



THE PLASTICS SHOW

West Hall Level 2, Booth W729

Press release

Coperion and Coperion K-Tron at NPE 2018

Advanced Solutions for Efficient and Reliable Conveying and Feeding

Sewell, NJ, USA, March 2018 – At NPE 2018 (May 7-11, 2018, Orlando, Florida / USA), Coperion and Coperion K-Tron will present a variety of feeding, conveying, bulk material handling components and solutions for plastics processing at their Booth W729 in West Hall Level 2. Debuting for the first time will be a USA-manufactured Coperion ZRD rotary valve from Salina, KS, that will significantly shorten delivery times for bulk solids industry customers and the new MIX-A-LOT bulk material mixer for high-speed, gentle and cost-efficient homogenization of fed material. Also on display will be a Coperion K-Tron T35 volumetric twin screw feeder, shown with a Coperion STS 35 Mc¹¹ extruder. Further exhibits include a simple but clever electronic solution for accurate and reliable pressure compensation for loss-in-weight feeders, as well as a Coperion K-Tron Smart Flow Meter for reliable metering, registering or monitoring of bulk material flows. Visitors at NPE can also see firsthand a transparent glass pipe system demonstrating various modes of pneumatic conveying and a recirculating feeding and conveying system featuring the Coperion K-Tron Bulk Solids Pump feeder combined with a 2400 Series vacuum sequencing receiver. Lastly, Coperion and Coperion K-Tron will offer attendees a cutting-edge virtual reality experience and augmented reality applications of their equipment and systems. So as you can imagine, it will be well worth a visit to Booth W729 and see what all Coperion and Coperion K-Tron has to offer and talk to the experts at the show.

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Reduced Delivery Times with USA-Manufactured ZRD Rotary Valve

In order to significantly shorten delivery times for customers of the Americas market, Coperion K-Tron located in Salina, KS, USA has started the US production of German-designed Coperion rotary valves type ZRD in Salina. Local production of the valves, along with a considerable investment of stocked inventory, will allow Coperion to deliver and repair valves for the Americas market with significantly shorter delivery times. Standard grey cast iron and stainless steel ZRD rotary valves will now be available to customers within 4 to 6 weeks.

The Coperion ZRD rotary valve is specially designed for plastics, mineral, chemical and food applications. The valve is engineered for heavy-duty industrial service with pressure differentials up to 21 psi(g) [1.5 bar(g)] and temperatures up to 212°F [100°C]; higher temperature options are available. The ZRD is often used as a discharging and metering valve for conveying products in powder and granular form.

An extensive range of sizes is available, with large throughputs ranging from 500 to 400,000 + lb per hour (subject to bulk density and application). The valves have a pressure-surge-proof, (pressure shock) rating of 145 psi(g) [10 bar(g)], and are suitable for isolation according to NFPA standards (for select sizes up to 12 inch). The ZRD comes standard with air purged seals completely mounted with plastic or stainless steel tubing, solenoid and filter regulator with gauge. An alternate seal option includes the popular T3 PTFE and quad ring assemblies, which eliminate the need for air purge. The ZRD comes with a sealed-for-life outboard bearing arrangement that can be supplied with and without air purge seals (separated from the product zone) by way of a dedicated relief openings.

Cost-Efficient, High-Speed and Gentle Mixing

The new mechanical bulk material mixer MIX-A-LOT ensures particularly efficient, high-speed and gentle homogenization of fed material. The readily accessible and easy to clean mixer is available in three sizes for throughput rates up to 5 t/h, there is also an ATEX version. The surface of the mixing chamber can be electro polished. The combination of an outstanding mixing effect and extremely short mixing time is due to the optimized design of the mixing rotor. Its low circumferential velocities and the optimum design of the gap to the housing, permit gentle handling without particle destruction or heating of the product. The large inspection door

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on the front of the MIX-A-LOT provides easy access to the entire process chamber. An additional opening at the discharge flap also facilitates inspection and cleaning of this section.

T35 Feeder Dispensing for Masterbatch Extrusion

The T35 twin screw feeder offers volumetric feeding of free flowing to very poor flowing powders (e.g., lumpy, moist or bridge building materials) as well as fibers, flakes and other bulk materials. The T35 is a twin screw feeder with interchangeable feeding tools. All parts in contact with the material being fed are stainless steel, and feeding equipment is easy to disassemble. A horizontal agitator gently moves the bulk material to the large throat and then into the screws. This equipment conforms to CE standards regarding EMC and safety. The K2-MV-T35 feeder comes with a Coperion K-Tron SmartConnex™ control system, which allows individual or multi-component control. Rate range (depending on material) is 0.04 to 88 ft³/h (1.25 to 2,500 dm³/h).

Smart Flow Meter for Reliable Metering, Registering or Monitoring of Bulk Material Flows

In high rate applications, the Smart Flow Meter (SFM) provides high accuracy feeding, at feed rates of up to 7,000 ft³/h (200,000 dm³/h), combined with gentle handling. In addition to a lower purchase cost than a large loss-in-weight feeder, the SFM offers lower maintenance costs and reduced headroom.

The SFM is often employed in PE resin pelletizing processes, where it accurately and gently feeds the main component, PE powder, into the pelletizing extruder. Typical particle size is approximately 0.02 mm up to 10 mm. The SFM is suitable for free-flowing bulk materials such as powders, granules, chips or fibers.

Electronic Pressure Compensation (EPC) System for High-Accuracy Coperion K-Tron Loss-In-Weight Feeders

Coperion K-Tron will present a unique Electronic Pressure Compensation (EPC) system for their high-accuracy loss-in-weight feeders. The main advantages of the new system include improved accuracy and reliability as well as lower initial cost and easier installation compared to traditional mechanical pressure compensation systems. Coperion K-Tron has developed a clever but simple electronic solution for accurate and steady pressure compensation in feeder hoppers and outlets. The modular design incorporates pressure sensors and electronics tailored to interact smoothly with Coperion K-Tron's KCM feeder control system. Retrofitting options for

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existing feeders are available. EPC can be installed on a majority of Coperion K-Tron gravimetric feeders in almost any application and all industries.

Modes of Pneumatic Conveying Demonstration

A pneumatic conveying demonstration system featuring transparent glass pipe will be a highlight to the booth, which will allow attendees to see firsthand different modes of conveying bulk solid material. The unit will be constructed to allow guests to observe particle flow through this unique and one-of-a-kind system. See for yourself how different conveying methods are especially suitable for premixed materials, materials with high bulk density, materials which are abrasive, friable, or tend to segregate.

Recirculating Conveying System with Bulk Solids Pump (BSP) Feeder Demonstration

The unique Coperion K-Tron Bulk Solids Pump (BSP) feeder will be featured in this working recirculating system, together with a 2415 receiver. The running unit will demonstrate unique characteristics of the BSP feeder and the versatility of the Series 2400 vacuum sequencing receivers.

The BSP feeder line has been specifically designed and engineered to provide gentle, precise feeding of free-flowing pellets, granules, and friable bulk materials. BSP feeders do not use the usual screws/augers, belts or vibratory trays to convey the material. They utilize positive displacement action to feed free flowing materials with highest accuracy, offering uniform discharge, consistent volume and gentle handling. BSP feeders have vertical rotating discs that create feeding ducts. Material moves smoothly from storage hopper to discharge outlet through a “product lock-up zone,” achieving true linear mass flow. With only one moving part, these compact feeders are cleaned in seconds, making them ideal for applications with frequent material changes. Three sizes are available, offering feed rates of 0.07 to 1.2 ft³/h [2 to 6,700 dm³/h]. On display will be the model K-ML-BSP-150-S.

The Series 2400 vacuum receivers provide a high capacity sequencing system primarily used on multiple destination applications where larger conveying rates or long distances are required. They are designed to high quality standards for pneumatically conveying powder, pellet and granular materials for the bulk materials handling industries. Conveying rates range from 720 to 15,000 lb/h (327 to 6,804 kg/h). On display will be the 2415 Powder Receiver.

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For complete show highlights, visit www.coperion.com/NPE2018

Coperion is the international market and technology leader in compounding and extrusion systems, feeding and weighing technology, bulk materials handling systems and services. Coperion designs, develops, manufactures and maintains systems, machines and components for the plastics, chemicals, pharmaceutical, food and minerals industries. Within its four divisions – Compounding & Extrusion, Equipment & Systems, Materials Handling and Service – Coperion has 2,500 employees and nearly 30 sales and service companies worldwide. Coperion K-Tron is part of the Equipment & Systems division of Coperion. For more information visit www.coperion.com or email info@coperion.com.



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Coperion rotary valves are highly regarded as top-quality products in the plastics, chemical, food, pharmaceutical and minerals industries around the world.

Image: Coperion K-Tron, Salina, KS

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The new bulk material mixer MIX-A-LOT from Coperion ensures cost-efficient, high-speed and also gentle mixing of the individual components for extrusion.

Image: Coperion, Weingarten, Germany



The mixing rotor of the new bulk mixer MIX-A-LOT ensures a combination of excellent homogenization and shortest mixing time

Image: Coperion, Weingarten, Germany

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The Smart Flow Meter is used in process applications that need reliable metering, registering or monitoring of bulk material flows.

Image: Coperion K-Tron (Switzerland) GmbH, Niederlenz, Switzerland