

2021 Top Products

Whether it's at product launches, factory tours, or trade shows, the staff at MPT is afforded an up-close look at the newest offerings for our industry, and each December, we look back on the year that was and present our choices for the Top Products spanning the industrial pump and rotary equipment markets.

In the pages that follow, MPT shares its selections for the products that speak to the industry's needs for efficiency, reliability, and innovation. Each of our Top Products was chosen through submissions from our staff, advertisers, and readers like you. The products range from large multinationals you're likely familiar with to smaller, regional suppliers worthy of your attention.

Regardless of their size or reputation, they all offer value you can take into the new year. Enjoy!

AW-LAKE

EDGE Flow Electronics

Built upon a foundation of scalability, flexibility, and stability, the EDGE family of flow meter electronics provides you better access, understanding, and control of your process. The innovative signal processing, increased accuracy from linearization, flexibility to choose the output you need (pulse, analog, or Modbus), and incredible ease of use make AW-Lake's EDGE products the smart choice to use on your positive displacement or turbine flow meters.

Operators can remotely configure, set parameters, fine-tune adjustments, and troubleshoot the flow meter remotely using a mobile device. The mobile application also supports basic scaling and advanced functions, allowing for remote correction of non-linear flow meters to keep a linear analog output. Using the mobile application, users can turn a smartphone or tablet into a wireless flow monitor that works in the palm of their hands!

EDGE Local Mount Sensor:

- Single user interface and tools with Bluetooth app and PC Toolkit for easy setup
- Modbus outputs for faster, higher resolution data transfer to HMI's or smart controllers for data recording
- Data storage with MicroSD card or pull through mobile or toolkit app
- Linearization allowing wider flow range for all meters

RT-50 Battery, Loop, or DC Powered Transmitter:

- Rugged, weather-tight enclosure and easy-to-read LCD display
- Bluetooth for easy setup and monitoring via mobile app
- List style menu and quick access buttons for easy programming
- Multiple power options include battery, loop, and DC

FAC-R DIN Panel Mount Converter:

- Bluetooth for easy troubleshooting and setup via mobile app
- This device acts as an economical high-speed PLC counter or multimeter
- Ten-point linearization table improves the output accuracy
- Excellent linearity and temperature stability

The EDGE family of sensors can be used with AW-Lake's Next-Generation Gear Meter Series that offers greater efficiencies in operation with tighter tolerances, higher resolutions, higher standard pressure ratings (6,000 psi), improved accuracy, and wider turndowns (100:1). These meters were designed with high-performance materials that offer high chemical resistance to operate safely in abrasive or filled fluids while providing a long service life of more than thirty years in the field, ± 0.1 percent repeatability, and ± 0.5 percent standard accuracy. ■

For more information, visit www.aw-lake.com.



ATLAS COPCO

PAC Flow Series Pumps

At Atlas Copco, we are driven by innovation. Our new PAC Flow Series pumps are designed with three key features in mind: performance, technology, and serviceability that bring you best-in-class performance.

The PAC F66 and F88 feature an enclosed impeller that can pass a 3-inch spherical solid, meaning when it comes to flow and performance, it can get the job done. Our carefully thought-out design brings you up to 82 percent efficiency. Our priming system is powered by a diaphragm vacuum pump that delivers 50 cfm, meaning you get a faster prime and can start pumping quicker.

When crafting our Flow Series, we kept the same design components as other Atlas Copco pumps. Our polyethylene fuel tanks have a massive advantage against steel fuel tanks that prevent any oxidation within the tank, thus increasing the lifetime of the fuel system.

Another technological advantage within the PAC Flow range is our QR code. Scan the QR code on your mobile device to take you to Power Connect, connecting you with relevant machine information and documents, all in the palm of your hand.

One of the greatest features of the PAC Flow pumps is the ease of serviceability. We designed these units with our patented swing-door solutions that give you access to the impeller and the heart of the pump within minutes. Two additional features that enhance serviceability are our semi-cartridge seal design and link belt. Both actively reduce your mean time to repair, so you can continue your operations quicker and more efficiently.

With flows up to 3,950 gallons per minute and heads to 200 feet, you can easily transfer and dewater in quarry and mining applications, complete sewer bypasses, and provide diesel backup systems for sewer lift stations. No matter the application, the Atlas Copco Flow Series can get the job done. ■



For more information, visit www.atlascopco.com/en-us/construction-equipment.

SIGNALFIRE WIRELESS TELEMETRY

Ranger Wireless Telemetry System

Measuring and monitoring when you need it, how you need it, and where you need it has never been this easy. No matter your industry, if you need to monitor parameters like pressure, flow, temperature, and level, or equipment like compressors, pumps, generators, and more, the SignalFire Ranger wireless transmitter provides flexible, secure, real-time connection in a user-friendly package. Once the Ranger transmitters are connected to your measurements, you can immediately track conditions, troubleshoot problems, change monitoring parameters, receive alerts and alarms, and take action from any web browser. No software installation is required.

The Ranger's inputs are suitable for current, voltage, HART, Modbus, SDI12, frequency, and even relay output. Battery-, solar-, or DC-powered, the Ranger transmitter powers a variety of IoT sensors to transmit their measurements using the latest LTE-M CAT M1 cellular networks, providing real-time data that empowers you to optimize your operations and ensure compliance with environmental and industry regulations—or simply to have peace of mind, knowing you have insight on what you need to monitor.

Modular and scalable, the SignalFire Ranger platform can meet all your IoT sensor data transmission needs. SignalFire engineers will work with you to develop a solution specific to your systems and environment, powering and connecting sensors in any location to your existing private cloud or the SignalFire cloud. The modular, plug-and-play nature of the system provides flexibility as well as time and cost savings, allowing room for your network to grow and change as you add or change sensors and as wireless technology advances. The Ranger firmware can also be updated over-the-air to support new features or sensor types creating a future-proof solution—so you spend less time in the field and more time in control.

This IoT industrial monitoring solution utilizes the latest MQTT/Sparkplug technology available so it can easily be integrated into our cloud or your cloud application. Because it is cloud-based, you have 24/7 access to your data which provides complete awareness and enables you to make timely decisions for your operations.

SignalFire Wireless Telemetry: We make things easy for you. ■

For more information, visit www.signal-fire.com.



SUNDYNE

ANSIMAG Seal-less Magnetic Drive Pumps

ANSIMAG seal-less magnetic drive pumps are specifically designed for chemical processing applications. All wetted parts are molded ETFE components that can safely handle a wide range of corrosives and solvents without corrosion. A patented, fully encapsulated mag drive hermetically seals the inner magnets to isolate them from process fluid and maintain magnet integrity for the life of the unit. A Kevlar-fiber reinforced vinyl ester shell delivers unprecedented reliability.

During the last several months, ANSIMAG pumps have been used in a wide range of prominent applications. They're used to pump the harsh chemical polymers that coat the electrodes for electric vehicle lithium-ion batteries. ANSIMAG pumps are used by COVID-19 vaccine manufacturers to pump the coolants used in freeze driers. And ANSIMAG pumps are used by Hydrogen Fuel Cell producers to pump caustic chemicals into electrolyzers to adjust the pH of water used to generate green hydrogen.

ANSIMAG pumps are more energy-efficient than mechanically sealed pumps. An innovative rear casing generates no eddy currents, thus eliminating heat generation and reducing energy costs. Because ANSIMAG pumps do not have seals—there are no leaks, no emissions, and no costs related to seal maintenance.

ANSIMAG benefits include:

- **Zero leakage:** Seal-less design and a single, fully-contained O-ring eliminates possible leakage.
- **Chemically resistant lining:** Carbon fiber reinforced ETFE is resistant to most chemicals.
- **Secondary containment:** Lined Kevlar fiber/epoxy offers unsurpassed pressure handling capability.
- **Corrosion protection:** Powder coat exterior is more durable and resistant than epoxy-based paints.
- **Durable construction:** Ductile iron exterior is designed for heavy-duty chemical applications.
- **Magnetic drive:** Hermetically seals the inner magnets, isolating them from the process fluid.
- **Fully-encapsulated inner drive:** Provides unsurpassed resistance to chemical attack.
- **Easy service:** Nine wetted parts and a back pull-out design enables service without breaking the wet end.
- **Small footprint:** Close-coupled design offers quiet operation. ■

For more information, visit
www.sundyne.com/products/ansimag-pumps.



VAUGHAN COMPANY

THE VAUGHAN CONDITIONING PUMP

The Vaughan Conditioning Pump is a Vaughan submersible chopper pump mounted on a portable stand and fitted with a high-velocity mixing nozzle. The Conditioning Pump recirculates the contents of the wet well, chopping and mixing to produce a homogeneous mixture that is more easily pumped out. Floating mats are removed and solids that have accumulated on the floor are re-suspended. As the pump is mounted on a portable stand it can easily be used in multiple applications at a single job-site, facility, or municipality.

APPLICATIONS

- Lift station conditioning
- Influent station/channel conditioning
- Basin conditioning
- Holding tank conditioning
- Digester cleanout/homogenization

When Vaughan created the Conditioning Pump, they designed it to be used in several different scenarios to save you from costly clean out cycles and maintenance.

REDUCE VACUUM TRUCK VISITS

By re-suspending and removing floating solids that have accumulated on the floor, the Vaughan Conditioning Pump reduces—and in most cases eliminates—the need for costly vacuum trucks, saving thousands of dollars each year.

EXISTING NON-CLOGGING PUMPS EXPERIENCE CLOGGING

If the large pumps you are currently using in the station (wet well or dry well) are clogging on solid filled liquid they are trying to pump, it can be a costly endeavor to replace the pumps. Vaughan created the Conditioning Pump to solve this problem at a fraction of the cost. You can put the conditioning pump into the wet well and chew up all of the rags and solids so that the existing pump won't get clogged.

FLOATING LAYER OF GREASE AND DEBRIS ACCUMULATED

Lift stations/collection pits tend to form floating mats that standard lift station pumps cannot pump out. If left unattended, the layer will continue to thicken until you eventually need to call in a vacuum truck to suck off the thick layer. This results in thousands of dollars in maintenance and dumping fees. The Vaughan Conditioning Pump can get rid of unnecessary third-party cleaning cycles, and the unwanted costs that come along with them, by recirculating/conditioning the pit until the mat disappears.

SETTLING SOLIDS ON THE FLOOR OF THE WET WELL OR SUMP

When solids fall out of suspension, they create a “settling layer” at the bottom of the tank, resulting in costly third-party cleanout cycles. The Vaughan Conditioning Pump re-suspends these solids so the duty pumps can actually pump out and remove the solids, and also save you from those costly clean out cycles. ■

For more information, visit www.chopperpumps.com.



BLACOH SURGE CONTROL

SurgeWave™ Transient Monitoring System

Blacoh's patented SurgeWave™ Transient Monitoring System solves the need for industrial and municipal plant operators to detect and record transient pressure events occurring in water, wastewater, oil and gas, and industrial fluid applications. The system is unique in that it employs a system of dynamic pressure transducers and digital technology to monitor piping systems for indefinite periods of time. When a transient such as a pressure surge, pressure spike, or water hammer event is detected, the system activates a high-speed data recorder to record the event 100 times per second. Use SurgeWave to prevent pipe fatigue, breakage, cavitation, and assist in the modeling of corrective actions.

Often, plant operators do not find out about these dangerous abnormalities until much later when it is too late. With this Blacoh SurgeWave™ Transient Monitoring System installed, it will notify designers, engineers, manufacturers, and operators immediately within a few minutes of the event. They can assess pipeline performance, pressure, flow, and pump speed and perform the necessary corrections and maintenance. ■



For more information, visit www.blacohsurge.com.

CHECK-ALL VALVE MFG. CO.

Precision Check Valves

Check-All Valve Mfg. Co. manufacturers a complete line of spring-loaded poppet style check valves. With worldwide service, Check-All Valve serves a wide range of industries including the chemical, petrochemical, biofuels, pharmaceutical, food and beverage, water treatment, and many others. Every Check-All valve is designed and built to perform to exact needs and specifications.

Check-All valves are engineered for silent operation. They close quickly and smoothly to eliminate hammer noise. They function equally well in either a vertical or horizontal position, with proper spring selection. Our space saving design easily fits

into existing line components, which reduces initial cost and installation time. Check-All valves can also be used as low-pressure relief valves and vacuum breakers.

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 flanged 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. ■



For more information, visit www.checkall.com.

CLA-VAL

Model XP2F

The new Cla-Val Model XP2F is an all-encompassing, data acquisition instrumentation package option available now for any Cla-Val control valve. This also has flow calculation data and is a differential pressure-based solution and comes complete with pressure transmitters, a valve position transmitter and flow calculation module. IP 68 rated, 12-24V DC input, four analog inputs, and four analog outputs with the ability to accept additional field instrumentation and retransmit measurements to PLC/SCADA via 4-20mA signals. This will also be supported by a nationwide staff of field and factory personnel to provide trouble-free implementation.

Additionally, the Cla-Val Model XP2F Metering Package is comprised of the X35 Flow Calculation Module, the X117H Valve Position Transmitter, and two X141-PT Pressure Transmitter assemblies. The calculated flow through the main valve can be used for flow indication or flow control, and the flow signal and transmitter signals can be retransmitted as 4-20mA signals.

The Cla-Val Model XP2F is easily retrofitted onto existing valves, has minimal upstream/downstream straight pipe requirements, has a local display with five buttons, easy field calibration and commissioning with no software needed, low maintenance/minimal fluid contact, as well as forward and reverse metering capabilities. ■



For more information, visit www.cla-val.com.

CRANE PUMPS & SYSTEMS

Envie³ Pump Motor

Envie³ high efficiency air-filled motors come without application limitations. These premium efficient motors are designed to run both submerged and dry run and are available with our Barnes and Deming product lines. The envie³ pump motors are available as both Barnes or Deming chopper and non-clog pumps, which feature superior hydraulic performance that is proven by our existing SH product platform. The patent pending closed loop glycol cooling systems allows for stress-free easy maintenance and installation. The envie³ motor platform is engineered to be installed into dry pit and submersible applications. This makes the envie³ a superior pump solution to all existing and new installations, including coastal regions that experience frequent flooding in dry pit applications.

The envie³ motor platform features numerous accessories and installation options including horizontal and vertical configurations. The horizontal installation options include a cart system, which creates a back pull-out option allowing for easy maintenance, as well as a fixed bracket configuration. When installed horizontally, the envie³ footprint is 35 percent smaller than competitors' frame mounted end suction pumps. This allows for space savings which helps when installing into locations where space is limited. The envie³ vertical installation configurations include a metal and concrete stand. Each of these vertical stands allow for 360-degree rotation which makes adapting to existing piping convenient, including tangential discharge pumps. ■

For more information, visit www.cranepumps.com.



GAS CLIP TECHNOLOGIES

MGC Simple and MGC Simple Plus

Keeping employees safe while at a worksite is always a priority. Therefore, they need the most reliable protective equipment possible, especially when it comes to gas detection. Without it, tragedy can strike simply by walking into the space. That thought of keeping others safe has been the driving force behind Gas Clip Technologies' efforts to provide dependable, compliance-based, affordable gas detection solutions—like the MGC Simple and MGC Simple Plus.



The MGC Simple and MGC Simple Plus have continuous run times of two years and three years respectively. After being charged and calibrated during manufacturing, neither detector requires recharging or routine calibration, although bump testing before every use is advised. They both identify the presence and level of hydrogen sulfide, carbon monoxide, oxygen, and combustible gases (LEL).

These detectors also provide detailed data logging. Valuable information is documented in one-second increments, which in turn creates a "black box" of critical details that map out the development of gas exposure from the moment of detection. Additionally, both devices are compatible with a variety of accessories, like the new GCT External Pump (which is perfect for working in confined spaces).

Innovative gas detection solutions, like the MGC Simple and MGC Simple Plus, are always within easy reach since Gas Clip Technologies' products are available through distributors worldwide. ■

For more information, call 972.775.7577
or visit www.gascliptech.com.

GRAPHITE METALLIZING CORPORATION

GRAPHALLOY® Wear Parts

GRAPHALLOY wear parts work where others won't—including run dry, flashing, and low lubricity service.

Plastic and metal wear parts may enable a pump to run dry briefly without a catastrophic crash, but generally a major rebuild of the pump will be required. GRAPHALLOY case rings and bushings enable pumps to run dry and survive, often without loss of performance or the need to replace the GRAPHALLOY parts. This is due to GRAPHALLOY's unique features.

GRAPHALLOY, a graphite-metal alloy, is non-galling, self-lubricating, and dimensionally stable. GRAPHALLOY has a wide temperature range with pump applications from cryogenic to 1,000 degrees Fahrenheit (540 degrees Celsius). It has a low coefficient of thermal expansion across a wide temperature range, allowing very tight clearances without risking pump seizure.

Pumping low lubricity fluids, hydrocarbons, liquid gases, or hot water can be especially difficult for a metal-on-metal pump; GRAPHALLOY solves the problem. Using GRAPHALLOY also allows closer running clearances often resulting in pump efficiency improvements.

For over 100 years, Graphite Metallizing Corporation has supplied GRAPHALLOY wear parts for light hydrocarbon pumps, food pumps, chemical pumps, boiler feed pumps, molten sulfur pumps, wastewater pumps, drinking water pumps, and more. NSF/WRAS grades are also available. ■

For more information, visit www.graphalloy.com.



GREASEZILLA

FOG Separation Process

By separating FOG into its basic elements, Greasezilla® generates an advanced biofuel and pasteurized effluent water ready for your wastewater treatment facility.

No chemicals. No landfilling. No waste.

Greasezilla's® two-reactor tank system heats the FOG to create separation, requiring no additives, additional processing, blending, or fossil fuels. After separation, the brown grease is pumped into holding tanks and has now become an advanced biofuel that is a cleaner substitute for high-sulfur fuel. The remaining water content, which is pasteurized and nearly free of all suspended solids, is now safe for discharge into the treatment facility.

Greasezilla® separates FOG into its basic elements, sending the water back to the wastewater treatment center headworks and recovering highly profitable Brown Grease Advanced Biofuel (ABF). This end-to-end process is the most ecologically advanced system available. Greasezilla® is unique in that it is powered by the same clean ABF it produces and leaves nothing to be landfilled or disposed of.

Customers range from small municipalities to large commercial operations. Recently, Hampton Roads Sanitation District (HRSD) selected Greasezilla® to provide FOG separations for its Nansemond Treatment Plant. ■



For more information, visit www.greasezilla.com.

HELWIG CARBON

BPK-Probe: Shaft Voltage Detection Device



**BPK-PROBE:
SHAFT VOLTAGE
DETECTION DEVICE**



As variable frequency motor drives (VFDs) become more widely introduced as an effective method to increase motor efficiency, bearing failure and related downtime have also increased. VFDs induce a current on the electric motor shaft that often discharges through the motor's bearings causing pitting, fluting, and eventual failure.

Helwig Carbon developed the BPK-Probe to be an easy-to-use field instrument that helps a user identify the risk of premature bearing failure in an electric motor due to induced shaft currents. The device measures the voltage on the motor shaft and gives real-time results to the user. This unique, patented technology is perfect for any field service or plant maintenance personnel that care for motors run by variable speed drives. The BPK-Probe will give a pass/fail result that tells the technician whether the motor should be outfitted with a shaft grounding/bearing protection system. In fact, the probe has a built-in silver graphite grounding brush that can be activated to show the shaft voltage if a Helwig Carbon Bearing Protection Kit was installed. The probe can also be hooked up to an optional oscilloscope to show graphical data of the voltage changes over time.

The BPK-Probe makes for a great addition to any motor diagnostic and preventive maintenance toolkit. A new mobile app that pairs with the probe is also available, allowing for easy data collection and report creation. ■

For more information, visit www.helwigcarbon.com/shaft-voltage-detection-device.

SULZER

Johnston Pump

As a recognized leader in the municipal water industry, as well as irrigation and flood control, the Johnston Pump name is familiar to several generations of operators. Sulzer is equally well-known for its quality and extensive product range in the oil and gas and power generation sectors; so, with both benefitting from extensive service and manufacturing facilities in North America the brands sit well together.

The Sulzer management and operational teams are confident to provide reassurance that the attributes of high-quality engineering and reliability associated with Johnston pumps have been retained and refined over the past sixteen years. Manufacturing standards within the current production facilities remain extremely high with extensive testing capabilities within Sulzer to ensure that every product is delivered to the exact specification required.

The Johnston product range, which has been adopted by Sulzer globally, is renowned for its reliability and versatility. For the water and wastewater industries, the ability to engineer a base pump design to suit individual applications is very important. It ensures the essential design features are retained while the specifications match the operation, delivering an efficient and cost-effective solution. ■

For more information, visit www.johnstonpump.com.



SULZER



ANSIMAG Sealless Magnetic Drive ETFE Lined Pumps



ANSIMAG Sealless pumps are used to pump the harsh chemical polymers that coat the electrodes for electric vehicle Lithium Ion Batteries. They're used by COVID-19 vaccine manufacturers to pump coolants into freeze driers. And ANSIMAG pumps are also used by Hydrogen Fuel Cell producers to pump caustic chemicals into electrolyzers to generate Green Hydrogen.



ANSIMAG Benefits:

- **Zero Leakage** – Sealless design eliminates possible leakage
- **Chemically Resistant Lining** – Carbon fiber reinforced ETFE
- **Secondary Containment** – Lined Kevlar Fiber/Epoxy
- **Durable Construction** – Ductile iron exterior is designed for heavy-duty chemical applications
- **Magnetic Drive** – Hermetically seals the inner magnets
- **Easy Service** – 9 wetted parts and a back pull-out design
- **Small Footprint** – Close coupled design

For more information, please visit
sundyne.com/products/ansimag-pumps



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Another Vanton AdVantage

VANTON's Engineered Pump Solutions Mean Never Settling for a Square Peg in a Round Hole

At VANTON PUMP, there are no off-the-shelf solutions when it comes to properly addressing your pump needs. With the broadest line of thermoplastic pumps in the industry, we've learned that every application can benefit from a little extra scrutiny. It's our way of ensuring that the pump we deliver is the pump your situation demands - and not an attempt to thwart geometry by forcing a square peg into a round hole.

From selecting the optimal construction materials, to assessing the proper configuration, VANTON engineers every pump we ship to our customer's specific application. It's your assurance that a VANTON pump will interface perfectly with your operation's requirements and perform the task it's intended for year after year.

***VANTON PUMP...Engineered Solutions
for Trouble-free Performance.***



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Pumps



Pump/Tank
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