping applications in:

- Oil & Gas
- Mining
- Municipal/Wastewater
- Chemical Processing
- Nuclear
- Pulp/Paper

#### We offer:

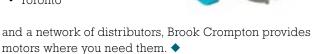
- · Severe Duty
- NEMA Explosion Proof
- Medium Voltage
- IEC



A key attribute of our company is our ability to meet your exact needs by being both versatile and flexible. We are committed to listening to your needs and responding in a way that meets those requirements whether that be from stock with one of our standard products, through local modification of a stock motor or the production of a product customised to meet your specific needs.

#### With warehouses in:

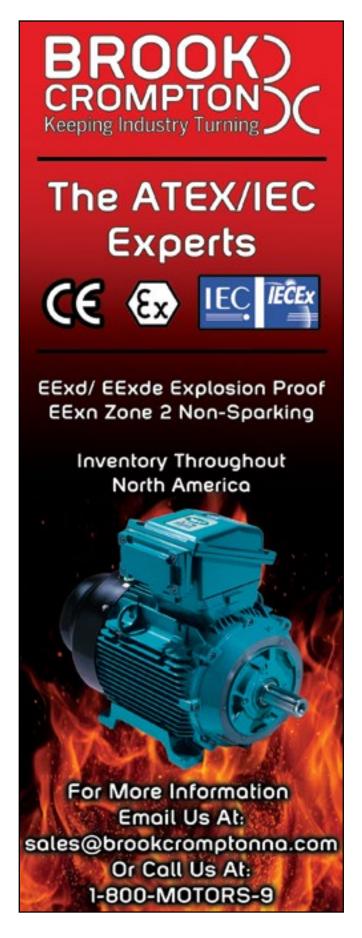
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#### **BROOK CROMPTON**

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# Check-All Valve Mfg. Co.

Since 1958, Check-All Valve Mfg. Co. has manufactured a complete line of in-line spring-loaded pistontype 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 quidelines, 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-tometal 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. Contact us for a complete catalog or see us at www.checkall.com.

## CHECK-ALL VALVE MFG. CO

515.224.2301 sales@checkall.com



# Fluid Components International

FCI's products are specified by name in many of the world's most demanding environments for flow instrumentation. They are recognized for their reliability, accuracy and repeatability in harsh conditions, where their total performance ensures users of both their endproduct's quality and operational safety. FCI offers a broad range of application solutions from off-the-shelf devices to custom-engineered systems.

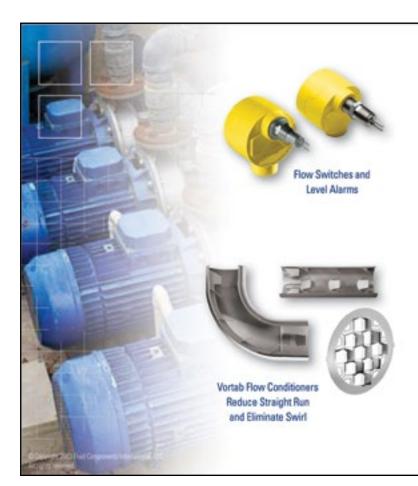
FCI flow switches are ideal for pump protection and flow assurance to prevent pump run-dry conditions, which can damage pump components, degrade pump performance over time and reduce their useful lifecycle. These flow switches feature a no-moving parts thermal dispersion flow sensor and plant rugged design that makes them ideal for a wide range of point-level process applications. Their versatile design also allows them to measure flow or level or temperature.

Flow conditioners developed by FCI's Vortab Company provide a low-pressure loss solution to correct flow profile irregularities that also affect the operation of pumps and the accuracy of flow instrumentation. In today's crowded plants, elbows, valves, blowers and other devices in the pipeline often disrupt flowing media and affect other equipment.

For efficient and low maintenance operation, pumps require a repeatable, uniform upstream flow profile of the liquid entering the pump. When elbows, valves, or other equipment are installed too closely to a pump, they can cause swirl and velocity profile distortions, resulting in uneven force placed on the pump impeller. Such disturbances can create excess noise and cavitations. resulting in reduced bearing life. Vortab Flow Conditioners correct these flow profile problems to keep pumps running longer and reduce maintenance costs.

FCI's flow meters are designed with advanced thermal dispersion mass flow sensors. They combine precision flow measurement accuracy with a rugged design that is compatible with caustic, corrosive, humid and high temperature environments. They are highly reliable, easy to install, require virtually no maintenance, and are designed for long-life.

All FCI products are tested and calibrated to rigorous standards at FCI's world-class, fully NIST traceable flow calibration laboratories to ensure instrument accuracy with the customers' actual fluid and process conditions. FCI is ISO9001:2008 and AS9100 certified and meets MIL-STD-45662A and ANSI/NCSL-Z-540 requirements. ◆



# Pump Flow **Assurance**

FCI Flow Switches ensure early warning and safe shutdown when leaks, low flow or dry conditions occur. Vortab Flow Conditioners maximize pump life by eliminating distorted velocity profiles at pump inlets.



Visit FluidComponents.com 1-800-854-1993 1-760-744-6950

# **Hoosier Pattern**

Located in Decatur, Indiana, with almost fifty employees in a 45,000 square foot facility, Hoosier Pattern stays committed to quality products getting delivered to customers on-time and on-budget. The team at Hoosier Pattern is not scared of big, complex or projects that aren't even on paper yet. Hoosier Pattern is confident in what they do and how they do it. They encourage you to contact them to see what their team can do for your next project.

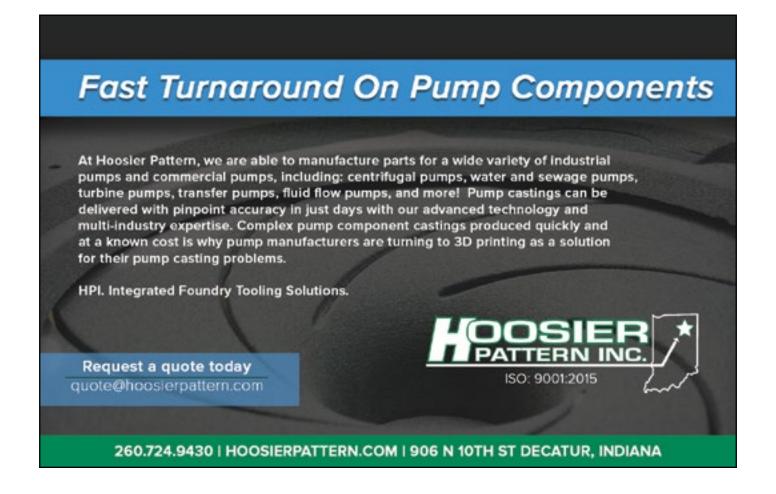
Often Hoosier Pattern is asked, "how big of a part can you print in your sand printer?" Hoosier chooses to answer that question with another question, "how big do you need it to be?" The sand printer has a job box of 70.9 inches x 39.37 inches x 27.56 inches. This large build envelope opens the possibility to build molds and cores that previously were not

possible by current CNC machines. This allows Hoosier Pattern to provide rapid prototyping and speed up lead times for producing castings of

HPI has lowered the price of printed sand for customers within the last year without compromising quality or customer service. No extra charge for complex pump geometries. The only extra charges are if you want it NOW, as in the next day NOW (yes, they can do that). Complex geometries of parts do not make for higher costs to make your castings. Design does not need to be sacrificed for manufacturability. Complex core designs are 3D printed as one piece, thus reducing or eliminating assembly errors and foundry casting defects. No internal fins or mismatches. 3D printed foundry molds do not need traditional parting lines and flask sizes. This

gives the foundry the freedom to gate, riser, and feed the casting in the best way possible to produce the best possible casting. The freedom of pump design combined with the freedom of the foundry to manufacture a pump component casting is a huge advancement in the pump industry. Complex pump component castings produced quickly and at a known cost is why pump manufacturers are turning to 3D printing as a solution to pump casting problems.

Have a specific need but don't have the right resources to design it? Hoosier Pattern has an experienced team of highly skilled CAD designers who has a passion for precise, efficient design. Our CAD designers can help you achieve a simple or highly complex design that could be required to help take your project to the next level.



# KSB, Inc.

KSB, an international supplier of highly engineered pumps, valves, and related systems and service for a variety of applications, including wastewater, building services, water treatment, process engineering, mining and power plant processes. With forty manufacturing facilities and 170 service centers, KSB operates in 130 countries on five continents.

KSB, Inc. in the USA is a subsidiary of KSB AG and has been doing business in the USA since 1974 and brings a 140 plus years of global experience and competence in centrifugal pump technology with cutting-edge designs for optimum reliability and maximized performance. The Richmond, Virginia, office is backed by a network of sales and service locations. They maintain an inventory of assembled pumps and parts and manufacturing, testing and repair facilities in Richmond.

In 1996 GIW Industries, Inc. became a full subsidiary of KSB AG. GIW is world renowned for its severe abrasive handling pumps and leads the world in wear technology. This year GIW commemorated its 125th year of servicing the minerals and mining industries. GIW has grown in size and expertise to ensure that KSB's GIW® Minerals products are at the forefront of slurry technology. Their production

facilities recently completed a multimillion-dollar expansion to provide customers with the best slurry solutions. The expansion was designed to increase the capacity for large flask sizes and has more than doubled foundry capacity.

GIW maintains a vast service network through their REGEN Service Centers located in North America. They offer rebuild and remanufacturing services for both slurry and non-slurry products and support all slurry products and equipment used in the mining industry. GIW continues to partner with their customers to reduce their operating costs and increase their process efficiencies.

In 2010 KSB acquired Standard Alloys Inc. Since 1926 they have provided high quality replacement parts, part repairs, complete replacement pumps, and other industrial equipment through its manufacturing location in Port Arthur, Texas. Originating from a demand for replacement parts for the refinery industry, Standard Alloys expanded into the chemical, municipal and power industries. In 1982 they expanded their product offering by adding a repair center in Vidor, Texas. The company has expanded its geographical coverage and now has service centers in Port Allen, Louisiana, and Deer Park, Texas. For more information, visit www.ksbusa.com or www.giwindustries.com.



# Milton Roy

Milton Roy, a brand of Accudyne Industries, provides the world's largest and most comprehensive selection of controlled-volume metering pumps. Built on a strong reputation of reliability, Milton Roy combines vast industry experience, a proven track record and a culture of continuous technological improvement.

We manufacture the most reliable products on the market that enable our customers to operate in critical processing industries throughout the world. Our pumps set the standard for performance, accuracy, and durability in the most challenging and demanding applications.

With the capability to pump a wide range of chemicals including acids, bases, corrosive or viscous liquids and slurries, our comprehensive selection of diaphragm and piston/

plunger metering pumps deliver the highest level of repetitive accuracy.

Our products range from lowpressure water treatment applications to demanding installations with pressure up to 20,000 psi (1340 bar)



and pump capacities range from 0.00003 gph (12 ml/hr) to some of the highest capacities in the industry.

Along with the most reliable metering pumps, Milton Roy can develop customized chemical injection packages, adapted for your requirements. These packages are designed in-house or through our global channel partner network.

Every one of our pumps is engineered to exceed expectations and is backed by a global network of highly trained field engineers and aftersales support. Milton Roy provides local support to customers with offices and a network of welltrained representatives around the globe. The company also provides high-level application engineering, customer training, and system support to help ensure successful installations.

# THE EXCEL XR **METERING PUMP**

A NEW REASON TO RELY ON LMI

Introducing the new EXCEL XR metering pump: providing extreme reliability, accuracy, and process control flexibility in a wide range of challenging industrial applications.

Designed with feedback from customers and industry experts, the EXCEL XR's comprehensive, dependable product offering includes the following features and benefits:

- Flow rates from 0.006 to 18 GPH (0.023 to 68 l/hr)
- · Mechanically actuated diaphragm for years of reliable service
- Steady accuracy of +/- 1% over 1000:1 turndown ratio
- · Three-year warranty
- · Quick delivery worldwide

For more information, visit LMIPumps.com or contact your local sales representative.



# Onyx Valve Co.

n the late 1980's a large multinational conglomerate bought out one of the leading of pinch valves manufacturing companies. In 1995 they decided to outsource the product, closing the New Jersey manufacturing plant and terminating the work force. In response, six employees got together and formed Onyx Valve Company. They hired their former

co-workers, purchased state-of-the-art manufacturing equipment and on April 13, 1995, they shipped their first pinch valve

Today, Onyx Valve Company specializes in three principal product lines related to hard-to-handle fluids:

- 1. Onyx Pinch Valves control the flow of slurries ranging from thickened sludge to sand blasting media. The D-series valves are a full port unobstructed design with no wetted metal parts. Available in a range of sizes from ½ to 30 inches complete with hand wheels, or automated versions with electric or pneumatic actuators, they are suitable for both on/off and modulating service. These valves are available with the unique Onyx Airbag actuator, a true zero-maintenance actuator with no piston, no piston rings, in either failopen or fail-closed design.
- 2. Onyx Isolator Rings provide a safe, convenient, and reliable way to measure pressure on slurries and are immune to clogging, plugging, and corrosion. Now you can easily measure pressure on fluids ranging from joint compound to salsa. Compatible with virtually any pressure gauge, switch or transmitter, Onyx Isolator Rings facilitate automatic control and protection for pumps and other pressure sensitive process equipment. Available in sizes ranging from ½" to 48" in a variety of materials to insure compatibility with virtually any process fluid imaginable.
- 3. Onyx Duckbill Valves are the ideal choice when you need a check valve capable of passing high volume with minimum head loss. They are the ideal choice for storm water applications allowing highways and parking areas to drain quickly and completely while preventing streams from backing up through the system and flooding roads, homes, and businesses.

Any Pressure Gauge, Switch, or Transmitter

## measure pressure

on almost any conceivable liquid from calk to thickened sludge.



without clogging or corroding.

**Onyx Isolator** Rings

Fit ANSI or DIN flanges from 1/2" to 42"

Why would you use anything else?

Sewerage, sludge, slurry, sand, mine tailings, cement. For any hard-to-handle fluid, call the slurry experts

ONYX VALVE CO

www.onyxvalve.com

tel: 856-829-2888

# Proco Products, Inc.

Proco Products, Inc. is the global leader in the design and supply of expansion joints for piping/ ducting systems. For over thirty years, Proco has prided themselves on offering the most complete line of products to suit a variety of applications. Some of these products include rubber and molded PTFE expansion joints, braided flexible hose assemblies. and low torque sealing gaskets.

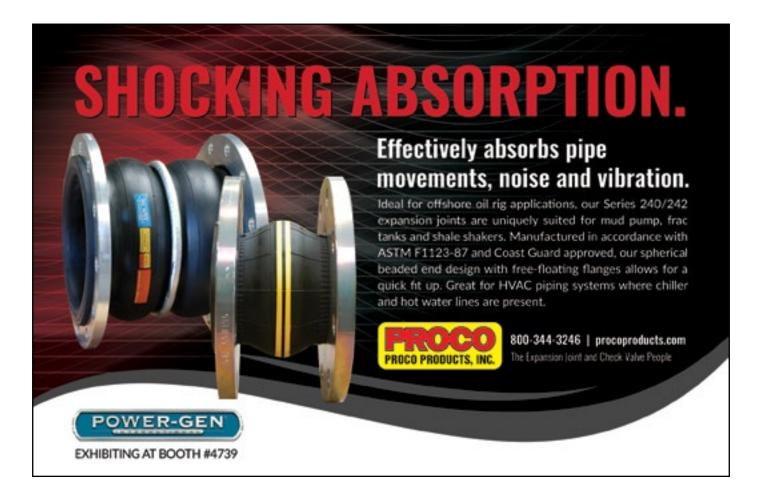
Also available from Proco Products, Inc. are the Series 700 ProFlex® rubber duckbill check valves. These valves are commonly used in the water and sewage industry. Rubber check valves are a cost effective way to control back pressures from sewage treatment plants, outfalls and tidal operations. All Proco check valves are manufactured completely of

barnacle resistant rubber with a top quality fungicide.

Proco is involved in several technical and trade organizations, such as the FSA (Fluid Sealing Association - Rubber Expansion Joint Division and Non-Metallic Ducting Expansion Joint Division). One of Proco's own, Rob Coffee, VP of Sales & Marketing, is a part of the FSA Board of Directors and serves on technical committees to ensure its continued development of proper expansion joint design for industries served. Other associations that Proco is proud to be a member of are NAHAD (National Association of Hose and Accessory Distributors), WEF (Water Environment Federation), AWWA (American Water Works Association), IDCO (Industrial Distributor Co-op), and the Cooling Tower Institute.

Proco Products, Inc. operates worldwide through a global agent and distribution network providing a wide range of products and services. This allows them to service the customer during all phases of a project regardless of location. Proco's main goal is to provide superior service to the demanding marketplace. Quality and service will always be Proco's highest priority.

With more than \$2 million in inventory, Proco maintains one of the largest stocks of product in North America, Contact Proco for pricing and availability on the appropriate expansion joint or check valve for a particular application. Please visit the company website for more information and to request a free catalog. •



# Pulsafeeder Engineered Products

Pulsafeeder Engineered Products continues to be a leader in fluid handling technology since the early 1940s when Larry Wilson pioneered the hydraulically actuated diaphragm metering pump principle. Pulsafeeder was the first pump to feed chemicals at an adjustable flow, accurately, without leakage. With experience in various chemical injection applications, Pulsafeeder pumps and systems are manufactured to serve the unique requirements of our global customer base.

Over the years, Pulsafeeder's desire to meet needs and solve problems has been the motivation behind efforts in R&D. Its ingenuity lead to the development of the unique HYDRAtube and HYDRAcone designs. Pulsafeeder designed the innovative HYPO valve-the

ideal solution for the injection of sodium hypochlorite and other off-gassing fluids. With decades of experience, Pulsafeeder offers pumping technologies that meet and exceed industry requirements for safety, reliability, and precise control. PulsaPro, the evolution of Pulsa Series, offers expanded performance, improved robustness, and new features. PulsaPro has a smaller footprint and is also port-to-port compatible with the original Pulsa Series, HYDRAtube and HYRDAcone are still available. Eclipse, nonmetallic and metallic, is structurally rugged with corrosion resistant materials, ensuring compatibility with the toughest chemicals. Eclipse has the fewest number of components of any gear pump on the market, making maintenance easy and reducing down-time.

By investing in the latest production equipment and manufacturing techniques, Pulsafeeder has set the industry standards for manufacturing quality and efficiency. This gives it the maximum control of product quality, manufacturing efficiency, and production cost for fast, effective response to customer needs. Its pumps are known for their rugged construction, and dependable and repeatable performance in difficult environments.

Pulsafeeder serves the following markets:

- · Chemical Processing
- · Petrochemical
- Refineries
- Oil and Gas
- · Water Treatment
- Wastewater Treatment ◆



# Ruthman Companies and Gusher Pumps

## Continuing a century of service

Since 1912, the Ruthman Companies has achieved through continuous growth, innovation and service what few manufacturers have—over a century of service and success in the fluid handling industry. Today, with a host of global partners, Ruthman Companies serves industries in America as well as Europe, the Middle East, and China.

#### GUSHER PUMPS

The Ruthman Companies flagship brand, Gusher Pumps, which now includes over 11,000 products, is today stronger than ever, largely because of the Ruthman consumer based manufacturing and marketing philosophy. While many in the industry are content in producing "off the shelf" standard models, Gusher engineers products for specific customer requirements and is willing to meet challenging situations with innovative engineering. The result is Gusher's unique acquired expertise and ability to serve today's global market with one of the most extensive selections of pumps and equipment available anywhere in the world, including, to name a few, Gusher 7071 ANSI Series pumps, the 7550 series pumps, designed for heavy duty industrial applications, and the vertical top pull-out 7600.

## A FAMILY PROFESSION AND A PROFESSIONAL FAMILY

The story begins in 1924 with Alois Ruthman's design of the first vertical ball-bearing machine tool coolant pump and named it "The Gusher." In 1949, Thomas R. Ruthman joined his father's company and, as president, is still active in the company today along with his son, Thomas G. Ruthman. Les, Gary, and Scott Smith follow their father, Pete, a founding member who joined Gusher in 1929. Gusher now has five locations and over 200 employees.

## PARTNERS IN PERFORMANCE

Today the Ruthman Family of Companies also includes: Gusher Pumps of Williamstown and Dry Ridge, Kentucky; Gusher Pumps of Newcastle, Indiana, and Gusher Pumps of California, Other Ruthman Compa-nies include BSM Pump Corporation specializing in vane and positive displacement gear pumps. Fulflo Specialties manufactures the industry standard in hydraulic pressure relief valves. FPI Pumps of Florida, specializing in Large Volume Axial Flow Pumps, Great Lakes Pump and Supply distributes pumps and re-lated products in the Midwest, USA, GM Treble is the Ruthman Companies distributor in the United Kingdom. Great Southern Pump serves the Florida municipal market. Nagle Pumps of Chicago manufactures

heavy duty sludge and slurry pumps to a global market. Process Systems Inc. is a manufacturer of turbine pumps, including the Ruthman owned Deming® Vertical Turbine Pump brand. Ruthmann Pumpen of Germany produces DIN standard pumps for the European and Middle Eastern markets. Vulcan Tools of Dayton, Ohio, manufactures tool and die making equipment. Wagner Process Equipment serves the industrial and municipal equipment needs in California and Nevada.

Gusher and the Ruthman Company partners' success and growth is primarily due to the high demand for a quality product and a continuous willingness and ability to meet the challenges presented by customers and the industry for innovative products and solutions. •



## 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

Scale watcher<sup>™</sup> eco-friendly hard water conditioning no salt, no chemicals, no maintenance Patented Easily installed and truly maintenance free Removes scale from pipe work Removes scale from heat exchangers and steam boilers Saves energy by keeping heating elements scale free Increases life of capital equipment Reduces cleaning costs, chemicals & labor Saves 50% on cooling tower make up water Saves irrigation water Provides short term payback Applications: Residential • Commercial • Industrial Dealer territories available. Scalewatcher North America Inc., Oxford PA Call Toll Free (800) 504-8577 or by email: sales@scalewatcher.com www.scalewatcher.com

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.

# Schenck Trebel Corporation

Schenck offers a range of products and services for the production, maintenance, and repair of any rotating component—from a fraction of a gram to more than 600,000 pounds!

### What Does Schenck Offer?

- Horizontal and vertical balancing machines
- In-house balancing services
- · Contract balancing
- · On-site services
- · Consulting services
- · Vibration analysis services
- Vibration monitors
- Secure networks for balancing data
- Remote and online support
- Moment weighing scales
- · Live website chat
- Machine calibration services
- · On-site seminars and training
- Instrumentation upgrades
- Portable balancing instruments
- · Spare parts
- · Regional technology centers in six cities nationwide
- Balancing tooling

For a full list and more information about the products and services available from Schenck and for its exclusive eSales specials, visit schenck-usa.com.

## SCHENCK TREBEL CORPORATION

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Provided to our Customers for Over 125 Years!

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Balancing Machines & Software Moment Weighing Scales Spin Test Systems Vibration Analysis Equipment Condition Monitoring Systems

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# Seepex

SEEPEX is a leading worldwide specialist in pump technology that provides progressive cavity pumps, systems, macerators, accessories and services. We take a consultative approach to offering innovative products and customized solutions. Each pump we supply meets the specific needs of an industry, a company, an application and the product being pumped. For more than forty years, SEEPEX has been offering customers in environmental, chemical, food and beverage, oil and gas, pulp and paper and numerous other industries, optimal economical pumping solutions based on low pump life-cycle costs. SEEPEX progressive cavity pumps convey fluids of all characteristics gently, accurately and reliably.

SEEPEX Inc. is an ISO-9001-2008 certified, 82,000 square feet manufacturing facility situated on ten acres of land in Enon, Ohio. We have a larger presence in North America than any other progressive cavity pump manufacturer!

Our company's headquarters, SEEPEX GmbH, is in Bottrop, Germany. We are represented in more than seventy countries through a dense network of subsidiaries, branch offices, distributors, and agents. We will keep expanding consistently in the future by developing innovative, market driven products and services, by expanding our enterprise purposefully on an international basis and by opening additional market segments. With SEEPEX, all things flow.



## SEEPEX. ALL THINGS FLOW



Progressive

Cavity Pump

## THE CLEAN SOLUTION FOR CONSUMER SAFETY

SEEPEX progressive cavity pumps from the BCSO range are used where cleanliness, sterilization and hygiene are of the upmost importance. BCSO pumps meet the highest demands of cleanliness, safety, corrosion and wear resistance. They are excellent at maintaining quality over a wide range of food and beverage to cosmetic and personal care products.

#### BENEFITS

- FDA compliant and 3-A approved components
- Low shear rates
- · Easily pumps thin to highly viscous materials
- Clean in Place/Sterilization in Place
- · Easy to service, no special tools required

Contact us to solve your pumping problems.

CONVEYING CAPACITY **UP TO 572 USGPM** 

PRESSURE

**UP TO 360 PSI** 

SEEPEX Inc. sales.us@seepex.com T+1937864-7150 www.seepex.com

# See Water, Inc.

See Water, Inc. located in the valley of San Jacinto, California, manufactures proprietary electronic control panels for commercial, industrial, utility, and environmental treatment applications. See Water continues to develop innovative solutions for the water and wastewater industry.

OIL SMART® TECHNOLOGY

The company was founded on the premise to safely pump water and eliminate the risk of pumping hydrocarbons into the environment. The easy-to-install design and long-term reliability makes the Oil Smart® products the preferred choice among manufacturer representatives and contractors.

### PUMP PANELS

See Water provides a complete line of innovative pre-engineered sewage and wastewater control panels that will operate pumps up to 65 FLA. See Water provides a complete line of innovative pre-engineered sewage and wastewater control panels that

will operate pumps up to 65 FLA. The

quality simplex and duplex control panels provide complete pump monitoring, come standard with NEMA-4X enclosures and are UL 508A or UL 698A listed for the United States and Canada.

## DISTRIBUTION NETWORK

All products are sold through a worldwide network of manufacturer representatives and distributors. Every product is 100 percent factory tested, third-party approved, backed with three-year warranties and made in the U.S. •

## SEE WATER, INC.

888.733.9283 info@seewaterinc.com www.seewaterinc.com



# Sensaphone

Sensaphone has been providing remote monitoring, early warning systems and auto dialers for more than thirty years. Their latest products, like the Sentinel™ PRO system, function as data loggers with unlimited storage, collecting data, and pushing it to the cloud for alarming and reporting. You can view the status of multiple locations through Sensaphone's websites and manage multiple devices from one login. It's quick and easy to access trending reports, check specific equipment status, and review alarm history. Cellular and low-cost satellite options are available for remote sites that don't have phone lines, broadband, or cellular service.

Sensaphone products are the low-cost way to monitor critical conditions at unattended pump stations, wells, and tank farms—conditions like power failure, pump status, tank level, pressure, temperature, equipment malfunction, flow rate, motor torque, and security breach. The units integrate seamlessly into floats, pump alarm outputs, level transducers, and other equipment.

Sensaphone systems provide an extra layer of protection 24/7 for remote sites, instantly notifying you when they detect readings outside of preset parameters and possible threats to pumps and systems. Early notification enables you to take fast, preventive action before production is impacted, equipment, and property are damaged or the environment is contaminated. You reduce the costs of production drops, man-hours for site visits, cleanup, and fines.

Application Examples:

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- Well Level Monitoring: Reduce waste and avoid 40 CFR 12 violations.
- Water Management: Ensure continuous flow of water to remote wells and storage areas.
- Lift Stations: Keep water flowing with instant notification of pump and other equipment failures.
- Elevated Tanks: Avoid water contamination and overflow with tank-level alerts.

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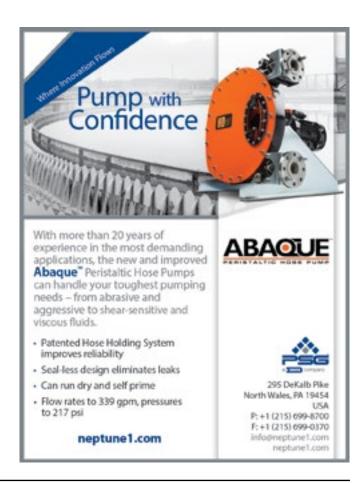
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Abaque™ Series Peristaltic (Hose) Pumps meet the challenging requirements of a wide variety of industries thanks to their seal-free design that eliminates leaks and product contamination. These self-priming pumps can run in forward or reverse and offer suction-lift capabilities to 25.5 feet (9 meters), as well as the ability to run dry without adversely affecting performance, pressure and accuracy (no slip). Abaque pumps are available in ductile iron and stainless steel construction, allowing higher discharge pressure up to 217 psi (15 bar). For more information, visit psqdover.com.





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BJM Pumps® is headquartered in Old Saybrook, Connecticut, and has been providing fluid handling solutions for industrial and municipal services since 1983. BJM Pumps has grown quickly by supplying world class pumps and accessories, priced competitively, through its global network of stocking distributors in the United States, Canada, and South America.

BJM Pumps® supplies a wide variety of submersible pumps and pump accessories for many different applications. Products include slurry pumps, stainless steel pumps, corrosion resistant pumps, sump pumps, sewage pumps, trash pumps, sludge pumps, non-clog pumps, solids handling pumps, shredder pumps, vortex pumps, submersible dewatering pumps, sand pumps, agitator pumps, hydraulic pumps, explosion proof pumps, utility pumps, and specialty pumps such as 12 Volt pumps and residue pumps (or Mop-Up-Pump). ◆

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EIPL, located in Newport News, Virginia, was opened in 1978 to serve and support the North and South America markets. With over thirty product lines, EIPL 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.

EIPL 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 EIPL clients are supplied with the latest and most cost effective moisture removal solutions.



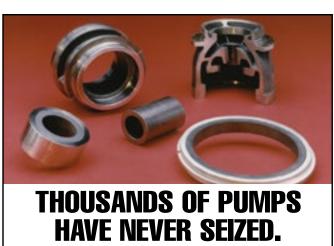
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GRAPHALLOY® case rings and bushings allow pumps to survive repeated "run-dry" conditions, slow roll operation, and frequent stop/starts—conditions where metal and plastics fail.

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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.

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## **Hidrostal**

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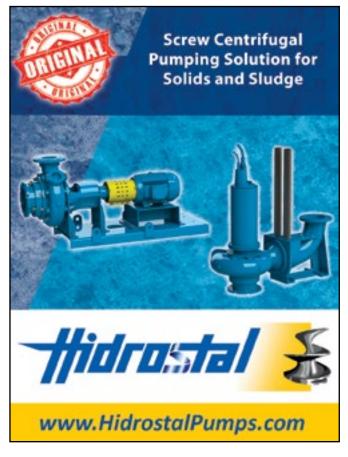
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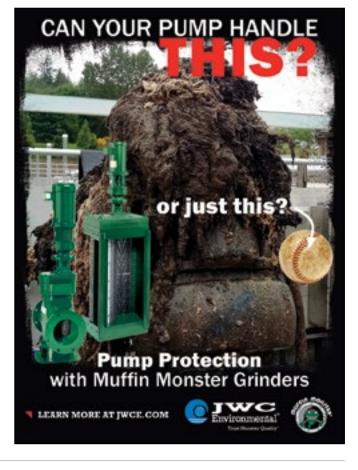
At InfoSight we believe that using our durable identification tags can save time by ensuring that you are identifying the correct asset, save manpower by allowing assets to be easier to identify for visual inspection or maintenance, and save you money by being able to verify that proper maintenance is being performed—thus increasing the lifespan of an asset. •



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**IWC's Monster Grinders** have been protecting pumps for over forty years. The rugged twin shafted grinders cut down tough solids in demanding wastewater and industrial applications so that pumps can do what they do best-pump. There are over 45,000 Muffin Monster® and Channel Monster® installations around the world preventing pump ragging, costly maintances, unplanned clogs or full system shutdowns. Monster Grinders adapt easily into pipelines and channels or even onto wet well walls.





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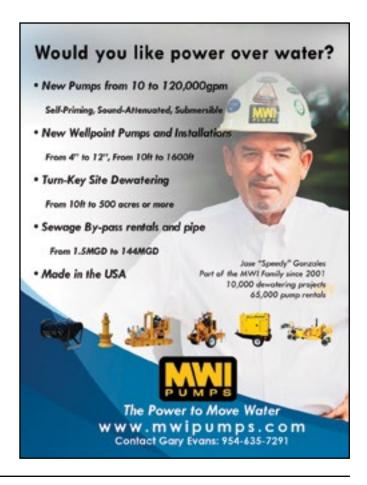
MWI is a pump manufacturing company located in Deerfield Beach, Florida. Our philosophy is simple: provide innovative, high quality pumps at competitive prices, and take care of each customer. Let us help you solve your water moving problems with our extensive engineering staff, years of experience, and variety of products. We specially customize our pumps to suit your needs and situation.

Founded in 1926, MWI specializes in the design, manufacture, and use of high efficiency axial and mixed flow propeller water pumps worldwide for a variety of applications, including emergency pumping, flood control, storm drainage, water transfer, construction dewatering, irrigation, mining, water diversion, water infrastructure security, pit-to-pit transfer, and by-pass pumping.

We also provide rental and repair services across the United States and worldwide. Under our Pump Rental and Repair Division, we have offices throughout Florida along with rental distributors in multiple locations nationwide and reps throughout the world.

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## Cascade Analytic USA

281.482.2727 www.cascademvs.com

## **CEC Vibration Products**

626.938.0200 www.cecvp.com

## Cincinnati Gearing Systems, Inc

513 527 8634

www.cincinnatigearingsystems.com

#### Cole-Parmer

800.323.4340 www.coleparmer.com

## **CST Industries**

913.748.4514 www.cstindustries.com

## Danco Pump & Supply Co.

918.437.8800 www.dancopump.com

## **Ebac Industrial Products**

855.873.6800 www.ebacusa.com

### Elliott Group EBARA Corp.

724.527.2811 www.elliott-turbo.com

## **Environment One Corporation**

518.346.6161 www.eone.com

#### ExOne

877.773.9663 www.exone.com

## **FCI (Fluid Components International**)

760.744.6950 www.fluidcomponents.com

#### Flowserve

800.728.7867 www.flowserve.com

## **Flow Systems**

855.569.3083 www.flowsystemsmachining.com

## **Graphite Metallizing Corporation**

914.968.8400 www.graphalloy.com

## Greyline Instruments, Inc.

315.788.9500 www.greyline.com

## **Hayward Flow Control**

888.429.4635 www.haywardflowcontrol.com

#### **Hoosier Pattern**

260.724.9430 www.hoosierpattern.com

## Hydro, Inc.

312.738.3000 www.hydroinc.com

## InfoSight Corporation

740.642.3600 www.infosight.com

## **International Products Corporation**

609.386.8770 www.ipcol.com

## JDA Global LLC

909.798.9532 www.jdaglobal.com

## KTR Corporation

219.872.3646 www.ktrcorp.com

## Ludeca, Inc.

305.591.8935 www.ludeca.com

#### Mechanical Solutions, Inc.

973.326.9920 www.mechsol.com

## **NSK Corporation**

888 446 5675 www.nskamericas.com

#### Onyx Valve Company

856.829.2888 www.onyxvalve.com

### Orival, Inc.

201.568.3311 www.orival.com

#### R+W America

630.521.9911 www.rw-america.com

#### **Romac Industries**

800.426.9341 www.romac.com

## St. Marys Carbon Company

814.781.7333 www.stmaryscarbon.com

## Salem-Republic Rubber Company

330.938.9801 www.salem-republic.com

#### **Shelco Filters**

800.543.5843 www.shelco.com

## Smith-Blair. Inc.

800.643.9705 www.smith-blair.com

## **Summit Industrial Products**

800.749.5823 www.klsummit.com

## **Seals**

### **Advanced Sealing Technology**

978.750.8001 www.astseals.com

#### **AESSEAL**

865.531.0192 www.aesseal.com

## **Amiad Water Systems**

704.662.3133 www.amiadusa.com

#### **A.W. Chesterton Company**

781.438.7000 www.chesterton.com

## **Bartlett Bearing Company, Inc.**

800.523.3382 www.bartlettbearing.com

## **BJM Pumps**

860.399.5937 www.bjmpumps.com

#### Blacoh Fluid Control Inc.

951.342.3100 www.blacoh.com

### Blue Ribbon Corp.

716.773.9300 www.blueribboncorp.com

### **CCI Pipeline Systems**

337.332.5808 www.ccipipe.com

### DiscFlo Corporation

619.596.3181 www.discflo.com

#### **Electro Static Technology**

866.738.1857 www.est-aegis.com

## FCI (Fluid Components International)

760.744.6950 www.fluidcomponents.com

#### Frontline Industries, Inc.

800.890.7325 www.frontlineindustries.com

## Gallagher Fluid Seals, Inc.

610.277.8200 www.gallagherseals.com

### **Garlock Sealing Technologies**

800.448.6688 www.garlock.com

### LMK Technologies, LLC

815.433.1275 www.lmktechnologies.com

#### Parker Hannifin Corp. Engineered Polymer Systems

800.233.3900 www.parker.com/eps

## Proco Products, Inc.

209.943.6088 www.procoproducts.com

### Pipeline Seal & Insulator, Inc.

800.423.2410 www.pipelineseal.com

### SealGuard, Inc.

866.625.4550 www.sealguardinc.com

### U.S. Seal Mfg.

800.243.5489 www.ussealmfg.com

#### VersaFlex Incorporated

800.321.0906 www.versaflex.com

### **Watson-Marlow Pumps Group**

800.282.8823 www.watson-marlow.com

## Waukesha Bearings

262.506.3000 www.waukeshabearings.com

## **Valves**

#### Asahi/America Inc.

781.321.5409 www.asahi-america.com

## **Badger Meter**

800.876.3837 www.badgermeter.com

#### Blacoh Fluid Control Inc.

951.342.3100 www.blacoh.com

## Check-All Valve Manufacturing Company

515.224.2301 www.checkall.com

## Chemtrol, a brand of NIBCO Inc.

574.295.3000 www.nibco.com

## Cla-Val

800.942.6326 www.cla-val.com

#### **CSI Controls**

800.363.5842 www.csicontrols.com

### Dwyer Instruments, Inc.

800.872.9141 www.dwyer-inst.com,

#### Flomatic Corporation

800.833.2040 www.flomatic.com

#### **GEMÜ**

678.553.3400 www.gemu.com

## Griffco Valve, Inc.

716.835.0891 www.griffcovalve.com

## **Hayward Flow Control**

888.429.4635 www.haywardflowcontrol.com

## **Hydra-Stop**

708.389.5111 www.hydra-stop.com

## Mainline Backflow Products (USA) Inc.

877.734.8691 www.backwatervalve.com

#### Milliken Valve Company

610.861.8803 www.millikenvalve.com

## National Oilwell Varco

888.262.8645 www.nov.com

## OCV Control Valves

918.627.1942 www.controlvalves.com

#### **Onyx Valve Company**

856.829.2888 www.onyxvalve.com

## Plast-O-Matic Valves Inc.

973.256.3000 www.plastomatic.com

## Proco Products, Inc.

209.943.6088 www.procoproducts.com

## Red Valve Company Inc.

412.279.0044 www.redvalve.com

## Ross Valve Mfg Co., Inc.

518.274.0961 www.rossyalve.com

## Schroedahl International Corp.

713.975.8351 www.schroedahl.com

## Schwing Bioset, Inc.

715.247.3433 www.schwingbioset.com

## Singer Valve Inc.

800.663.7266 www.singervalve.com

## **Spears Manufacturing Company**

818.364.1611 www.spearsmfg.com

### STP-FloPlast Compression Fittings

877.356.7527 www.floplastfits.com

## Trident Actuators, Inc.

914.698.2650 www.mihtrident.com

## Val-matic Valve & Mfg. Corporation

630.941.7600 www.valmatic.com

#### Victaulic

610.559.3300 www.victaulic.com

## WACO Products, Inc.

410.242.1000 www.wacoproducts.com

## WAGO Corporation

262.255.6222 www.wago.us