

## **PRESS RELEASE**

### **Zeppelin Systems presents comprehensive recycling solutions for plastics at PRSE 2025 in Amsterdam**

**Friedrichshafen, March 27, 2025. How do you start recycling plastics? At the PRSE trade fair in Amsterdam on April 1 - 2, the experienced plant engineering expert Zeppelin Systems will present innovative solutions for plastics recycling and also showcase a laboratory system for deodorization, among other things. This enables a smooth transition to the large-scale plant for processing waste plastics. These and other solutions will be presented in Hall 11 at Stand G119. We Create Solutions!**

Zeppelin is known for innovation and sustainability. Therefore, recycling and reprocessing plastics has always played a major role for our company. "As a global plant manufacturer and a foundation-owned company, we develop sustainable recycling solutions and processes for our customers. We are involved in every phase of the project," explains Hubert Stojanovic, Vice President Sales Performance Materials of Zeppelin Systems GmbH. For this purpose, the Friedrichshafen-based solution provider offers a wide range of services for systems in plastic recycling from a single source, from basic engineering to automation to final assembly and comprehensive after-sales service, taking into account customized customer wishes and needs.

#### **Test Fresh-Tec deodorization in advance in mobile units**

Deodorizers play an important role in the recycling process. In these, recycled plastics are degassed by a thermal-physical cleaning process and freed of unpleasant odors and other organic contaminants. Zeppelin Systems solutions are particularly impressive in this regard thanks to their energy-saving solutions that integrate energy recuperation of process waste heat.

Zeppelin Systems offers the DEO-L mobile laboratory deodorization system so that users are on the safe side during the deodorization process step. The process steps such as heating, degassing and cooling can be simulated on a laboratory scale. First, the bulk material is heated in the system with a high volume flow of air (automatically until the target temperature is reached). The deodorization then starts with a reduced air volume, depending on the preset retention time. A large volume of air is again used for cooling. The temperature of the blown-in air can be adjusted as required up to 120°C using the touch terminal, as can the volumetric flow rate and the retention time. Similar to the production facilities, the laboratory facility also places great emphasis on ease of cleaning; internal

containers and outer sheets are therefore made of high-quality stainless steel. The process parameters obtained in the system can be transferred to industrial systems. The degassing results obtained on a laboratory scale thus provide a reliable basis for predicting the deodorization performance in large-scale plants.

### **Reliable separation in the GSF counterflow screen**

Another important task is the reliable separation of lightweight plastic fractions such as films, thin flakes or layers from heavy fractions such as hard plastic or other foreign materials. The GSF counterflow screen is designed in such a way that the good product flow is discharged together with the conveying and visible air via the aspiration nozzle. The screener can be integrated directly into pneumatic conveyor systems. It is suitable for both open and closed-circuit systems. The coarse material is discharged gravimetrically at the bottom product outlet or optionally via a downstream rotary valve. The GSF enables constant separation efficiency over the entire operating period. Since the screen does not have any moving parts, it is also maintenance-free. The continuously operating GSF counterflow screen allows a throughput of up to 25 m<sup>3</sup>/h of bulk material.

### **Gentle static homogenization**

Another important aspect in producing high-quality plastic recyclates is homogenization, that is, the uniform blending of plastic bulk materials. Once again, Zeppelin Systems ensures seamless integration into the overall process here thanks to its customized solutions. As a result, users can rely on production operating under stable conditions. Users also value the gentle static homogenization in Zeppelin Systems plants. In addition, the systems operate quietly and cleanly and require no maintenance or additional energy for blending.

### **Fluff-Tec processing of heterogeneous starting material**

According to the EU directive, around 65 percent by weight of all packaging waste in Europe must be recycled by the end of 2025. And by 2030 at the latest, this level will go up to at least 70% by weight. This is often particularly challenging for fluffy materials such as films, nonwovens or fibers. Zeppelin Systems has been working on innovative recycling solutions for years and also provides excellent solutions for these seemingly challenging products.

After all, while there are already good recycling solutions for hard coarse materials made from polyurethane, polypropylene, acrylonitrile butadiene styrene (ABS) and polystyrene, solutions for fluffy materials are still in the early stages. This is where systems are needed that can reliably process large material flows and react flexibly to changes in the input streams. With Fluff-Tec, Zeppelin Systems is delivering on exactly these requirements. "Users need not only a safe but also

a cost-effective plant concept for recycling their recyclable material fractions. We can directly monitor and control the composition and mixing of used plastic materials,” explains Bert Theuwissen, Managing Director of Zeppelin Systems Benelux NV. “As a plant engineering expert and experienced solution provider, Zeppelin Systems offers all steps for process reliability, from storage in the silo to the processing of (fluffy) waste plastic and sorting.” If desired, this can even take place automatically, assisted by the “NAMiQ recipe” formulation and batch management software which allows the customer to economically control the quality of their end product at any time. We Create Solutions!

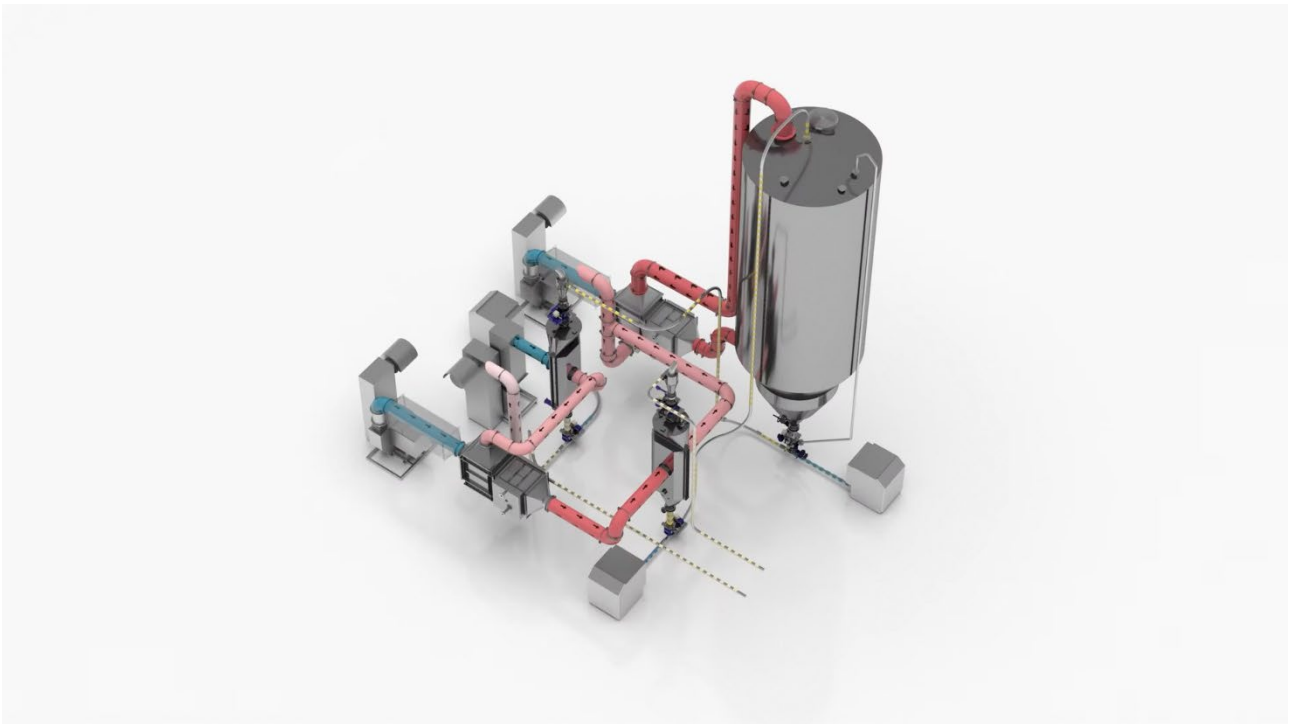


Image: Degassing plastic recyclates effectively with the intelligent Fresh-TEC® process

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## About Zeppelin Plant Engineering

Zeppelin Systems specializes in the design, construction, and technological upgrading of industrial plants for storing, conveying, mixing, dosing, and weighing high-quality bulk materials and raw materials. With around 1,900 employees worldwide, Zeppelin Systems provides daily solutions for customers in the plastics, chemicals, rubber, and tire industries. Customers in the food industry also value Zeppelin Systems' many years of technological know-how and experience in delivering turnkey solutions. From plant planning and project implementation to after-sales service including process optimization – Zeppelin Systems is an integrated solutions provider, delivering complete solutions from a single source. Every Zeppelin plant is characterized by tailored features to meet specific customer requirements, smart automation

solutions, and comprehensive service. We refer to this as the embodiment of engineering art, and we apply it to the entire life cycle of a system. With roots in Germany and global operations at more than 20 sites around the world, Zeppelin Systems makes industrial-scale testing available to its customers, thereby facilitating the assessment and sustainable optimization of their plant design. Zeppelin Systems also develops and manufactures mechanical and plant engineering components that can be seamlessly integrated into third-party systems. We Create Solutions for our customers every day. For more information, visit [www.zeppelin-systems.com](http://www.zeppelin-systems.com).

## About Zeppelin Group

The Zeppelin Group offers solutions in the construction industry, drive and energy systems, engineering and plant engineering. The Group provides customers with expertise in a number of areas, from the distribution and service of construction, mining, forestry and agricultural machinery, through rental and project solutions for the construction sector and industry as a whole, to drive and energy systems as well as engineering and plant engineering and enhances its offering with digital capabilities in all areas. Zeppelin is active worldwide in 26 countries. In the 2023 financial year, the Group workforce comprised over 10,000 employees and generated sales of EUR 3.9 billion. The Group organizes its activities into five strategic business units (Construction Equipment Germany & Austria, Construction Equipment International, Rental, Power Systems, and Plant Engineering) and the Zeppelin Group IT Services. Zeppelin GmbH is the Group holding company. It is legally domiciled in Friedrichshafen and has its head office in Garching near Munich. The Zeppelin Group is a foundation-owned company. Its roots can be traced back to the establishment of the Zeppelin Foundation by Graf Ferdinand von Zeppelin in 1908. For more information, visit [zeppelin.com](http://zeppelin.com).

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