



What's New

FLUIDS AND SOLIDS HANDLING

Sanitary Filter Receiver Is Easy to Clean



The sanitary filter receiver (SFR) automatically separates product from conveying air in vacuum and pressure conveying systems. It is appropriate for both batch and continuous operations in food processing that require quick clean-out to eliminate contaminants. Rounded corners and the absence of ledges and hidden areas contribute to the easy-to-clean design. A side-entry door allows safe tool-less access to the unit for cleaning and fast changeover of filter media. The unit includes an integral 70-deg. hopper, mounting legs, and pressure differential indicator. It is designed to meet U.S. Food and Drug Administration (FDA), European Hygienic Engineering and Design Group (EHEDG), and ATEX standards.

Coperion K-Tron
www.coperionktron.com

Reusable Bulk Container Vent Serves Multiple Purposes

FUZ-VENT is a multifunctional fusible vent for bulk containers that can be used as a filling port, a fusible safety vent, and/or a mechanical pressure-relief vent. It allows for safe tank venting, away from the opera-

tor, without any pressure buildup and with only a quarter turn of the valve. The center ring is designed to soften and rupture without exceeding the design pressure of the tank. The unit is resistant to degradation from solvents, chemicals, and ultraviolet light. Installation is simple and involves only tightening by hand and then torquing to 15–20 ft-lb. This model's cost is one-tenth that of other reusable models on the market, and the savings a facility realizes after a few turn-arounds of tank contents or cleanings justifies the use of a reusable device.

American Machining, Inc.
www.iberesource.com

Vacuum Conveyors Have Bigger Pumps

The piFlow p vacuum conveyor series now features larger pumps that achieve higher speeds for handling difficult-to-move powders and granules over longer distances. The easy-to-clean vacuum conveyor system meets the high demands of the food and pharmaceutical industries. A more-efficient ejector reduces compressed air energy costs, and a lower operational noise level improves the working environment. The maintenance-friendly design has fewer internal parts and a single connection point.

Piab
www.piab.com

MATERIALS AND CHEMICALS

Condensation-Curing Silicon Is Optically Clear

MasterSil 152 is a two-component, condensation-curing system that achieves complete crosslinking in air. It fully cures in 24 to 48 hr at room temperature, and has a low exotherm. It has a long working life of 6 to 8 hr after mixing, and maintains its size upon curing. Low viscosity, electrical insulation properties, and the ability

to cure in sections thicker than 1 in. make this product suitable for potting and encapsulation. Because it is optically clear, it can be used successfully in electronic and optical components. The silicon material is flexible, withstands thermal cycling and shock, is resistant to water, and has a service temperature range of –65°F to 400°F.

Master Bond, Inc.
www.masterbond.com

Lithium-Ion Cathode Material Could Enable Smaller Batteries

CAM-7.2 is a lithium-ion cathode material for advanced batteries. Because of its high energy and power density properties, batteries could be made smaller, lighter, and at lower costs. It is well suited for existing electrolyte systems and cell designs because of its ability to provide 200 mAh/g with low impedance growth during full depth-of-discharge (DoD) cycling under normal charging voltage. The company provides customers that license CAM-7.2 assistance in adapting existing manufacturing facilities to synthesize and blend the material.

CAMX Power
www.camxpower.com

Thermoplastic Has a Higher Tensile Strength than Steel



Kryon MAX thermoplastic bridges the performance gap between materials that are processed by standard injection molding and pre-preg lay-up composites. High-strength structural components with mechanical proper-

ties that meet or exceed those of metals can be produced by high-pressure injection molding from a minimum mass of plastic. Kyron MAX has a higher tensile strength than steel (greater than 100,000 psi), but weighs approximately 60–75% less than steel and titanium. With high mechanical performance and a low fiber content, the material has increased strain to allow parts to yield but not fracture. Three performance levels are available for a variety of budgets.

Piper Plastics

www.piperplastics.com

Degreasing Solvent Is Versatile and Nontoxic

Because it is effective at a neutral pH, this solvent is not harmful to equipment surfaces, personnel, or the environment. Omnia is environmentally friendly and safe for humans to use in a variety of applications. Tests have demonstrated the ready biodegradability of this solvent, and have indicated that repeated exposure produces no evidence of acute toxicity, genetic toxicity, developmental or reproductive toxicity, skin sensitization or irritation, or any impact to aquatic life.

Eastman

www.eastman.com

INSTRUMENTATION

Deposition Monitor Helps to Prevent Downtime

Damage and plugging of valves, pumps, pipes, and other pipeline components are common causes of production downtime and lost revenue that can be prevented with predictive monitoring. The Deposition Watch is designed to monitor paraffin wax and asphaltene depositions in pipelines and related equipment, and alert operators of deposition issues well before they reach critical levels. Users can generate real-time images of depositions without opening the pipeline and slowing production. They can produce 3D images of the fluid in the

pipe and generate trend data, show the free volume inside the pipe, and monitor the growth rate of depositions. With this technology, users in the oil and gas industry will be able to make more informed decisions regarding the addition and frequency-of-addition of deposition-treatment chemicals.

Flowrox, Inc.

www.flowrox.us

Conductivity-Temperature Sensor Boasts High Accuracy and Fast Speed



The CombiLyz conductivity and temperature sensor provides precise analysis and differentiation of media in the food, pharmaceutical, and water-treatment industries. It has a maximum deviation of less than 1% and is available in 14 measurement ranges, from 500 $\mu\text{S}/\text{cm}$ to 1,000 $\mu\text{S}/\text{cm}$. Its response time is 0.3 sec for conductivity measurements and less than 15 sec for temperature measurements. The display indicates multiple process variables, including conductivity, concentration, temperature, current output, switching states, and device status. It is suitable for use in processes that require cleaning in place (CIP) and sterilization in place (SIP).

The Baumer Group

www.baumer.com

Graphite Bearings Withstand High Temperatures

These graphite bearings are designed to run without lubrication and at temperatures that could melt, volatilize, or



carbonize lubricants and deform or melt plastic or composite bearings. In oxidizing atmospheres, the bearings tolerate temperatures up to 1,000°F, while in non-oxidizing atmospheres, they can withstand temperatures up to 6,000°F. They are appropriate for continuous dryers, kiln cars, high-temperature ventilation dampers, continuous bakery ovens, screw conveyors, and other high-temperature applications. Several of the grades are approved by the U.S. Food and Drug Administration (FDA) for contact with food and pharmaceuticals. The standard pillow blocks and flange blocks with bearing inserts are available with cast iron, stamped steel, and stamped stainless steel housings.

Metallized Carbon Corp.

www.metcar.com

LABORATORY EQUIPMENT

Droplet Merging System Combines Nanoliter-Scale Samples

The Mitos Dropix droplet merging system is designed for microfluidic applications that need to combine pairs of droplets in a controlled manner. It sequences the droplets and merges successive pairs using a droplet pillar merger chip. The device holds a droplet until the next droplet in the sequence approaches, which allows droplet fusion to occur even if the inter-droplet spacing is not constant. The system can handle droplet volumes of 40 nL to 175 nL. Applications include automated screening experiments, dose-response testing, concentration/stoichiometric testing, and combinatorial chemistry.

Dolomite Microfluidics

www.dolomite-microfluidics.com