In the production of quality beer, breweries rely on many raw materials including water, malt, hops, yeast, and the fifth most important – carbon dioxide (CO₂). CO₂ has a large influence on not only the beer’s quality, but also the customer’s acceptance of the product. CO₂ treatment, control and dosing are of fundamental importance and should be seen as a total concept of which CO₂ Recovery plays a key role. As a specialist in CO₂ Recovery, Pentair Haffmans is your total CO₂ Management Partner.

Pentair Haffmans offers solutions for every situation. This covers individual components such as CO₂ storage vessels, CO₂ cylinder filling and CO₂ evaporators with reducing set, up to complete CO₂ Recovery Plants from 20 kg/h up to 10,000 kg/h.

We offer a delivery program with a range of options from cost-effective conventional CO₂ Recovery plants to state-of-the-art plants incorporating the latest technologies. In addition, we can update existing plants with these technologies. Worldwide, custom-made solutions will be installed and commissioned by a team of experienced and well-trained service engineers.

To meet the growing demand for CO₂, Pentair Haffmans’ R&D Department continuously develops new technologies to improve CO₂ quality, recovery rates and efficiency. Our LD and HLP plants can produce CO₂ with a purity better than 99.998 percent and with less than 5 ppm oxygen (O₂) v/v content. The HLP plant collects raw gas from an inlet of just 95 percent v/v and will be economically recovered while still maintaining a guaranteed outlet purity of 99.998 percent v/v.

With the HLP plant design, breweries can now recover CO₂ gas from fermentation earlier and still provide food-grade CO₂ to meet the demand for beer production, with a surplus of food grade CO₂ that can be used to produce carbonated soft drinks. The main advantage is that fermentation CO₂ produced from beer or other fermentation processes itself guarantees that the recovered CO₂ has fundamentally no food-alien substances and is food-grade.
HAFFMANS CO₂ RECOVERY

CO₂ RECOVERY PLANTS

PRODUCT LEAFLET

TECHNICAL DATA

CO₂ Inlet (CO₂ % vol.)
Conventional > 99.7
LO (Low Oxygen) > 99
HLP > 95

CO₂ Outlet (CO₂ % vol.)
Conventional > 99.97
LO (Low Oxygen) > 99.998 / O₂ < 5 ppm
HLP > 99.998 / O₂ < 5 ppm

RECOVERY PROCESS

Fermentation → Foam separator → Foam drain → Gas balloon → Gas washer → Refrigeration unit → CO₂ evaporator → CO₂ to consumers

CO₂ compressor → Activated carbon filter/driers → CO₂ condenser → Stripper/Reboiler (optional) → CO₂ storage tank

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