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Contact

Bettina König
Marketing Communications
Coperion GmbH
Theodorstrasse 10
70469 Stuttgart, Germany

Tel: +49 711 897 2215
bettina.koenig@coperion.com
www.coperion.com

Press Release**Coperion at K 2025****EPC and Coperion Present Innovative Direct Compounding Technology for Cost-Efficient Polycarbonate Production**

Stuttgart/Arnstadt – EPC Engineering & Technologies GmbH from Arnstadt, in close cooperation with Coperion GmbH from Stuttgart, have developed a groundbreaking one-step process for the direct compounding of polycarbonate (PC) melt. This new technology offers a highly flexible and cost-efficient solution for the production of high-quality PC products using non-phosgene polymerization.

At the heart of this innovation is the direct compounding of the PC melt, straight from the final polymerization reactor outlet with various polymers (like ABS) or additives. This eliminates the need for separate and additional compounding facilities and simplifies the overall PC compounds production process considerably.

One of the most significant advantages of this one-step process is the substantial reduction in energy consumption. The PC melt now is directly transferred from the final polycarbonate polymerization reactor, together with other plastics like ABS and additives, into a special one-step direct compounding extruder. The Coperion ZSK twin screw extruder mixes and homogenizes the ready-made PC compound melt before the final pelletizing step. This new technology eliminates the need of an intermediate PC granules storage and further PC chips

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conveying systems towards a separate compounding facility. It also eliminates the reheating/re-melting of a 2nd step extrusion system, overall resulting in a significant increase in energy efficiency. Therefore, and depending on the product mix, operational cost savings of up to 1 million USD per 100 kta can be achieved.

Through this new technology, capital expenditures are also drastically reduced as there is no need for additional compounding plants/facilities or supporting infrastructure. The entire process can be carried out within one integrated direct-compounding process step and related machine setup, allowing for streamlined operations and reduced complexity.

Moreover, this process provides maximum flexibility, enabling the producers to quickly adjust or adapt product formulations based on changing market demands. This ensures fast market-response times, increased product diversity, and sustainable long-term competitiveness.

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 three divisions, Performance Materials, Food, Health & Nutrition, and Aftermarket Sales & Service - at over 50 sales and service locations 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

About EPC Engineering & Technologies GmbH:

EPC is an internationally active technology provider, engineering and plant construction company headquartered in Arnstadt, Germany. With decades of experience in chemical, polymer, and industrial plant technologies and engineering, EPC offers tailor-made solutions for process optimization, plant design, and project implementation.



Dear Colleagues,

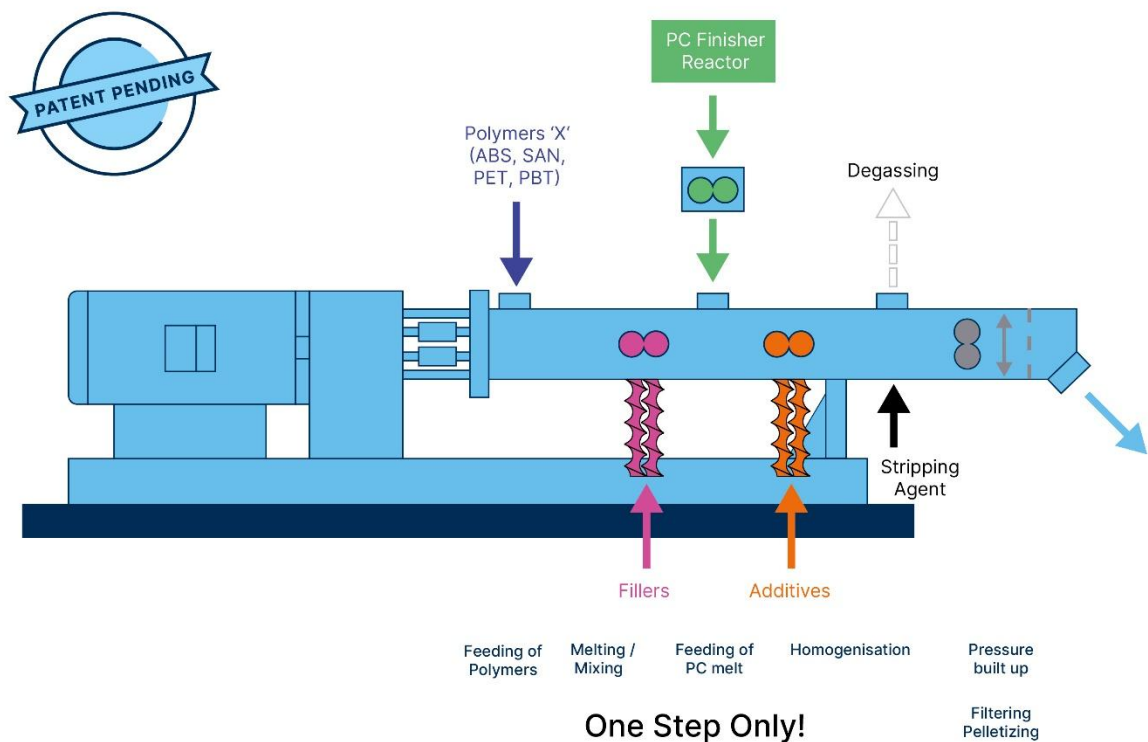
You can find and download this [press release in German and English](#) and [print-ready color images](#) at

<https://www.coperion.com/en/news-media/newsroom/>

October 2025

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



EPC and Coperion have worked closely together to develop an innovative process for the direct compounding of polycarbonate (PC) melt, which is characterized by both its high flexibility and cost efficiency.

Photo: Coperion, Stuttgart, Germany