

Drum Dryer System TK+

Combined Drying and Cooling with reduced energy consumption



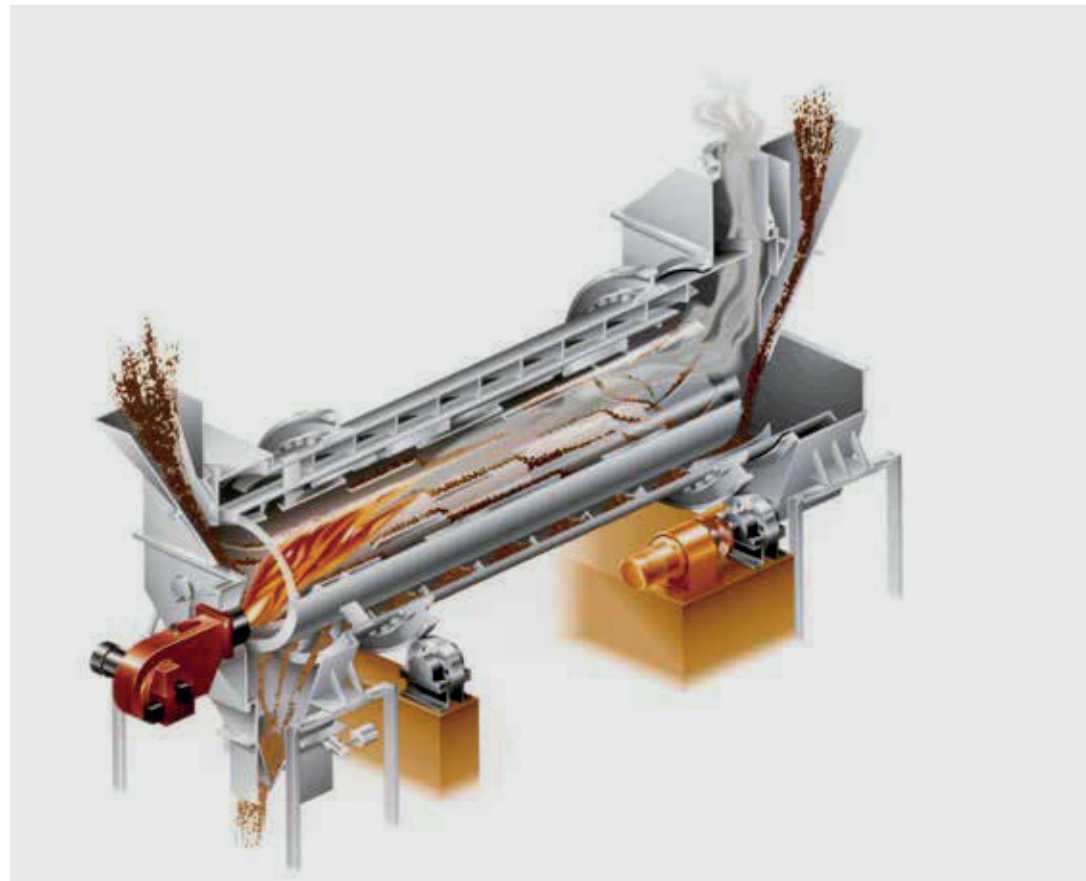
Drum Dryer System TK+ Combined Drying and Cooling with reduced energy consumption by evaporative cooling

The TK+ drum dryer system is used for combined drying and cooling of fine-grained material, for example sand with grain size 0-8 mm in the usual distribution for dry mortar production.

Advantages:

- Energy savings up to 20 % vs. comparable systems which use ambient air only for cooling
- A smaller filter unit is required, which leads to a lower investment, operating and maintenance costs.
- Cooling is independent of the ambient air; therefore the system is also suitable for countries with extreme hot and/or damp climates.
- Can be retrofitted to all MOZER double-shell drum dryers delivered since 1985 and used for drying of sand with grain size 0-8 mm.

Depending on the initial moisture of the product, only up to 70-85 % of the total throughput is fed into the inner drum and dried by the hot gas produced by burning the fuel. The rest of the product, referred to as the “bypassing product” is fed directly into the outer drum at the other end.



There it meets the dried material arriving from the inner drum and is mixed while being conveyed through the outer drum.

Mixing and close contact with the hot dry material is drying the moist material. The resulting evaporative cooling cools the hot dry material. Therefore no additional fuel is required for drying the “bypassing product” which leads to evident energy savings compared with pure dryers or combined drying and cooling systems operating with cooling air.

As no air is required for cooling and only a little air is required for ventilation of the outer drum the dust extraction filter can be designed with the same size as for a pure dryer. In comparison to systems with combined drying and cooling by ambient air only, half of the exhaust air volume is required which leads to a much smaller dust extraction filter with lower costs for investment, operation and maintenance.

It is possible to modify all MOZER double shell dryers delivered since 1985 to the system TK+ providing the existing installation conditions and the existing dust extraction plant.



Drying-Cooling Drum for 100 t/h sand



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