

Wort boiling systems

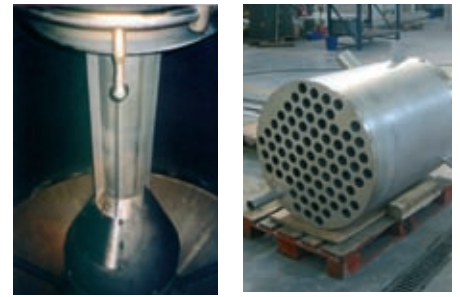
After the mash filtration, the next step is the wort boiling. Its main purposes are the elimination of unwanted volatile compounds, hop isomerisation, wort stabilisation by enzymatic destruction, sterilisation, adjustment of the final density and hot trub formation.

Wort boiling is an important step in the production of high-quality beer. It represents 20 to 30% of the total amount of the thermal energy consumed in a brewery.

For this reason considerable attention has been given by **MEURA** to improving the efficiency of wort boiling and heat recovery systems. Depending on the requirement of the brewery, Meura has developed internal and external boiler technologies for the wort boiling.



Wort Boiling



MAIN ASSETS

- Evaporation rate between 4 and 6%.
- Steam pressure lower than 2.5 barg.
- High stripping efficiency of undesirable flavours.
- Gentle treatment of the foam-positive protein fraction.
- Reduction of the thermal stress.
- Less colouration of the wort.
- Better isomerisation of α -acids from the hops.
- Better coagulation of protein-tannin compounds.
- Minimising of the fouling effect.

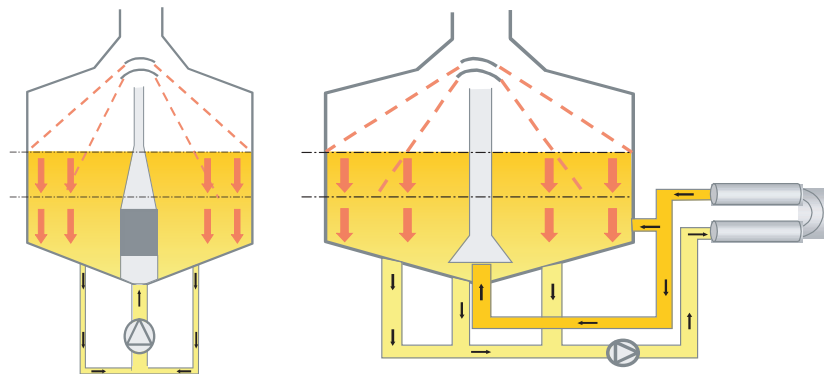
OTHER ADVANTAGES OF THE EXTERNAL BOILER:

- Thanks to an increased heating surface, a lower steam pressure and therefore a better foam stability, low fouling rate and low colour pick-up are obtained.
- Variable evaporation rates are possible.
- Excellent wort homogeneity.
- Variable wort volumes are allowed.
- Rapid heat-up to boiling temperature of the wort.

TWO-LEVEL WORT SPREADER OF THE INTERNAL BOILER WITH OR WITHOUT WORT RECIRCULATION PUMP

DESCRIPTION

The **MEURA** internal boiler works with a forced flow by means of a pump. The design of the two-level wort spreader increases the surface for evaporation, improves the stripping effect and the distribution of the wort on the surface. By using the pump, temperature stratification while heating the wort from 72°C to 100°C is avoided. The evaporation rate is controlled by acting on the wort pump speed and on the steam pressure.



TWO-LEVEL WORT SPREADER OF THE EXTERNAL BOILER

DESCRIPTION

The **MEURA** external boiler achieves the same targets. Its main advantage is that the heating surface of the external boiler is independent of the size, the shape of the vessel and the wort volume.

TRADITIONALLY PIONEERS SINCE 1845

MEURA