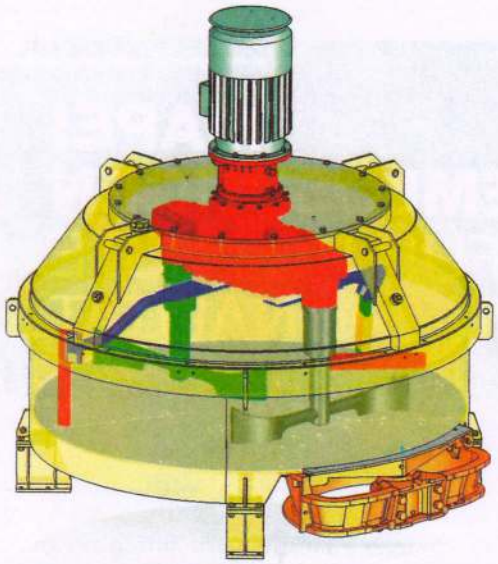
TEKA

The optimum mixer for the dry building materials industry



At the BAUMA 2013, TEKA Maschinenbau GmbH presented for the first time its newly-developed TEKA high-performance turbine mixer series (THT) – the result of intensive product research and development work. The device is ideal for mixing all dry material batches such as dry mortar, cements, etc. and is suitable for a multiple range of aggregates and different types of cements used in the dry building materials industry. It is the mixer for the most difficult mixing tasks and the most diverse batch sizes.

The TEKA high-performance turbine mixer series (THT) with its patent-pending mix-turbine are specifically suited for many different dry material batches from fine to coarse aggregates for the complete range of mortar mixtures to very small fines used in cement batches. The mix-turbine with its "swing and throw" effect provides the customer with a very intensive mixing action while at the same time not destroying the composition of the particles, resulting in premium quality products for the end-user. In addition, the mix-turbine is coated with tungsten-carbide pieces in order to ensure a long life cycle before the mix-turbine needs to be re-coated.

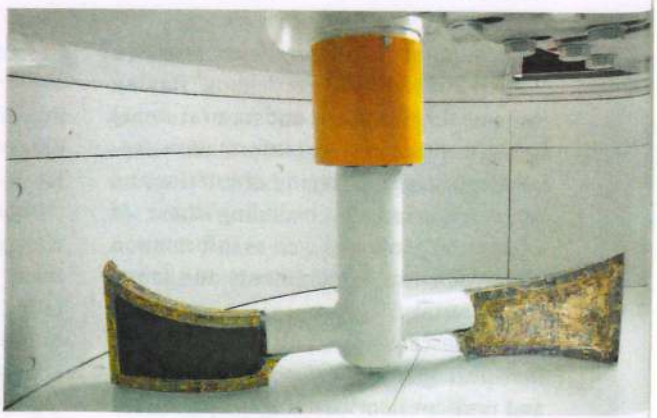
All THT turbine mixers are suited with a frequency converter for the main drive motor. The standard frequency converter allows for different rotation speeds of the mix-turbine in order to provide optimal mixing effectiveness for each individual batch depending on the specific dry material to be mixed without destroying the composition of the aggregates. In addition, varying mixing intensities can be selected during the different stages of a single mixing cycle allowing for better mixing effectiveness during the dosing, mixing and discharging phases. This also ensures that the drive power is used to the optimum, which reduces the energy requirement to that which is absolutely necessary and results in energy cost reduction

The THT is able to mix even the smallest batch sizes with the same mixer. Tests have proven that batch sizes of less than 10 % of the maximum filling capacity of the mixer have been achieved, resulting in enormous product flexibility for the end-user and giving the customer the possibility to manufacture a diverse range of products. Due to the complete emptying of the mixer within the shortest possible times, the changing of batch materials and products from one batch to the next batch without long cleaning intervals is possible.

A further advantage is the reduction in contamination within the mixer itself. Not only the mix-turbine does have an optimal self-cleaning effect, but the fastening system for the mix-turbine runs outside of the batch. This results in longer intervals between cleaning and the effort required to clean the mixer is reduced to a minimum.

Thanks to the sophisticated modular system principle, the mixer can be configured optimally for the respective dry building material that is to be mixed. In order to optimally exhaust the possible combinations, a type designation was introduced for the new THT series that is no longer orientated towards the filling quantities, but rather to the specific requirements of the individual customer in combination with the required components.

In other words, turbine mixers are custom-built to the individual requirements and the specific mixing task. The drive power, the diameter of the pan and the number of mix-turbines are variable and specifically chosen for each single mixing task.



The advantages of the new THT series can be summarized as follows:

- the "swing and throw effect" of the mix-turbine ensures optimal material flow and intensive mixing action without particle destruction
- maximum flexibility with regard to grain size and batch size
- ability to mix even the smallest batch, leading to immense variability of batch sizes with the same mixer
- complete emptying of the mixer in extremely short times leads to larger batch variability
- no unmixed areas within the mixer, no "dead zones"
- possible points of adhesion for the batch material has been drastically reduced (for example installation bolts outside of the batch), which means considerably less contamination of the mixer
- the mix-turbine is coated with tungsten-carbide protection for extremely long wear-life and cost reduction
- drive power optimally adapted to the batch which is to be mixed thereby very energy efficient
- a frequency converter for the main motor is standard for optimum rotation speed of the mix-turbine depending on the batch composition and batch size
- depending on the application and power size, the installation of a second mixing turbine is possible (from 1500 litres onwards)
- various mixing trough sizes up to a capacity of 3000 litres depending on the specific application

The mixing effectiveness of the mixers from the THT series has been scientifically tested and proven by the Institute of Building Process and Environmental Technology (IBU) in Trier. The new mixing turbine has already proven itself in practice at numerous companies in new installations and modernizations of existing plants.

Also, many customers have already used the TEKA in-house testing facility. This is available for clients who would like to prove to themselves the mixing effectiveness of the THT turbine mixer with their specific dry material i.e. batch.

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