Contact
Kathrin Fleuchaus
Marketing Communications
Coperion GmbH
Theodorstraße 10
70469 Stuttgart/Germany

Telephone +49 (0)711 897 25 07
kathrin.fleuchaus@coperion.com
www.coperion.com

Press Release

Compounding temperature- and shear-sensitive plastics

More Quality, Less Energy: Coperion optimizes Eccentric Pelletizer EGR

Stuttgart, April 2026 – Coperion has optimized the EGR eccentric pelletizer for use with its two-stage Kombiplast compounding system, improving the system's overall design, air supply, material conveying and pellet handling. In its new design, the EGR delivers significantly better pellet quality, particularly when processing temperature- and shear-sensitive plastics. In addition, Coperion has successfully reduced the pelletizing system's energy consumption.

New smart features also make the redesigned EGR easier to operate compared to the previous model. Heating the pelletizing system and carrying out product changes, including die plate exchange, can now be performed more quickly, increasing the compounder's overall equipment effectiveness (OEE).

The EGR eccentric pelletizer connects seamlessly to Coperion's two-stage Kombiplast compounding system. Coperion has specifically designed both technologies for manufacturing soft PVC, hard PVC, or HFFR formulations.

Higher product quality and lower energy needs

Processing and pelletizing temperature- and shear-sensitive plastics presents significant challenges for the compounding process. The material must be treated as gently as possible throughout the entire process to ensure consistently high pellet quality.

Based upon comprehensive simulations and practical tests, Coperion has optimized the air supply system of the EGR pelletizer. As a result, pellet conveying now takes place under

considerably lower feed pressure, resulting in gentler handling of the material. The optimized conveying process not only improves product quality, but also effectively reduces the risk of agglomerate formation.

These enhancements also deliver clear economic and environmental benefits for operators. Compared with the previous model, the new EGR reduces energy consumption for material conveying by up to 75 percent. In addition to contributing to lower operating costs, the improved efficiency also results in a reduction of the CO_2 footprint.

Increased machine availability

Coperion has also redesigned the die plate heating system so that it can now be easily separated from the die plate. Die plate assembly and disassembly are now significantly faster, an important advantage during recipe changes. At the same time, the pelletizer can be heated up much more quickly, minimizing delays in production.

These enhancements have increased uptime for both the EGR as well as the entire compounding system, increasing the overall equipment effectiveness (OEE).

Optimized handling

The redesigned EGR pelletizer stands out in particular for its simplified handling. For operating personnel, work safety during die plate changes has been further enhanced. Moreover, a divided, pivoting pelletizer hood provides easier access to the EGR's knife blade, enabling faster, more precise adjustments to the pelletizing knives which in turn improves cut quality. At the same time, the optimized design simplifies both maintenance and service operations, reducing the time required for routine tasks and helping to minimize downtime.

Another important enhancement is the relocation of the EGR drive to the front of the pelletizer hood. This design change makes it easy to install a screen pack changer between the Kombiplast’s discharge and the EGR pelletizer, as is commonly necessary when manufacturing cable compounds.

Komibiplast and EGR: synergy for first-class compounding results

April 2026

With its two-stage Kombiplast compounder and the EGR eccentric pelletizer, Coperion offers a technology specifically adapted to the manufacture of temperature- and shear-sensitive plastics such as PVC or cable compounds. The system is designed to ensure particularly gentle product handling throughout the compounding process, while also delivering high economic efficiency and maximum flexibility.

First, the raw materials are fed into the process section of a ZSK twin screw extruder using a twin screw ZS-B side feeder where they are conveyed, plasticized, mixed and homogenized. In its ZSK Mv^{14} design with an increased torque of 14 Nm/cm^3, the extruder handles the product extremely gently and achieves very high throughput rates. Product discharge takes place via the ES-A single screw that builds up the required pressure for the EGR eccentric pelletizer.

In the pelletizing step the EGR cuts the cylindrical product strands exiting the die plate into uniform pellets using revolving pelletizing knives. The pellets are then removed by pressure conveying, with the help of new inflatable seals installed for this purpose. The pelletizing knives are mounted onto a blade that is eccentrically attached to the die plate. The blade's rotation is infinitely adjustable. Coperion customizes the quantity, diameter and geometry of the die plate holes according to the material properties and individual customer requirements.

About Coperion
Coperion (www.coperion.com) is a global industry and technology leader in compounding and extrusion systems, size reduction, washing, separating, drying, agglomeration, feeding, weighing, material handling and pneumatic conveying systems, as well as milling, mixing, thermal processing, dust collection and other services. Coperion develops, produces, and services plants, machinery, and components for the plastics and plastics recycling, chemical, battery, minerals, food and pharmaceutical industries. Coperion employs more than 5,000 people in its divisions, Performance Materials and Food, Health & Nutrition - at over 50 sales and service locations worldwide.

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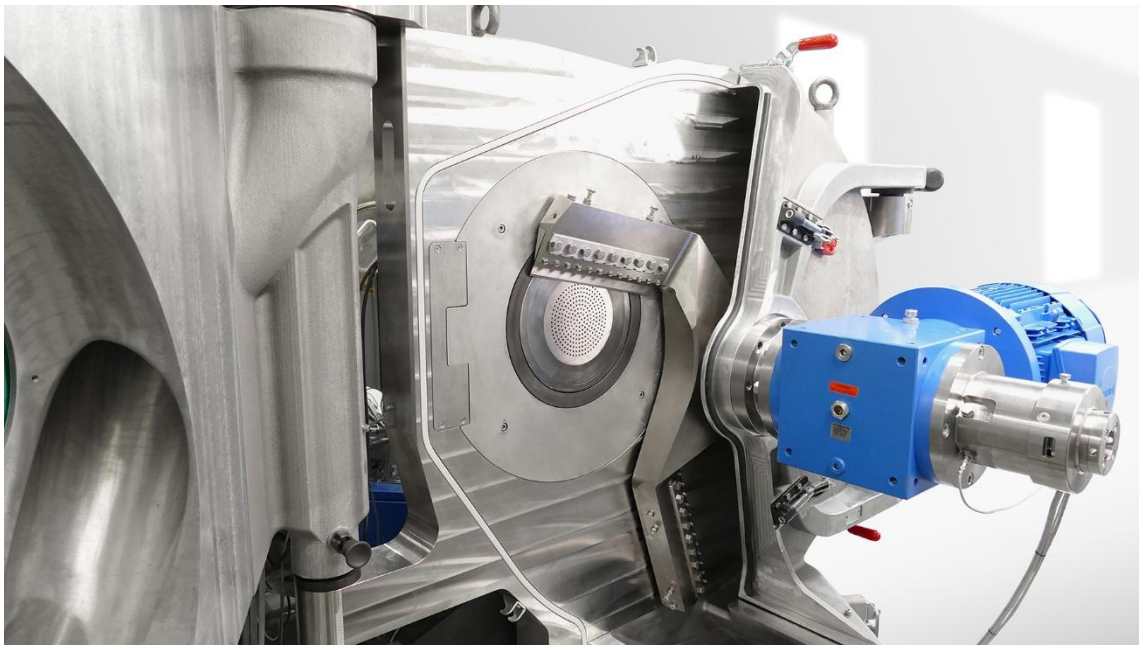
Editorial contact and copies:

Dr. Jörg Wolters, KONSENS Public Relations GmbH & Co. KG,
Hans-Böckler-Str. 20, D - 63811 Stockstadt am Main, GERMANY
Tel.: +49 (0)60 27/ 99 00 5-0
E-Mail: mail@konsens.de, Internet: www.konsens.de



The redesigned Coperion EGR eccentric pelletizing system achieves higher compound quality and significant energy savings in the manufacture of temperature- and shear-sensitive plastics.

Photo: Coperion, Stuttgart Germany