

Flowmeter Measures Gas in Ducts



The Rectangular Conical Flowmeter can be used in very large quadrate ducts where other flowmeters will not work. It features better than 0.5% accuracy and 0.1% repeatability, and it has no straight-pipe-run requirement. Its energy-saving, antifouling, nonclogging design requires virtually no maintenance and provides for a long service life. It is suitable for dirty and low-flowrate applications such as combustion air, fluegas, stack gas, coke oven gas, exhaust air, biogas, and fuel gas.

ACN Industry Inc. Booth 608
www.acn-industry.com

Reactor Uses Active Biofilm to Treat Wastewater



The AnoxKaldnes moving-bed biofilm reactor (MBBR) uses biofilm carrier elements to provide optimal conditions for complete biological treatment or pretreatment in a variety of chemical industry wastewater treatment applications. The process removes biochemical oxygen demand (BOD), chemical oxygen demand (COD), nitrogen, and phosphorous in compact, robust, reliable systems

with flexible designs. Depending on the application's requirements, the MBBR can be used as a stand-alone process, as pretreatment in a more-extensive system, or in the same reactor as an activated-sludge process. It can be used in new or retrofit projects.

Veolia Water Solutions & Technologies Booth 224
www.nawatersystems.com

Controller Provides Interface for Variable-Speed Pumps



The C100A is a variable-speed controller that features both manual speed adjustment via a front-panel-mounted rotary dial and electronic speed control via a 4–20-mA signal from an external source (sensor, flowmeter, analyzer, process controller, etc). Additional features include iR compensation, a current-limiting circuit, and minimum and maximum speed adjustment, which are all factory-preset to meet specific application parameters. It also incorporates transient-voltage protection and an AC fuse. The C100A is appropriate for controlling the firm's Chloritrol valveless hypochlorite injection system and CTS chemical treatment system, both of which provide maintenance-free fluid control for the water and wastewater treatment industries. It is especially well-suited for applications that operate continuously in remote locations. The C100A retains settings and resumes operation following a power interruption or fail-

ure without the need for an operator to manually restart it. The electronics are housed in a space-saving NEMA 4/12 enclosure suitable for wall mounting.

Fluid Metering Booth 213
www.fmipump.com

Rugged HMI Operates at Severe Temperatures



Built to perform in extreme environments, the QTERM-A12 human-machine interface (HMI) meets NEMA-4X/IP66 specifications and operates at temperatures from –30°C to 70°C (–22°F to 158°F). It is UL 508, UL 50, and UL Class I Div. 2 certified, and ATEX certification is pending review. Features include a 12.1-in. (307-mm), 800×600-pixel TFT-LCD LED backlit display, resistive touch-screen, Ethernet 10/100 Base-T interface with two USB 2.0 full-speed host ports, and two serial ports for connection to nearly any device. Tests have shown it to withstand shock, vibration, humidity, and extreme temperatures. The QTERM-A12 comes with a choice of iX Software for automation control or Windows Embedded CE 6.0. The iX software includes drivers to communicate with automation equipment (e.g., programmable logic controllers and motion controllers), scalable vector-based graphics (WPF), open architecture (.NET, C#), and an intuitive design environment. Windows

Embedded CE 6.0 allows for easy integration with existing systems and has a variety of programming and software options.

Beijer Electronics, Inc. Booth 629
www.beijerelectronicsinc.com

Coriolis Mass Flow Controller Measures Low Flowrates



The mini CORI-FLOW series includes compact and cost-effective Coriolis mass flow meters/controllers for accurate measurement and control of very low flowrates — from 400 mg/h to 30 kg/h. The miniature Coriolis sensor features a unique design and is said to have superior response time and high accuracy regardless of changing operating conditions (pressure, temperature, density, conductivity, and viscosity). Suitable for both liquid and gas applications and capable of bidirectional measurement, the instruments are equipped with robust IP65 weatherproof housings and are available with optional approval for use in hazardous areas (ATEX Category 3 Zone 2). The mini CORI-FLOW line offers integrated proportional-integral-derivative (PID) control and close-coupled control valves or pumps. The devices feature standard analog and RS-232 communication, optional fieldbus interfaces, and additional functions such as alarms, totalizing (to mea-

sure fluid consumption), and batch dosing. The instruments feature fluid temperature and density as secondary digital outputs. Typical applications include research laboratories, pilot plants, analytical testing facilities, microreactors, and others that require direct mass flow measurement independent of fluid properties.

Bronkhorst USA Inc. Booth 602
www.bronkhorstusa.com

Low-Flowrate Pump Handles Pressures up to 10,000 psi



The 65DM precision syringe pump provides low-flow stability down to 0.01 $\mu\text{L}/\text{min}$ in high-pressure (up to 10,000 psi) applications. Wetted materials are compatible with most aqueous and organic liquids, corrosive solutions, heated fluids, liquefied gases, viscous fluids, and slurries or pastes. The pump has a robust, single-ratio drive train with auto-lubricating gears to assure long life and low maintenance. Its small-bore cylinder provides maximum pressure and improved displacement resolution. All pumps have mechanical and electrical fail-safes, in addition

NEW DIGITAL TOOLS ENHANCE SHOW EXPERIENCE

Chem Show Online is a new suite of online tools designed to help chemical process industries professionals maximize their experience at the 2011 Chem Show. From the Chem Show website, www.chemshow.com, visitors can:

- search for exhibitors by name or alphabetically to see where they are located on the show floor
- search products by category, subcategory, or company name
- access an interactive floor plan that identifies exhibitors' booths and provides contact information and web links
- view featured exhibitors, their websites, and videos they post
- create a customized "My Show Planner," which allows registered attendees to easily prepare their own personal show roadmap. Visitors can make appointments with exhibitors, add events to a calendar, save exhibitors' contact names, keep track of educational session times and locations, and connect with people before, during, and after the event.

A mobile app version of Chem Show Online will allow visitors to more easily navigate the event. The smartphone application has the same features as the regular online version.

to factory-default or user-set limits. The 65DM pump uses special fittings to prevent leaks and ensure safety at maximum pressures. The controller console includes a keypad and LCD display, as well as built-in, optional interfaces for computer control, data logging, and analog input/output. The 65DM is CE-compliant and certified to UL61010A-1, EN61010-1:2001, EN61326:1998, and CSAC22.2 No. 1010.1-92 standards.

Teledyne Isco

Booth 713

www.teledyne.com

Gear Pump Handles Low-Viscosity Liquids



The G3000 and G4000 series gear pumps in Hastelloy C276 can handle chemicals that cannot be tolerated by 316 SS, and pressures and temperatures for which plastic pumps are unsuitable. They can be close-coupled to variable-speed motors for accurate, pulseless metering. Non-lubricating, low-viscosity liquids can be handled by models with an alloy-against-plastic-gear construction.

Dynaflow Engineering, Inc.

www.dynafloweng.com

Booth 127

Density Meters and Refractometers Determine Multiple Parameters Concurrently



Density and refractive index instruments in the Excellence line are robust and simple to operate. Shortcut buttons on the One-Click user interface provide quick, direct access to routine tasks, enabling the tasks to be started immediately. Every operator can set a personalized home screen, shortcuts, and operation language, and can start a measurement by simply waving a hand over the ErgoSens hands-free motion sensor. Full modularity allows multiple parameters to be determined simultaneously, such

as the combination of density/specific gravity with refractive index, color, and/or pH/conductivity measurements. Complete and secure traceability is available with LabX PC software. Barcode functions allow the user to quickly and conveniently input sample data, and automatically ensure that the right measurement method is always chosen. Comprehensive testing and error-detection functions, along with automatic adjustment verifications, provide tight security, ensuring that the instruments consistently provide precise results. A fingerprint reader performs biometric identification for access control.

Mettler Toledo

Booth 741

www.mt.com

Spectrometer Provides Continuous Process Control under Harsh Conditions



CompactSpec II is an ultraviolet/visible/near-infrared (UV/VIS/NIR) spectrometer system in a stainless steel cabinet (IP65) that features an industrial PC and thin-film transistor (TFT) touch-screen monitor. Its fast and reliable detector array and xenon flash lamp technology make it suitable for demanding process applications. Models are available with an integrated multiplexer that provides multichannel operation. The system is available with various spectral ranges and resolutions. In combination with fiber-optic immer-

sion probes, it is suitable for inline measurements in pipes and reactors. The new Hellma polytetrafluoroethylene transmission probe can be used in wet chemical etching and cleaning baths, which can be monitored in real time. The MultiSpec Pro software analyzes and controls all spectral channels in parallel. Various modules are available for chemometrical models, color measurement, peak-valley detection, data preprocessing, and more.

tec5USA, Inc.

Booth 647

www.tec5usa.com

Supercritical-Fluid Extractor Processes Natural Products



The SFT-NPX-10 pilot-scale supercritical extractor is designed to simplify the extraction of a wide variety of natural products, such as botanicals, herbs and spices, flavors, and nutraceuticals, and to facilitate the transition from laboratory-scale equipment to production-scale processing systems. It performs supercritical-fluid extractions in either single or dual 10-L sample vessels with single or dual separators. It has a Coriolis mass flow meter for precise mass flow measurement, and a pneumatic CO₂ pump with an integral waterless prechiller to maximize pumping efficiency.

Supercritical Fluid Technologies, Inc.

www.supercriticalfluids.com

Booth 545

Website Optimizes Chemical Delivery



AlarmAgent.com is a wireless, web-based application that helps chemical manufacturers optimize inventory management at their customers' facilities. The site monitors chemical inventory levels at a customer's location, notifies the sales manager when a low level is reached, and triggers the next delivery or sales call. These inventory levels can also be accessed quickly on-demand through the AlarmAgent.com website. With this information, manufacturers can maximize the amount of product delivered per delivery cycle — a more-efficient and cost-effective supply approach.

RACO Manufacturing and Engineering Co. Booth 609
www.alarmagent.com

Flame Arrester is Maintenance-Friendly



Sediment and debris make it difficult to disassemble a flame arrester for cleaning, which is critical for safe and efficient processes. The Protego flame arrester is designed for applications that require frequent cleaning, such as those with heavy soiling, polymerizing, or crystallizing substances. The modular design makes maintenance simple and avoids damage to the unit

during assembly and disassembly. Faster and easier maintenance reduces process downtime and costs. Existing Protego arresters can be retrofitted with the new maintenance-friendly flame arrester.

Protego Booth 907
www.protego.com

Flowmeter Measures Liquid and Gas in Hazardous Areas



The ForceMeter is a liquid, steam, or gas flowmeter that uses proven strain-gauge technology to sense the force of the fluid in the flow stream. It is suitable for many applications, including water, compressed air, and superheated saturated steam. It has a remote-operation option, an easy-to-read two-line display for flowrate and total flow, and is HART-compliant. Its rugged design with all-welded construction and no frictional moving parts ensures reliability and durability over the life of the unit. The ForceMeter is approved for hazardous locations.

Niagara Meters Booth 111
www.forcemeter.com

Pumps Can Handle Liquids that Contain Solids



This firm's pumps are designed to handle highly viscous liquids containing particles, debris, and abrasives.

The pumps are suitable for applications that require shear sensitivity, self-priming, high suction lift, and dry running. They are easy to service, and can be maintained without removing the pump from service or disturbing any connected piping. Numerous wet-end material options are available for chemical compatibility and wear resistance. The company also offers the RotaCut inline grinder, a high-performance, size-reducing solids separator that can be installed upstream of the pumps and other equipment to protect them from harmful solids and debris, and the X-Ripper inline twin-shaft grinder, which reduces the size of large solids, either wet or dry.

Vogelsang Booth 828
www.vogelsangusa.com

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