

Phase Separation Beer / Water

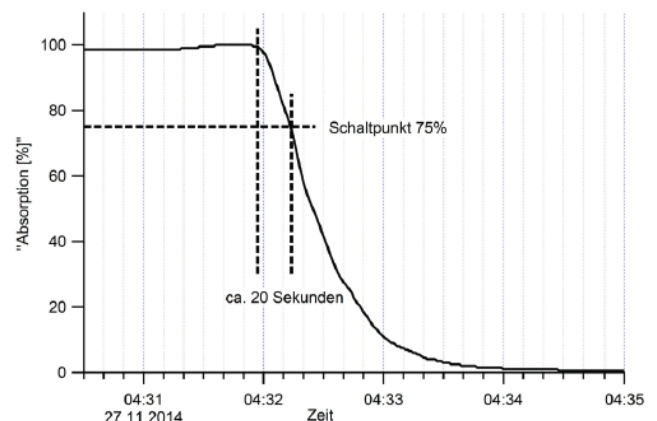
The PhaseGuard In-line interface monitor consists of 3 models for various applications. One of the most important is the beer/water separation in which the model PhaseGuard ST 40 – S is used. Technically, this is a simple measurement, where the application within the filling station can easily be identified.

Customer Benefit

Minimising beer losses begins in the brewhouse. In order to minimise wort losses on the way to the fermentation cellar, the lines at the end of a wort run are emptied with water. The relatively sharply defined transition from wort to water can be precisely identified via the colour value. A signal from the PhaseGuard ST 40–S within seconds reliably prevents water from getting into the wort or wort from being channelled into the waste water channel unnecessarily early. This ensures that only wort of the correct concentration enters the fermentation tank and that no wort is lost via the waste water.

Typical Application

PhaseGuard ST 40–S devices in Varivent housings are installed in the respective wort lines after the wort cooler on the way to the fermentation cellar. The device's measuring range of 0 – 100 % is ideally suited to the typical wort colours, but the switching points must be determined in the brewery (see example diagram). However, the very rapid drop in values of around 100 % is always significant, with the switching point (e.g. 70 – 80 %) being reached between 10 and 20 seconds. Generally existing turbidity does not interfere with this application, as measurements are always taken against the transition to clear water.



Cost/benefit calculation

At a speed of 1000 hl / h of the wort run, around 280 litres of wort pass through the line every 10 seconds. If you work without a measuring device and use a timer with a delay of approx. 30 seconds for the switchover time, then that is 8.4 litres per switchover. With 12 brews per day, this means around 100 hl / day. The production costs of a hl of sales beer are around 40 € / hl. This clearly shows that the amortisation time of a PhaseGuard ST 40–S is in the region of less than half a year and should therefore definitely be used.



PhaseGuard ST 40-S

Sigrist Products and Configuration

- PhaseGuard ST 40 – S

Parameter Setting

- Selection of the desired switching point (% Absorption)
- Setting of the configuration can be done very comfortable by using a connected samrtphone

Advantage of the PhaseGuard ST 40-S

- Integrated display and operation
- LED light source, only 2W power consumption
- No purge air needed
- Sealless design
- Extremely low cost for maintenance



Sensor head PhaseGuard ST 40-S