



High Gravity Blender model DB

- Blending accuracy $\pm 0,1$ °P
- Sophisticated regulation
- Fastest start-up / product changeover
- Inline gravity / alcohol measurement
- Sanitary design
- PLC controlled, automatic CIP mode

HIGH GRAVITY BLENDING

HGB is a standard procedure in modern brewing. Precise adjustment of extract or alcohol content is performed directly after filtration rather than in the brewhouse. It allows increasing the final output with the existing brew capacity and gives high flexibility in brewing different types of beer.

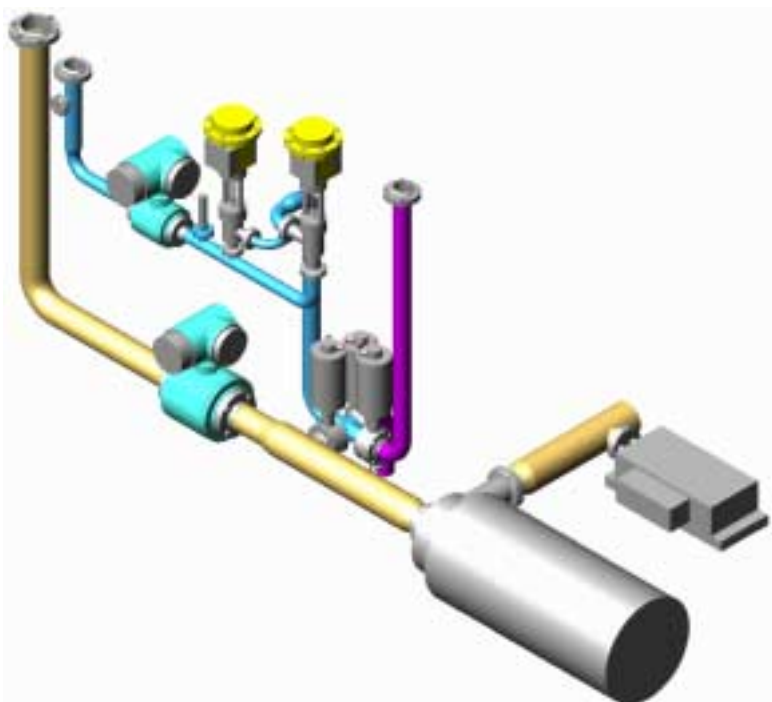
Designed for fast and accurate dosage of deaerated water, DENWEL provides a fully automated solution for continuous blending ensuring consistent product quality.

HIGH GRAVITY BLENDING

Principle

An inline density / sound velocity analyzer continuously monitors the original gravity and alcohol concentration of the standardized beer. Two parallel control valves of different size are responsible for accurate dosing of deaerated water. Special software algorithm regulates both control valves simultaneously anticipating their required position: the coarse valve acts for the fine valve so that the latter never remains in any end-position but can do fine tuning in its most efficient range. This results in very fast regulation and most precise adjustment in just one process step.

Two electromagnetic flow meters measure the volumes of high gravity beer and deaerated water. If the resulting ratio is not within expected range, the system sends a warning or stops. The dosing of deaerated water is typically situated between buffer tank and beer pump after the filtration. The beer pump reliably blends the two liquids and therefore no additional mixer is necessary. Pressure drop can be avoided and superior sanitary design maintained.



Technical specifications

Nominal capacity: 20 to 2000 hl/h
Pipe Diameter: DN 20 to DN 200
Blending range: 0 to 20 °P
Analyzer accuracy: $\pm 0,1$ °P

Auxiliary utilities

Power supply: 400 VAC, 50-60 Hz
CO₂: 6 bar, purity > 99,99%
Air: 6 bar, dried, oil free

Control

The system is PLC controlled and has automatic modes for continuous blending and CIP. The PLC displays relevant process data and controls the gravity / alcohol concentration. The measured °P / vol% value is compared to the set point and the control valves are adjusted accordingly. Representative screens, control lamps and clear instruction ensure user-friendly operation. Digital and analogue output or optional field-bus interface allow remote control of the system.

CIP

The unit has an uncompromising sanitary design and is fully CIP cleanable. Leakage valves separate the deaerated water line and the main product line and allow independent and safe CIP of both streams.

Design

The unit comes pre-assembled and tested on a compact frame and can be rapidly put into operation. Proven components guarantee low maintenance and extended lifetime. The modular layout allows easy integration into the plant and efficient combination with other process units like deaeration, water -carbonation and -storage and final beer carbonation to form a complete high gravity blending system.