this month's topic Solids Handling

Dust Collector's Integrated Filter Prevents Leaks

This firm's Gold Series cartridge dust collector is now available with an optional integrated high-efficiency particulate air (HEPA) filter that is mounted on top of the collector so that no additional floor space is required. This after-filter prevents collected dust from re-entering the workspace in case of a leak in the dust collector's primary filtering system. It is a required component in recirculating dust collection systems that filter hazardous dusts and recycle air downstream of the collector. Each module incorporates two HEPA filters capable of handling 2,500 cfm (4,248 m^3/h) of air per filter and is rated to remove 99.97% of airborne particles 0.3 µm in diameter and larger. Unlike after-filters that are installed downstream of a fan and a filter at positive pressure, the Gold Series' integrated design maintains the after-filter at negative pressure, preventing contaminated air from escaping in the event of a leak. The design also allows convenient access to the HEPA filters and easy change-out via the same platform used to access the primary filters.

Camfil Farr Air Pollution Control
www.farrapc.com

Cutter Controls Particle Sizes

The SCC-15-B screen classifying cutter reduces hard, soft, and fibrous materials into particles of controlled sizes at high rates and with minimal fines. The proprietary rotor, consisting of cutter heads attached to interconnected parallelograms (a helical array of staggered holders), continuously shears oversize materials against twin, stationary bed knives. The cutter tips, which are available in stainless steel, tool steel, and tungsten carbide, can be slid onto blade holders and secured with one retaining socket-head screw, which allows for rapid replacement. The SCC-15-B cutter has carbide-tipped cutter heads along its entire shaft, with no frontal gaps between the tips. As a result, material is cut into uniform pieces with minimum imperfections or fines, and little to no generation of heat. The cutter has a 15-in.-wide (381 mm) throat that accommodates up to 30 parallelograms with 60 cutter inserts. Bed screen perforations range from 1/32 in. to 1.5 in. (0.79–38 mm) in diameter and up to 3 in. (76 mm) square, allowing the reduction of materials into uniform particles as small as 20–30 mesh. Shaft rotation speed is infinitely variable between 30 and 3,600 rpm. The cutter system is suitable for food, chemical, mineral, and plastics products.

Munson Machinery Co.
www.munsonmachinery.com

Packer Gently Compacts Material without Contact

This device gently vibrates bulk-shipping containers, such as flexible bags and intermediate bulk containers (IBCs), to increase the bulk density of their contents and improve efficiency in packaging, material handling, and warehouse operations. It applies linear vibration from underneath the bulk container, which creates a fluidizing action that densifies the material by removing air from in between the particles, while protecting particle integrity, shape, and size. The packer, which accommodates loads up to 4,500 lb, is suitable for compacting food, beverage, chemical, pharmaceutical, mineral, metal, plastic, and other powdered, granular, and pelletized materials. Options include a variable-speed drive to adjust vibration speed and a roller deck that permits the bulk containers to be easily rolled onto and off of the platform. In addition, the packer can be mounted directly to a scale platform to combine weighing and densifying in a single unit.

The Witte Co.
www.witte.com

Radar Instrument Measures Solids Level

The Optiwave 6300 C radar level sensor accurately measures the level of powder, granulates, and bulk solids in silos, hoppers, and bulk storage containers, and on conveyor belts. Its versatile design makes it suitable for a variety of industries, such as minerals and mining, food, chemicals, pulp and paper, and power. Because the innovative drop shape of the plastic antenna generates a smaller beam angle (2 deg.) than conventional antennas, an antenna aiming kit to amplify the reflected signal is unnecessary. The unique drop shape also prevents crusting on the antenna, which makes the sensor ideal for dusty applications. Users can choose a 3-in.-dia. (DN 80) antenna made of polypropylene (PP) or polytetrafluoroethylene (PTFE, or Teflon) or a 6-in. (DN150) PP antenna. Conventional stainless steel horn antennas up to 6 in. in diameter (DN 150), with a built-in horn purging feature, are also available. The Quick Set-up wizard and a comprehensive help function simplify startup. A large screen with a four-button keypad makes navigation easy, and the wizard displays information in nine languages, including Chinese, Japanese, and Russian. ATEX, FM, and CSA certifications are pending.

KROHNE
www.krohne.com