

# Full Taste Zero Alcohol



 **System Solutions  
For Dealcoholization**

# Areas of Application

With more than 30 years of experience in dealcoholization, Schmidt 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 by-product
  - 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

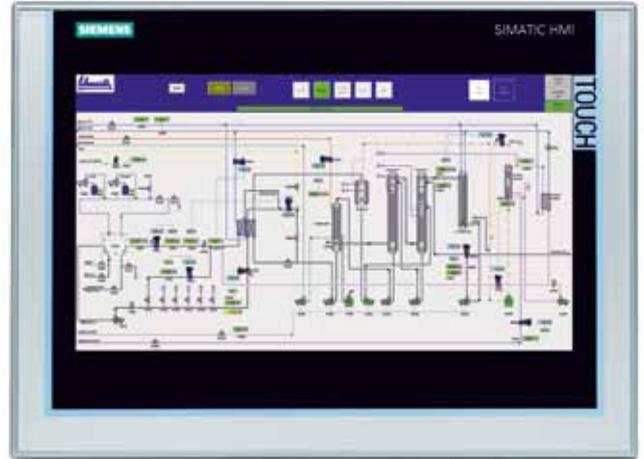
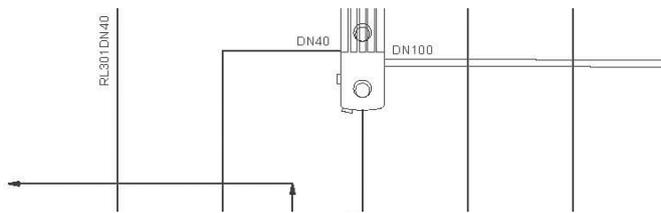
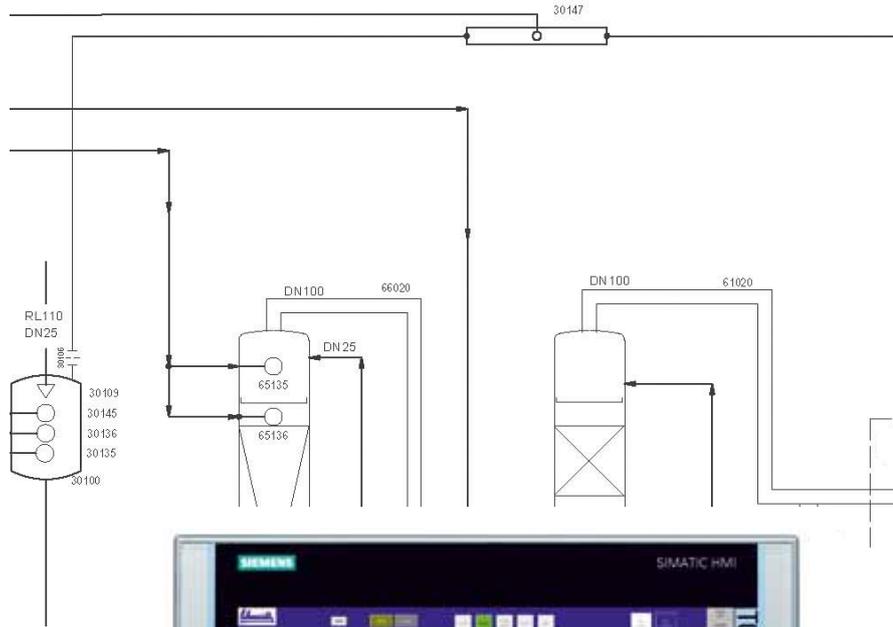
## Capacity Data

|                                 |  |  |                                  |
|---------------------------------|--|--|----------------------------------|
| Materials of Columns and Tanks: | All current stainless steels             | Feed Capacity:   | 2 hl/h - 150 hl/h (beer)         |
| Column Internals:               | Metall Packings, Filling material, Trays | Steam Consumption:<br>Cooling Capacity:                            | 15 - 18 kg/hl<br>10 - 12 kg/hl   |
| Column diameters:               | DN 200 to DN 2,000                       | Average Temperature:   | 40 - 80°C                        |
| Heating System:                 | Direct steam or hot water                | Alcohol concentration at inlet:<br>Final concentration of alcohol: | 0.75 - 15 vol-%<br>40 - 85 vol-% |

# Application Examples



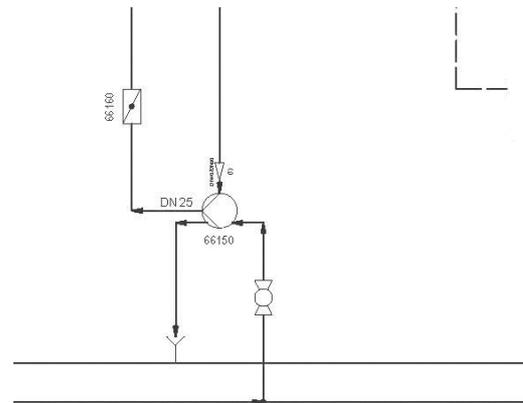
Mobile Testing Unit 4 hl/h - diverse products



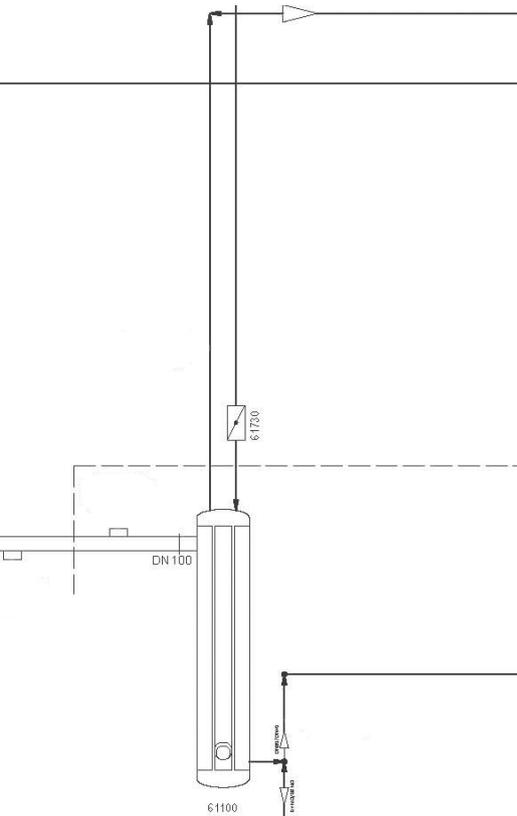
Visualization of the plant on the operator panel



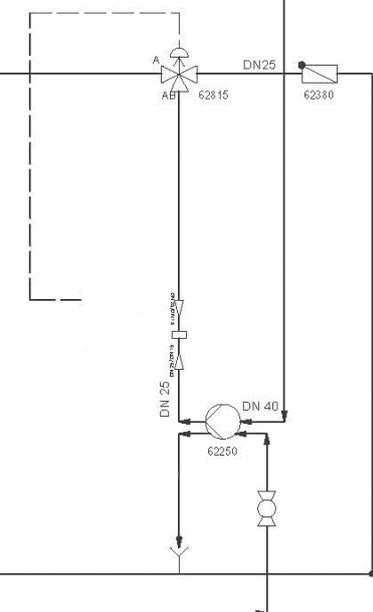
Dealcoholization plant for beer - 50 hl/h



# Application Examples



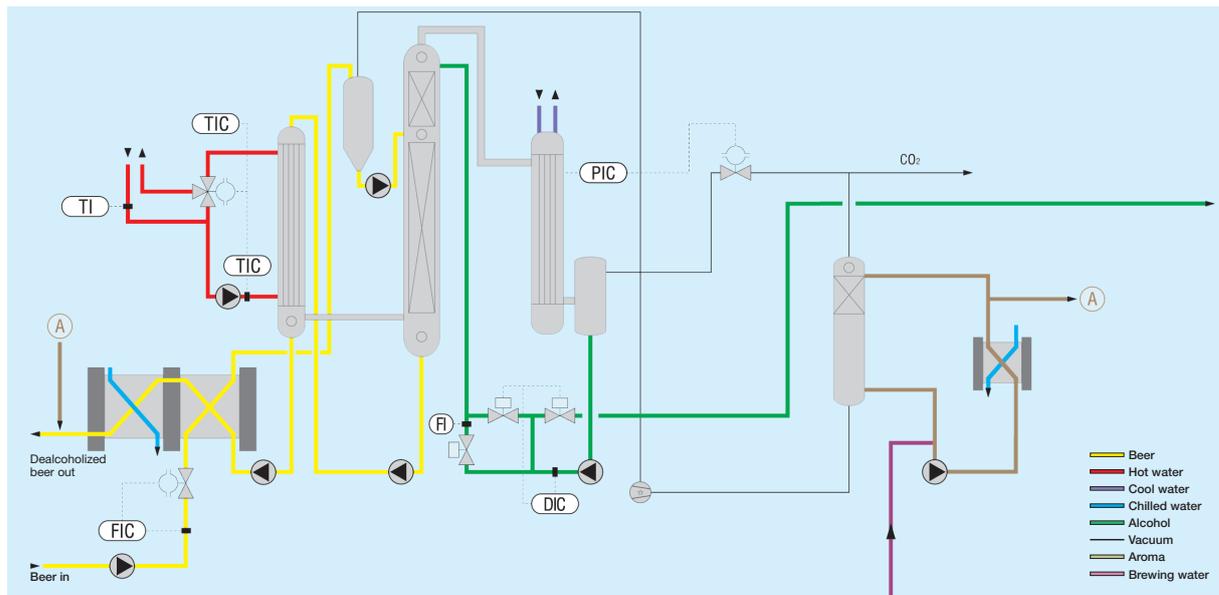
Dealcoholization plant for wine - 2,000 l/h



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

|   |  |  |  |
|---|--|--|--|
| Order No.   |  | <b>Schmidt</b><br>API Schmidt-Bretten GmbH & Co.KG |  |
| Best./Customer  |  |  |  |
| Frage/Advice  |  | Gepr./Approved                                     |  |
| Entz./Drawn   |  | Zeichnungs-N./Drawing No.                          |  |
| Benennung/Description<br><b>SIGMATEC</b><br>Entalkoholisierungsanlage |  | Blatt/Sheet<br>1 von/of<br>1                       |  |
| Schutzvermerk nach DIN34 beachten                                     |  | Copyright reserved                                 |  |

# 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 CO<sub>2</sub>.
- **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.)

# A world of heat transfer solutions

API Heat Transfer's global presence includes manufacturing facilities, R&D locations, and sales support throughout the world, all aimed at one goal – to better serve our customers.



For more information about our heat transfer products, contact our API Heat Transfer sales representative or visit [apiheattransfer.com](http://apiheattransfer.com) or [apiheattransfer.de](http://apiheattransfer.de).

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