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Press Release

Coperion and Coperion K-Tron at NPE 2015 Latest developments in compounding and bulk materials handling technology

Pitman, NJ, USA (January, 2015) – At this year's NPE, March 23-27, Orange County Convention Center, Orlando, Florida, West Hall, Booth W1329 Coperion and Coperion K-Tron present their latest technology developments that are advancing compounding and bulk materials handling to the next level. Representing their comprehensive portfolio in compounding and extrusion, bulk materials handling systems, feeding solutions, packaging systems and service for lower rate compounding and bulk materials handling, equipment on display will include a dual-blower vacuum pressure railcar unload system, S100 single screw and T35 twin screw loss-in-weight feeders, the twin screw laboratory extruder ZSK 26 Mc¹⁸, the strand pelletizer SP 100 EN and an FFS Packaging Machine IBP 250. For higher rate bulk materials handling Coperion and Coperion K-Tron will show a newly redesigned Smart Flow Meter, a ZRD 400 heavy-duty premium rotary valve and new high rate railcar loading spreader technology for loading polymer pellets. In addition to displaying their products on the show floor they also offer a totally new and innovative digital application to experience their equipment within a compounding plant, highlighting their complete capabilities in compounding & extrusion, feeding, bulk materials handling as well as project management & engineering.

Dual-Blower Vacuum Pressure Railcar Unload System

The Coperion K-Tron dual-blower Rail Unload System pneumatically transfers pellets, powder and granular materials from railcars at conveying rates in excess of 120,000 lb/hr (54,430 kg/hr). Dual-blower systems are available with up to 10 in (254 mm) line sizes. Using separate vacuum and pressure blowers, the Dual-Blower Railcar Unload System unloads material from the railcar at higher conveying rates and for longer conveying distances. A vacuum blower



draws material from the railcar to a self-cleaning Coperion K-Tron Filtair[™] Series filter receiver that separates the product from the conveying air. Mounted below the receiver is an Aerolock[™] rotary valve that meters the product into the pressure side of the system for delivery to storage.

S100 Single Screw and T35 Twin Screw Loss-in-Weight Feeders

Coperion K-Tron's modular loss-in-weight feeders are ideal for materials with varying bulk density and for material handling automation. The S100 Single Screw LIW Feeder offers feed rates from 0.4 to 560 ft³/hr (10 to 15,800 dm³/hr). The single screw feeding elements handle free flowing powders, granules, pellets and other free flowing materials. The T35 Twin Screw LIW Feeder offers feed rates from 0.04 to 88.0 ft³/hr (1.25 to 2,500 dm³/hr). The twin screw elements are ideal for floodable powders and more difficult, sticky or hard-to-flow materials. Displayed with both feeders will be the patented Smart Force Transducer (SFT) Weighing Technology, which offers accurate feeding, metering and batching.

ZSK 26 Mc¹⁸ is user-friendly, highly efficient and versatile

Making its debut in the USA is Coperion's newly redesigned ZSK 26 Mc¹⁸ twin screw laboratory extruder. The ZSK 26 Mc¹⁸ laboratory extruder has an increased torque of 15 Nm/cm³ and is capable of higher throughputs but also allows to better simulate the many advantages of the very successful ZSK Mc¹⁸ series. The unit is mobile and requires only a minimum of floor space, as the control cabinet is integrated into the base frame of the machine. Heating and cooling systems are installed ready for use (Plug & Play). The ZSK 26 Mc¹⁸ laboratory extruder has a simple design, is operator-friendly and easy to clean. With a wide throughput range of 20 to as high as 400 lb/hr the extruder is also suitable for the compounding of small production batches. The feed enhancement side feeders type ZSB-FET and the side vent stuffer type ZS-EG complement this new research platform.

SP 100 EN Strand Pelletizer

The strand pelletizer SP 100 EN has a working width of 3.94 in (100 mm) and with 20 strands (at strand diameter 0.118 in (3.0 mm)) reaches throughput rates of up to 1,433 lb/hr (650 kg/hr). The cutting head cover swings open very wide to give full access to the interior and the intake chute can be quickly removed by simply loosening two screws. The pellet outlet is accessible through the cutting head housing without disassembly. All inside surfaces are flat and smooth to minimize the accumulation of residues.



Intelligent FFS Packaging Machine IBP 250 with automated features

The FFS Packaging Machine IBP 250 with automated features provides accurate weighing, ideal dosing and hygienic packaging for crystalline, granular, beaded or flaked goods. The system features a small footprint and the controls can be navigated intuitively by using a touchscreen. Its modular design allows an easy upgrade of machine performance to be made without replacing the complete system. Check weigher, metal detector, bag marking system and automatic cleaning can optionally be integrated into the system.

Newly Redesigned - Smart Flow Meter for precise metering, registering and monitoring of bulk material flows

The Smart Flow Meter provides high accuracy feeding, at very high feed rates of up to 7,000 ft³/hr (200 m³/hr). Applications include material flow control within a production line, measuring filling or discharge of materials from storage, inventory control, and quantitative bulk goods measurement. The Smart Flow Meter offers gentle handling, lower maintenance costs, reduced headroom and is a cost-effective solution for in-line weighing applications.

ZRD 400 Heavy-Duty Premium Rotary Valve

Coperion's rotary valves come with the assurance of decades of experience, process know-how as well as with proprietary development and manufacturing with top quality materials. The ZRD 400 demo valve shows special variations for use in different industries, like plastics, chemicals, food and minerals. It is often used as a discharging and metering valve for conveying products in powder and granular form. Especially for the high demands in the plastics industry, the valve is equipped with open rotor (type D), chamfered blades, rotor with tilted blades, rotor with reduced volume, direct drive with flat gear motor and purge gas supply with solenoid valve, pressure controller, flow meter and pressure monitoring.

New high rate railcar loading technology for polymer pellets

Specially designed for the supply of high rate and high filling efficiency railcar loading systems for polyethylene pellets, Coperion is proud to present this new technology at NPE. The loading efficiency and capacity will be achieved with proven product spreading technology developed and patented by Erhard Muhr GmbH, Germany. Coperion and Muhr have entered into an exclusive cooperation for the development, marketing and implementation of railcar loading



technology for polymer pellets.

The Muhr technology utilizes a novel spreader blade form that uses recoil forces to gently accelerate the pellets propelling them into the far corners of the railcar compartments. Extensive railcar loading tests in Coperion's technical center including the new blade form have proven the high rate and filling efficiency as well as the gentle handling of the product characterized by a comparatively low spreader rotation speed.

For more information visit www.coperion.com/NPE2015.

Coperion (www.coperion.com) is the international market and technology leader in compounding systems, feeding 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 40 sales and service companies worldwide. Coperion K-Tron (www.coperionktron.com) is a brand of Coperion.

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Dear Colleagues,

This <u>press release in English</u>, <u>Spanish and German</u> and the colour photos in printable quality are available for download from http://www.coperion.com/en/news/newsroom/

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The Coperion K-Tron dual-blower Rail Unload System pneumatically transfers pellets, powder and granular materials from railcars at conveying rates in excess of 120,000 lbs/hr (54,430 kg/hr).

Photo: Coperion K-Tron, Salina/USA



Coperion K-Tron's S100 Single Screw and T35 Twin Screw Loss-in-Weight Feeders are ideal for materials with varying bulk density and for material handling automation.

Photo: Coperion K-Tron, Pitman/USA





Making its debut in the USA is Coperion's newly redesigned ZSK 26 Mc¹⁸ twin screw laboratory extruder with 25 mm screw diameter. It has an increased torque of 15 Nm/cm³ and is capable of throughputs of up to 100% higher than its predecessor, but it also has all the advantages of the ZSK Mc¹⁸ series.

Photo: Coperion, Stuttgart/Germany



Coperion's intelligent FFS Packaging Machine IBP 250 with automated features provides accurate weighing, ideal dosing and hygienic packaging for crystalline, granular, beaded or flaked goods.

Image: Coperion, Weingarten, Germany