



Hall 14 Booth B19
Pavilion at the Circular Economy Forum in the open-air fairgrounds
(CE09)
Herbold Meckesheim: Hall 9 Booth B34

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Press Release

Coperion presents complete plastics recycling solutions at K 2022

Making the Plastics Economy Even More Circular

Stuttgart, October 2022 – Complete systems for industrial-scale plastics recycling from a single source – the recently completed merger between Coperion and machine manufacturer Herbold Meckesheim makes it possible. Coperion, technology leader in extrusion and compounding, bulk material handling and feeding systems, brings its own expertise in the field of recycling together with that of Herbold Meckesheim, specialist in the mechanical recycling of plastic and plastic waste, forming a new Recycling Business Unit. This new Business Unit makes innovative process solutions possible that represent a new benchmark in the efforts towards a circular economy in the plastics industry. Coperion is providing a first look at its integrated recycling solutions at K 2022 (19-26 October 2022, Dusseldorf) at its booth 14/B19, at its Recycling Pavilion in the open-air fairgrounds (CE09), and at Herbold Meckesheim's booth 9/B34.

The newly created Recycling Business Unit is able to offer modular system and plant solutions that combine the complementary technologies of Coperion and Herbold Meckesheim to benefit customers. 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, the systems that both companies have developed together cover the entire process chain for reclaiming plastics. Moreover, the plastics industry will profit from this cumulative expertise thanks to their combined global sales and service network.

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Experience PET recycling live

PET recycling is one example that illustrates how Coperion will be able to implement a complete system for plastics recycling in the future. As the plastics industry makes advances towards a circular economy, PET plays an ever more important role due to its increasing use in disposable and reusable bottles and its recovery through deposit systems, along with other factors. This material possesses outstanding recycling properties, regardless of whether it is to be recycled in bottle-to-bottle, bottle-to-film/sheet, or bottle-to-fiber processes, or whether it comes from other product streams.

Complete PET recycling solutions from Coperion offer throughput performance of up to ten tons per hour. The quality of PET recyclate manufactured using Coperion recycling technology and decontaminated in an SSP (Solid State Polycondensation) reactor is so high that it is approved by the U.S. Food and Drug Administration (FDA) for direct contact with food.

One unique feature is that virgin material and various recyclates – such as regrind, agglomerates, or flakes – can be processed together, even if they exhibit different IV (Intrinsic Viscosity) values. Compared to conventional PET recycling procedures, Coperion's solutions save on operation and energy costs and create less logistic efforts. Visitors to K can see and experience key components of this process at the Recycling Pavilion CE09/open-air fairgrounds and at Herbold Meckesheim's booth 9/B34.

- **SML 60/100 SB 2 Granulator**

This is a granulator used for crushing PET bottles and is suitable for wet operation. One unique feature that it offers is horizontal force feeding using screw feeders. The granulator allows for space-saving installation and easy material feeding. Up to two tons of polyolefins or more than one ton of film per hour is processed.

- **T 2016 PA Mechanical Dryer**

This mechanical dryer is suitable for various materials such as film, regrind, and mixed and rigid plastics. Thanks to its optimized design and the position of the exchangeable, wear-resistant paddles, it achieves up to 50% higher drying performance than its predecessor.

- **HV 70 Plastcompactor**

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The high-performance HV 70 Plastcompactor from Herbold Meckesheim processes material in continuous operation between one rotating and one fixed compactor disk, each equipped with screwed-on and easily replaceable kneading bars. Since the material leaves the compactor zone within a fraction of a section, the thermal impact upon the plastic is very low. The process is regulated using two parameters – the screw speed and the distance between the disks.

- **FLUIDLIFT ecodry®**

The FLUIDLIFT ecodry® process dries the regrind while it is being conveyed to the extruder. A flash dryer specially modified for recycling regrind removes the moisture remaining after the washing process. Moisture content is significantly reduced which optimizes the energy consumption of the downstream process and leads to improved end product quality.

- **Smart Weigh Belt (SWB) Feeder**

For feeding flakes and fiber, a Smart Weigh Belt (SWB) feeder is used. This low-headroom gravimetric feeder can feed large quantities of bulk material into the extrusion process at high accuracy, even at low and variable bulk densities.

- **ZSK Twin Screw Extruder**

Coperion ZSK twin screw extruders are the heart of the plastics recycling process. With their high-performance processing properties and high devolatilization performance, ZSK twin screw extruders are suited to energy-efficient recovery of plastics of all sorts. The ZSK extruder features high end product quality with gentle product handling, short residence time, intensive devolatilization, and outstanding dispersion with concurrently high throughput performance. In the Recycling Pavilion CE09/ open-air fairgrounds, Coperion is showing a ZSK 58 Mc¹⁸ twin screw extruder with a 58 mm screw diameter together with a melt pump, screen pack changer, and an underwater pelletizer.

- **Product Discharge**

Diversers, melt pumps, and screen pack changers follow the extrusion step. Depending upon whether pellets, fiber or film are to be manufactured from the PET, Coperion

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provides water baths and underwater pelletizers, fiber spinning pumps or film stretching lines as part of their complete solutions.

New Recycling Innovation Center

The start of construction on the state-of-the-art Recycling Innovation Center in June of this year demonstrates the importance of the topic of plastics recycling for the market leader in extrusion and compounding technology. This new test center for recycling applications is located in immediate proximity to Coperion's existing test center for bulk material handling at its Niederbiegen/Weingarten production facility in Germany. In the future, every major step of the plastics recycling process can be tested under production conditions and results can be examined by customers down to the smallest detail prior to making an investment.

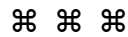
About Coperion

Coperion (www.coperion.com) is the global market and technology leader in compounding systems, feed systems, bulk goods systems, and services. Coperion develops, produces, and services plants, machinery, and components for the plastics, chemical, pharmaceutical, food, and minerals industries. Coperion employs 2,500 people worldwide in its two divisions: Polymer and Strategic Markets and Aftermarket Sales and Service, as well as its 30 sales and service companies. Coperion K-Tron is a Coperion brand.

About Herbold Meckesheim

Herbold Meckesheim (www.herbold.com) is a leading recycling specialist and produces machines and plants for processing pure plastic waste from the industry as well as used, mixed and contaminated plastics. More than 240 employees at the headquarters and the staff of the international agencies accompany custom-made plants and machines from the conception stage through commissioning to the end of their commercial use.

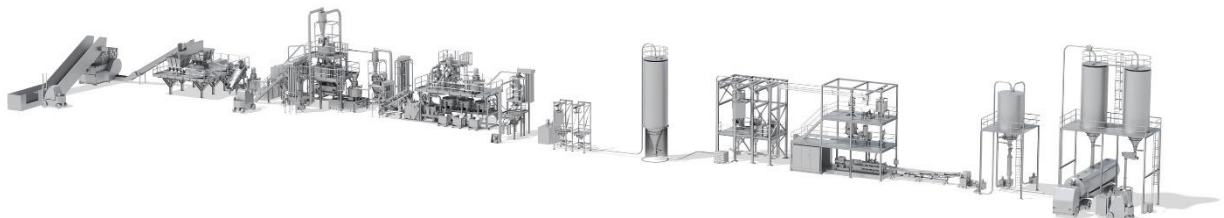
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<https://www.coperion.com/en/news-media/newsroom/>

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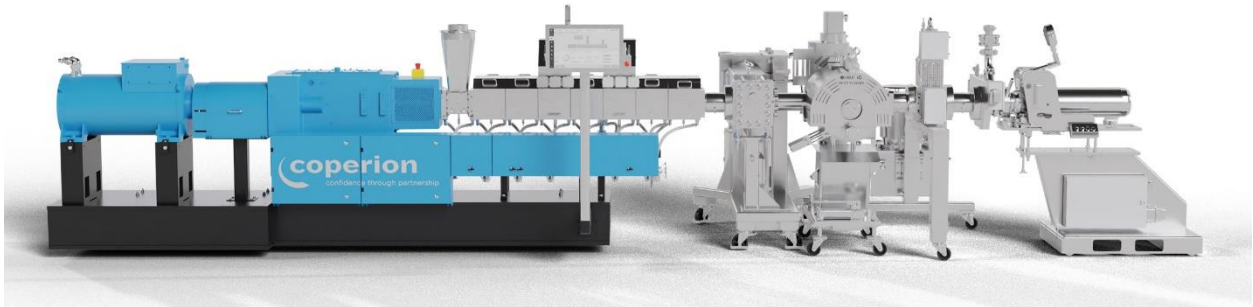
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With complete systems for plastics recycling from a single source, Coperion is setting new standards for the industry.

Photo: Coperion, Stuttgart Germany

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The ZSK twin screw extruder is the heart of a plastics recycling line.

Photo: Coperion, Stuttgart Germany



The SML 60/100 SB 2 Granulator crushes PET bottles into flakes.

Photo: Herbold Meckesheim, Germany