

2023 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!

CHECK-ALL VALVE

ADAPTER VALVE

Since 1958, Check-All Valve® Mfg. Co. has manufactured a complete line of spring-loaded poppet-type check valves, also known as silent check valves. We service customers all over the world in the chemical, petrochemical, pharmaceutical, biofuel, food and beverage, water treatment, OEM, and MRO industries and our products are trusted in the most demanding applications.

Check-All Valve® is happy to announce the addition of the Adapter Valve to our full-service line of check valves. The Adapter Valve is available in two styles, model AM (MNPT x FNPT) and model AF (FNPT x MNPT). Both models have the same size pipe thread on both ends for installation where a threaded straight adapter is needed. The one-piece body design is machined from high quality bar stock and is manufactured at our factory in West Des Moines, Iowa. ■

FEATURES

- **SIZE:**
0.5- to 4-inch NPT threads
- **BODY MATERIALS:**
316 Stainless Steel, Brass, Carbon Steel, Alloy 20, Alloy B, Alloy C-276, Monel® 400, Titanium
- **SEAT MATERIALS:**
AFLAS®, Buna-N, EPDM, KALREZ®, "Metal-to-Metal", Neoprene, PTFE, and FKM
- **SPRING MATERIALS:**
316 SS, Alloy C-276, Alloy B, INCONEL® X750, MONEL® 400, 17-7PH SS, and Titanium



AF Model: FNPT inlet x MNPT outlet



AM Model: MNPT inlet x FNPT outlet



For more information, call 515.224.2301, email sales@checkall.com, or visit

WWW.CHECKALL.COM

HYDRO-THERMAL

NON-OBSTRUCTING HEATERS

ACHIEVING PEAK PERFORMANCE IN ANAEROBIC DIGESTERS

Hydro-Thermal Non-Obstructing Heaters™ (NOH) heaters are emerging as a superior alternative to traditional heat exchangers for sludge heating in anaerobic digestion. By maintaining optimal digester temperatures, these heaters increase biogas production, shorten detention times, and improve process efficiency, contributing to cost savings and sustainability. As industries prioritize efficient resource utilization and environmental responsibility, innovation and progress in wastewater treatment are paramount.



OPTIMIZING MICROBIAL PERFORMANCE

Precise temperature control isn't just about microorganism survival; it's about maximizing their performance. It's about converting waste into valuable resources like biogas, reducing the environmental impact of waste disposal, and contributing to a more sustainable future.

Hydro-Thermal NOH heaters are specifically designed to maintain the required temperature range for mesophilic and thermophilic digestion, facilitating optimal biogas generation and reducing the detention time in the digester.

COMPARING NOH HEATERS WITH TRADITIONAL HEAT EXCHANGERS

Traditional methods like heat exchangers have long been the go-to solution in sludge heating. However, they bring challenges, including energy inefficiencies and maintenance complexities. This has paved the way

for innovative alternatives like Hydro-Thermal NOH Heaters, presenting a direct and highly efficient method to address the shortcomings of traditional heat exchangers.

ENERGY EFFICIENCY

- Traditional heat exchangers transfer heat indirectly through a metal barrier, resulting in significant energy loss.
- NOH heaters, on the other hand, achieve a remarkable thermal efficiency of 100 percent by injecting steam directly into the process fluid, utilizing both sensible and latent heat.

MAINTENANCE CONSIDERATIONS

- Heat exchangers pose maintenance challenges due to condensation, necessitating the maintenance of low water temperatures to prevent fouling.

- NOH heaters feature a straight flow-through configuration that minimizes clogging, requiring no specialized tools for maintenance. Additionally, their wear and corrosion-resistant metallurgies enhance durability, even when dealing with abrasive materials.
- NOH heaters eliminate burn-on risks associated with traditional heat exchangers, ensuring a safer operational environment.

SPACE AND INSTALLATION EFFICIENCY

- NOH heaters boast a compact design that saves valuable space, making them particularly suitable for installations with limited room.
- Easy integration into existing piping systems eliminates the need for a separate condensate return system, leading to substantial cost savings during installation. ■

For more information, email info@hydro-thermal.com or visit

WWW.HYDRO-THERMAL.COM

MEGALERT

MOTORGUARD

MegAlert manufactures the MotorGuard patented testing and protection systems designed to detect insulation breakdown in critical motors. The system senses when the pump motor is offline and then performs a continuous dielectric test on the winding insulation until the equipment is started again. When an abnormal condition is detected the equipment can be locked out and a warning signal sent, indicating that the pump motor needs maintenance.

Reduce risk to save lives! The testing is done with a current limited non-destructive DC voltage from 500 to 5,000 VDC, which is safe for both personnel and the equipment. By automatically testing offline equipment customers can now predict and prevent impending failures, reduce unscheduled downtime repairs, and increase plant safety by not exposing maintenance personnel to dangerous Arc Flash conditions experienced when performing manual testing.

MotorGuard applies a current limited, fixed DC voltage to the motor windings during idle periods. A solid-state comparator circuit monitors measured leakage current to the ground. Two adjustable set points, factory preset to customer specifications, can be programmed to signal a pre-alarm, alarm, and lockout the equipment from operating if the low set point is exceeded. The manual reset feature enables a return to operational status only after the alarm condition has been corrected. MotorGuard will not impair normal operation of the equipment being monitored.

For over three decades, MegAlert has offered this patented, cost-effective, and proven technology with almost unlimited applications to multiple industries in both the private and government sectors. ■



GP2500-MU-AS



For more information, visit

WWW.MEGALERT.COM

SUNDYNE

SUNDWASH PRIME

DELIVERING CONSTANT HIGH-PRESSURE WATER-ON-DEMAND FOR CENTRALIZED CLEANING AND WASHDOWN SYSTEMS

Sundyne's industrial grade Sunflo pumps have a proven track record for providing exceedingly high pressure in an energy-efficient, compact footprint. For decades, Sunflo pumps have been widely used in high pressure washdown applications that are common to power generation, maritime, transportation or food and beverage industries. In 2019, Sundyne introduced SundWASH® high-pressure wash-down packages that combined the power of Sunflo pumps with motors, motor starters, pre-programmed logic controllers (PLC), flow meters, recirculation control valves, temperature switches, and piping to create turnkey SundWASH systems for food and beverage applications. Today, the SundWASH system has been enhanced via the new SundWASH Prime™, which is a fully integrated, pre-engineered system that can be configured to any process requirement. SundWASH Prime provides constant high-pressure water-on-demand for a wide range of applications, including:

- Food and beverage cleaning systems
- Industrial spray and washing systems
- Reverse osmosis systems
- Ultra-filtration systems
- Boiler feed systems.

SundWASH Prime delivers constant, pulsation-free pressure on demand. There is no waiting for pressure to build up, and there are no drops in pressure. SundWASH Prime's Integrated Variable



Frequency Drive adapts to changing operational requirements, and it can support multiple operation modes.

FEATURES

The newly redesigned SundWASH Prime system consists of:

- Sunflo high pressure pump
- Energy efficient VFD control
- Constant, pulsation-free pressure on demand
- Low flow/high flow protection
- Field adjustable settings
- Ethernet communication with site DCS
- 316SS construction

BENEFITS

- Intelligent minimum flow by-pass (opens only when required)
- Automatic stand-by and sleep modes
- Field adjustable and field serviceable:
- Maintenance made easy. No need to remove pump from the system
- Communication with site DCS for back-office control of system via Ethernet protocols
- Energy efficient—NEMA Premium Efficient motor.
- Small footprint

TECHNICAL DATA

- 1 to 4 pump configurations
- Capacity up to 2,000 gallons per minute
- Head: 2,800 feet max
- Pressure: 1,000 PSI max
- Inlet pressure: 32 to 140 degrees Fahrenheit (300 degrees Fahrenheit with external cooling)
- Pump and manifold construction: 316SS
- Control panel and VDF enclosure: NEMA 12 or NEMA 4x.

Water demands at food and beverage plants vary widely, making it difficult for single pumps to meet demand—but SundWASH Prime systems scale as needed without compromising on performance. Boosting pressure increases efficiency, enabling operators to get the job done with less water and fewer chemicals. In addition to high pressure, SundWASH Prime systems are easy to maintain. One person with one wrench can repair the pump in less than one hour—saving operators time while reducing labor costs. ■

For more information, visit

WWW.SUNDYNE.COM

VAUGHAN

THE VAUGHAN CONDITIONING PUMP™

A BEAST JUST BELOW THE SURFACE

American-made and built to last, the Vaughan Conditioning Pump™ is a Vaughan Submersible Chopper Pump mounted on a portable stand and fitted with high-velocity mixing nozzle. The Conditioning Pump recirculates the contents of the wet well, chopping and mixing to produce a homogeneous mixture that is 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 jobsite, facility, or municipality.

WHY CHOOSE VAUGHAN CONDITIONING PUMP?

BUDGET SAVER

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. Here are a few examples:

LESS 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.

HELP EXISTING “NON-CLOG” PUMPS FROM 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. Some pumps can cost you upward of \$350,000 to replace. 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 will not get clogged.

REDUCE UNNECESSARY 3RD-PARTY CLEANING CYCLES

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.

CIRCULATE “SETTLING LAYER” OFF YOUR 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

GREASEZILLA

FATS, OILS AND GREASE (FOG) SEPARATION SYSTEM

Developed by Downey Ridge Environmental Company, Greasezilla® is a turnkey system that provides an ecological and cost-effective process to divert FOG from the waste stream. Greasezilla® leaves almost nothing to be landfilled and has a total operating cost of one to two cents per gallon, making Greasezilla® the ideal front-end pretreatment system for FOG waste.

Greasezilla's® hydronic thermal system takes grease trap waste in its trucked-in form and separates it into three layers—brown grease, batter, and water. The brown grease is pumped off and stored, with the remaining layers sent to wastewater treatment plant headworks or anaerobic digesters. The brown grease is a high-quality advanced biofuel, ready as a biodiesel feedstock. Greasezilla® can also polish used cooking oil (UCO) into a premium yellow grease advanced biofuel.

Greasezilla® is fully automated, making it easy to operate and maintain with minimal staffing. Greasezilla's® standard two-tank reactor system requires a footprint of

only 1,000 square feet and is available in two formats to accommodate interior or exterior placement.

Currently, the company is working closely with pumpers and wastewater treatment sites across the nation eager to incorporate Greasezilla's® sustainable, proven, and profitable technology into their operations. ■



For more information, visit

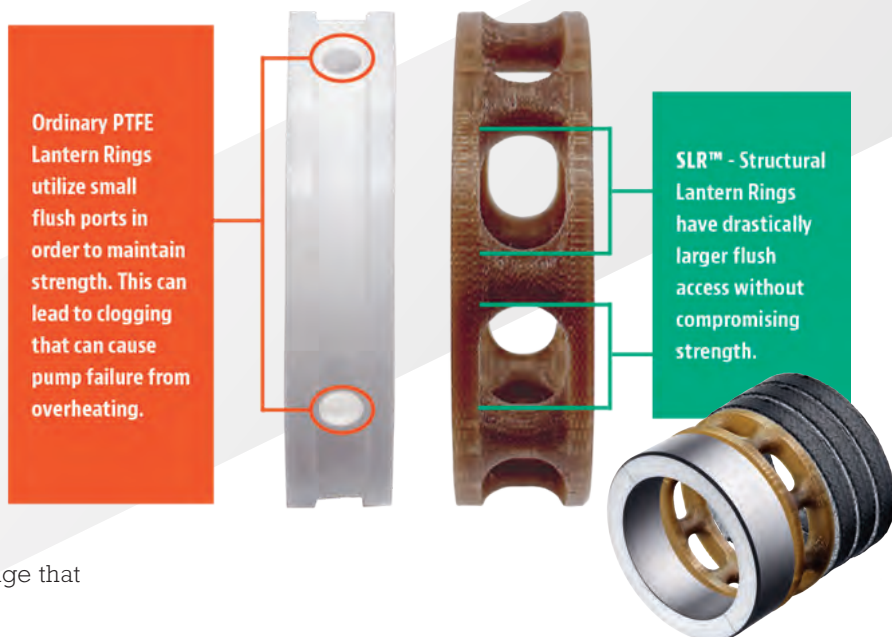
WWW.GREASEZILLA.COM

SEALRYT SEALING SYSTEMS

SLR SYSTEM: THE FUTURE OF LANTERN RINGS

The SLR™, or Structural Lantern Ring, is a new, patented, custom-built removable lantern ring that resists clogging, significantly improves flush and flow characteristics over traditional PTFE lantern rings, and is non-collapsible in service. SealRyt® has integrated this product into two new offerings, the DuraPack™ System and the SLR System. Both incorporate the structural lantern ring with SealRyt packing ring sets to create a comprehensive line of sealing products.

The DuraPack System consists of a PackRyt® BRG Bearing and the SLR with SealRyt packing ring sets. This innovative hybrid methodology combines bearing support with the removable, clog-resistant lantern ring. When paired, you get shaft stability and excellent flush capacity in a package that won't crush or shift inside the stuffing box. ■



For more information, visit

WWW.SEALRYT.COM