



What's New

BIOPROCESSING Tube-and-Cap Assemblies Can Be Configured to Customer Specifications

The Cap2v8 tube-and-cap system can provide aseptic transfer, storage, and sampling in bioprocessing applications. Its single-use components meet USP Class VI standards. The one-piece molded cap has an innovative design that provides a sterile seal and eliminates the product loss associated with barbed fittings. Customers can configure their systems with unique tubing sizes, lengths, and other accessories. C-Flex tubing and polypropylene caps are standard, and other material options are available. The components are designed to fit standard glass GL45, standard plastic 38-430, or standard plastic 24-415 bottle threads. The elements can be made into complete assemblies and shipped pre-sterilized or not pre-sterilized.

SaniSure, Inc.

www.sanisure.com

Cell-Density Sensor Features NIR Light Absorbance Technology



The OUSBT66 sensor employs near-infrared (NIR) light absorbance technology to measure cell density in life science processes, fermentation biomass applications, and algae

growth systems. It provides rapid and accurate measurement of cell growth activity in cultures to identify the end of the log growth phase and avoid the process death phase. The OUSBT66 sensor body is constructed of Type 316L stainless steel. The measuring head, which contains an LED light source and optical sensor, is hermetically sealed and can withstand cleaning in place (CIP), sterilization in place (SIP), and autoclaving. The sensor can be operated continuously at temperatures up to 158°F and can be exposed to temperatures up to 275°F for short time periods.

Endress+Hauser

www.us.endress.com

FLUIDS AND SOLIDS HANDLING

Varnish Removal System Extracts Both Soluble and Suspended Sludge



The Varnish Removal System (VRS) uses two mitigation technologies to remove soluble and suspended varnish from oil. It employs granular adsorbent media to remove soluble varnish found in warm oil at normal operating temperatures of 100°F and higher. As soluble varnish is removed from the oil, it allows hard varnish deposits

on the metal surfaces of the lube oil system to fall back into solution. At cooler temperatures, varnish in suspension can be removed by depth-media filter elements. The VRS is suitable for purifying turbine lube oil, hydraulic oil, paper machine oil, compressor oil, and other oils for rotating equipment. The systems are offered in several different sizes and are available for purchase or for rent.

Oil Filtration Systems (OFS)

www.oilfiltrationsystems.com

Grinder Pump Provides Solids Reduction at High Discharge Pressures



The 500 grinder pump combines efficient solids reduction with a high-performance progressing cavity pump. It has a cast iron cutter disc with replaceable carbide tips that rotates against a stationary steel cutter ring. It also includes a molded, elastomeric wobble stator that increases the compression fit with the rotor for enhanced volumetric efficiency. The grinder pump effectively reduces stringy fibers and other debris to prevent blockages in downstream process equipment. It can handle flowrates up to 15 gpm and discharge pressures up to 100 psi. Each pump features a carbon/ceramic mechanical seal; prelubricated, fully sealed ball bearings; and an ANSI-compatible tank mounting flange.

Moyno, Inc.

www.moyno.com

MATERIALS AND CHEMICALS

Synthetic Lubricants Offer Thermal Stability



The Chemlube Plus Series of high-performance synthetic lubricants is designed for use in a wide variety of rotary-screw and rotary-vane compressors. The lubricants are fully compatible with most original equipment manufacturers' (OEM) rotary-screw compressor oils, and can be used to top off and replace existing fluids. The Chemlube Plus Series lubricants are made with a very thermally stable polyol ester (POE) blend that resists oxidation. They form less varnish under high temperatures and are more resistant to acidic intake air than polyalkylene glycol (PAG) coolants. Lubricant service life can reach 11,000 h under normal operating conditions in rotary-screw compressors. The lubricant offers improved safety with high flashpoints and is available in ISO Grades 32, 46, and 68.

Ultrachem

www.ultracheminc.com

Emulsifier Stabilizes Personal Care Formulations

The ES-5300 formulation aid is a water-in-oil silicone emulsifier specifically designed for enhancing liquid and cream sunscreens and cosmetics. It provides excellent oil-phase flexibility that can increase the stability of emulsions, even when a wide variety

of ingredients and cosmetic oils are incorporated. The material has low odor and low viscosity, and delivers high emulsification capabilities due to its small particle size. The low viscosity provided by the formulation also translates into a lighter feel and lower tackiness. Stability is maintained under varying temperature conditions and for a broad range of silicone/oil ratios. The formulation aid allows for cold or hot processing.

Dow Corning

www.dowcorning.com

Polymer Enhances Softness of Skin-Care Products

The Aristoflex Velvet polymer contains no ethylene oxide or preservatives, and is specially designed to add a soft and smooth feel to moisturizing and cleansing cosmetics and skin-care products. It is suitable for use over a broad pH range (pH = 3–8) and has high temperature stability. It is compatible with organic solvents, which allows special formulations with a soft, non-drying feel to be created. Aristoflex Velvet also provides excellent suspending properties in a variety of products, enabling the stabilization of colorful beads, exfoliating scrubs, and microcapsules, among other particles. It is pre-neutralized and is easy to add in any formulation step, dispersing easily in both oil and water phases.

Clariant

www.clariant.com

Silicone Adhesive Withstands High Temperatures and Thermal Cycling

MasterSil 153Med is a two-component, medical-grade silicone adhesive that resists temperatures up to 400°F. It meets USP Class VI and ISO 10993-5 specifications for biocompatibility and cytotoxicity. The adhesive has a convenient one-to-one (by weight) mix ratio, and does not require exposure

to air and humidity for cross-linking. It has a long working life of 5–7 h and will not outgas while curing. The adhesive has high flexibility, which allows it to withstand thermal cycling, vibration, and shock. It has a Shore A hardness of 20–35 and can bond to metals, glass, ceramics, many plastics, and cured silicone rubber. Once cured, it can function as an electrical insulator. MasterSil 153Med is available in a variety of standard packaging options, including pints, quarts, gallons, and 5-gal kits.

MasterBond, Inc.

www.masterbond.com

High-Performance Grease Is Now Available in a Variety of Containers



DayLube high-performance grease contains nanoceramic particles that act as ball bearings to provide continuous lubrication to steel surfaces. It is now offered in a full range of sizes, from 16-oz tubes and jars to 1-gal and 5-gal containers. The grease has a lower coefficient of friction than traditional polytetrafluoroethylene (PTFE) greases and is chemically inert. It can withstand temperatures from –40°F to 800°F and maintains its viscosity across the full temperature range. DayLube has high load-bearing capabilities, a low dielectric constant, and is resistant to steam, acids, and most chemicals. It does not contain metal or silicone.

Dayton Progress

www.daytonprogress.com

LABORATORY EQUIPMENT

Multichannel Pipettes Achieve Balance Between Lightness and Performance



The manual Rainin Pipet-Lite XLS+ and electronic Rainin E4 XLS+ multichannel pipettes have new mechanical designs that eliminate hand strain and ensure the highest channel-to-channel consistency. This helps pipette operators work more comfortably and reduce the risk of error, and may also avoid expensive rework. The pipettes feature lower tip-ejection forces and reduced piston stickiness (stiction), which help eliminate splash up. Both pipettes are available in volumes up to 300 μL .

Mettler Toledo

www.us.mt.com

Particle Analyzers Employ Dual Detection Systems



DelsaMax particle analyzers speed nanoparticle research with two independent detection systems that operate in parallel. The DelsaMax PRO light-scattering and zeta potential analyzer provides precise measurement of the size, structure, and charge of particles 0.4 to 10,000 nm in diameter in as little as one second. It can reliably

measure dilute, weakly scattering systems. The analyzer will not damage small biologicals and proteins even at very low volumes and concentrations. DelsaMax CORE analyzers measure the size and molecular weight of particles from 0.4 to 10,000 nm, at sample volumes as low as 1 μL . The system is cuvette-based and operates at temperatures from -15°C to 150°C . DelsaMax analysis software, featured in both analyzers, has an intuitive interface and can delete spurious data without rerunning the sample. The user can create overlays, custom variables, and data reports.

Beckman Coulter, Inc.

www.beckmancoulter.com

INSTRUMENTATION

Benchtop Temperature Controller Includes a Power Supply

The 5R6-900 thermoelectric benchtop temperature controller has an internal power supply and is capable of loading currents up to 10 A. The unit is PC programmable; it easily connects to a computer via the RS232 communications port. It has an easy-to-read digital display for controlling output voltage and temperature. An automatic shutdown feature is triggered if the sensor is opened or shorted, which enhances user safety. The controller also includes high-, low-, and no-alarm settings. It is suitable for use in research labs, universities, and industrial temperature control applications.

Oven Industries, Inc.

www.ovenind.com

Dosimeter Tubes Require Little Training for Accurate Measurements

Gastec dosimeter tubes provide on-the-spot, time-weighted average (TWA) monitoring of air contaminants. The tubes are easy to read and can be used for personnel or area monitoring. They can perform TWA, short-term, or long-term sampling up to 48 h, as well as measure workplace exposures over

30 min to 10 h. Employees on the job site can accurately take TWA measurements without extensive training. To operate the tubes, snap off the easy-to-break end of the tube and insert the tube into the holder. Then, after the desired time period has elapsed, read the measurement printed on the tube's scale and divide the measurement reading by the sampling time to achieve the average exposure measurement in parts per million. Gastec dosimeter tubes are an inexpensive and easy way to develop worker exposure profiles.

Nextteq

www.nextteq.com

Combustion Analyzer is Certified for Safety Instrumented Systems



The Thermox WDG-V combustion-gas analyzer monitors hot, wet fluegas for excess oxygen. It allows operators to reduce emissions of NO_x , CO, and CO_2 , as well as improve operating efficiencies. It also monitors for the presence of methane for safe burner startup. The analyzer is third-party certified for SIL-2 implementation in safety instrumented systems (SIS). The WDG-V is mounted directly to the process flange and is heated to maintain all sample-wetted components above the acid dewpoint. The analyzer features an improved aspirator design with larger orifice sizes and improved response times, even when flame arrestors are installed. An alarm monitors gas flow at the sensors and indicates low sample flow. Cell and detector age tracking allow proactive calibration and service scheduling.

Ametek Process Instruments

www.ametekpi.com