

STEINECKER Calypso

Flexible brewhouse technology

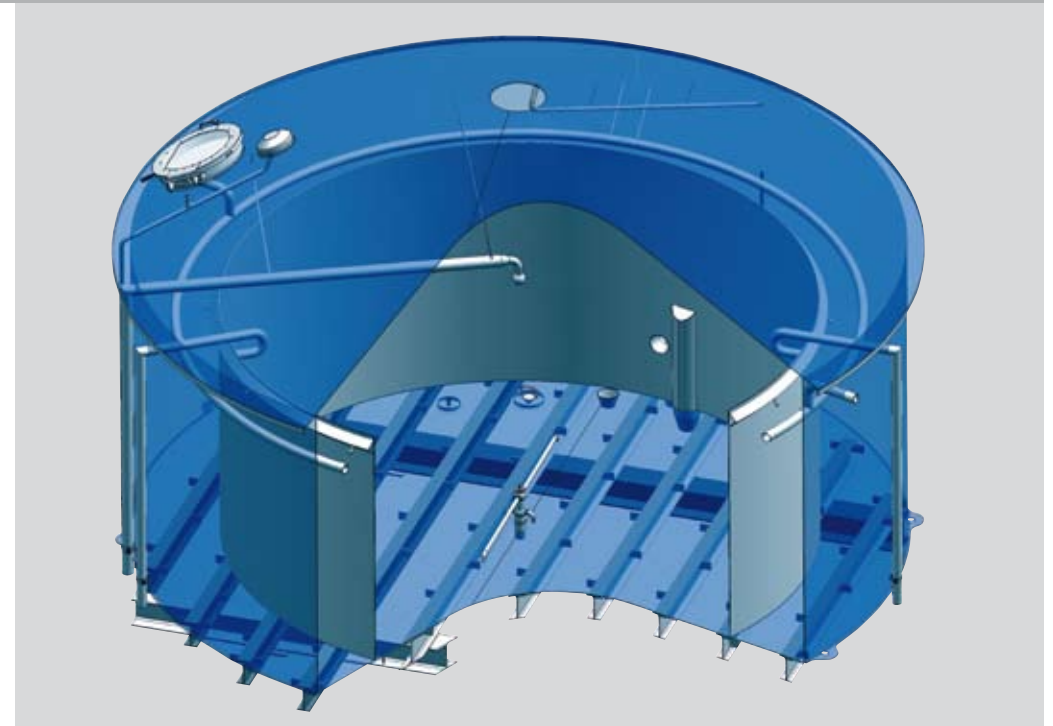


Whirlpool and coolship in one vessel

STEINECKER Calypso

Free DMS produced in the course of hot trub separation is no longer evaporated in the whirlpool and can reach a concentration which leaves the finished product with an abnormal flavour. The STEINECKER Calypso combines hot trub separation with re-evaporation in one vessel. This means that at the end of the classic whirlpool activity, free DMS and other negative flavours can be evaporated - under atmospheric conditions and with no additional input of thermal energy - directly before the wort is cooled. A bypass which allows only a part of the hot wort to be stripped lends the new system even more flexibility.

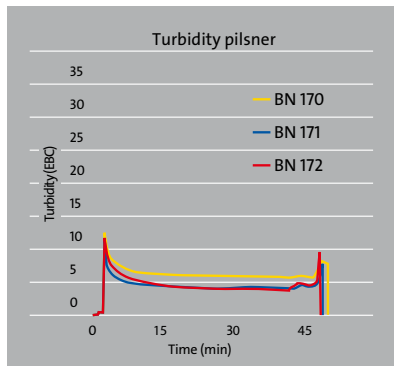
Using the STEINECKER Calypso it is possible to equip all conventional wort boiling systems with atmospheric re-evaporation.



Principle of operation

The cylindrical segment inside the Calypso serves as an optimised whirlpool. The wort flows through the newly developed slot-shaped inlet in a widely fanned jet tangentially over the whirlpool wall. This helps the wort to rotate more evenly, which improves the trub separation.

The atmospheric stripping takes place in the outer zone of the Calypso. After the trub separation, a ring circuit trickles an adjustable amount of wort onto the surrounding walls which, like the entire annular space, are heated by the hot wort during the rest period. Consequently, no thermal energy has to be added for the stripping.



The three brews display very little - and nearly identical - turbidity (left picture)

Ring circuit for stripping the wort (right picture)

Given the very large surface of the outflowing wort film, the volatile DMS and other unwanted flavours are expelled without the wort being concentrated and notably cooled (as happens in a vacuum system). Oxidation of the sensitive ingredients is prevented by the steam atmosphere in the annular space. The process reduces not only the free DMS but also the aging indicators, thus enhancing the beer's taste stability.



The wort enters the whirlpool in an even, widely fanned jet

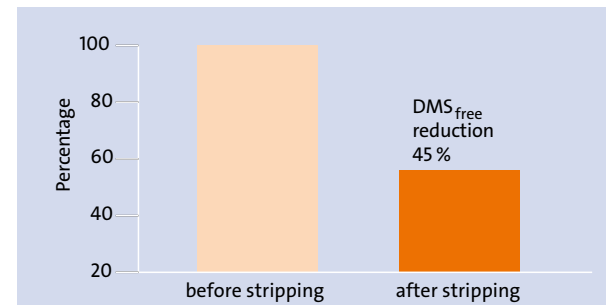
Design features

- Whirlpool with integrated atmospheric re-evaporation
- Little space required due to vertically arranged, annular evaporation surfaces
- Bypass for variable adjustment of the flavour profile
- Re-evaporation without an additional vacuum vessel and input of thermal energy
- Newly developed whirlpool inlet
- Simple cleaning thanks to fully automatic CIP and hygiene-optimised design

Output range

Aging components	with stripping		without stripping	
	fresh	forced	fresh	forced
∑ heat indicators (µg/l)	34	107	34	111
∑ oxygen indicators (µg/l)	15	20	16	20
∑ aging indicators (µg/l)	89	171	61	181
	Δ82 µg/l		Δ120 µg/l	

Measurements taken in practice indicate that the stripping does not influence the heat and oxygen indicators but enhances the aging stability significantly.



Volatile DMS is greatly reduced by the stripping.

Your benefits

■ More flexibility

The flexibility of the STEINECKER Calypso makes itself felt above all when selecting the raw material for the malt (DMS content).

■ Shorter boiling times

The results are a lower level of energy consumption without a separate energy storage system.

■ Safety

The oxygen indicators and the wort colour do not change. Unlike with vacuum evaporation there is no impact on the brewery's hot water bill. Maximum biosafety is assured with fully automatic operation.

■ 45 percent less free DMS after the hot trub separation

Free DMS produced in the course of hot trub separation is no longer evaporated in the whirlpool and can reach a concentration which leaves the finished product with an abnormal flavour. The STEINECKER Whirlship Calypso combines hot trub separation with re-evaporation in one vessel. This means that when the classic whirlpool activity ends, free DMS and other negative flavours can be evaporated - under atmospheric conditions and with no additional input of thermal energy - directly before the wort is cooled.

