



## What's New

### SOLIDS AND FLUIDS HANDLING

#### Degassing System Achieves High Vacuums within a Small Footprint



This portable degassing system is sized and priced for small batch-production applications and research labs. It has a 4-gal stainless steel chamber, a clear 1-in.-thick acrylic top that allows viewing of the contents, and a dry piston 5-cfm vacuum pump that achieves a vacuum of 29 inHg. The system is self-contained on a 20-in.-square mobile cart. It includes a 0–30-inHg Bourdon dial gage, isolation and vent valves, and an on/off power switch. The unit is suitable for degassing, encapsulating, potting, and drying applications, and can be built to customer specifications.

**Mass-Vac, Inc.**

[www.massvac.com](http://www.massvac.com)

#### Hydrophobic and Hydrophilic Filters Ease Sample Preparation



The #28246 and #28247 hydrophobic filters and #28245 hydrophilic filter all have 0.2- $\mu$ m pores and are equipped with a polypropylene housing, female luer lock inlet, and male luer slip

outlet. The hydrophobic filters have a polytetrafluoroethylene (PTFE) membrane and are available with a 25-mm or 15-mm diameter. The PTFE membrane is suitable for the filtration of aggressive chemicals, such as acids and nonaqueous solvents, as well as for gas chromatography and high-performance liquid chromatography (HPLC) sample preparation. The hydrophilic filter is available with a polyethersulfone (PES) membrane and a 25-mm diameter. The PES membrane has very low protein absorption, which makes it suitable for pharmaceutical and biological sample preparation.

**Qosina**

[www.qosina.com](http://www.qosina.com)

#### Tubular Cable Conveyors Facilitate the Transfer of Fragile Products



The Flexi-Disc tubular cable conveyors move material using high-strength polymer discs that are affixed to a stainless steel or galvanized cable and that slide within smooth stainless steel tubing. The conveyors move fragile products gently, quietly, and without generating dust. The system can be configured with multiple inlets and outlets, and conveys material at any angle over short distances or hundreds of meters. Modular components available in Type 304 or 316 stainless steel include tubing, drive-wheel housings, tension-wheel housings, metered and

unmetered inlets, and discharges with or without valves, as well as accessories for wet or dry cleaning, including clean-in-place (CIP) sanitizing. The conveyor is offered as a stand-alone system, or fully integrated with upstream and downstream equipment such as inlet hoppers, bag dump stations, bulk bag dischargers and fillers, screeners, and storage vessels. It is suitable for the transfer of delicate food products such as cereals, dried fruits, grains, nuts, pet foods, and spices. Typical non-food applications include the transfer of bulk chemicals, minerals, chopped fiberglass, and pellets.

**Flexicon Corp.**

[www.flexicon.com](http://www.flexicon.com)

#### Bulk-Material Handling System Reduces Operator Interaction



This fully automated, self-contained, bulk-material handling system completely manages material from the introduction stage, through discharge and conditioning, to downstream supply of finished material into manufacturing operations. Human interaction is limited to container loading and removal. The lift-and-seal carriage receives each 1,450-lb container and precisely aligns and seals it to the custom, stainless steel discharge hood using an automatic centering system. The 2,000-lb-capacity lift carriage raises and rotates the container 180 deg. to ensure complete material discharge. A 100-ft<sup>3</sup> stainless steel receiving hopper preconditions the material with an integrated agitator. A 9-in.-dia. auger feeds the preconditioned material to a dual-

shaft size-reduction crumbler for final conditioning of the material before it is pneumatically conveyed to downstream process operations. Complete process automation, including controls, sensors, monitoring, and data reporting, is centralized on a single, touch-screen human-machine interface.

**National Bulk Equipment, Inc.**

[www.nbe-inc.com](http://www.nbe-inc.com)

### **Electronic-Interface Diaphragm Pumps Have Solenoid Actuation**



The ARO electronic-interface air-operated diaphragm pumps have integral sensors and controls for enhanced fluid-handling control and safety. The pumps can be configured to user specifications with optional solenoid actuation and several feedback sensors, such as leak detection and stroke monitoring. ATEX configurations, as well as multiple voltage options, are available to help meet the compliance and electrical requirements of applications in explosive atmospheres. The pumps are offered in a wide variety of materials of construction with port sizes ranging from 3/8 in. to 3 in.

**Ingersoll Rand**

[www.ingersollrand.com](http://www.ingersollrand.com)

### **ENVIRONMENTAL, HEALTH, AND SAFETY Impeller Is Suitable for Wastewater Treatment Applications**

The RL-3 ragless impeller is designed to prevent the buildup of fibrous material on its rotating blades, which helps maintain a uniform top-to-bottom flow pattern, thereby improving solids



suspension and blending uniformity. This also reduces the load on the entire agitator system, including the gears, bearings, motor, shaft, and impeller blades. The RL-3 provides strong axial flow and can easily be retrofitted to existing agitators. It delivers safe and reliable operation and reduces mixer downtime. The impeller is available in a wide range of sizes, from lab scale to over 200-in.-dia. It is offered in carbon steel, stainless steel, or high-alloy material, as well as with an optional rubber, elastomeric, or fiber-reinforced plastic (FRP) cover.

**Chemineer, Inc.**

[www.chemineer.com](http://www.chemineer.com)

### **Dewatering Sieve Clarifies Wastewater at Ultrahigh Rates**



The Cross-Flo static dewatering sieve continuously removes solids from waste streams at ultrahigh rates, which facilitates clarification and dewatering of slurries. The screening deck is fitted with a stainless steel wire screen that has slots oriented perpendicular to the flow of material. An extended acceleration/orientation ramp in the upper por-

tion of the unit establishes the proper feed velocity to the wire deck, and twin spray bars assist in the discharge of collected solids from the lower edge of the screening deck. The sieve is offered in widths of 24 in. to 72 in., with larger sizes available on a custom basis. Two-deck models that separate solids into two sizes are also available. All models are available with quick-release splash covers, and may be installed in exterior or interior locations. The Cross-Flo sieve is suitable for clarifying and dewatering in the chemical, food, mining, pulp/paper, and industrial/municipal waste industries.

**Kason Corp.**

[www.kason.com](http://www.kason.com)

## **LABORATORY EQUIPMENT**

### **Peeling Jig Measures Adhesive Bond Strength**



The TA-GPJ general peeling jig was developed to measure the force required to peel the lid off a sealed container. A strong adhesive bond is critical to prevent contamination and spoilage, but ease and consistency of opening are equally important to consumers. The TA-GPJ can be adjusted to remove the lid at 0-deg., 45-deg., or 90-deg. angles. It is suitable for measuring lid strength for products in the pharmaceutical and food and beverage industries.

**Brookfield Engineering**

[www.brookfieldengineering.com](http://www.brookfieldengineering.com)