

Aroma Conserving Dealcoholization of Beer and Wine

DeAlcoTec



The Principle

For dealcoholization the product is first heated by a heat exchanger in counter current to the finished alcohol-free product. It is then dispersed at the top of a specially designed evaporation column. For CO₂ containing liquids, prior degassing prevents formation of foam. Exhaust vapours are fed into the bottom of the column. They rise upwards inside the column in counter current to the falling warm liquid. Thereby, they remove the volatile alcohol from the product. The less volatile components fall to the column base and flow into the falling film evaporator that generates the exhaust vapour. Densely packed, thin stainless steel sheets in the column maximize the transfer surface and the contact time between product and exhaust vapours. The complete process takes place under vacuum at low temperature. The remaining alcohol-free product is pumped away and cooled. The volatile flavours from the original product can be separated in an aroma recovery system and added back to the finished product. The alcohol is optionally concentrated to up to 90 vol. % for further use.

Typical Technical Data

Capacity	3 - 200 hl/h
Initial Alcohol	4,5 - 5,5 vol. %
Residual Alcohol	0,01 - 0,4 vol. %
Rectified Alcohol	30 - 90 vol. %
Material	1.4301/AISI 304; 1.4404/AISI 316L; etc.
Heating Medium	hot water, steam as primary source
Cooling Medium	glycol, ice water, ammonia, brine
Optionen	in-line measurement (e. g. O ₂ , CO ₂ , °Plato, alcohol) carbonation; aroma recovery; pasteurization blending (mother beer, syrup) alcohol rectification (ATEX area)

Highlights

Gentle treatment of the product at low temperature
Residual alcohol content close to detection level
Optional aroma recovery and alcohol rectification

The Centec Group

Centec offer fully automated, skid-mounted process units and high precision measurement technology from a single source. Our systems and sensors are engineered to perfectly meet the most demanding requirements of the brewery, beverage, food and pharmaceutical industries. With a team of experienced engineers, we aim to create quantifiable added value for our customers. We are your partner from planning and design through to commissioning of your plant.



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