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Press Release

Coperion & Coperion K-Tron at PTXPO 2022, Booth #2817

Coperion to Debut the All-New ProRate PLUS Feeder line and Showcase Recycling Technologies at PTXPO 2022

Salina, KS, USA (March 2022) – Coperion and Coperion K-Tron will exhibit at PTXPO 2022 (March 29-31, 2022, Rosemont, IL) in Booth #2817, where they will have experts on hand to discuss the new ProRate feeder line and recycling technology solutions. Exhibits will include the all-new feeder line called ProRate™ PLUS, a ZSK twin screw extruder demo showing the benefits of plastics recycling when using the ZSK Mc¹⁸ twin screw extruder technology, a smart weigh belt feeder (SWB) and the ZRD rotary valve with rotor extraction device. The exhibits are part of the extensive technologies and complete systems that Coperion and Coperion K-Tron provide for compounding and plastics recycling applications.

Preconfigured ProRate PLUS feeders offer plastics industry a powerful and efficient feeding solution

The All-New ProRate PLUS continuous gravimetric feeder line is an economical solution and offers a quick return on investment due to its good price-performance ratio and fast delivery times. It was designed with the specific requirements of the plastics processing industry in mind. The feeder line features a unique design that allows a very compact, space-saving arrangement. The trapezoidal shape of the ProRate PLUS feeders allows up to six feeders to be easily grouped around an extruder inlet within a 1.5 meter [5 ft] radius. The three feeder models PLUS-S, PLUS-M and PLUS-L cover a wide range of throughputs. The ProRate PLUS feeders are capable of handling feed rates from 3.3 up to 4800 dm³/h [0.12 up to 400 ft³/h], depending on the material. Theoretically, a feeding system with six ProRate PLUS-L feeders can feed up to 28.8 m³/h [1017 ft³/h] on a footprint of only 7 m² [75 ft²].

March 2022

All ProRate PLUS feeders are equipped with P-SFT load cells, featuring reliable Smart Force Transducer weighing technology. They operate under compression and provide accurate, stable and reliable digital weight measurement under a broad range of operating conditions. The load cells supply a direct digital weighing signal and the onboard microcontroller ensures excellent repeatability and stability. P-SFT load cells have a high tolerance to vibration and electrical noise. They feature built-in over and underload protection.

ZSK Mc¹⁸ twin screw extruders for enhanced plastics recycling

Coperion is demonstrating the benefits of plastics recycling when using the ZSK Mc¹⁸ twin screw extruder technology. This twin screw extruder makes plastics recycling more energy-efficient while increasing the quality of the end product. The ZSK Mc¹⁸ can be used for various applications in plastics recycling: for regrinding plastics such as HDPE, PP, ABS, PS and PVC, for chemical plastics recycling, for recycling of multi-layer films, for PET recycling as well as for the upcycling of various materials.

Coperion's ZSK Mc¹⁸ extruder series process high percentages of calcium carbonate, talc, glass or natural fibers with the highest energy efficiency, thanks to their high 18 Nm/cm³ torque and optimally adjusted process parameters. Homogenization and melt devolatilization take place with high intensity that positively affects odors that may be present in the recyclate, effectively removing them. With the ZSK Mc¹⁸ twin screw extruder, the recyclate's properties profile is optimized according to the requirements provided by the end customer, at a constant high level of product quality.

Coperion designs complete recycling systems with their smooth interaction of all process steps. This includes material handling, feeding, twin screw extrusion, pellet treatment (cooling, drying, homogenization) and finished product handling. Coperion recycling systems have proven their high productivity on the market many times.

Gentle high-rate feeding, batching and metering for plastics

The Coperion K-Tron Smart Weigh Belt Feeder (SWB) is used for continuous controlled gravimetric feeding of free-flowing or friable bulk materials. The feeder can be used for gravimetric batch feeding or for continuous metering of bulk material flow. The SWB features a primary weigh bridge and offers an optional secondary weigh bridge that provides continuous

March 2022

online auto tare, reducing maintenance, frequency of calibration, and improving long term stability. Material weight on the primary weigh deck and belt tare weight on the secondary weigh deck are determined by Coperion K-Tron's SFT III weighing technology with vibration and temperature immunity, zero deflection and resolution of 1:8,000,000 in 20ms. The SWB is available in 300mm, 600mm, 650mm, 800mm and 1000mm belt widths. The SWB-300 and SWB-600 are supplied as open or closed frame.

Advanced solutions for efficient and reliable conveying

The Coperion ZRD rotary valve is specially designed for plastics and chemical 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. The standard seal option includes the popular T3 PTFE and quad ring assemblies, which eliminate the need for air purge in most applications. In addition, the ZRD comes with a sealed-for-life outboard bearing arrangement, separated from the product, with and without purge gas by way of a dedicated relief opening.

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 two divisions – Polymer and Strategic Markets / Aftermarket Sales and Service – Coperion has 2,500 employees and nearly 30 sales and service companies worldwide. Coperion K-Tron is a brand of Coperion. For more information visit www.coperion.com or email info@coperion.com.

March 2022

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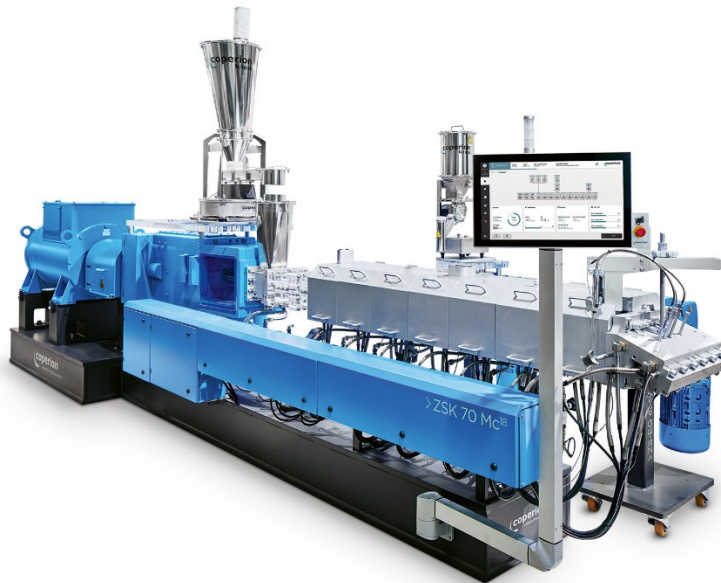
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ProRate PLUS continuous single screw gravimetric feeders are ideal for the feeding of pellets, granules and other free-flowing bulk materials in secondary plastics applications.

Image: Coperion K-Tron, Niederlenz, Switzerland

March 2022



The ZSK 70 Mc¹⁸ twin screw extruder has a screw diameter of 70mm and incorporates numerous features, which improve handling and increase efficiency in compounding and recycling.

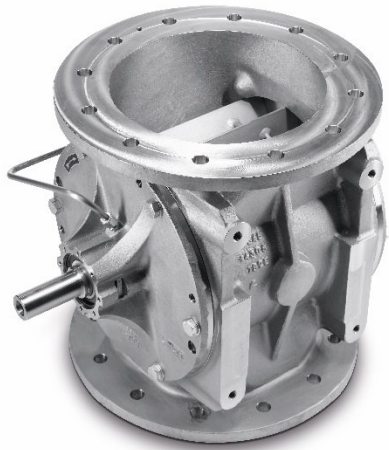
Image: Coperion, Stuttgart, Germany



High-accuracy Coperion K-Tron SWB feeder that is reliably and precisely feeds PET flakes into the extruder.

Image: Coperion K-Tron, Niederlenz, Switzerland

March 2022



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, Kansas