VETTERTEC
PASSION FOR DRYING

VETTERTEC TUBE BUNDLE DRYERS

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The VetterTec tube bundle dryer is an indirect steam heated dryer and well-known for its efficient and gentle treatment of products. By using steam as indirect heating media, customers are flexible in the choice of their energy source.

The steam heated tube bundle slowly rotates in a fixed housing and conveys the product to be dried axially through the dryer. Shovels transport the product along the circumference of the housing, where it falls through the heated tube bundle for each rotation. Economic and gentle drying is achieved by direct product contact with the tubes and by convection.

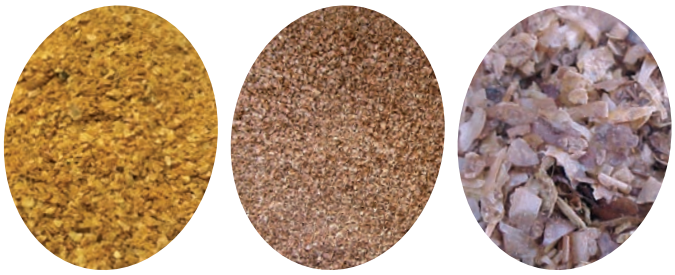
ADVANTAGES

- √ Drying only with indirect steam and sweep ambient air, means no pollution to your product
- √ Low installation costs through modular design
- √ Gentle drying with low temperatures
- √ Low energy consumption in the range of 1.25 to 1.28 kg of steam/kg of water evaporation
- √ Clean and environmentally friendly due to integrated dust collector
- √ Optimal sealing and insulation increase energy recovery up to 67% for utilization in other processes, e.g. evaporator (energy integration)

SPECIAL FEATURES

- √ Saturated steam between 4 – 10 barg as heating source
- √ Solutions with lower steam pressure available
- √ Minimized dust emissions, closed-loop systems also available
- √ Safe process due to minimized oxygen content
- √ Design in accordance with all relevant ATEX/NFPA or similar local requirements
- √ Closed gas-tight system as well as design for drying below atmospheric pressure are possible

VetterTec tube bundle dryer with bag filter in ATEX/NFPA design



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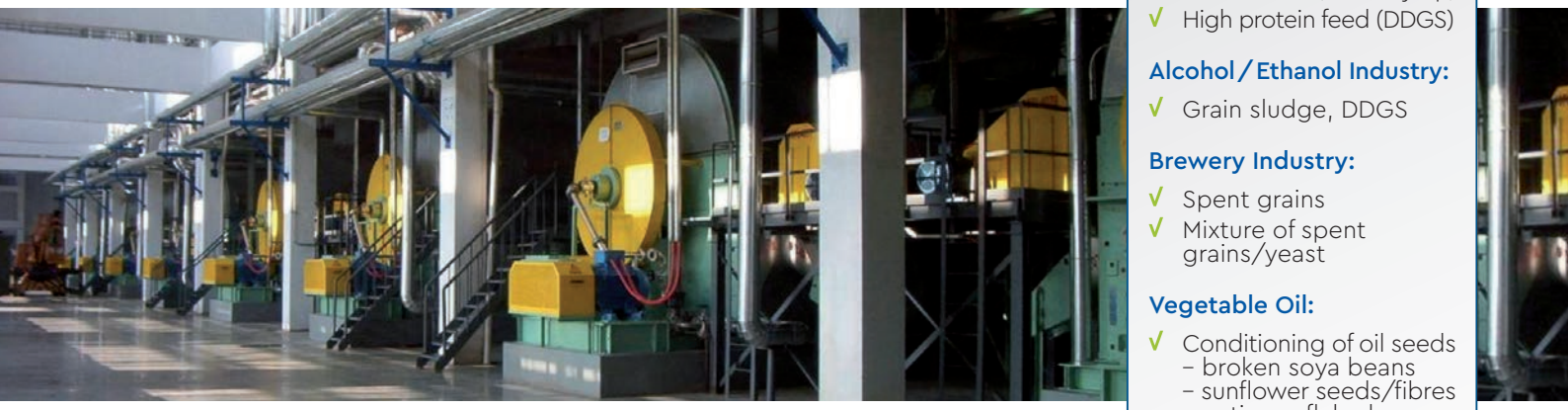
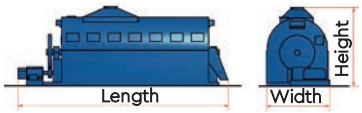
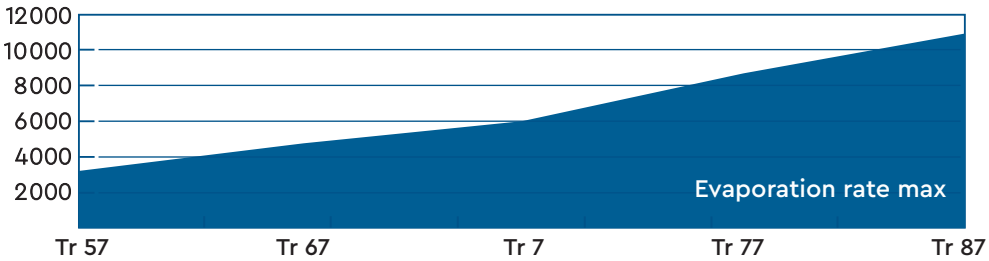
VetterTec tube bundle heat exchangers are employed in a wide range of applications as dryers, conditioners or desolventisers. Both granular as well as slightly adhesive products can be dried in a tube bundle dryer. To be able to dry slightly adhesive products, the dryer is equipped with a specially developed recirculation system.



To achieve optimal operating conditions, each dryer is customized, e.g. the spaces between tubes and tube diameters, shovel positions and filling levels inside the housing are selected and adjusted to an optimum. According to requirements, it may be useful to run drying tests with the product.

WATER EVAPORATION (kg/h)





Fields of Application

Starch and Grain Industry:

- √ Corn germs, corn fibres and corn husks
- √ Corn gluten
- √ Corn feed (fibres + CSL)
- √ Wheat germs
- √ Wheat feed (bran + syrup)
- √ High protein feed (DDGS)

Alcohol / Ethanol Industry:

- √ Grain sludge, DDGS

Brewery Industry:

- √ Spent grains
- √ Mixture of spent grains/yeast

Vegetable Oil:

- √ Conditioning of oil seeds
  - broken soya beans
  - sunflower seeds/fibres
  - entire or flaked rape
  - other oil seeds
- √ Pre-desolventising of oil seed coarse meal prior to the toaster
- √ Drying of oil seed coarse meal after the toaster
- √ Removal of solvents (desolventising)

Energy & Environmental:

- √ Lignin
- √ Pig manure
- √ Granulates
- √ Fibrous extracts
- √ Cellulose material/acetat
- √ Leaves, extracted roots
- √ Olive husks/pomace
- √ Citrus peels

Dryer Type	Tr 57	Tr 67	Tr 7	Tr 77	Tr 87
Length max./mm	12500	13500	14000	14900	15200
Width/mm	2900	3300	3700	4100	4700
Height/mm	3900	4600	5500	6500	7500
Weight empty/kg	36000	51000	68000	90000	98000
Water evaporation (kg/h)	3200	4800	6000	8700	11000

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