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Press Release

Coperion and Herbold Meckesheim at Chinaplas 2024

Pioneering Technologies for Plastics Compounding and Recycling

Stuttgart, March 2024 – At this year's Chinaplas (23-26 April 2024, National Exhibition and Convention Center (NECC), Hongqiao, Shanghai, PR China) Coperion will present key technologies for processing plastics at Booth F 106 in Hall 2.1. The centerpiece of the exhibits will be the STS 75 Mc PLUS twin screw extruder with its increased specific torque of 13.6 Nm/cm³ which allows the STS extruder to achieve up to 20% more throughput with markedly higher product quality.

Together, Coperion and Herbold Meckesheim offer operators broad expertise in technology and process solutions for plastics recycling. Since their merger, both companies have continued to develop and optimally attune their technologies so that entire systems excel in operation with extremely high efficiency. At Chinaplas, Coperion and Herbold Meckesheim will display a virtual PET recycling installation. Visitors to the booth can peer inside key components of the recycling installation and see for themselves the process-technical details in each process step and the high efficiency of each component.

Other exhibits at Booth F106 in Hall 2.1 include the Coperion ZSK 26 Mc¹⁸ twin screw extruder with a Coperion K-Tron K-ML-SFS-KT20 twin screw feeder, a Coperion K-Tron T35-QC quick change feeder shown with a 2415 vacuum receiver for refilling ingredients, and a C/S-LW-NT28 twin screw feeder from Colormax Systems. In addition, Coperion K-Tron will be introducing the ProRate PLUS line of gravimetric single and twin screw feeders to the Chinese market, showing a PLUS-S feeder with refill. A CVH 550 high pressure rotary valve for granulates will also be on display.



STS 75 Mc PLUS: Higher Throughput with Improved Compound Quality

For the STS 75, Coperion has raised the specific torque of the STS twin screw extruder from 11.3 Nm/cm³ to 13.6 Nm/cm³. The compounder thus achieves improved product quality and at the same time up to 20% higher throughput in every application. Critical to this level of performance, along with process-technical modifications, is optimization of the drive's key components. The new STS 75 Mc PLUS extruder is equipped with a high-power motor and a gearbox designed specifically for the high torque. Proven high-performance materials for the screw shafts ensure full torque transmission from the gearbox to the screw elements.

The higher fill level in the process section is crucial to the improved compound quality that the STS 75 Mc PLUS achieves. It reduces both shear stress and melt temperature and improves mixing behavior. The result is an extremely gentle product handling at high throughputs. The process section of the STS 75 Mc PLUS is equipped with heating cartridges that generate heat very energy-efficiently exactly where it is needed.

STS extruders combine the advantages of substantially standardized and thus more cost-effective machine construction incorporating Coperion's technical expertise. In the continued development of the STS 75 Mc PLUS, Coperion has profited from the comprehensive experience gleaned from its high-end ZSK Mc^{18} extruders. The new STS 75 Mc PLUS's throughput increase of up to 20% makes it a particularly economical solution. Material costs per kilo drop and return on investment is reached much more quickly. Coperion retained the proven $D_0:D_i=1.55$ ratio of outer to inner screw diameter unchanged, thus ensuring secure scale-up to other STS model sizes.

Complete Plastics Recycling Plants from a Single Source

Coperion and Herbold Meckesheim realize plants for a wide variety of plastics recycling applications, excelling in their reliability and the high product quality they achieve. From mechanical processing – shredding, washing, separating, drying and agglomerating of plastics – to bulk material handling as well as feeding and extrusion all the way to compounding and pelletizing, such plants cover the entire plastics recycling process chain.





Together, Coperion and Herbold Meckesheim offer solutions for mechanical recycling of post-industrial and post-consumer waste, chemical recycling, solvent-based recycling, and deodorization, tailored to the type of plastic being recycled.

Coperion K-Tron Feeders for Maximum Flexibility

Coperion will demonstrate its expertise in all feeding tasks at this year's Chinaplas with its high-accuracy Coperion K-Tron K2-ML-D5-T35 Quick Change feeder equipped with ActiFlow™ smart bulk solid activator and EPC (Electronic Pressure Compensation). The feeder is equipped with a 2415 vacuum receiver for refill. The T35/S60 quick change feeder (QC) on display is designed for applications requiring quick changeover of materials and convenience of fast cleaning. The QC feeder allows for fast removal of the entire feeding module with screws in place for replacement with a second unit. Twin and single screw feeding modules are available.

The ActiFlow™ smart bulk solid activator offers an innovative method to reliably prevent bridging and rat-holing of cohesive bulk materials in stainless steel hoppers without internal hopper agitation. The smart flow aid applies gentle vibrations to the hopper wall, hereby carefully activating the contained material with the optimal amplitude and frequency, automatically adjusted by the controller based on bulk material flow. It is designed specifically to work with Coperion K-Tron's line of gravimetric loss-in-weight feeders.

The 2400 Series vacuum receivers provide a high-capacity sequencing system primarily used where larger conveying rates or long distances are required, in applications with one or multiple destinations. They are designed to high quality standards for pneumatically conveying powder, pellets and granular materials for most industries. Conveying rates range from 327 to 6,804 kg/h (720 to 15,000 lb/h). The 2415 pellet receiver will be on display at Chinaplas 2024.

Additionally, Coperion will display the preconfigured size S ProRate PLUS single screw feeder, equipped with a 2410 receiver for refill. This continuous gravimetric feeder is very robust and stands out for its good price-to-performance ratio. The ProRate PLUS line was designed as an especially economical solution for reliably feeding free-flowing bulk materials. Coperion has expanded the ProRate PLUS feeder line with a PLUS-MT twin screw feeder especially for feeding powders.



> compounding & extrusion > materials handling > service

March 2024

About Coperion

Coperion (www.coperion.com) is a global industry and technology leader in compounding and extrusion systems, sorting, size reduction and washing systems, feeding systems, bulk material handling and services. Coperion develops, produces, and services plants, machinery, and components for the plastics and plastics recycling industry as well as the chemical, batteries, food, pharmaceutical and minerals industries. Coperion employs more than 5,000 people in its three divisions, Polymer, Food, Health & Nutrition, and Aftermarket Sales & Service, and in its over 50 sales and service companies worldwide. Coperion is an Operating Company of Hillenbrand (NYSE: HI), a global industrial company that provides highly-engineered, mission-critical processing equipment and solutions to customers serving a wide variety of industries around the world. www.hillenbrand.com

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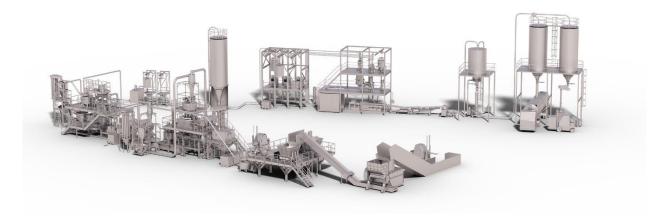
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The new Coperion STS 75 Mc PLUS twin screw extruder achieves up to 20% greater throughput with improved product quality, at an increased specific torque of 13.6 Nm/cm³. *Photo: Coperion, Stuttgart Germany*



The reliability of plastics recycling machinery from Coperion and Herbold Meckesheim excels, achieving very high recyclate product quality.

Photo: Coperion, Stuttgart Germany





Coperion K-Tron introduces a reliable, high-accuracy feeding solution in its K2-ML-D5-T35 gravimetric feeder.

Photo: Coperion K-Tron, Switzerland





The ProRate PLUS feeder line with refill solutions are simple, robust and reliable.

Photo: Coperion K-Tron, Switzerland