

PRECISION SORTING THANKS TO THE WESTERIA AIRLIFT

Westeria's AirLift is notably precise as far as sorting fractions made up of components that differ in specific weight present in waste streams.

CHARLOTTE, NORTH CAROLINA, UNITED STATES, February 25, 2021 /EINPresswire.com/ -- Regulations governing plastics products are requiring the use of larger proportions of recycled materials. Germany's Packaging Act specifies a material recycling rate of 58.5% for plastics packaging, a rate which is set to rise to 63% from 2022. These regulations disregard economic factors such as the oversupply of plastic scrap and the reduced prices for virgin plastics. This means the requirements on the quality and purity of the input for recycling are increasing. If greater quantities of recycled material are to be obtained from post-consumer waste, greater attention has to be paid to the processing step upstream of recycling, particularly sorting.

New market situations demand the right tools for the job

Air classifiers are very well suited to separating different weight fractions in waste streams. They cannot cope when it comes to differentiating presorted or similar lightweight components, which is why the Westeria AirLift plays a key role. The Airlift can replace conventional air classifiers in existing installations where it can separate plastic film from paper or different plastics from one another.

The complete AirLift system consists of three components. The SpeedCon high-speed conveyor belt, which has a long design service life, feeds the material at up to 4 ms⁻¹ toward the central element, the AirLift, while the AirWheel is arranged downstream of the AirLift. Depending on the model, working widths of the AirLift range between 1,000 mm and 3,500 mm, the widest being capable of handling throughputs of up to 320 m³/h with grain sizes varying from 60 mm to 250 mm. The maximum outlet capacity is 5.6 t/h. Automatic gate controllers prevent material blockages on the input and output sides to ensure high operational reliability. Being adjustable, the automatic gate control also ensures the passage height can be adjusted exactly to the separation goal.

The SpeedCon is angled downwards by 20° directly below the intake. As a result, the air stream can easily get underneath the light parts. Angling the conveyor in this way imparts a ballistic trajectory to all input stream materials. The integrated controller can adjust the trajectory's shape or throw distance via the belt speed to tailor it to the task at hand. Diametric downflow ensures particularly high selectivity. Levels of purity in excess of 95% are achievable depending

on the input material. For instance, an analysis of AirLift systems installed in the mixed plastics feed to a NIR sorter revealed that, for a working width of 2,800 mm, over 90% of the desired film fraction could be reliably separated. As a result, the system considerably reduces disposal costs and increases cost-efficiency. Eliminating the film from mixed plastics facilitates NIR sorting and improves the sorting result.

System integration

The complete three-part AirLift system can be used as a sub-component of a comprehensive sorting installation. Its design also allows it to be retrofitted if necessary.

Summary and outlook

Society is demanding the use of recycled plastics, a demand which policymakers are meeting. In the future, the circular economy will stop being a theoretical mission statement and become an everyday reality. Waste disposal operators require high-performance sorting technology in order to be able to obtain optimally segregated secondary raw materials from the waste stream. High-quality recycled plastics are essential for manufacturing products that can be put to use long-term.

With the AirLift, Westeria has a solution that meets requirements and can be retrofitted in existing sorting operations. The various models and configurations mean that they can be adapted to any kind of plant configuration. Westeria is constantly developing its technology and current projects, including the boosting of the performance of its high-efficiency "DiscSpreader" material distribution systems.

About eFACTOR3, LLC

Whether wind sifters, individual components or complete conveyor lines or material distribution systems, Westeria delivers quality and individuality from planning to assembly and after-sales service. eFACTOR3, headquartered in Charlotte, North Carolina, is a proud U.S. distributor of Westeria.

eFACTOR3 brings together a keen understanding of environmental, engineering, and equipment issues. The company offers a variety of pre-shredding, shredding, granulating, conveying, separation, and more.

Whatever you intend to recycle or turn into alternative fuel, eFACTOR3 can provide a custom solution. For more information, contact Hartmut Bendfeldt at 1.877.801.3232, hbendfeldt@efactor3.com, and visit www.efactor3.com.

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