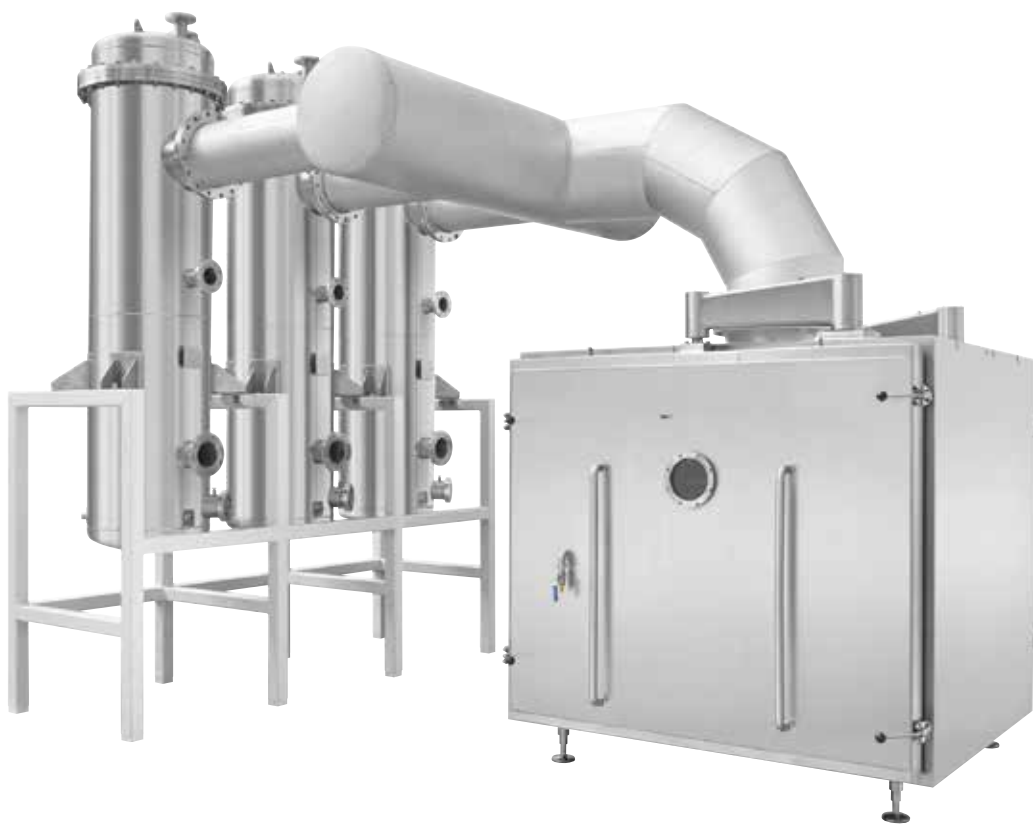
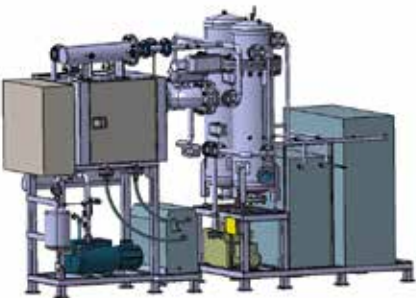


Zeolite reactors



Gentle vacuum
drying or freeze
drying (lyophilisation)
of products by using
water adsorption

- Best aroma retention
- Flexibility of production
- Selective process
- Batch or continuous process



Design and Functionality

The Zeodration system uses Zeolite reactors to trap the water or solvent. Zeolite is crystallised clay with a pore diameter of 4 Angstroms (water molecules are 3 Angstroms). Its properties, combined with polarity factors, lead to a selective moisture trap that under operating pressure conditions, retains water only. Because of a very low partial pressure at the water adsorption, a maximum reduction of lost volatile molecules through the vacuum system is achieved, thus maintaining most of the flavours in the product. While using Zeodration with vacuum dryers, a similar product-quality can be achieved

than with freeze-drying systems. Due to an integrated and cyclic regeneration of the Zeolite the full adsorption capacity is maintained. Zeodration can be combined with a vacuum cabinet dryer for batch production or a vacuum belt dryer for continuous production. Existing plant can be upgraded with Zeodration system for best flavour result.

Application

- Flavours
- Plant extracts
- Fruits and vegetables
- Pharmaceutical and nutraceutical concentrates
- Probiotics and enzymes

Technical data

Adsorption capacity	1 to 1'000 kg/h water
Batch dryer sizes	1-88 m ² heating surface
Belt dryer sizes	0.2-325 m ²
Vacuum range	from 1 to 80 mbar abs.

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Products and Services

Process technology for fruit and vegetable processing to juices, concentrates and puree production, for brewing solutions, for filtration, for milk powder production, for the vacuum drying of liquid and solid products, for freeze drying of coffee, tea, fruits, vegetable, etc. Technology for municipal and industrial sludge dewatering and drinking water filtration

Products

Fruit reception lines, mills, mash heaters, hydraulic presses, membrane filtration equipment, cold block equipment, adsorber, ion exchanger, evaporators and aroma plants, pasteurizers, CIP systems, vacuum and freeze drying cabinets and belt dryer, zeolite adsorber, complete processing lines

Services

Process development and project engineering; assembly and commissioning; technical support; original spare parts; inspection; service contracts; retrofits; training; service and maintenance; NetService