



FLUIDS AND SOLIDS HANDLING

Recycling Accessory Rejuvenates Metalworking Fluids



The Hydroflow SumpDoc is a portable fluid-reclamation machine for the metalworking industries. It provides complete coolant restoration and rejuvenation treatment of the metalworking fluids in the machine tool sump, with minimal operator interaction and without interruption to the production cycle. The SumpDoc features a sump cleaner for removal of all sludge and solids 50 μm and larger, and a pleated bag filter for removal of solids down to 10 μm . The continuous-flow tramp oil coalescer and high-speed centrifuge remove emulsified tramp oil and fines down to 5 μm . The SumpDoc also has an ozone generator for microbiological treatment of coolants. The touch screen dashboard provides clear instructions to the operator, and allows the operator to choose the optimal coolant makeup.

Eriez

www.eriez.com

Tubing Line Promotes Food Safety and Sustainability

The Tygon S³ bio-based, phthalate-free tubing is a safe, smart, and sustainable product-transfer solution for food and beverage manufacturing applications. It complies with FDA, NSF, and 3-A requirements, Japan Food Sanitation Law 370/1959, and when used as instructed with European regulations 10/2011/EU. As an alternative to phthalates, Tygon S³ incorporates a bio-based material as a plasticizer.

Manufacturers can also leverage the sustainability benefits of this material to reduce the carbon footprint of their supply chains.

Saint-Gobain Performance Plastics (SGPPL)

www.plastics.saint-gobain.com

Force Piston Pumps Handle Viscous and Harsh Fluids

The AFX line of air-operated piston pumps and systems features air motors with the manufacturer's proprietary Progressive Exhaust and integrated regulator technology on 2-ball, 4-ball, and chop-check pumps. The product line also features new 5-gal and 55-gal rams for ultra-high-viscosity fluid. The air motors are available in five sizes: 4.25-in., 6-in., 8-in., 10-in., and 12-in. These piston pumps are suitable for transferring shear-sensitive, viscous, corrosive, and abrasive fluids in a broad range of critical process and industrial applications.



Ingersoll Rand

www.ingersollrand.com

Diaphragm Metering Pump Boasts a Long Service Life

The FMM80 solenoid-driven diaphragm metering pump dispenses liquids accurately in adjustable volumes between 30 mL per stroke and 80 mL per stroke. The pump can be driven with single impulses to deliver discrete micro-volumes or can be operated with a pulsed signal at a frequency up to



10 Hz to provide continuous flowrates up to 48 mL/min. The FMM80 has a service life of more than 500 million strokes, integrates a patented noise-suppression system for quiet operation, and remains flow-tight in both directions with pressures of 14.5 psig at rest. A wide selection of head materials is available, including polypropylene, polyvinylidene fluoride (PVDF), and ethylene propylene diene monomer (EPDM), among others. The pump is suitable for transferring a wide variety of both neutral and aggressive liquids, and it can be mounted in any position using either a manifold or tubing. Typical applications include industrial dosing systems, water treatment systems, and medical devices and diagnostic equipment.

KNF Neuberger, Inc.

www.knf.com/usa

HEAT TRANSFER

Ovens Eliminate the Need for Secondary Spill Containment



Sahara Hot Box ovens are now available with oversized spill containment, which enables the units to contain the full volume of a 55-gal drum or tote in the event of a spill. They can also pump material from a tote while the tote remains in the oven. The ovens help heat and speed the flow of thick or viscous materials. They can safely heat or melt a wide variety of greases, oils, cosmetics, plastics, and adhesives. Each unit has a temperature range to 350°F with over-temperature protec-

What's New

tion and a thermocouple-actuated digital temperature controller. Units can be custom designed to fit any tote size and are easily lifted with a forklift.

Benko Products, Inc.

www.benkoproducts.com

INSTRUMENTATION

Temperature Controller Allows Rapid and Accurate Viscosity Measurements



Minute variations in temperature can cause significant changes in viscosity measurements. The microVISC TC is a precise temperature controller for the handheld microVISC viscometer. The microVISC TC eliminates the uncertainty in viscosity measurements. It has a temperature range of 15–50°C, and a PID controller with advanced fuzzy logic to facilitate temperature control with an accuracy of 0.02°C and a stability of 0.07°C. An optional software program allows remote temperature control and touch-pad operation of the microVISC.

RheoSense, Inc.

www.rheosense.com

Pipe Flow Monitor Is Simple to Install, with No Downtime



The Flow Pulse is a compact and cost-effective pipe flow monitor. Installation is simple and does not require a service interruption; the small sensor is clamped to the outside

of a pipe for immediate flow measurement. Spectrum analysis via digital signal processing provides repeatable measurements. With this technique, ultrasound energy is transmitted through the pipe wall, then refracts at angles across the axis of the flow. The instrument's Refracted Spread Spectrum Analysis (RSSA) digital signal-processing platform derives flow information from the reflected signals. The Flow Pulse measures liquids and slurries with a minimum particle size of 100 µm and minimum concentration of 200 ppm. It has a flow range from 0.3 to 4 m/s. It can be used with pipes made of rigid plastic, stainless steel, mild steel, or cast iron, and can function in a corrugated pipe or corroded environment.

Pulsar Process Measurement

www.pulsar-pm.com

Safety Instrumented System Withstands Desert Environments



The latest addition to the company's line of safety instrumented systems (SIS), the ProSafe-RS R3.02.00 features two key improvements. The enhanced high-temperature-resistant digital and analog input/output modules can operate at temperatures from ambient to 158°F. This is suitable for SIS installed outdoors, such as those on oil and gas wells and pipelines, which are often in desert locations. The second enhancement adds support for Ethernet-based Modbus/TCP communications, which allows the ProSafe-RS SIS to be connected to distributed control systems from other vendors.

Yokogawa

www.yokogawa.com

Monitoring Unit Optimizes Operations in Remote Locations



As a component of a predictive maintenance program, the Messenger GMU8120 remote monitoring unit checks equipment operations in inaccessible locations. The Messenger is configurable with industry-standard 0–5-V, 4–20-mA, or dry contact sensors that detect temperature, pressure, voltage, vibration, and other parameters. It creates a database of past and current conditions that the operator can use to determine when equipment maintenance, inspections, cleaning, and repairs are necessary. The Messenger can send early warning signals of emergency conditions via phone call, text message, or email. The unit also performs a wide range of control and input-processing tasks, such as totalizing flow through a pipe, tracking the run time of a pump, and remotely rebooting equipment.

Global Monitoring, LLC

www.globalmonitoring.com

Portable Gas Chromatograph Features LCD Display

The Model 292B natural gas chromatograph is a portable analyzer that features a sample handling system, rugged gas chromatograph (GC) module, and an LCD color display. The unit determines energy content, relative density, and compressibility. Gas analysis starts with the touch of a button. Sample transport, signal integration, and system diagnostics are handled within the unit to ensure accurate analysis and repeatability. Sample results, including live chromatograms, raw data, and analysis reports, can be easily viewed on the front-panel



display. The reports can be retrieved or printed directly from a standard USB port connection. The oven temperature in the unit is precisely controlled, which eliminates errors caused by ambient temperature fluctuations.

AMETEK Process Instruments
www.ametekpi.com

OPERATIONS AND MAINTENANCE

Key Cabinet Programs and Dispenses Smart Keys



The newly redesigned CyberKey Vault 20 FX, which manages, programs, and dispenses CyberKey smart keys, features a sleek new look and weatherized input modules. Blank keys are stored securely in the locked cabinet. When a user scans a radio-frequency identification (RFID) card or enters a code, the CyberKey Vault programs a CyberKey with specific access privileges — *i.e.*, which electronic locks the key can open and when — for that individual. Each time a key is used at a lock, a record of the lock identification number, date, and time is stored in the key and in the lock. When a key is returned to the cabinet, the Vault downloads the key's audit trail, removes its permissions, and begins charging the key.

Videx
www.videx.com

Conveyor Belt Cleaner Removes Sticky Materials

This rotating-brush cleaner removes material accumulation and dust from conveyor belts that have raised elements (*e.g.*, cleats, chevrons, ribs, or lugs), even in applications with sticky

materials and stringy fibers, such as coal and biomass. The belt cleaner is constructed of steel and stainless steel components. The standard polypropylene bristles have an operating temperature range of -20°F to 180°F , and optional bristles are available for higher temperatures. The standard 0.38-in.-dia. bristles are 4 in. long. An economical 230/450-V, 3-phase electric motor drives the unit with minimal power consumption. A 1-hp motor powers the unit for 18–42-in. belts, and a 2-hp motor drives the cleaners for 48–96-in. belts.

Martin Engineering
www.martin-eng.com

Tank Light Fits through Narrow Manways

The EPLCD-48-100LED explosion-proof tank light delivers 7,000 lumens and can fit through an 18-in. or 24-in. manway. The aluminum dolly-cart frame protects the Class 1 and Class 2 Division 1 LED light while operators lower the light into the tank. Once it has been deployed, operators can rotate the light so it is perpendicular with the ground for coverage of a wide area — up to 120 ft long and 50 ft wide. The light is equipped with a 100-ft SOOW cord and an explosionproof 15-amp plug.

Larson Electronics
www.magnalight.com

Weigh Module Can Safely Measure up to 100 Tons

Weighing large tanks and silos presents safety challenges. The PinMount weigh module can easily and safely convert such vessels ranging from 7.5 to 100 tons into high-capacity scales. It is easy to integrate into existing

tanks, silos, and conveyor scales, and incorporates important safety features. Self-aligning rocker-style load cells ensure that lateral movement and thermal expansion of the raw material do not affect the PinMount's performance. The weigh module's dual anti-lift devices and vertical downstops prevent damage due to environmental forces and component failure.

Mettler Toledo
www.mt.com/pinmount

ENVIRONMENTAL, HEALTH, AND SAFETY

Filtration System Protects Laboratory Personnel from Hazardous Vapors



The Vent-Box ductless filtration system is designed to protect laboratory personnel from chemical vapors found inside stand-alone chemical safety cabinets. It utilizes the Multiplex Filtration System to adsorb and neutralize the target chemicals. The filtration system has both a prefilter and main filter. Constant negative pressure removes vapors and particulates from the cabinet's interior. The Vent-Box connects to the chemical cabinet via a flexible hose. Clean, filtered air is returned to the laboratory, which eliminates the need for external ducting and minimizes the loss of conditioned air from the facility.

Air Science USA
www.airscience.com