



FLUIDS AND SOLIDS HANDLING

Emulsifier Produces a Narrow Particle Size Distribution



Size reduction of active pharmaceutical ingredients (APIs) is a key step in the drug development process. The Ytron HV-Emulsifier is an inline emulsifier and wet mill that provides high shear energy and achieves precise particle size distributions. The Ytron HV is said to produce particles that are as much as 60% smaller than other conventional wet mills — down to 10–15 μm . The emulsifier can create submicron emulsions with droplet sizes of 0.2–1 μm , drug suspensions with particle sizes of 1–10 μm , and topical formulations and semisolids with droplet sizes of 0.4–3 μm . The HV Series includes three different models with capacities ranging from 1 to 285 L/min.

Quadro Engineering Corp.

www.quadroytron.com

Extractables Testing Verifies Tubing Qualities

The amount of extractables, or substance that is drawn out of a product under extreme conditions, must be known for the tubing used in the pharmaceutical and biopharmaceutical industries. This company has conducted extractables testing on its silicone and thermoplastic elastomer (TPE) tubing to verify that the products meet or exceed stringent requirements. Products are tested after autoclave sterilization and gamma irradiation. The tests include those to quantify endotoxins, particulate, pH,

and polarity. Customers can request a summary or a comprehensive report of the test results through the company's website or by phone. The tubing is available in single-use manifold assemblies, bulk coil lengths, and assembled with sanitary fittings.

AdvantaPure

www.advantapure.com

Rotary Valves Have Increased Material Throughput

SD Series rotary valves have a large pocket-fill capacity between the eight vanes of the rotor.



This design improves the efficiency of bulk material feeding and metering by allowing over 5% more throughput per revolution than a comparable eight-vane valve. The valves' housings are CNC-machined to precise tolerances (*i.e.*, using computer numerical control), which eliminates axial shaft movement, seal leakage, and problems associated with shortened bearing life. Housing options include cast iron, and Types 304 and 316 stainless steel. The valves are available in square-flange sizes from 6 to 12 in., and heights from 10 to 18 in.

ACS Valves

www.acsvalves.com

Ball Valve Offers Precision Flow Control

The Type 523 ball valve has a V-notched ball with a 180-deg. rotational capability, which provides excellent flow control. It has a circular scale with a high-contrast display, so the valve position is easy to read from all angles. It is available in 3/8-in. and 1/2-in. standard sizes. Material options include polyvinyl chloride (PVC), polypropylene, and polyvinylidene

fluoride (PVDF). Integrated stainless steel mounting inserts, polytetrafluoroethylene (PTFE) ball seals, and built-in threaded inserts all come standard.

GF Piping Systems

www.gfpiping.com

Double Planetary Mixer Has a Tilted Design



The slightly tilted configuration of this double planetary mixer allows for more effective and complete discharge of flowing products. The mixer has an air/oil hydraulic lift to raise and lower the stirrers into the vacuum-rated mix can. A glass charge port and tank light allow the operator to check on the batch and add raw materials without interrupting the agitation. A 5-hp motor drives the Type 316 stainless-steel rectangular stirring blades. A 50-psig heating and cooling jacket on the vessel is insulated and sheathed in stainless steel. After the mixing cycle, product is discharged through a 3-in.-dia. polytetrafluoroethylene (PTFE) plug. The mixer's NEMA-4X control panel houses the speed controls, digital temperature readout, cycle timer, vacuum gage, etc.

Charles Ross & Son Co.

www.mixers.com

ENGINEERING SERVICES

Service Facilities Provide Responsive Support



These certified service facilities act as stocking distributors for the entire line of company pumps. They are able to specify, install, and maintain fluids handling equipment. The service facilities offer maintenance cost reduction solutions, preventive maintenance programs, warranty repairs, and troubleshooting assistance. All facilities have an extensive inventory of replacement parts, and offer 24-h service and support.

Moyno, Inc.

www.moyno.com

INSTRUMENTATION

Pressure Switch Is Approved for Hazardous Areas



The AST46SW explosionproof pressure switch has a single-pull, double-throw configuration with factory-set switch points. Its one-piece stainless-steel sensing element can measure pressure in the most extreme temperature conditions. The switch has an operating range up to 20,000 psi, and can maintain high performance with zero signal drift due to its thick and robust sensing diaphragm. The

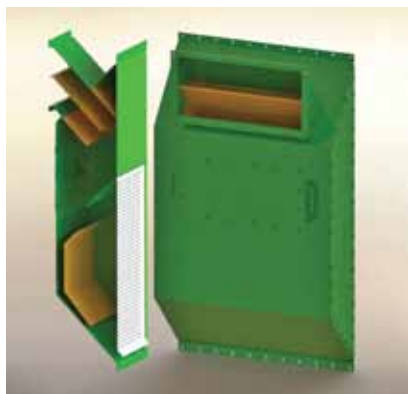
AST46SW is approved for use in hazardous areas, including Class 1 Div. 1 Groups A, B, C, and D, and Class 2 Div. 1 Groups E, F, and G. It is suitable for use in well optimization, oil and gas pipelines, drilling platforms, compressed natural gas (CNG) and hydrogen filling stations, and combustion controls.

American Sensor Technologies, Inc.

www.astensors.com

ENVIRONMENTAL, HEALTH AND SAFETY

Spark Arrestor Protects against Dust Collector Fires



This spark arrestor for dust and fume collection systems channels sparks away from filters without the use of perforations or screens. It creates torturous paths that direct sparks and embers to a safe area, giving them more time to lose energy. The inlet transition is reversible, and provides horizontal or vertical entry without compromising control of the spark. The unit has a maximum capacity of 10,000 ft³/min, and contains an access door to allow debris to be removed.

Camfil Farr APC

www.farrapc.com

Leak Detector Is Suitable for Mobile Sensing

Weighing only 11 lb, The Mini-Test 300 is suitable for mobile leak detection and onsite service calls. The vacuum leak detector uses a quartz window sensor to locate and measure



small leaks, and operates at working pressures up to 200 mbar with a detection limit of 5×10^{-7} mbar-L/s. It is equipped with two different leak detection functions. In the qualitative search mode, leaks can be quickly located. In the measuring mode, the size of the leak can be quantitatively determined. All measurement data can be saved in the device's remote-control system and stored on a USB stick for later use.

Pfeiffer Vacuum

www.pfeiffer-vacuum.com

MATERIALS AND CHEMICALS

Photostabilizer Enhances Sun-Care Products

Polycrylene S1 is a singlet-quenching photostabilizer that helps formulators meet U.S. Food and Drug Administration (FDA) standards for broad-spectrum claims, and enhances the water resistance of sun-care products. The film-forming polymer enhances the substantivity of sunscreen formulations, and provides enhanced UV protection by slowing UVA filter degradation. Formulators can achieve a critical wavelength of at least 370 nm in order to earn the broad-spectrum designation from the FDA. It can be used in sprays, lotions, creams, balms, and gels, and its water resistance makes it suitable for use in athletic sunscreens.

The HallStar Co.

www.hallstar.com