

HAFFMANS CO₂ RECOVERY CO₂ RECOVERY PLANTS

PRODUCT LEAFLET



GENERAL PRODUCT INFORMATION

In the production of quality beer, breweries rely on many raw materials including water, malt, hops, yeast, and the fifth most important – carbon dioxide (CO_2) . CO_2 has a large influence on not only the beer's quality, but also the customer's acceptance of the product. CO_2 treatment, control and dosing are of fundamental importance and should be seen as a total concept of which CO_2 Recovery plays a key role. As a specialist in CO_2 Recovery, Pentair Haffmans is your total CO_2 Management Partner.

Pentair Haffmans offers solutions for every situation. This covers individual components such as CO_2 storage vessels, CO_2 cylinder filling and CO_2 evaporators with reducing set, up to complete CO_2 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 CO_2 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 LO and HLP plants can produce CO₂ with a purity better than 99.998 percent and with less than 5 ppm oxygen (O_2) v/v content. The HLP plant collects raw gas from an inlet of just 95 precent 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 CO_2 gas from fermentation earlier and still provide food-grade CO_2 to meet the demand for beer production, with a surplus of food grade CO_2 that can be used to produce carbonated soft drinks. The main advantage is that fermentation CO_2 produced from beer or other fermentation processes itself guarantees that the recovered CO_2 has fundamentally no foodalien substances and is food-grade.

TOTAL CO₂ MANAGEMENT

- CO₂ Recovery Plants
- Expansion and renovation of existing plants
- CO₂ Recovery Plants Accessories
- CO₂ Quality Control
- CO₂ Analysis Service (CAS)
- After-sales Service
- Training / Maintenance Contracts
- Spare Parts
- CO₂ Audits, Quick scans

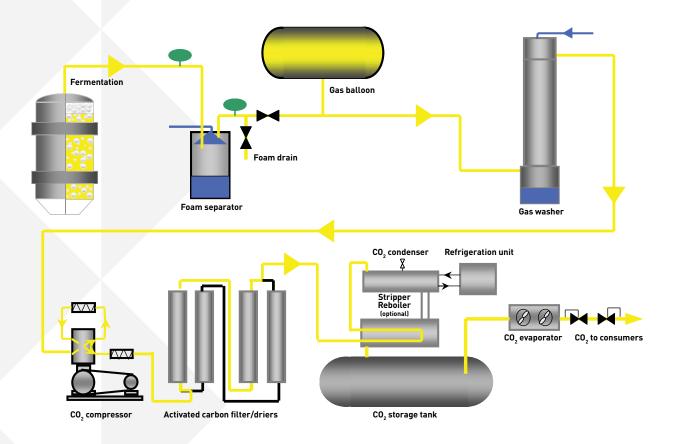
HAFFMANS CO₂ RECOVERY PLANTS²

PRODUCT LEAFLET

TECHNICAL DATA

CO, Inlet (CO, %	vol.)	CO, Outle	t (CO ₂ % vol.)
Conventional	> 99.7	Conventio	onal > 99.97
LO (Low Oxyger) > 99	LO (Low C)xygen) > 99.998 / 0 ₂ < 5 ppm
HLP	> 95	HLP	> 99.998 / 0 ₂ < 5 ppm

RECOVERY PROCESS







HAFFMANS BV

P.O. BOX 3150 NL-5902 RD VENLO, NETHERLANDS INFO@HAFFMANS.NL WWW.HAFFMANS.NL

All Pentair trademarks and logos are owned by Pentair, Inc. All other brand or product names are trademarks or registered marks of their respective owners. Because we are continuously improving our products and services, Pentair reserves the right to change specifications without prior notice. Pentair is an equal opportunity employer.

CO₂ TWI E-9 /13 © 2012 Pentair, Inc. All Rights Reserved.