

2020 BUYERS GUIDE



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Universal Field I/O



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Operator Interface



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DISPLAY YOUR WAY

Large, small, or no screen at all, the C-more Headless HMI lets you decide



C-more®

Headless HMI

With the C-more headless HMI, you can display your factory floor data how and where you choose. The EA9-RHMI has all the powerful functionality of the C-more Touch Panel HMIs, but without display size restrictions. This HDMI-enabled device works with televisions, monitors, projectors, and most any other HDMI display device of any size to display real-time operational data or messages. Use the C-more Remote HMI mobile app or the embedded Web Server if you prefer no local display at all.

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Features include:

- All the functionality of a C-more Touch Panel without the display size limitation
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 - USB-B port for programming, monitoring and configuration
 - USB-A port for USB HID devices such as pen drives, touch screen displays, keyboard, mouse and bar-code scanners
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Gas Clip Technologies

Gas detection has come a long way since the first portable gas detector with a catalytic diffusion sensor was introduced decades ago. New technology has led to the development of sophisticated, yet simple to use, gas detectors that can run for their entire lifespan without ever needing to be charged or calibrated. Gas Clip Technologies' continued development and refinement of advanced low-power photometric infrared technology for LEL measurement helps save more lives and makes compliance to safety regulations simple.

Gas Clip Technologies is leading the gas detection industry with new innovations every year that are designed to keep things simple. Recently added to its family of portable gas detectors is a maintenance-free multigas detector that provides 3-years of continuous runtime with no charging or calibration necessary—the Multi Gas Clip Simple Plus. Finally eliminate the risk of being exposed to hazardous gases due to

a gas detector running out of battery in the middle of a shift. Hydrogen sulfide (H₂S), carbon monoxide (CO), oxygen (O₂), and combustible gases (LEL) can all be detected with this simple-to-use and simple-to-maintain detector. Just turn it on and have worry-free assurance that you will be warned of the most common life-threatening gases 24/7 for three full years.

“Keeping gas detection simple means keeping people safe”

What makes this ultra-durable detector able to perform so well for so long even under the harshest of conditions?

The Multi Gas Clip Simple Plus uses a low-energy infrared beam of light inside the sensor that detects combustible gases. This sensor technology has an extremely low drain on the battery, allowing the battery to last for years at a time. Non-infrared (pellistor/catalytic bead) combustible gas sensors, which were the only combustible gas sensors available for many years, contained two beads and a filament which needed to heat up to detect gas. That continual heating process used an enormous amount of energy which quickly consumed the battery power of the detector. By the end of a shift, and sometimes even before a shift was over, gas detectors would need to be recharged. The Multi Gas Clip Simple Plus is always charged up and ready to perform.

The pellistor/catalytic bead combustible gas sensor required continual calibrations because it gradually degraded over time due to exposure to typical sensor poisons such as H₂S or silicones. It was also susceptible to breakage when the detector was accidentally dropped and bursting when it was suddenly exposed to a high level of gas concentration. The sensor could become instantly inoperable without the user's knowledge. The infrared combustible gas sensor in Gas Clip Technologies' detectors contains no fragile filament or bead to get poisoned, to break or to burst. It fails to safe, so the detector will notify you immediately if the sensor fails at any time during operation.

The Multi Gas Clip Simple Plus is the simplest to use and easiest to maintain gas detector available today. It comes with a three-year warranty and no hidden service or monthly fees. All detectors are quality tested before they are shipped. Any necessary warranty work is handled quickly and efficiently by Gas Clip Technologies' certified service technicians at no cost to the customer. The service department is second to none. □

For more information, visit www.gascliptech.com.





Portable gas detectors you can count on

MGC Simple & Simple Plus the multi gas detectors that you never have to charge

Our Family of Products



NEW
3 year
multigas

Detect
combustible gases (LEL),
hydrogen sulfide (H₂S),
carbon monoxide (CO)
and oxygen (O₂)

MGC Simple & MGC Simple Plus

- ◆ Two or three year run time with no charging or calibration
- ◆ Detect in oxygen deficient or oxygen enriched environments
- ◆ LEL sensor is immune to sensor poisoning
- ◆ Fails to safe
- ◆ Simple, one button operation
- ◆ Logs data at one second intervals whenever gas is detected
- ◆ 100% Quality control tested
- ◆ Full two or three year warranty



Multi Gas Clip

The portable multi gas detector that can run continuously for two months on one charge due to advanced infrared sensor technology. Detects combustible gases (LEL), H₂S, CO and O₂.

Multi Gas Clip Pump

Compact, light-weight, handheld/wearable multi gas detector with internal pump draws from 75 ft. & runs for an average of 52 hours on a single charge. Detects combustible gases (LEL), H₂S, CO and O₂.



Single Gas Clip

Eliminate downtime with our ultra-reliable portable gas detector. Detects H₂S, CO or O₂.



Single Gas Clip Plus

Hibernate mode offers extended life option when detector is not in use. Detects H₂S or CO.



Compatible Docking Stations

Portable, durable 4-bay dock stations quickly bump test, calibrate & log data for up to four detectors at once with the push of a button.



**Single Gas Clip Dock,
Multi Gas Clip Dock,
MGC Pump Clip Dock & MGC Simple Clip Dock**

Thank you for visiting our booth at WEFTEC 2019

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Gorman-Rupp Pumps

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

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

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

Gorman-Rupp has over 1,000 distributors throughout the United States and the world that are qualified to give expert advice on pump selection and applications. If you have

a service problem, a factory-trained distributor is only a phone call away. Our distributors are backed by the fastest parts service in the industry. Gorman-Rupp stocks more than 60,000 pumps and parts and ships 99 percent of them within twenty-four hours so your parts will be there when you need them.



The Pump People®

CONSTRUCTION MARKET

Gorman-Rupp is the leading manufacturer of pumps for the construction market. Offering nearly 3,000 models, we have one of the largest selections of fluid-handling products in the world. We have built our reputation on the workhorses of the construction pump market: self-priming centrifugal trash pumps. These dependable, versatile performers help contractors move

large volumes of water quickly. We also manufacture an extensive line of submersible, diaphragm, and priming-assisted pumps that offer maximum reliability and service life.

INDUSTRIAL MARKET

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

MUNICIPAL MARKET

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





WHEREVER PUMPS ARE NEEDED, GORMAN-RUPP SENDS THEIR BEST.

Keeping flood waters at bay in New Orleans.



After Hurricane Katrina, New Orleans undertook a massive flood control project to ensure that the next major event wouldn't wreak such devastation. To handle the potential water volume, they chose eight H₂O Works™ SAFV mixed flow pumps from Gorman-Rupp's Patterson Pump Company. From municipal and construction to industrial and fire protection, any application that needs a pump can use a solution from one of our family of brands. Wherever life takes you, there's Gorman-Rupp. The high-water mark in pumps.

For more information, contact your nearest Gorman-Rupp distributor or visit GormanRupp.com.

The Pump People®

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NATIONAL PUMP COMPANY / GORMAN-RUPP INDUSTRIES / AMT PUMP COMPANY

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Dedicated to Excellence

For over 50 years, Liberty Pumps has been innovating pump designs in a company culture that cultivates a passion to provide the best service and quality possible to our customers.

As a privately held, family and employee owned US manufacturer, Liberty Pumps has been recognized as a multi-year recipient of the prestigious Inc. 5000 Award, an award granted to the fastest growing privately held companies in the US.

As part of our continued expansion, we are now proud to bring the newest line of US manufactured pumps to the commercial, municipal, and industrial wastewater markets. Designed, built, and backed by the same employee owners that have made us who we are today.

It's what we do. It's in our DNA...



Proudly engineered and
built in the USA!

Liberty Pumps[®]
Engineered **Products**

Liberty Pumps®

Engineered **Products**

Meet the newest line
of wastewater pumps.
Made in the U.S.A.

With over 50 years of manufacturing excellence, multiple awards for growth and the highest reputation for quality and innovation, Liberty Pumps is proud to announce the newest offering of products for the municipal, industrial, and commercial pump markets.

Designed by our talented group of product engineers and built by our dedicated manufacturing team - right here in the U.S.A.

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A Family and Employee Owned Company

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SCHENCK USA CORP.

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

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

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

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

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

global service support structure. With the company's recent acquisition of Test Devices Inc., of Hudson, Massachusetts, it has expanded its capacities in the spin testing and balancing services areas.

The company provides production, sales and servicing of balancing, filling, assembly and test systems, vibration and monitoring systems as well as accompanying services for the automotive industry and their suppliers, for the electrical industry, turbomachinery, general industries, and aviation and space.

In order to maintain its current role as a market and innovation leader in these fields, the company is dedicated to the following points:

- Thoroughly understanding customers' needs and exceeding expectations through partnership interactions
- Ensuring high quality by continuously improving the effectiveness of the company's processes, products and services in accordance with its quality management system (QMS)
- Contributing to the global success of SCHENCK by observing and proactively anticipating market developments
- Ensuring a safe workplace for the company's employees and visitors
- Complying with laws and regulations applicable to the company's operations
- Treating vendors fairly in partnership arrangements
- Creating a rewarding and challenging environment of integrity and ethics



- Constitute a positive environment, where the company encourages internal improvement suggestions

HM-Series Machine Advantages at a Glance

HM-Series machines are designed to:

- meet most balancing requirements in single-unit or in high volume production
- solve many horizontal, hard-bearing balancing tasks
- be fitted to many individual applications because of its modular design
- be well suited for the industrial work in a repair shop due to their sturdy construction
- make fast and accurate balancing possible due to permanent calibration
- have a measuring sequence with digital measured value processing that makes them stable
- enable balancing of a large spectrum of rotors with variable rotor support and adaptable drive
- offer a comprehensive safety package for the protection classes B and C, which will protect operating personnel

SCHENCK USA CORP.

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We are SCHENCK USA

- AUTOMOTIVE FLUID FILL



- BALANCING



- SPIN TESTING



- APPLIANCE FLUID FILL



- TESTING - END OF LINE



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Smith & Loveless

EVERLAST® Wet Well Mounted Pump Stations: A Better Way to Pump—and Prime

Smith & Loveless above-ground EVERLAST® Wet Well Mounted Pump Stations strike the perfect balance between cost-effectiveness, reliability and operational efficiency for municipalities, private developments, and businesses transferring small-to-medium sized flows of wastewater.

With all pumping equipment, valves, and controls immediately accessible at ground level, these systems are more convenient and cost-effective to operate than traditional submersible pumps. These packaged stations arrive pre-assembled with all equipment installed on a common base and a quick-access enclosure, allowing quick and easy installation on the wet well after basic suction pipe and electrical connections were completed.

Immediate and safe ground-level access to the pumping equipment means these systems significantly reduce the time and personnel required to perform regular O&M. Confined space entry and associated requirements are virtually eliminated, including permitting, harnesses, gas monitoring equipment, and other OSHA and Class 1 Division 1 requirements.

Routine tasks like pulling a pump to change a seal or impeller can be completed in minutes by a single operator, without the use of outside contractors or pricey pump maintenance centers. This contributes significantly to lower S&L EVERLAST® parts and O&M costs when compared to submersibles—documented as much as 50-plus percent—and long service life.

Naturally, operating a pumping system above the liquid level requires priming assistance. There are a variety of ways this can be achieved—including via liquid or compressed air assistance—but S&L's EVERLAST® sets itself apart from other "self-primers" with a proprietary vacuum-priming system that is more energy-efficient, safe, and serviceable.

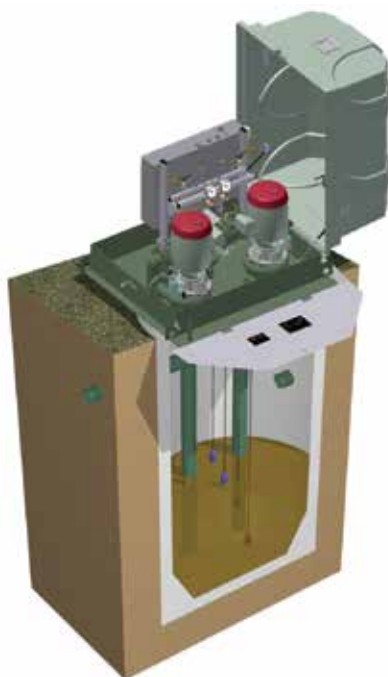
Self-priming pumps are typically horizontal end-suction centrifugal pumps that use internal recirculation within the pump in order to achieve prime. After water fills the volute, the impeller will turn and flow is directed through an ever-increasing channel into a discharge chamber inside the volute casing. There, the water and air separate. The heavy water falls back down into a recirculation port while the air is evacuated. Overall, priming can take several minutes.

Rather than priming themselves, however, S&L EVERLAST® pump stations rely upon a proprietary-yet-simple ancillary vacuum priming system comprised of three basic components: a prime sensor, a solenoid valve, and a separate 1/8 horsepower vacuum pump. The vacuum pump turns off when the prime sensor senses sufficient liquid in the volute. From a totally non-

primed condition, the system primes the pump within sixty seconds under standard rated conditions. Once the centrifugal pump is primed, it is designed to stay primed indefinitely.

Despite being separate from the actual centrifugal pump and requiring a separate vacuum pump, the vacuum priming process is generally more efficient than self-priming because the self-priming pump motor must generate the priming action. For example, a 15 horsepower self-priming pump may utilize 5 horsepower simply for the priming cycle compared to just 1/8 horsepower of the vacuum pump. Thus, the need for self-primers to both prime and pump increases the energy required to prime while lowering the overall operating efficiency. Compared to vacuum-primed pumps, the overall difference in wire-to-water efficiency can be as much as 20-25 percent, which can mean hundreds to thousands of dollars per pump station in annual savings when compared side-by-side.

Operating inside every EVERLAST™ Pump Station are proprietary STAR ONE™ Non-Clog Pumps, each designed to meet the 10 States Standard for passing three-inch solids. These pumps—with their exclusive oversized stainless-steel pump shafts, oversized bearings, and bronze seal housings—deliver the industry's longest service life and high efficiencies. The larger diameter of the shaft provides increased rigidity, while its stainless-steel composition eliminates the possibility of rusting, one of the leading causes of eventual pump failure for wastewater solids handling pumps. For applications experiencing a high volume of pump clogs caused by wipes, rags, stringy or unusual trashy items, the X-PELLER® Impeller is available. It easily passes these types of items with its proprietary mono-port design. ♦



Packaged EVERLAST® Stations arrive pre-assembled with all equipment installed on a common base and a quick-access enclosure, allowing quick and easy installation on the wet well after basic suction pipe and electrical connections are completed.

You'll Retire Before It Does.



EVERLAST™

Wastewater & Stormwater Pump Stations

Above-Grade Pump Station

Access Offers You the
Easiest & Safest Pump O&M
for Longest Pump Life &
No Confined Space Entry



Featuring Smart Time-Saving Components

XPELLER

Super Non-Clog
Single-Port Impeller



RapidJack™

Quick-Connect Check Valve



LAST

Stainless Steel
Baseplate Conversion
with 25 Year Warranty



S&L EVERLAST™ Wet Well Mounted Pump Stations offer you the easiest and safest O&M without confined space entry, non-clog pumping, long-lasting reliable performance, and when the time comes... simple life-extending retrofits. Backed by the longest warranty protection in the industry, EVERLAST™ pump stations are built to last—so long that you will retire before it does! **But don't wait. Specify EVERLAST™ today.**

CALL 800.898.9122



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Smith & Loveless Inc.

TECO-Westinghouse Motor Company

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

In recent advancements, TWMC extended the breadth of products to include the Pro-3200, a next-generation vibration measurement instrument for rotating equipment with anti-friction bearings. An IoT gateway serves as a secure private cloud for Real Time Monitoring, Interactive Data Collection, Diagnostic Analysis and Reporting. With built-in Wi-Fi, this portable device is accessible simultaneously by up to twenty mobile devices via a free mobile app for iOS and Android.

Forthcoming exciting products include multiple permanent magnet/ ECM motors and the offering of packaged drive solutions for fan and pump applications. TWMC maintains stock of 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, providing an alternative solution to the standard pump motor. For optimal performance, use them with a reliable F510, low voltage Pump and Fan VFD. Customers save as much as 50 percent on power by reducing motor activity by 25 percent!

Scalable, modular medium voltage VFDs with advanced two-phase liquid cooling are manufactured in the US with NEMA 1 and NEMA 3R enclosures and can be easily paired with horizontal, Quick Ship motors from 800 to 3,000 horsepower that are carried in stock. TWMC also carries a product line of gearing solutions that offers customers inventory saving designs that are industry leading in efficiency and cost effectiveness.

TWMC continues to evolve to better serve customers' needs by providing motor and drive solutions that optimize efficiencies. 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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 - 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
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- ✓ Westinghouse Legacy Driven by TECO Experience
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Vaughan

Your Source for Reliable Chopper Pumps and Systems

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

Our Commitment to You—Reliability

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

We Chop—and Mix—It All

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

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



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

Why You Should Care That We're Family Owned and Made in the USA

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

A History of Continual Improvement Benefiting Our Customers

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

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

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

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



VAUGHAN COMPANY

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IT'S PRIME TIME

Simplify your set-up and reduce your maintenance costs with the Vaughan Self-Primer Chopper Pump. These pumps are designed to handle the toughest solids, while providing a cost-effective maintenance alternative to wet-pit pump installations. Self-primer pumps bring the same Vaughan Non-Clog Performance Guarantee to a maintenance-friendly chopper pump design.

The only Self-Priming Chopper Pump in the World.

- Eliminates use of comminutors prior to pumping
- Externally adjustable clearances
- Removable rotating assembly
- Expedite pumps and parts delivery
- Written performance guarantee
- Superior life cycle costs
- Hardened wear components
- Trial program available upon request



Contact us today to see why this versatile, reliable pump is perfect for your next project.

Ask about our on-site chopper pump demonstration.
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Yaskawa The Yaskawa Quality Experience



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

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

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

YASKAWA

U1000 INDUSTRIAL MATRIX DRIVE

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

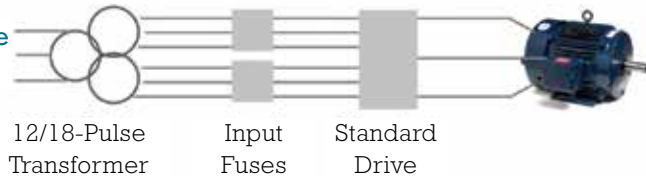
Enjoy low harmonic distortion and regeneration in a space-saving design, completely without the need for additional components.

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



CONVENTIONAL LOW HARMONIC SOLUTION

12/18 Pulse System

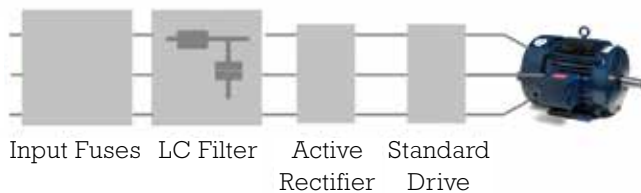


U1000 INDUSTRIAL MATRIX DRIVE



CONVENTIONAL LOW HARMONIC & REGENERATIVE SOLUTION

Active Component System



3 WIRES IN, 3 WIRES OUT

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

Prime Mover

The U1000 Industrial Matrix Drive



Yaskawa U1000 Industrial Matrix Drives are a proven and reliable pumpjack motor control solution. Whether on grid or generator power, the U1000 keeps your prime mover pumping even in pump-off conditions with its inherent regenerative capability.

Make the complex simple. Our U1000 Industrial Matrix Drives are the smallest, fastest to commission, low harmonic, regenerative drives on the market.

Want reduced energy costs and lower harmonics? Call Yaskawa at 1-800-YASKAWA today.

IT'S PERSONAL



For more info: <https://go.yaskawa-america.com/yai1347>

Yaskawa America, Inc. Drives & Motion Division 1-800-YASKAWA yaskawa.com

YASKAWA

Anue Water Technologies

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

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

PROPRIETARY SYSTEMS

At the core of our designs, Anue Water Technologies focuses on the delivery of technology that is highly effective, sustainable, and provides cost-savings. Our FORSe 5 system for odor and corrosion control in wastewater collection systems use onsite oxygen and ozone generation, providing a truly sustainable approach to lift station or force main

treatment. As well, our EnviroPrep™ and HydroSpear™ systems provide both cost savings and a sustainable solution for fat, oil, and grease (FOG) remediation in wastewater lift stations. Users can automate lift station clean-out and benefit from lower maintenance costs and consistent lift station operation.

ENVIRONMENTALLY SUSTAINABLE SOLUTIONS

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

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

ANUE WATER TECHNOLOGIES

5123 S. Royal Atlanta Dr., Tucker, GA 30084

706.727.2683

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Carver Pump

Eighty Years of Pump Experience

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

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

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

CUSTOM-ENGINEERED SOLUTIONS

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

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

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

THE LATEST TECHNOLOGY

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

AFTERMARKET SUPPORT

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

ENGINEERED FOR PERFORMANCE



CRUDE OIL TRANSFER (MAXUM OH1)



PRODUCED WATER (API MAXUM OH2)



LACT (RS)

At Carver Pump, we do more than make pumps.

We solve problems before they develop.



CARVER PUMP

Built for purpose

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

Check-All valves are engineered for silent operation. They close quickly and smoothly to eliminate hammer noise. They are designed

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

With many styles available, Check-All Valve provides check valves for practically every service application. Valves are offered with metal-to-metal or soft seats in sizes ranging from 1/8-inch NPT to 20-inch flange connections. Pressure ratings are available from full vacuum to 10,000 PSI. Standard or exotic materials are

available and you can choose from a wide variety of spring settings and seat materials for any valve. Most options are available with fast delivery. Specially designed valves are another option that Check-All Valve performs on a regular basis. Check-All Valve Mfg. Co. is staffed to supply you with a quality product as well as personal technical services. ♦

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VALVE MFG. CO.**

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SILENT OPERATION!

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Dickow

Dickow specializes in supplying centrifugal pumps with a seal less magnetic coupling. Our model NMWR/ NMWB are specifically designed for high temperature heat transfer fluids (hot oil) up to 750 F without any water cooling. The series NMWR/ NMWB are sealless with no shaft duct to the atmosphere. The containment shell forms a closed system with a hermetically sealed liquid end replacing double acting mechanical seals with external fluid reservoirs and necessary control equipment. Additionally, the containment shell is not used as an additional bearing holder meaning no dynamic stress occurs.

As in all Dickow sealless pumps the magnets are permanent rare-earth Samarium Cobalt with unlimited life. The driven rotor is completely encapsulated as to not come into contact the pumped liquid. Power is transmitted through the containment shell by a bank of external magnets. The inner and outer magnets are locked together by magnetic forces and operate as a synchronous coupling. The inner magnet transmits the power to the impeller at the same speed as the motor.

The bearing housing has been designed as a cooling devise with cast on fins that dissipate heat to the atmosphere. This keeps the temperature inside the containment shell below the system temperature in the volute casing.

The pump shaft is carried in the wetted end by pure Silicon Carbide (SiC) with a diamond layer that allows for limited dry running. The SiC components are elastically fitted in their holders which eliminate any concern of thermal shock and stress at high pumping temperatures. SiC is highly resistant to wear and corrosion.

The NMWR is long coupled. The drive shaft is carried in generously dimensioned oil lubricated antifriction bearings that are rated for 25,000 hours of operation. The oil bath is protected against the atmosphere and separated from the magnetic coupling by two

labyrinth seals. The level of the oil is controlled by a constant level oiler and a site glass.

The NMWB is closed coupled eliminating the requirement of the oil

bath and bearings. Additionally, the closed coupling shaft misalignment issues. The maximum capacity of these pumps is 4,000 gallons per minute with differential head 500 feet. □

DICKOW Pump Company

Dickow Pump Company has manufactured centrifugal pumps for more than 75 years, always with an emphasis on precision, longevity in service, and hydraulic efficiency. Today we offer the broadest and most technologically advanced range of magnet drive pumps, and have solid in-plant experience

In fact, Dickow ranks first among all sealless pumps in customer satisfaction and has the longest interval between required maintenance. Local representation? The Best. ISO 9001 approved? Of Course.

Dickow Pumps don't sit on the shelf – although parts are there when you eventually need them – because Dickow Pumps are engineered products for optimum performance in your specific application.

Because Performance is Everything.

Magnet Drive Pumps



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Acc. to DIN 24256/ISO 2858 or ANSI/ASME
B73.1M-1984



KML/KMB
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• Efficient, economical selection



KMB
• Horizontal Centrifugal Pump
• Close Coupled with standard electric motor



SCM
• Multi-stage, self-priming, side channel pump

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Dickow Pump Company

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www.dickow.com



Griffco Valve, Inc. Chemical-Feed Accessories

With more than 370,000 back pressure and pressure relief valves in the field since 1992, Griffco Valve has a proven record of providing quality chemical feed accessories at competitive prices. The company's new Pulsation Dampeners offering has expanded to include metallic and non-metallic dampeners in up to 320 cubic inch sizes. The new Fusion Dampener combines the proven technology of Griffco back pressure valves and pulsation dampeners into one accessory.

Griffco now produces a complete line of accessories to complement all chemical feed systems from storage tank to injection point. Products are sold worldwide through a distribution network, private label agreements, and OEM accounts.

Proprietary arrangements with major pump manufacturers mean that Griffco is behind the scenes delivering, supporting, and ensuring proper pump and system operation for end-users.

The company maintains optimal inventory for quick turnaround on shipments to pump manufacturers, processing plants, and municipal facilities. Certifications include ISO 9001, CRN, NSF and CE. All products are backed by a one-year warranty.

Personal service and expertise are the hallmarks of the talented and dedicated professionals employed at Griffco. The entire staff embraces its commitment to maximum customer satisfaction. During business hours, a person will always answer the phone.

The Griffco team will assist in product selection, including recommended performance specifications and materials of construction to meet specific applications. Full technical support is offered, including three-dimensional CAD drawings that are available on request or can be downloaded from the website.

Quotation preparation, project submittals, and custom requests are handled quickly and efficiently. Griffco Valve also has an on-time delivery record of 98 percent. ♦

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The Calming Effect of Griffco Pulsation Dampeners



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www.GriffcoValve.com

ISO CERTIFIED • MADE IN USA

Hydra-Tech Pumps

Hydra-Tech Pumps, a USA manufacturing company, located in the northeastern part of Pennsylvania, has been designing and building pumping solutions since 1977, giving them over forty years of experience and expertise. As a manufacturer of hydraulically driven submersible pumps and hydraulic power units, Hydra-Tech offers high quality, low lifetime cost products for a variety of pumping applications. Our systems are designed to cover the widest range of applications including construction, OEM, municipal, petrochemical, mining, marine utilities, and government customers.

There are several different types of pumps designed and manufactured by Hydra-Tech, including slim line, general purpose, axial flow, sand/slurry, solids handling, shredder, and specialty pumps. Many models

are produced in various materials of construction to handle the most difficult job conditions.

To compliment these pumps, Hydra-Tech also designs and manufactures hydraulic power units which include open, sound attenuated, and electric drive designs.

Pairing Hydra-Tech's submersible pumps with their standard line of hydraulic power units insures that your pumping system will operate with maximum performance, efficiency, and reliability.

With Hydra-Tech Pumps you can expect:

- No shock hazard
- Easy setup, no priming pumps
- No suction hose failures
- Field serviceability
- Pound for pound lighter, stronger,

and more efficient pump than comparable electric submersibles

- Low carbon footprint
- Private labeling and custom colors
- Available to answer the phone and offer support before and after the sale

In addition, Hydra-Tech offers solutions to many unusual pump or hydraulic power unit requirements. From customization for specific purposes, custom hydraulic circuits or unique environmental conditions to simple color matching, we can build the right product for you. For more information, please contact us at www.hydra-tech.com, email htpump@hydra-tech.com, or phone 570.645.3779. □



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JWC Environmental

Muffin Monster® Grinders

IN-LINE MUFFIN MONSTERS

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

THE 30K MUFFIN MONSTER

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

THE 40K MUFFIN MONSTER

The big brother to the 30K, the 40K Muffin Monster is the even stronger grinder offering with robust 2 ½-inch (64 millimeter) hex shafts, larger cutters. It is equipped with a standard 10 horsepower (7.5 kW) drive motor. The 40K is for the highest solids loading environments like prisons and combined flow sewer pumps stations as well as industrial operations like oil sludge systems.

With flow capabilities up to 6,860 gallons per minute (1,560 cubic meters per hour), it is a perfect fit for high flow applications and will excel in biosolids systems for larger treatment plants.

POWERFUL CUTTING FORCE

Muffin Monster® grinders from JWC Environmental® cleanly and easily shred through wipes, rags, plastics, and other waste materials, preventing costly pump problems and sewer back-ups. The units feature a low-speed, high-torque design that keeps waste flowing freely. The units are available with a variety of cutter configurations, including the patent-pending Wipes Ready® cutter, to shred material down to

the appropriate size. The design quickly adapts to existing pipeline and in-channel installations with little modification. ♦



Lovato Electric Where Technology Meets Tradition

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

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

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

Manual motor protectors, contactors, overload relays, electro-mechanical starters, softstarters, variable speed drives, pushbuttons and selector switches, signal towers, limit switches, cam switches, disconnect switches, miniature circuit breakers, time relays, protection relays, level control relays, general purpose relays, micro PLCs, power supplies, battery chargers, metering, automatic power factor controllers, automatic transfer switch controllers, engine and




generator controllers, supervision, and energy management software are the types of products and solutions designed and produced by Lovato Electric.

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

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

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

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Milton Roy, LLC

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

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

capacity-control options for the specific requirements of your application. More than a half-century of experience combines with advanced pump-engineering technologies to give you continuous operation with the longest possible time between scheduled maintenance.

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

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

PRIMEROYAL® Metering Series

Accuracy. Control. Power.

PRIMEROYAL® Metering Series

- API 675 compliant
- Critical chemical dosing
- Modular design to configure to the application precisely
- Variable eccentric drive for precise control of the pump's delivery rate
- Ultimate performance on minimal footprint

Performance data:

- Flow rate up to 4,356 gph per head
- Pressure up to 15,000 psi



Visit www.miltonroy.com to find your local representative and learn more information.

 **MILTON ROY**
an Accudyne Industries brand

Mueller Water Products

Mueller Water Products, Inc. is a leading manufacturer and marketer of products and services used in the transmission, distribution and measurement of water. Our broad product and service portfolio includes engineered valves, fire hydrants, pipe connection and repair products, metering products and systems, leak detection, and pipe condition assessment. Since 1857, Mueller has been helping municipalities increase operational efficiencies, improve customer service and prioritize capital spending demonstrating why Mueller Water Products is Where Intelligence Meets Infrastructure®.

When you invest in water infrastructure, smart really matters, from the products themselves to the people behind them. Using rock solid materials and ground-breaking technology, our products and services are designed and engineered for the long run. That means lasting value for the communities and contractors who choose solutions offered by the Mueller Water Product brands—value that ultimately can translate into cost savings.

Mueller brands provide:

Flow Control: Mueller offers a full line of products for controlling water safely and efficiently across distribution, treatment and civil works systems, including valves and control systems. And to keep that system working longer, we offer the most reliable high-quality connect, repair and restraint products on the market.

Metering and Communications

Technology: Smart metering with the MiNet® system allows municipalities to enhance how they serve the community.

Fire Protection: With safety built into every Mueller solution, all of our fire protection solutions are compliant with Underwriters Laboratories and Factory Mutual requirements.

Pipeline Management

Technology: Enables our customer to assess and optimize water networks using condition assessment and leak

correlation tools, as well as permanent pipeline leak detection systems. □



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PERFORMANCE
UNDER PRESSURE.**

Mueller Water Products is the one company that has solutions to address pressure management challenges from every angle – detection, monitoring, control and repair.

To learn more visit www.muellerwp.com/brands.

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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.

Recently, Proco was proud to receive NSF/ANSI Standard 61 certification on its Rubber Expansion Joints and ProFlex™ Check Valve product line. NSF/ANSI Standard 61 standards were developed by the National Sanitation Foundation (NSF) and the American National Standards Institute (ANSI) to establish stringent requirements for the control of equipment that comes

into contact with potable water or products that support the production of potable water.

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, Vice President of Sales and Marketing, is now serving as president of the FSA 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. □

Trust the PROCO people.

Our dedicated team is the reason we're the global leader in the design and supply of quality rubber check valves, expansion joints and other reliable piping products.



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Scalewatcher

Developed and patented in the Netherlands by Mr. Jan P. de Baat Doelman, Scalewatcher technology was introduced to the European

market in the 1980s. With immediate market success, Mr. Doelman brought the technology to the United States and applied and

received a patent in 1991. From that moment on, Scalewatcher North America has been on the forefront of environmentally-sensitive water treatment. Located in Oxford, Pennsylvania, Scalewatcher North America continues to lead the industry in descaling products that do no harm to the environment.

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

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

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

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

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

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

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- Saves irrigation water
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CCI Piping Systems

CCI Piping Systems has been protecting your infrastructure since 1995, proving itself time and again with innovative solutions, creative ideas, and a firm commitment to our customers. It is our belief that a high standard of quality in the manufacture and distribution of pipe protection products can be achieved reliably, honorably, and profitably. We also believe that in order to truly achieve success, we must continue to deliver the most up-to-date technology at the most competitive prices in order to assist our customer in meeting their product and industry needs.

Quality products manufactured by CCI Piping Systems include:

- Casing Spacers and End Seals
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- Pipe Supports
- ArmorCote™ U-Bolts
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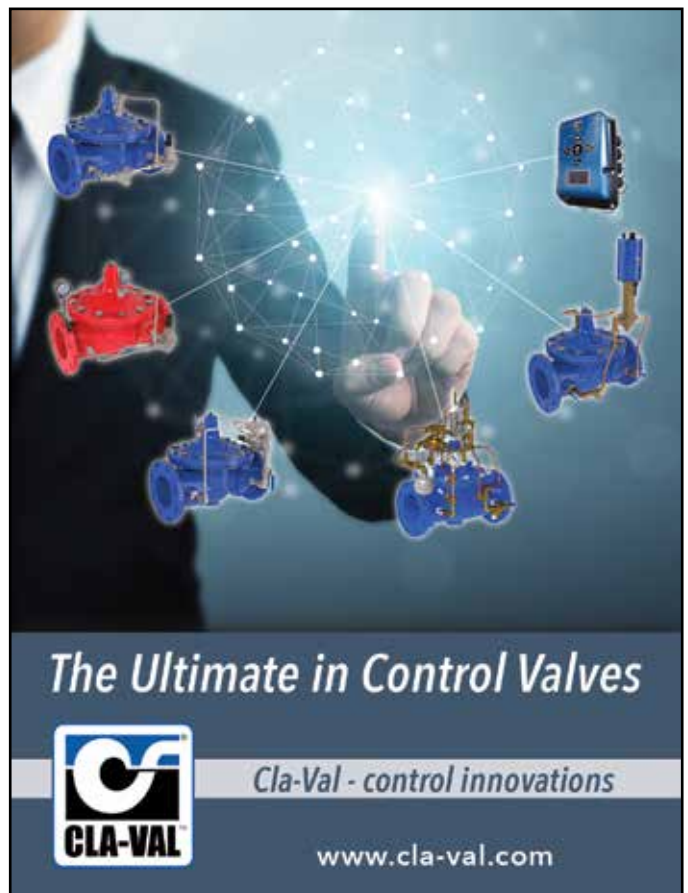
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Cla-Val

Since 1936, Cla-Val has produced the world's highest quality automatic control valves for a diverse array of industries. Cla-Val has continued to strengthen its operational and customer service capabilities around the world by enhancing product lines and building state-of-the-art production facilities and warehouses in Canada, Switzerland, France, the United Kingdom, and New Zealand.

With all our major locations having dedicated training centers, our team of sales personnel and factory authorized sales agents are able to provide exceptional industry expertise throughout the world. Our aggressive research and development programs have resulted in the design and production of technologically advanced electronic and hydraulic control systems that consistently meet the challenges of increasingly complex and diverse applications. ♦

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The Ultimate in Control Valves

CLA-VAL

Cla-Val - control innovations

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Continental Pump Co.

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

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

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

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ULTRAPUMP

2000 Series

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We offer custom base units designed to fit your space.

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Graphite Metallizing Corporation

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

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

GRAPHALLOY can be the solution to the toughest bearing, bushing, thrust washer, cam follower, or pillow block bearing design problem. It is available in over 100 grades with specific properties that meet a wide range of engineering solutions and specifications. FDA acceptable grades of GRAPHALLOY are available for food contact equipment. NSF® International has certified two grades of GRAPHALLOY material for use in municipal well pumps and water treatment plant applications. ◆

Visit us at www.graphalloy.com or call 914.968.8400.

Run Dry and Keep on Running

Pumps fitted with GRAPHALLOY® wear parts survive upsets.

- Self-lubricating
- Non-galling
- Won't swell
- Corrosion resistant
- Dimensionally stable
- Improved efficiencies
- -400°F to 1000°F (-240°C to 535°C)

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Greyline Instruments Inc.


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

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

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

GREYLINE INSTRUMENTS INC.

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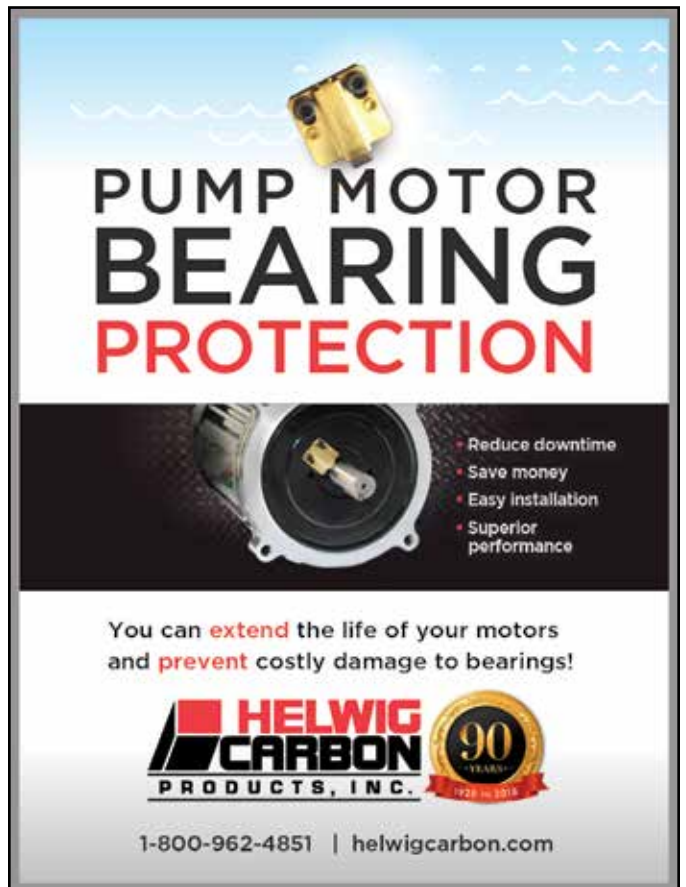
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Helwig Carbon Products

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

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



PUMP MOTOR BEARING PROTECTION

- Reduce downtime
- Save money
- Easy installation
- Superior performance

You can **extend** the life of your motors and **prevent** costly damage to bearings!

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Hoosier Pattern

Hoosier Pattern prides itself on being innovative and consistently raising the bar within the industry while maintaining the level of quality they are known for. In 2013, Hoosier was the first top service center to own and operate their own 3D sand printer in the United States. As of December 2019, Hoosier will be the only service provider to own and operate three 3D sand printers under their roof along with maintaining a fourth printer in their facility as well.

Customers are the driving force behind everything Hoosier does and this expansion is no different, enabling Hoosier to take on jobs that may have exceeded capacity restrictions before. The current turnaround time for printed sand of ten days will remain standard; moreover, the possibility to turn printed parts around sooner—if needed—for customers has greatly increased.

On top of the addition of the fourth sand printer in house, Hoosier has recently added a 5-axis machining, three Doosan DNM 650s, two Johnford Bridge mills, and, most recently, a robotic milling cell for machining sand. All of these additions allow Hoosier to maintain current customers as well as take on new customers with more complex projects. ♦

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Fast Turnaround on Pump Components
with printed sand molds and cores

- True Design Freedom
- Reduced Lead Times
- Print Directly from CAD Files

Integrated Foundry Solutions

COMING DECEMBER 2019
A 4th (3rd HPI owned) sand printer in house



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InfoSight

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

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

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

InfoSight tags make asset identification and tracking simple. ♦



INTRODUCING...

TwinTag™



InfoSight LDAR TwinTags offer a flexible, cost-effective way of meeting the EPA's Leak Detection and Repair requirements.

LubeTag™



InfoSight's labeling system for lubrication ensures that the correct type of lubrication is used on the proper pieces of equipment.

Available in 8 colors plus white - preprinted to your specifications or blank for printing on-site.



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