



Agglomeration, desiccation, crystallization

Complex intermediate steps can be avoided with Plastcompactors from Herbold Meckesheim

Agglomeration systems are a highly efficient solution that is in constant demand for achieving free-flowing regrind with a high bulk density that can be directly processed in extruders or injection molding machines. And with Plastcompactors from Herbold Meckesheim, even complex intermediate steps can be saved when reprocessing recycled PET: The agglomerate does not require any special silos for storage as it can be easily discharged and conveyed, unlike classic flakes. In addition, the recycled PET is already partially crystallized through the agglomeration.

All in all, the material is much easier to handle and therefore more suitable for further processing steps in preform injection molding machines or film extruders with gravimetric dosing. Furthermore, the specific energy requirement for the extrusion of compacted plastics is lower and the throughput higher.

The Plastcompactor HV 70 is the most powerful of the series from Herbold Meckesheim. It compresses the feedstock in continuous operation between a rotating and a stationary disk that are equipped with bolt-on and easily replaceable kneading bars. A stepless adjustable feeding screw constantly conveys granulated material from the buffer silo into the working zone through the center of the stator disk in a controlled manner. Since the rapidly warmed material leaves the compacting zone within fractions of a second, the thermal impact on the plastic is extremely low. The process is regulated by two degrees of freedom – the speed of the screw and the distance between the discs.

HV Plastcompactors can be used to agglomerate a wide variety of materials into products with a high bulk density: thermoplastics such as fibers, fines, tapes, foams, stretch or thin films, powders or shavings, as well as plastics that are difficult to convey, store or mix. In particular with stretch films or foams, adequate drying by mechanical or thermal means would only be possible with an immense use of energy. This is where a Plastcompactor is the solution of choice.

Moreover, the compactors from Herbold Meckesheim are often installed downstream of washing lines: Here, the damp material is heated in the compacting zone to such an extent that the moisture



escapes. With subsequent agglomeration – in conjunction with a secondary granulator and a classifier – residual humidity of less than one percent is achievable. Likewise, various additives such as lubricants, plasticizers or color pigments can be intensively incorporated using special dosing units on the feeding screw. Compounding or the recrystallization of PET flakes are further fields of application.

The HV 70 from Herbold Meckesheim also combines high throughput with low maintenance costs and a fully automatic control system in which settings for different infeed materials can be recorded. And thanks to the performance and temperature monitoring, the process is controlled in such a way that only minimal personnel deployment is necessary.

In the course of the latest enhancements, the disk geometry of the Plastcompactor HV 70 has been significantly modified. In combination with improved automatization of the compactor and a more compact design, manual interventions during operation are even less frequently required, offering customers a higher degree of operational reliability.

On the other hand, the silo and the feeding device have been optimized in such a way that even more complex materials with the lowest bulk densities and the most difficult flow characteristics can now be handled safely. This opens up further fields of application for the HV 70 from Herbold Meckesheim.

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About Herbold Meckesheim

Herbold Meckesheim 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. The modular system solutions for automated recycling lines are tested in the company's own technical center. More than 250 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. Since 2022 Herbold Meckesheim is part of the new Recycling Business Unit of Coperion, which offers complete solutions for plastics recycling processing. Coperion is the global industry and technology leader in compounding and extrusion systems, feeding and weighing systems, bulk material handling and services. Coperion is an Operating Company of Hillenbrand (NYSE: HI), an industrial company operating in over 40 countries serving a wide variety of industries across the world. www.hillenbrand.com



Figure 1: The HV 70 Plastcompactor is the most powerful of the series from Herbold Meckesheim.

Picture: Herbold Meckesheim



Figure 2: Agglomeration plant for fibers, fines, tapes, foams, films, powders or shavings.

Photo: Herbold Meckesheim

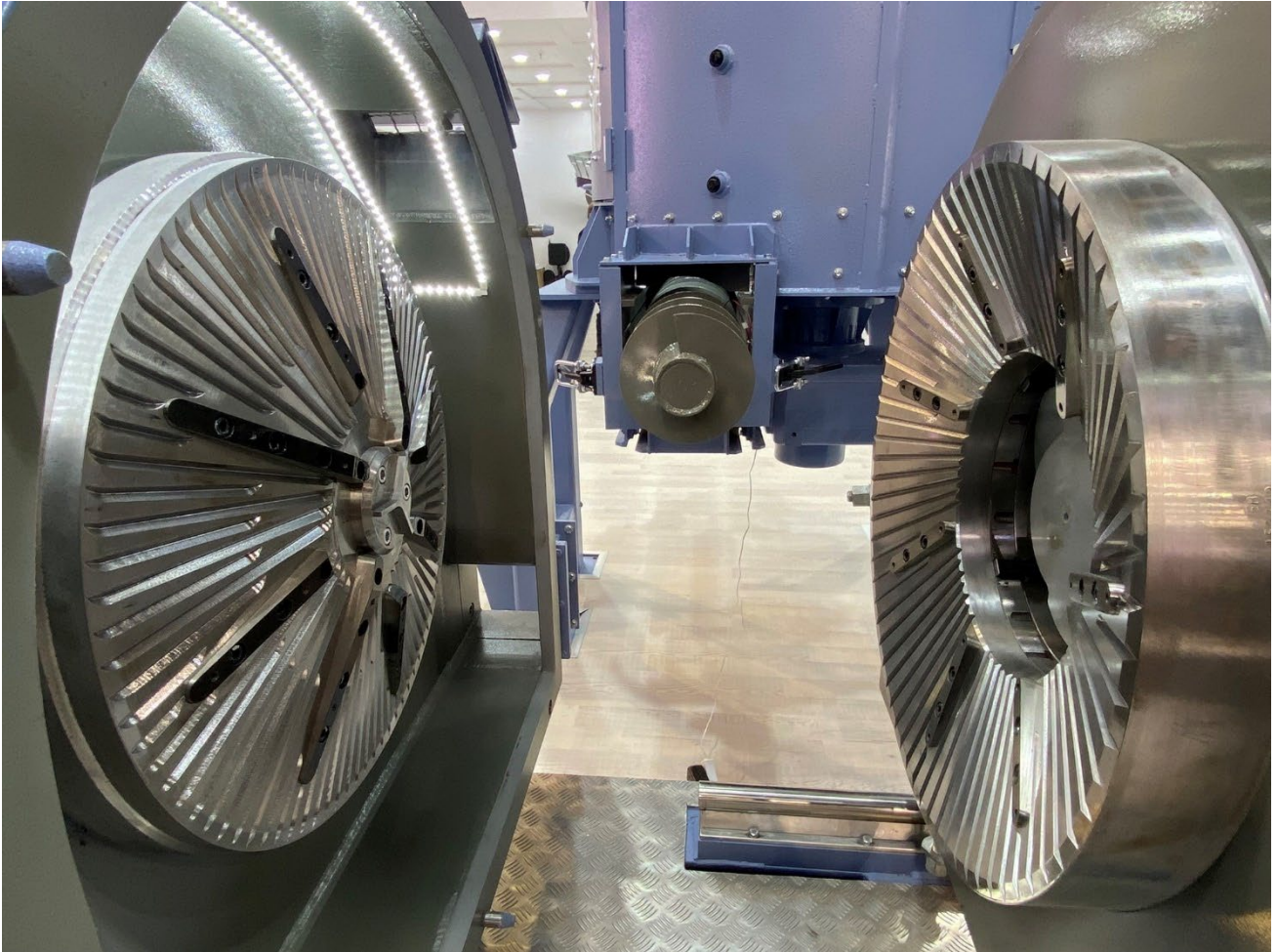


Figure 3: Plastcompactors process the feedstock in continuous operation between a rotating and a stationary disk.

Photo: Herbold Meckesheim



Figure 4: The agglomeration produces a free-flowing regrind of high bulk density.

Photo: Herbold Meckesheim