

**Color Adjustment model DCA**

- Continuous dosing
- High accuracy
- Inline color measurement
- Dual Wavelength 430 / 550 nm
- Sanitary design
- PLC controlled

COLOR ADJUSTMENT

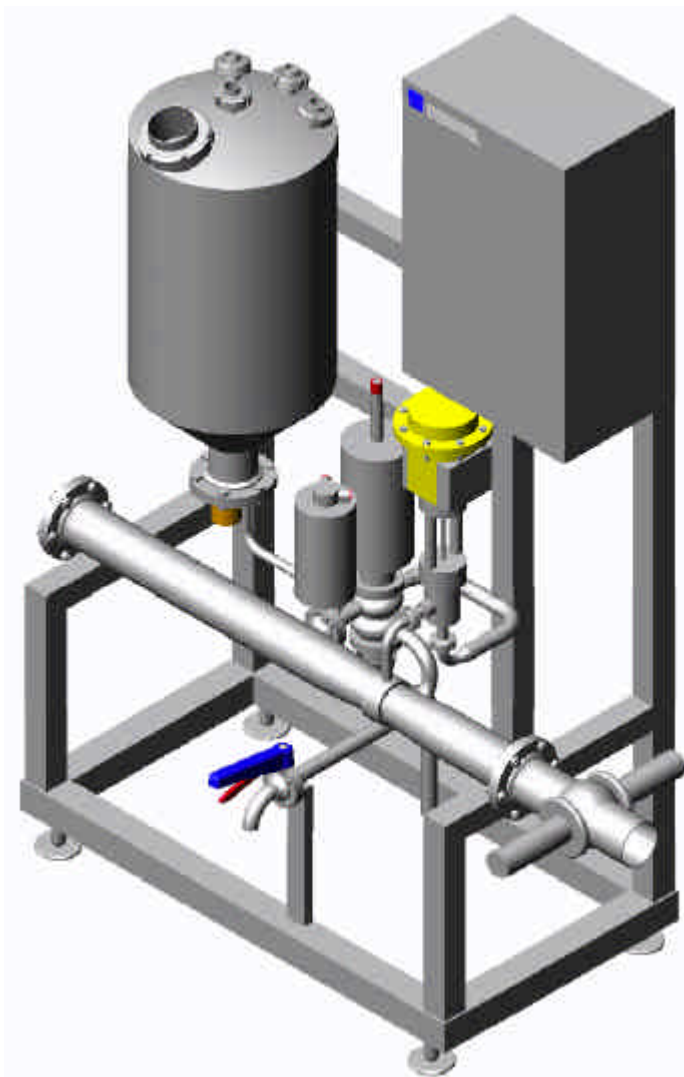
Color affects the appreciation and evaluation of beer in subtle but definite ways. Belonging to “front character” indicators, beer color influences the consumer before the first sip and helps increasing a positive taste sense. When adjusting beer concentration in High Gravity Blending, the color is affected as well. With higher blending ratio, the color is remarkably decreased and various coloring are dosed to establish the original appearance.

Designed for accurate dosage of coloring, DENWEL provides a fully automated solution for continuous color adjustment ensuring consistent product quality.

COLOR ADJUSTMENT

Principle

The coloring concentrate is stored in a stainless steel vessel. Depending on its viscosity, it is heated up to ambient temperature before being dosed. The dosing is either controlled by a membrane pump with variable lifting frequency, or a pneumatic valve and mixing injector. The control valve grants for a wide dosing range, but also continuous dosing of lowest quantities without the typically piece by piece pulsing caused by pumping concentrate into the product.. An inline analyzer based on the principle of light absorption measures the color of the standardized beer. DENWEL uses a dual channel system allowing to measure absorbance at two different wave lengths as light lagers and dark stouts absorb the light differently. A third detector in the sensor automatically compensates for turbidity. Inline process calibration is provided by special software setup.



Control

An industrial PLC controls the systems and displays relevant process data. The measured EBC color value is compared to the set point and the dosing pump or control valve is adjusted accordingly. 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. Stainless steel execution and sapphire optics of the inline sensor support excellent sanitation compatibility.

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 high gravity blending systems.

Technical specifications

Color range: 0 to 30 EBC at 430 nm
0 to 100 EBC at 550 nm
Reproducibility: $\pm 1\%$

Auxiliary utilities

Power supply: 240 VAC, 50-60 Hz
CO₂: 6 bar, purity > 99,99%
Air: 6 bar, dried, oil free