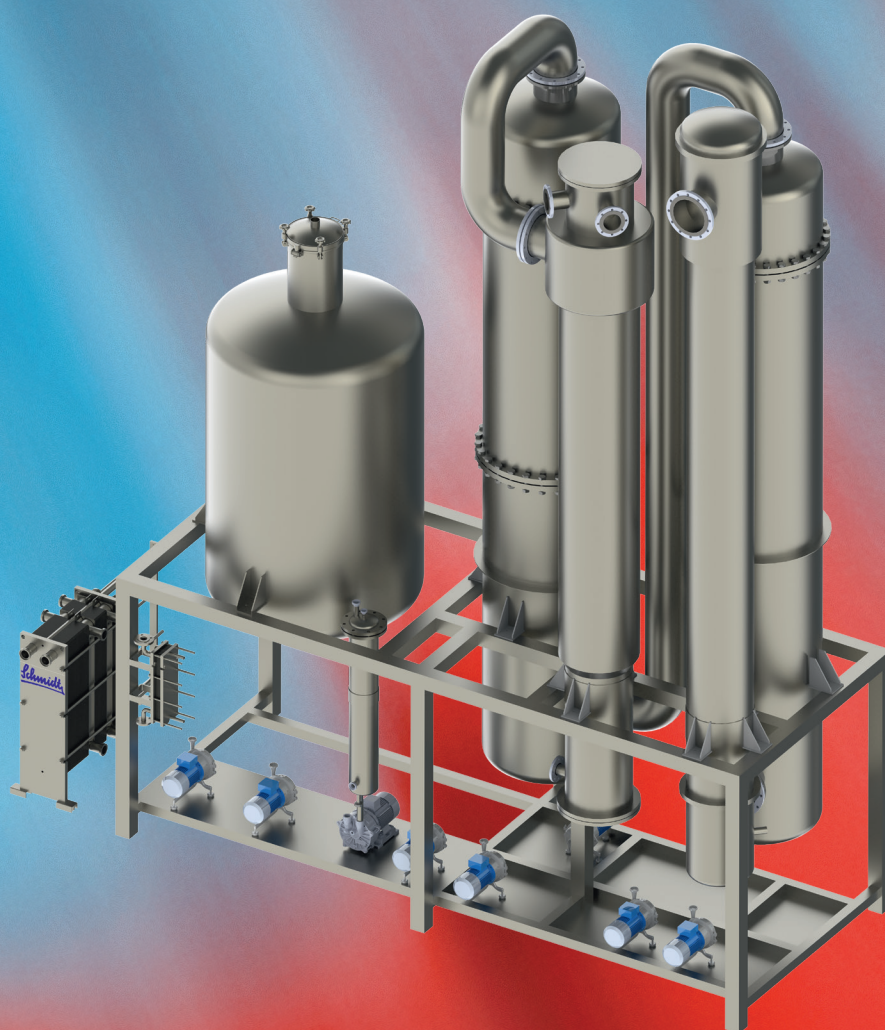

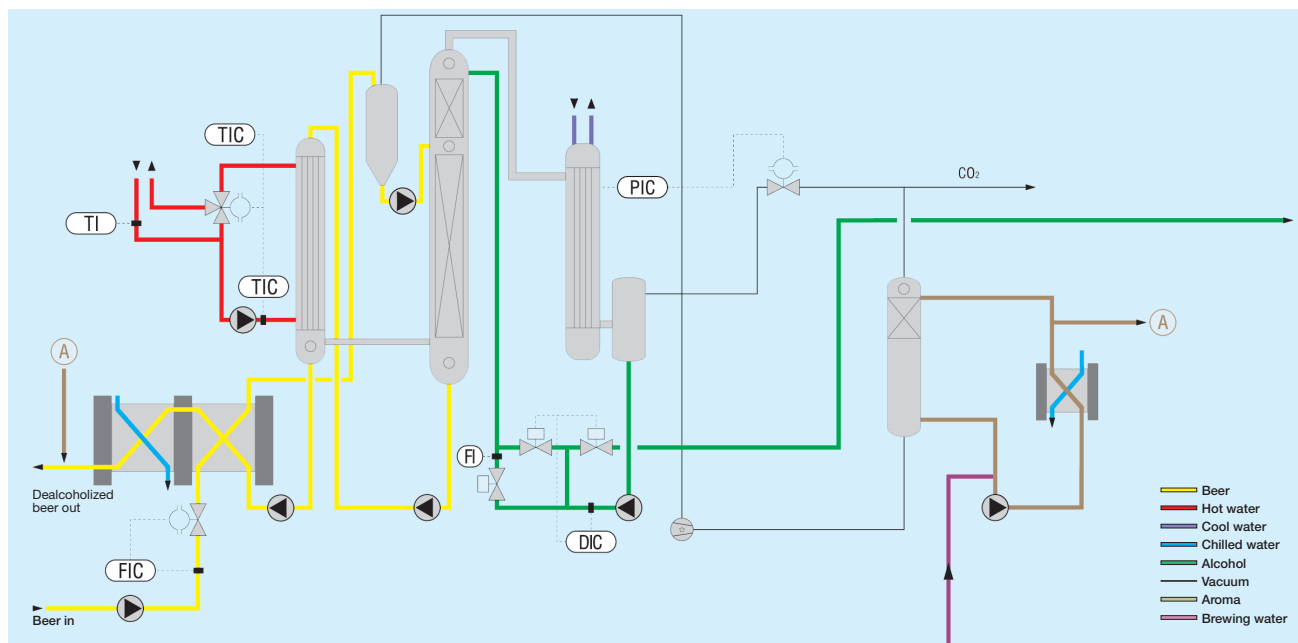


FULL TASTE ZERO ALCOHOL



 **System Solutions
For Dealcoholization**

Technology



Process Diagram for SIGMATEC Dealcoholization Plant

Description of Technical Procedure

With SIGMATEC technology it is possible to dealcoholize a diverse range of alcoholic products. The process varies according to the nature of the given product and is based on the following criteria:

■ Preheating

Using a Schmidt® plate heat exchanger the medium is preheated to the required degassing temperature.

■ Decarbonization

Depending on the final product, decarbonization takes place in a special vessel for the degassing procedure which enables mobile aromatic components to be recovered in the vacuum system.

■ Vacuum Rectification

A high-capacity distillation column carefully removes the alcohol from the product.

■ Flash Evaporation

From the already dealcoholized product a portion is evaporated in order to create the necessary stripping steam for the distillation tower.

■ Cooling

The medium is then cooled down by a Schmidt® plate heat exchanger to approximately 2°C.

■ Carbonization

On request it is possible to inject the product with CO₂.

■ Aroma Dosing

The aroma covered by an optional aroma recovery unit can be returned into the product. (Alternatively the product can be blended with the base product.)

Areas of Application

With more than 30 years experience in dealcoholization, the Schmidt® SIGMATEC has become the market leader worldwide. The experience gained in supplying a large number of dealcoholizing plants, our SIGMATEC design has become highly refined.

To date, SIGMATEC systems have been manufactured for a scope of capacity ranging from 2 hl/h to 150 hl/h.

Breweries

Wheat beer, Pils, Pale Ale, Lager, Dunkel, Stout

Wineries

White/Red Wine, Sparkling Wine, Mulled Wine

Fruit/Cider Production

Perry, Cider

Other Industries

Alcoholic Liquids, Extracts



Advantages of the Procedure

- **Dealcoholization under 0.05 vol-%**
- **Cost-Effectiveness**
 - minimum volume loss
 - alcohol concentration to 75 - 80 vol-%, hence a valuable, marketable byproduct
 - fully automatic operation
 - low energy consumption
 - low maintenance cost
- **Careful Handling of Product**
 - low processing temperature
 - short holding time
- **Environmentally Beneficial and Advantageous in the Conservation of Resources**
- **Optional Aroma Recovery**
- **Optional Dosing of Base Product**
- **Optional CIP System**
- **Optional Desulfurization of Grape Juice**

Technical Versions

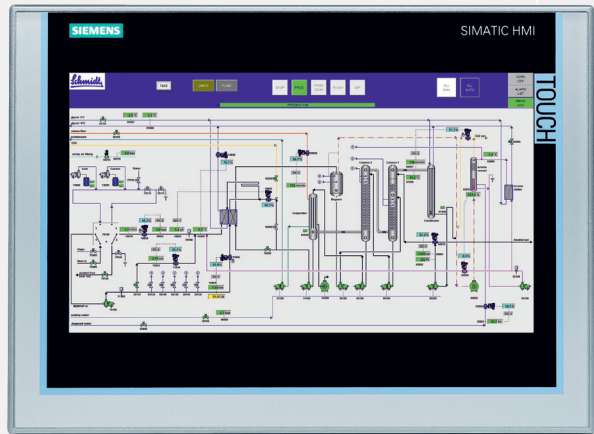
MATERIALS AND SPECIFICATIONS

| | |
|---------------------------------|---|
| Materials of Columns and Tanks: | All Current Stainless Steels |
| Column Internals: | Metal Packings, Filling Material, Trays |
| Column Diameters: | Dn 200 to Dn 2,000 |
| Heating System: | Direct Steam or Hot Water |

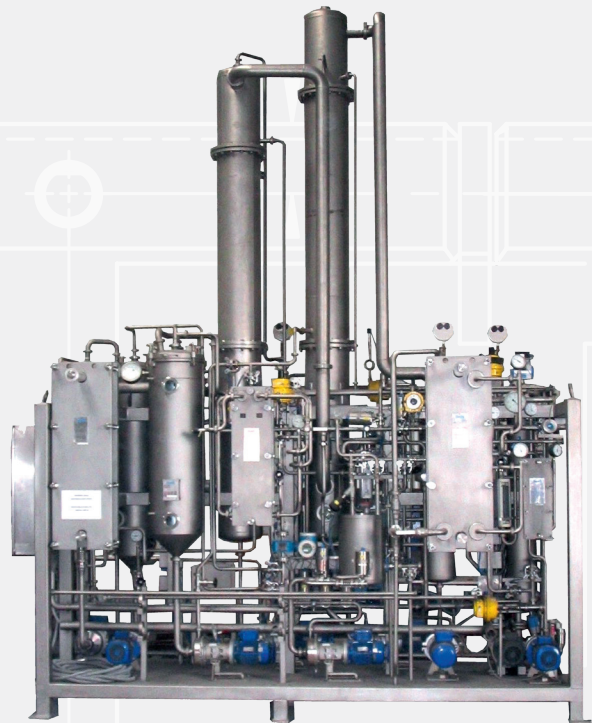
CAPACITY DATA

| | |
|--|----------------------------------|
| Feed Capacity: | 2 hl/h - 150 hl/h (Beer) |
| Steam Consumption: Cooling Capacity: | 15 - 18 Kg/hl 10 - 12 Kw/h |
| Average Temperature: | 40 - 80°C |
| Alcohol Concentration at Inlet: Final Concentration of Alcohol: | 0.75 - 15 Vol-% 40 - 85 Vol-% |

Application Examples



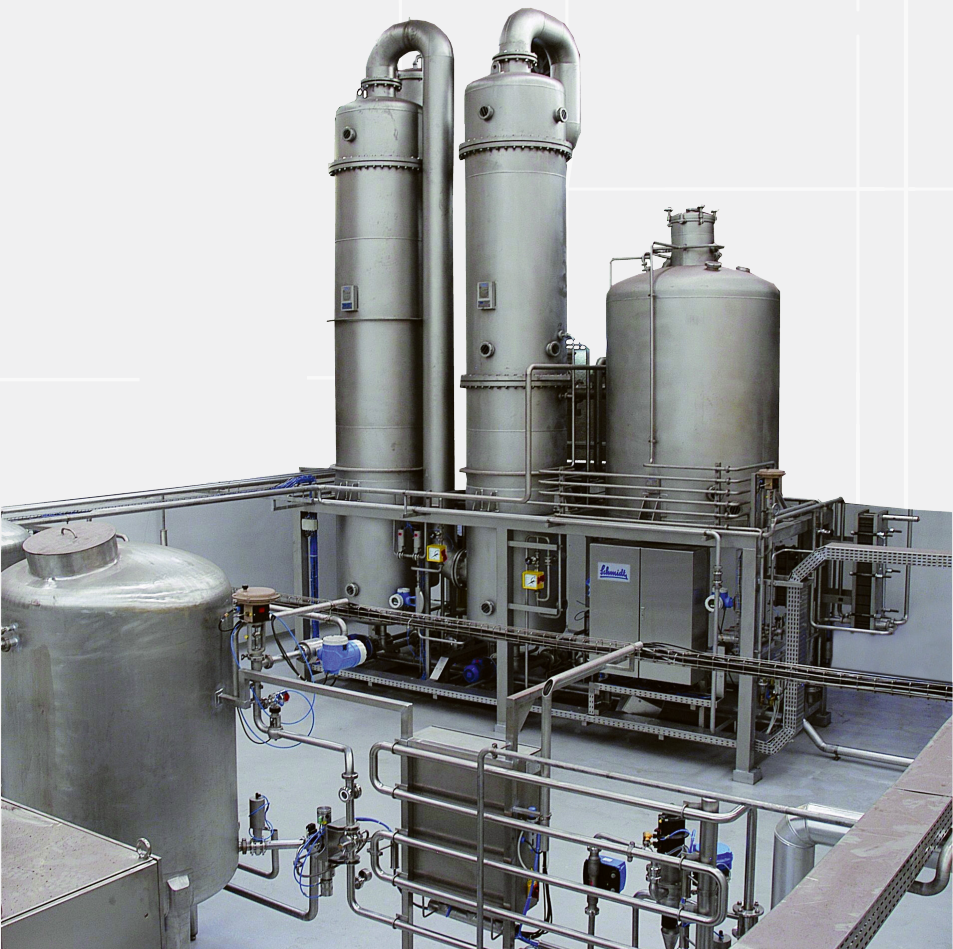
Visualization of the plant on the operator panel



Mobile Testing Unit 4 hl/h - diverse products



Dealcoholization plant for wine - 2,000 l/h




Dealcoholization plant for beer - 50 hl/h



Dealcoholization plant for beer - 100 hl/h beer - preassembled in the workshop



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