



## OPERATIONS AND MAINTENANCE

### Work Positioner Enhances Ergonomics



This hydraulic and pneumatic work positioner improves ergonomics by keeping work instruments and items close at hand to eliminate unnecessary reaching and other operator movements. The inclusion of a heavy-duty, 360-deg. turntable makes this unit suitable for palletizing, depalletizing, workstation assembly, and manufacturing of all kinds. Various lift capacities, base and turntables sizes, and vertical travel distances are available to meet customer needs. Additionally, other unit customizations include accordion skirting, oversized platforms, platforms with beveled edges, pit-mounted units, portability packages, detent stops, programmable logic controller (PLC) control, foot pedal control, fork pockets, external power modules, and more.

#### Verti-Lift

[www.verti-lift.com](http://www.verti-lift.com)

## ENVIRONMENTAL, HEALTH, AND SAFETY

### Warning Signals Have Four Alarm Stages

These explosionproof warning signals include four remotely triggered alarm stages that can signal multiple safety warnings or process events. The high-output horn sounder can be combined with a xenon strobe, available in a range of colors. In the combined units, the strobe beacon and the auditory



horn can be activated individually via separate terminations or linked for simultaneous operation. The horn offers 64 internationally and nationally recognized tones, as well as continuous, intermittent, sweeping, and alternating tones with an effective range of up to 125 m (410 ft). The compact 130-mm-wide, 125-mm-deep die-cast, marine-grade aluminum housing ensures resilience in the harshest environments. These units are appropriate for use in Zone 2, Zone 22, and Division 2 hazardous locations.

#### E2S

[www.e2s.com](http://www.e2s.com)

### Leak Detector Features a Fast Pumping Speed



A fast pumping speed of 5 L/sec enables the HELIOT 900 to detect small helium or hydrogen leaks quickly. The 7-in. tablet, touchscreen display/controller supports an active and mobile leak detection system. The system can be automated and includes several programs for different leak-test configurations. Internal monitoring of the error and alarm conditions detects problems before

they can cause damage to the unit, and the internal construction is designed for easy maintenance. Five different models are available for a range of applications.

**ULVAC Technologies, Inc.**

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

### Duct Deluge System Operates in Corrosive Environments



The DDS duct deluge system is a set of components suitable for fire suppression in ventilation ductwork in highly corrosive environments. The system resists damage from corrosive gases to provide effective fire protection in highly acidic ventilation and ductwork systems in widths from 1 ft to 16 ft and at temperatures up to 150°C (302°F). It is intended for use in circular, rectangular, or irregular ductwork. Items available with the package include water spray nozzles, linear heat detection cables, duct mounting hardware, and an electric actuation deluge valve cabinet. This complete fire protection package minimizes downtime, limits routine inspection, and reduces maintenance, while ensuring that fires are extinguished safely and effectively.

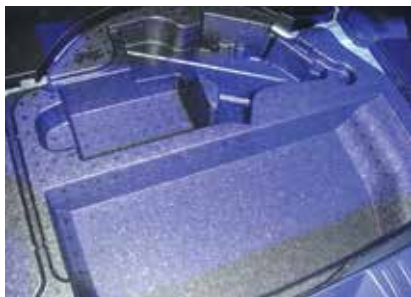
**Tyco Fire Protection Products**

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

## MATERIALS AND CHEMICALS

### Foam Resin Is Heat Resistant

A new grade of Piocelan moldable foam resin is composed of a higher-heat olefin component than previous grades, increasing the foam's temper-



ature stability, as well as its compressive, flexural, and tensile strength. Piocelan T is a hybrid of styrenic and olefin components that is produced with a unique processing technique. This technique yields foam beads that are easily molded into foam parts. Parts composed of this material can be 20% to 40% lighter than parts made from conventional foam materials. Because it has higher-strength properties, less material can be used — reducing part size and costs.

**Sekisui Plastics USA**  
[www.sekisuiplastics.com](http://www.sekisuiplastics.com)

### Polyols Improve the Sustainability of Polyurethanes



The four offerings of the Capa Lactide 8000 series include three diols and one triol, which are appropriate for a range of polyurethane elastomers, adhesives, and coatings. All four polyols are liquids at room temperature, and their improved solubility enables formulators to reduce or eliminate the use of solvents. These polyols improve adhesion to demanding substrates and increase hardness without the need to increase the isocyanate content of the final formulation. Some of the polyols contain up

to 50% renewable materials, which can help users meet sustainability goals. With optical clarity and minimal haze, these materials improve adhesive joint appearance.

**Perstorp**  
[www.perstorp.com](http://www.perstorp.com)

### Multifunctional Additive Increases Plastic Stability

NEXAMITE PBO is a compatibilizer and acid scavenger suitable for use in virgin polymer blend manufacturing, plastics engineering, and mixed-plastics recycling. It acts as a chain extender and crosslinker to improve melt viscosity, hydrolytic stability, and heat resistance. Manufacturers in a variety of industries can use NEXAMITE PBO to improve hydrolytic and thermal stability, upgrade spent and recycled materials, control the degree of branching and crosslinking, and compatibilize polymer blends.

**Nexam Chemical**  
[www.nexamchemical.com](http://www.nexamchemical.com)

### HEAT TRANSFER Fluid Chiller Reaches Ultralow Temperatures



This ultralow-temperature fluid chiller recirculates heat-transfer fluids at precise temperatures for use in pilot-plant-scale chemical reaction and recovery applications. The por-

table chiller can reach temperatures as low as  $-80^{\circ}\text{C}$ . It is designed with onboard diagnostics to monitor chiller health and avoid unexpected downtime, ensuring reliable 24/7 temperature control. With a small footprint and choice of water- or air-cooled condenser, the system can be easily integrated into a production facility. Additionally, an intuitive touchscreen interface allows users to set up thermal profiles, view data and trends, and log diagnostics.

**Thermonics Corp.**  
[www.thermonics-chillers.com](http://www.thermonics-chillers.com)

### Tube Expanders Assure Precise Expansion



The MILLHOG rolling motors and tube expanders automatically control tube expansion to assure precise wall-thickness reduction. The air-powered units feature a torque-control setting that stalls the tool when it reaches the desired tube expansion to prevent over- or under-expansion. This enables users to create a uniform and tight mechanical seal with a precise torque control of 25–235 ft-lb. The right-angle-oriented style options are offered as kits for tubes from 3/8-in. to 4-1/2-in. outer diameter (OD) and tubesheets up to 5-3/8 in. Models are available with 90-, 190-, and 280-rpm motors. The systems are appropriate



for creating mechanical seals in boilers, heat exchangers, and condensers. Units can be purchased or rented, and are supplied ready-to-use with standard shop air.

**ESCO Tool**

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

## FLUIDS AND SOLIDS HANDLING

### Homogenizer Improves Uniformity



The Ariete NS5180 homogenizer offers powerful and reliable high-pressure performance for processing nanoparticles, nanodispersions, nano-emulsions, and cell dispersions. The easy-to-clean and easy-to-maintain unit is constructed of high-quality stainless steel and other corrosion-resistant materials. It is available in a range of high-pressure and low-pressure models that provide throughputs from 100 L/hr to 50,000 L/hr at continuous working pressures from 100 bar to 1,500 bar. Users will see improvements in their homogenized products, including particle surface contact, increased stability of mixed emulsions, and enhanced product properties, as well as improved color intensity in pigment and paint applications.

**GEA Niro Soavi**

[www.niro-soavi.com](http://www.niro-soavi.com)

### Dispensing System Can Be Deployed Globally

The DrumQuik PRO dip-tube-based closed chemical-dispensing connector is now available in a 70-mm size that fits drums and totes commonly used in Europe and Asia. The rugged and cost-



effective system minimizes chemical exposure during the transfer of chemicals from bulk containers to end-use applications. The 70-mm drum insert features a unique hybrid design that is compatible with both 70 mm × 6 mm and 70 mm × 5 mm thread forms. The connector features a robust seal below the threads, which allows it to be used in high-pressure applications.

**Colder Products Co.**

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

### Pump Dampener Reduces Noise and Vibration



Traditional pulsating-pump dampeners produce unbalanced shaking, which can result in failure or operating inefficiencies, which then require additional equipment to counter these challenges. The Expulse flexible, inline pulsation dampener is an effective alternative to traditional pulsating pump dampeners. It reduces noise and

vibration, smooths pressure peaks, ensures continuous fluid flow, and prevents pipe breakage. Because it absorbs up to 90% of pulsations, this pump dampener reduces energy consumption by up to 10%. In addition, it reduces hammering of the pipeline and pump, therefore extending the operational lifetime of the pump bearing and gearbox. It includes a built-in self-cleaning operation that prevents the collection of sediment particles and residue.

**Flowrox, Inc.**

[www.flowrox.us](http://www.flowrox.us)

### Degassing Rotor Resists Wear



The presence of gas and particles inside gravity or sand castings can create bubbles that affect component strength and density — potentially compromising the appearance and performance of the component. Effective degassing is therefore integral to the casting process. This one-piece silicon carbide degassing rotor addresses the high replacement costs and frequent changeovers associated with traditional graphite models. It lasts up to five times as long as traditional rotors — a lifespan attributed to excellent wear resistance and anti-oxidation qualities of silicon carbide, as well as the high density of the isostatically pressed single-piece design. The six-vane rotor head reduces bubble size and delivers optimal gas dispersal. The rotor is available in a range of diameters with shaft lengths up to 1.2 m.

**Morgan Advanced Materials**

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