

## High Gravity Blending

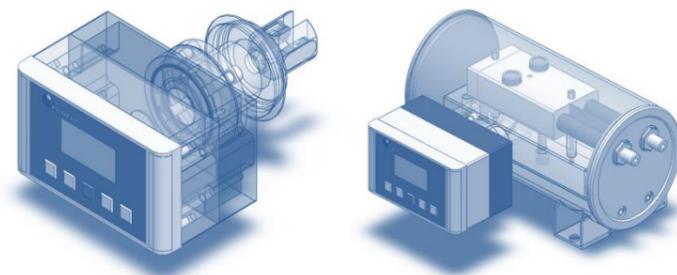
### Centec Brewery Systems



Automated  
process skids  
and high precision  
sensors from a  
single source.  
Centec.

## The Centec Group

Centec is a privately owned group of companies. We design and manufacture automated process skids for efficient and reliable production of beers and beer based mixed drinks. Our systems are applied in all steps of the brewing process, e.g. for water purification and deaeration, for wort cooling and aeration, for yeast dosing and management, for blending and carbonation as well as for flash pasteurization. Centec technology includes a range of high precision process sensors for accurately measuring brewery critical product properties such as extract, alcohol, O<sub>2</sub> and CO<sub>2</sub>. The largest brewery groups in the world are among our key customers.



**Accuracy. Reliability. Centec.**

#### Germany

Centec GmbH  
Wilhelm-Röntgen-Strasse 10  
63477 Maintal  
Tel.: +49 6181 18 78 0  
Fax: +49 6181 18 78 50  
info@centec.de

#### Czech Republic

Centec automatika s.r.o.  
Pekařská 8/601  
155 00 Praha 5  
Tel.: +420 257 084 111  
Fax: +420 235 518 701  
prodej@centec.cz

#### USA

Centec LLC  
P. O. Box 820  
Germantown, WI 53022-0820  
Tel.: +1 262 251 8209  
Fax: +1 262 251 8376  
info@centec-usa.com

#### UK

Centec UK  
Stalworths, The Street  
Great Tey, Colchester, Essex, CO6 1JS  
Tel.: +44 1206 21 19 21  
Fax: +44 1206 21 19 16  
info@centec-uk.com

#### Serbia

Centec Serbia  
Bogdana Žerajića 34/III  
11000 Beograd  
Tel.: +381 11 358 11 24  
Fax: +381 11 358 11 24  
info@centec.rs

#### India

Centec RRR Systems & Sensors Pvt Ltd  
RRR House, Plot 80, Sector 23  
Turbhe Naka, Navi Mumbai - 400 705  
Tel.: +91 22 2783 3655 & 2783 1348  
Fax: +91 22 2783 4814  
mail@centecrrr.com

#### Brazil

Centec América Latina Ltda  
Rua Mexico 148 conj. 1004 Centro  
20031 142 Rio de Janeiro  
Tel.: +55 21 2223 2066  
centelatina@terra.com.br

# Blender

## The Principle

High gravity blending has become a standard procedure in many modern breweries. It takes place after filtration and allows increased productivity while using the existing brew capacity. Thus, a high degree of flexibility for producing different beers and ciders is achieved. The Centec Blender is applied for the fast and accurate mixing of deaerated water and a high gravity beer or cider. For process control, the extract and alcohol contents are measured with a BEERMONITOR – a special type of COMBITEC sensor developed and manufactured by Centec. The Centec Carboblender combines two functions in one unit, namely mixing and carbonating the original beer. Every skid contains one or more specifically designed Vortex injectors that add CO<sub>2</sub> as fine bubbles into the product stream. The nozzle ensures that the carbon dioxide is perfectly and absolutely homogeneously dissolved in a very short time. At the outlet of the system, Centec's highly reliable CARBOTEC sensor is used to permanently measure the CO<sub>2</sub> content. Based on this accurate in-line measurement, the CO<sub>2</sub> flow is instantly and fully automatically adjusted. Due to the very low pressure drop in the product line, no static mixer is required for the Carboblender skid.

## Technical Data

Capacity	10 - 2.000 hl/h
Range of CO <sub>2</sub>	0 - 10 g/l ± 0,05 g/l or 0 - 5 vol.% ± 0,025 vol.%
Range of Original Gravity	0 - 20 °P ± 0,05 °P
Range of Alcohol	0 - 10 vol.% ± 0,03 vol.%
Pressure of Operation	0 - 10 bar
Temperature of Operation	2 - 30 °C
Temperature of CIP	up to 85 °C
Material	1.4301/1.4404 AISI 304/316L
PLC	SIMATIC S7
Options	in-line measurement of O <sub>2</sub> /CO <sub>2</sub> /sugar/alcohol/... water deaeration carbonation



The Centec production is certified according to ISO 9001.

- **Application Specific and Energy Efficient**  
exceptional accuracy with Centec sensor technology  
carboblending with integrated carbonation on demand  
specifically designed Vortex-nozzle for CO<sub>2</sub> injection
- **Modular Design with Standard PLC**  
skid mounted for easy installation and start-up
- **Hygienic Execution and Full CIP Capability**
- **Outstanding Price-Performance-Ratio**

## Experience. Expertise. Centec.

*Ion Exchange · Reverse Osmosis · Membrane Deaeration · Column Deaeration · Hops Pre-Isomerization  
Wort Aeration · Yeast Pitching · Nitrogenation · Carbonation · Carboblending · High Gravity Blending  
Multi Component Mixing · Additive Dosing · Flash Pasteurization · Cleaning-in-Place · Dealcoholization*

