

PRESS INFORMATION

Maximum drying efficiency combined with low product temperatures

Drum dryer/ cooler system TK-D | MOZER®

After two years of development, Allgaier Process Technology is presenting a new, combined drum dryer/cooler system based on the MOZER® system: the TK-D. This system makes it possible to take previously dried solids and cool them down to especially low temperatures, all the way down to nearly the ambient or cooling air temperature. The new technology makes a compelling case with its high energy efficiency with heat recovery based on separately recirculating the cooler's exhaust air or on evaporative cooling. Moreover, its single-shell construction makes it particularly easy to maintain, significantly reducing the unit's total cost of ownership (TCO).

Allgaier MOZER® drum dryer/cooler systems are known worldwide for their high-quality, high-performance, high-efficiency drying and cooling systems, and are especially used to process free-flowing bulk materials, although they are also used for sticky, agglomerated, and heavily abrasive materials. The custom nature of the drums, which are always sized and manufactured in such a way as to meet the specific needs of the project at hand, together with a number of special versions, ensures that these systems can be used for an extremely broad range of applications with throughputs ranging from 1 t/h to over 350 t/h and that process steps can be combined with the drying.

The new TK-D drum dryer/cooler system is a refinement of the extremely successful Allgaier Series TK and TK+ Allgaier dryers/coolers, which can cool the corresponding product down to approx. 50 °C. In certain applications, such as foundry sands and the production of ready-mix products such as construction adhesives, however, especially low temperatures – close to the ambient or cooling air temperature – are required for the dried materials that are output. And this was the primary focus of the developers behind the new TK-D: A single-shell design ensures that the solids can be cooled down to especially low temperatures while having split drying/cooling chambers. Moreover, in contrast to double-shell drying/cooling drums, there are no contact points between the cooling dry material and the hot inner drum in the entry area of the dryer. Finally, the use of previously cooled air instead of ambient air makes it possible to cool solids even down to temperatures of 10 °C in the case of special products.

The patented central area configuration, which is split in two by a partition wall, is designed to direct product from the drying zone into the cooling zone, and results in the exhaust air streams from both zones being separately discharged and dedusted. Accordingly, the cooler

exhaust air can be fed back into the process as pre-heated drying air. This heat recovery in the drying process, combined with evaporative cooling (i.e., the evaporation of residual moisture from the solid in the cooling process), results in greater efficiency and energy savings of up to 20%. Moreover, the separate supply and exhaust of the gas streams allow for different process control between the solid and the air: In particular, the possible countercurrent flow routing of the drying air and the stream of solids is suitable for the particularly efficient high-temperature treatment and calcination of solids immediately followed by cooling.

With the new TK-D, Allgaier Process Technology offers an efficient, versatile, heavy-duty, compact drum dryer/cooler system that is particularly cost-effective and easy to maintain as a result of its single-shell design. The system, which makes a particularly compelling case with its high quality and its ability to dry products and cool them down to low temperatures, can be used for a wide variety of applications, and especially in the mineral, construction material, and raw material industries.

Allgaier Process Technology with its core brands Allgaier, Mogensen, Gosag and Mozer is the market leader in custom-made systems for industrial washing, drying, cooling, screening and sorting applications for all types of bulk material. With a presence in over 40 countries, Allgaier Process Technology serves more than 40,000 manufacturing customers in a variety of industries including, but not limited to, chemicals and pharmaceuticals, food and feed, waste and recycling, mining and metallurgy, biofuels, wood, ceramics, plastics and stones & soil.

Allgaier Process Technology offers its customers a broad portfolio of dryer / cooling systems and systems based on the basic principles of rotary drum dryers / coolers, fluidized bed technology, and contact drying. In order to find the optimal system and configuration, customers and interested parties in the drying technology test center at the headquarters in Uhingen can test their specific application under the supervision of experienced specialists.

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IMAGES



The new **TK-D** drum dryer / cooler system MOZER as a pilot plant in the Allgaier Test Center, Uhingen, Germany enables the solids to be dried to very low temperatures up to near ambient or cooling air temperatures