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Press release

Coperion and Coperion K-Tron at Chinaplas 2016

ZSK 32 Mc¹⁸ smart twin screw extruder and EPC for high-accuracy feeders

Stuttgart, April 2016 – Coperion GmbH, Stuttgart/Germany, will introduce its ZSK 32 Mc¹⁸ smart twin screw laboratory extruder with 32 mm screw diameter and the unique new Coperion K-Tron Electronic Pressure Compensation (EPC) for its high-accuracy feeders to make their debut in Asia at this year's Chinaplas 2016. Both exhibits will be shown on Coperion's booth E1J01 in Hall E1.

The ZSK 32 Mc¹⁸ smart twin screw extruder offers all the advantages of the ZSK Mc¹⁸ series; it has a simple design, is operator-friendly and easy to clean. The success of the ZSK Mc¹⁸ series, which was launched five years ago, is based on the numerous processing advantages that are currently appreciated by its users, including the specific torque of 18 Nm/cm³, the simple handling and extreme reliability of the machine and the very high economic efficiency, even when processing small batches with frequent product changes. In addition there is a variety of additional options to further improve performance such as FET technology that considerably improves the feeding of powdered bulk materials with a high air or gas content. The ZS-B twin screw side feeder permits downstream feeding of components directly into the melt and, when used in conjunction with FET technology, enables use of the high specific torque of the ZSK Mc¹⁸ that provides for gentle product handling. The ZS-EG side devolatilization unit efficiently extracts the gas trapped in the melt, thus ensuring reliable production.

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The ZSK 32 Mc¹⁸ smart on display features screw shafts whose axes are only 800 mm above floor level, making this compounding extruder readily accessible and easy to clean. Ancillary units such as the ZS-B and the ZS-EG can be mounted by a swivel arm on any barrel of the extruder process section and can be operated from floor level without the need for stepladders, platforms or overhead cranes - an advantage that makes for improved operator safety. The feeders are mounted on a platform directly on the drive unit and, when required, on the swivel arm of the ZS-B twin screw side feeder. The complete redesign of the machine includes the integration of both the electrical supply system with the terminal box and the water supply system with the manifold into the base frame of the machine. This improvement also allows for a smooth and easy-to-clean machine exterior. The smart design version is available not only for the ZSK Mc¹⁸ series (sizes 18, 26 and 32) but also for the ZSK MEGAvolume PLUS series (sizes 27 and 34). The ZSK 32 Mc¹⁸ smart will be on display with highly accurate Coperion K-Tron feeders: a K-CL-SFS-KT20 Compact Twin Screw Feeder for high accuracy at low feed rates and a K4G-L-BS60 Single Screw Feeder for free flowing pellets or powders.

After Chinaplas 2016 the ZSK 32 Mc¹⁸ smart extruder will be available for testing at Coperion's test center in Nanjing, China.

Unique new Electronic Pressure Compensation for high-accuracy loss-in-weight feeders

Coperion K-Tron recently introduced a unique new Electronic Pressure Compensation (EPC) system for their high-accuracy loss-in-weight feeders. A Coperion K-Tron K2-ML-D5-T35/S60-QC Quick Change Twin and Single Screw Feeder with ActiFlow and EPC will be shown at Chinaplas 2016. The main advantages of the new EPC system include improved accuracy and reliability as well as lower initial cost and easier installation compared to traditional mechanical pressure compensation systems. Retrofitting options for existing feeders are available. EPC can be installed on a majority of Coperion K-Tron gravimetric feeders in almost any application and all industries.

In a closed feeding system, pressure build-up inside a feeder can significantly impair weighing accuracy. The commonly installed mechanical pressure compensation systems are sensitive to structural factors and machine alignment and may therefore be intricate or even unreliable.

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Coperion K-Tron has now developed a clever but simple electronic solution for accurate and steady pressure compensation in feeder hoppers. The modular design incorporates pressure sensors and electronics tailored to interact smoothly with Coperion K-Tron's KCM feeder control system.

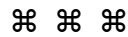
Depending on set-up and requirements, sensors can be positioned on the feeder hopper and, if required, on the material discharge tube. The software implements a self-optimizing compensation algorithm for best performance and dynamics identical to those of Coperion K-Tron's SFT load cells, which allows for highly accurate feeding results, even in systems with perceivable pressure fluctuations.

STS Mc¹¹ twin screw compounding extruder with Coperion K-Tron feeder

The STS Mc¹¹ series features an increase in torque from 10 to 11.3 Nm/cm³. When it comes to compounding with high energy input, the STS Mc¹¹ series provides increased throughput by up to 27% as well as decreased melt temperature due to higher screw filling, thus improving the quality of the resulting compound. The STS Mc¹¹ series is exclusively equipped with high quality European gearboxes. Screw speed has been increased from 800 to 900 rpm. The screw shaft coupling is similar to the time-tested design of the ZSK Mc¹⁸ series. Coperion presents the STS 75 Mc¹¹ twin screw extruder for the production of highly-filled compounds together with a newly developed ZS-EG side degassing unit. It enables stable operation and degassing, less cleaning time and no pollution of products. The STS 75 Mc¹¹ is on display together with a K-MV-T35 Volumetric Twin Screw Feeder from Coperion K-Tron, that is both simple and economic, at Chinaplas 2016 on booth no. E1J01 in Hall E1.

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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<http://www.coperion.com/en/news/newsroom/>

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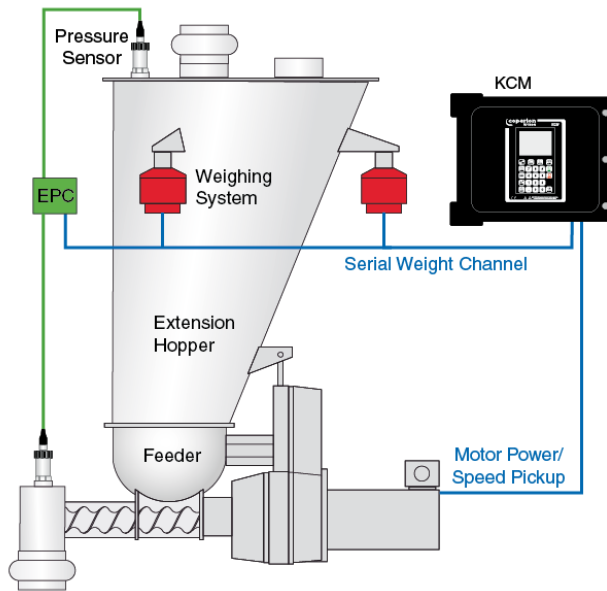
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ZSK 32 Mc¹⁸ smart with screw tip height of 800 mm for easy accessibility and electrical and water supply systems integrated in the baseframe. The Coperion K-Tron high-accuracy feeders are mounted directly on the drive unit or if needed on the swivel arm of the ZS-B twin screw side feeder.

Photo: Coperion GmbH, Stuttgart, Germany

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Basic principle of EPC electronic pressure compensation applied in gravimetric feeding system in a schematic presentation; KCM: feeding control

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