

PRESS RELEASE

Zeppelin Systems exhibits technically sophisticated solutions for malting facilities and breweries at the BrauBeviale beverage trade fair

Friedrichshafen, November 6, 2024. Beer is one of the most popular alcoholic beverages around – in Germany alone, average consumption was equivalent to around 92 liters per person in 2022. A number of work steps are required before the natural components – barley, hops and malt – are transformed into the end product of beer or even whiskey. As an experienced plant engineer, engineering partner and integrated solution provider, Zeppelin Systems has special expertise in the construction of malting facilities and breweries. The company will be at BrauBeviale in Messezentrum Nuremberg from November 26 to 28, 2024, where it will be presenting its complete solutions from a single source at stand R-9-320. We Create Solutions!

"The majority of the world's beer output is from large international brewery groups producing in massive volumes. However, in recent years, many small and often region-specific breweries have also entered the market, offering distinctive special beers and flavor variants. Zeppelin Systems is able to support all relevant players in the market with suitable systems and solutions – irrespective of whether production involves multiple millions of liters of beer every day or 100,000 hectolitres per year", explains Marc Segers, Global Business Manager for Malting & Brewing Plants at Zeppelin Systems GmbH.

Zeppelin Systems specializes in the design, construction and technological development of industrial systems for storing, conveying, mixing, dosing and weighing high-quality bulk materials and raw materials, and provides customized turnkey systems to various sectors including the food industry. Zeppelin Systems is also leading the way in malt processing and the construction of malting facilities: For example, in June this year the company handed over for <u>operation the world's largest (single-unit) malting plant</u> in Brazil. Zeppelin Systems planned and constructed the plant and also supplied all the processing equipment for the mega project, facilitating the annual production of 240,000 metric tons of malt. In a single day the plant produces approximately 880 metric tons, which corresponds to 18 million cans of beer.

Zeppelin Systems experts will be on hand at BrauBeviale to explain the benefits of individual technologies and components. For example, tower malting facilities offer the advantage of being



very space-saving compared to traditional, "flat" arrangements – this is of particular interest for sites where land is expensive and scarce, such as in port locations. While construction costs for concrete are cheap compared to steel, the concrete tower is a logical choice. This setup also requires a lower number of conveyor systems. The flat arrangement with steel containers is a popular conventional solution which can be implemented with a shorter construction time. This design delivers excellent thermal insulation and is easy to clean. Zeppelin Systems also offers steel containers for germination; these are available in 15 different sizes and so can be aligned to batch sizes between 100 and 450 metric tons. Similarly, the kilns required for drying are available in ten different sizes to suit various production volumes.

Another tried-and-tested technology that Zeppelin Systems offers is rectangular Saladin boxes, a 150-year-old French invention devised and patented by Jules Saladin. The roots of brewer's barley become entangled without regular turning, creating large mats that are unusable for further processing. To avoid this, the barley is stored in long troughs, in which motorized metal forks deal with turning. Many systems still use the same principle today. The Zeppelin Systems portfolio for Saladin boxes includes turning machines, unloading machines, wet and dry conveyor systems and associated ancillary equipment such as blowers and heat exchangers.

The Zeppelin Systems Automalt solution is suitable for smaller batches or craft brewers making special malts. This malting solution is suitable for annual malt production levels between 1,500 and 15,000 metric tons – which can be subsequently processed to make 100,000 to 1,000,000 hectolitres of beer or one to almost ten million liters of whiskey. The principle consists of separate germinating-kilning boxes, using a single soaking chamber and single kiln heater. Drinks manufacturers can commence production with a small investment and gradually increase their capacity with additional germinating-kilning boxes.

Zeppelin Systems offers sustainable solutions for a huge range of customer needs, from the planning, construction and commissioning of completely new plants on greenfield sites, to extensions or adaptations of existing brewery and malting facilities. The company offers a wide portfolio of solutions for the handling and storage of malt and brewing grain. Zeppelin's solutions optimize throughput and ensure higher and more consistent quality.

Zeppelin Systems at BrauBeviale: Stand R-9-320

Experts from Zeppelin Systems will be available at BrauBeviale from November 26 to 28, 2024, at stand R-9-320 in Messezentrum Nuremberg for all questions about malt handling in breweries and malting facilities. We Create Solutions!



You can find more information on Zeppelin's expertise in the field of <u>malting facilities and breweries</u> on the Zeppelin Systems website.

For information on BrauBeviale in Nuremberg, please visit the BrauBeviale website.

Captions:

Pic 1: Zeppelin Systems' expertise was used to build one of the world's largest malt production plants in Brazil, with a production capacity of up to 240,000 tons of malt per year.

Pic 2: View of the lower level of a steeping house with twelve stainless steel steeping tanks.

Pic 3: Controlled germination of the barley begins in the germination boxes - a crucial step on the way to high-quality malt.

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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, chemical, 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 one source. Every Zeppelin plant is characterized by customized 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. We Create Solutions! For more information, visit www.zeppelin-systems.com.

About the 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 represented in 26 countries worldwide. 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 Strategic Management Center for Group IT Services. Zeppelin GmbH is the Group holding company. It is legally domiciled in Friedrichshafen and has its head office in Garching bei München. 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.



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