



## What's New

### SOLIDS AND FLUIDS HANDLING

#### Stainless Steel Pipe is Safer and More Economical

The thin-walled Type 304 stainless steel ECO-pipe is an economical solution for stainless steel pipe systems that require corrosion resistance as well as pleasing aesthetics. It uses the firm's ProPress pipe-joining technology — a faster and more-reliable alternative to welding that makes watertight and gas-tight connections in less than seven seconds. Because it is flameless and requires no welding rods, smoke, cutting oils, or grinding, it is safer than welding and eliminates the need for hot-work permits. ECO-Pipe is available in 20-ft lengths with diameters ranging from 0.5 in. to 4 in. It is suitable for general utility applications, such as compressed air and chilled water lines, as well as in food and beverage, chemical, pharmaceutical and biotech, oil and gas, mining, and other manufacturing applications. ECO-Pipe meets American Society for Testing and Materials (ASTM) A554 standards.

Viega

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

#### Inline Filter can be Integrated into Single-Use Systems



The UltraCap H.D. high-capacity inline capsule filter is designed for seamless integration into single-use systems (SUSs), such as the firm's own One-Touch SUS as well as compatible SUSs from other compa-

nies, for critical pharmaceutical and biomanufacturing applications. It is available with removal ratings from 0.04  $\mu\text{m}$  to 99  $\mu\text{m}$ . Filter membrane materials include polyvinylidene fluoride (PVDF), polyethersulfone (PES), polypropylene (PP), and polytetrafluoroethylene (PTFE). The inline UltraCap can also be supplied with microfiber prefilter media made of PP or borosilicate glass, and PP depth media. A gamma-irradiated version is available for aseptic processing.

Meissner Filtration Products, Inc.

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

#### Piping System Resists Cracks over a Long Life



Chem Proline is a crack-resistant polyethylene (PE) piping system designed for the harshest liquid chemical applications, such as those handling sodium hydroxide, sodium hypochlorite, caustic soda, and weak acids. The complete system includes pipe, fittings, valves, injection quills, and chemical feed skids. Made from the latest generation of PE resin (PE100-RC), Chem Proline pipe and fittings are a lower-cost alternative to metal, fiberglass-reinforced plastic, and lined-steel pipe, and they have a design life expectancy of up to 50 years. The thermally fused Chem Proline piping can be installed above or below ground using socket, butt, or electrofusion joining methods. It is UV-resistant, can handle fluids of any pH from 1 to 14, and withstands pressures up to 150 psi and temperatures up to 140°F. It is available in

pipe sizes up to 4 in. and in single- or double-wall configurations.

Asahi/America, Inc.

[www.asahi-america.com](http://www.asahi-america.com)

#### Vacuum Pumps Provide Fast Pump-Down



The CXS160 and CXS250 dry vacuum pumps can continuously pump up to 1 L/min of liquid and up to 25-L slugs without stopping, and can achieve an ultimate vacuum as low as  $10^{-3}$  mbar with no contamination of the process stream or cooling water and no effluent generation. They feature tapered-screw technology that produces smooth, gradual compression along the length of the rotor for improved thermal control. They have low acoustic output (64 dB), and their flooded air-gap potted motors are up to 15% more efficient than standard motors. Both models can handle corrosive gases, and they are explosionproof and ATEX-certified for use in hazardous environments. Each pump is available as a standalone unit or as a complete system with accessories such as flame arrestors, knockout pots, and filters.

Edwards

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

### INSTRUMENTATION

#### Analyzer Characterizes Small Particles' Physical Properties

The SZ-100 nanopartica series instruments analyze key physical properties of small particles, including size

and zeta potential. Typical applications include nanoparticles, colloids, proteins, biomolecules, and emulsions. The particle size analysis function employs dynamic light scattering (DLS) to make both right-angle (90 deg.) and backscatter (173 deg.) size measurements for samples as small as 10  $\mu$ L. This feature provides maximum sensitivity and allows the user to optimize measurement conditions for all possible sample types. Unique semi-disposable zeta potential sample cells have carbon electrodes and can typically measure hundreds of samples before requiring replacement. Zeta potential is measured by electrophoretic light scattering and requires as little as 100  $\mu$ L of sample.

**Horiba Instruments Inc.**

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

### Explosionproof Pressure Transmitters have Extended Ranges



The AST4600 and AST46HA Series explosionproof pressure transmitters are now available in new materials and with new pressure ranges and options. The expanded pressure range

of 0–2.5 psi to 20,000 psi addresses the need for high-pressure transmitters capable of withstanding cycling; a vented gauge reference allows for use at low pressures. A failure-mode indicator option provides better system control in the event of sensor failure. F250C female process ports allow robust high-pressure connections. Construction of Waspalloy (a nickel-based alloy) makes the transmitters suitable for use in the processing of heavy oil and high sulfidation. Class 1, Div. 1, Groups A, B, C, and D approvals for the AST46HA allow the transmitter to be used in acetylene and hydrogen environments. Sealed gauge versions are approved for Class 2, Div. 1 Groups A, B, C, and D mining applications.

**American Sensor Technologies, Inc.**

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

### Infrared Thermometers Offer Bluetooth Connectivity

The Cyclops portable infrared thermometers for noncontact industrial temperature measurement in the 200–3,000°C range now offer improved efficiency and accuracy. In addition,

all models include Bluetooth connectivity as a standard feature, eliminating the need for cable connection to a recording device and making them easier and safer to use. The reliable, battery-powered thermometers may be used in a wide range of industries, including metals, glass, petrochemicals, and plastics. The devices have narrow, continuously focusable optics with through-the-lens sighting for accurate sample-point selection, and advanced spectral filtering eliminates the distorting effects of water vapor in the atmosphere. The thermometers' rugged casings are designed to withstand harsh environments. Two new models, 160B+ and 100B+, can resolve temperatures in 0.1°C increments.



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25  
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