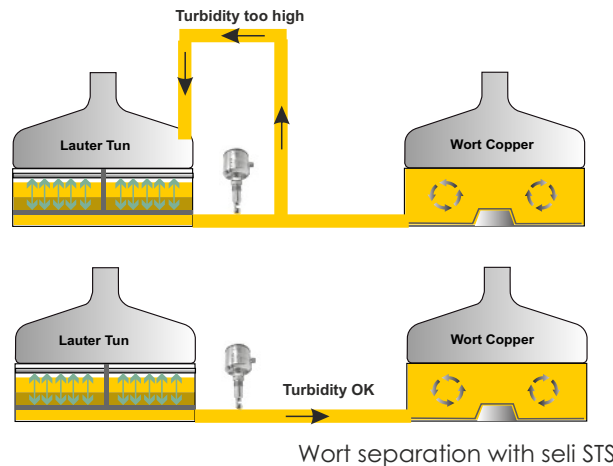


# Analytical measurement

## Control of a lauter tun



### Control of the wort separation



Wort separation with seli STS

**Products – Manufacturer**  
Precision and perfection.

#### Innovative Automation

Do you have a vision, from that should become more?  
We are looking forward to the Challenge!

#### Hygienic measurement technology

Our measurement technology for the food industry is characterized by a very high measuring dynamics. The robust Hygienic design ensures an increased lifespan. They usually have aseptic measuring points and are typically on the device or programmable on PC.

### Application and process description

Controlling a lauter tun with turbidity measurement technology is an advanced method to optimize the lautering process in the brewery. A lauter tun is used to separate the clear liquid (wort) from the solids (spent grain) after mashing in the brewing process. Turbidity measurement technology helps to monitor and adjust the process automatically to ensure better wort quality.

After mashing, the wort is separated from malt and spent grain residues. To do this, the mash is pumped into a lauter tun in which, after a rest period, a filter cake settles on the permeable bottom. The wort is pumped back into the lauter tun through control valves for further filtration. There are often sight glasses for visual control and the valve is operated manually. Because the wort constantly flows through the cake, the composition of the porous filter layer changes. Once the wort has reached the desired clarity, it is fed into the wort copper. The wort is thus removed from the lauter tun and the spent grain cake builds up more and more. This is cut off at a suitable point. This can lead to fluctuations in the clarity and cloudiness of the wort. Here it is important to constantly monitor the transparency of the wort, since excessive turbidity can otherwise lead to a loss of quality.

### seli STS turbidity sensor - In action

A turbidity sensor, the seli STS, is therefore placed near the outlet of the lauter tun. This sensor

measures the turbidity of the exiting liquid (wort). Cloudiness can indicate impurities or spent grains that have not been separated. The turbidity sensor continuously sends readings to a control system that monitors and analyzes turbidity levels. Once the desired turbidity value has been reached, the wort is transferred to the wort copper. If the measured turbidity value is still too high, the wort is automatically fed back into the lautering circuit until the desired target value is reached. In the event of significant deviations or time limits being exceeded, the system can send alerts to operators to allow human intervention.

### Advantages of using the seli STS

1. Consistency: Automatic adjustment based on real-time turbidity measurements can improve the consistency of wort quality.
2. Efficiency: The lautering process is optimized, resulting in more efficient use of time and resources.
3. Quality improvement: Impurities can be detected early, which leads to an overall better wort quality.
4. Time savings: Automated adjustments save brewing staff manual intervention and monitoring.
5. Data Analysis: The collected turbidity data can be used for later analysis and process optimization.