

MECHAMASHER

The logo graphic consists of a blue horizontal line with a black wavy pattern underneath it, resembling a spring or a mechanical component.

MECHANICAL PRE-MASHER

The mashing-in process is a crucial step in modern brewing practice for several reasons:

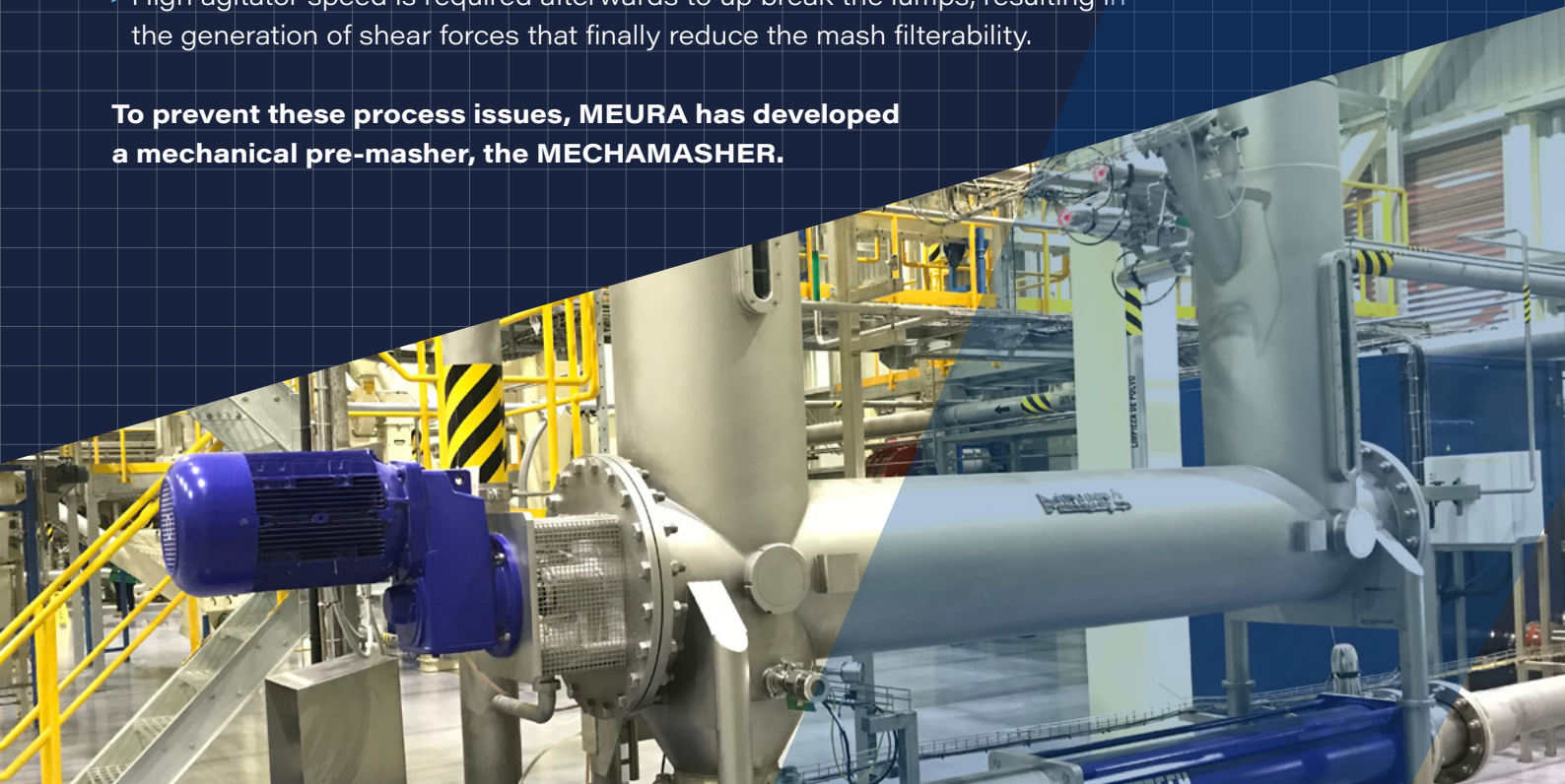
- ▶ The trend toward high **gravity brewing** requires mashing-in at a low water/grist ratio;
- ▶ The **limitation of mash oxidation** is necessary to ensure that the final beer has a long shelf life;
- ▶ The mashing-in process influences the **mash filterability** and thus the brewhouse productivity (number of brews/day).

Traditional mashing-in is performed by a hydrator directly connected to the top of the mash conversion vessel.

This method is no longer adapted to the modern brewing practice mentioned above since:

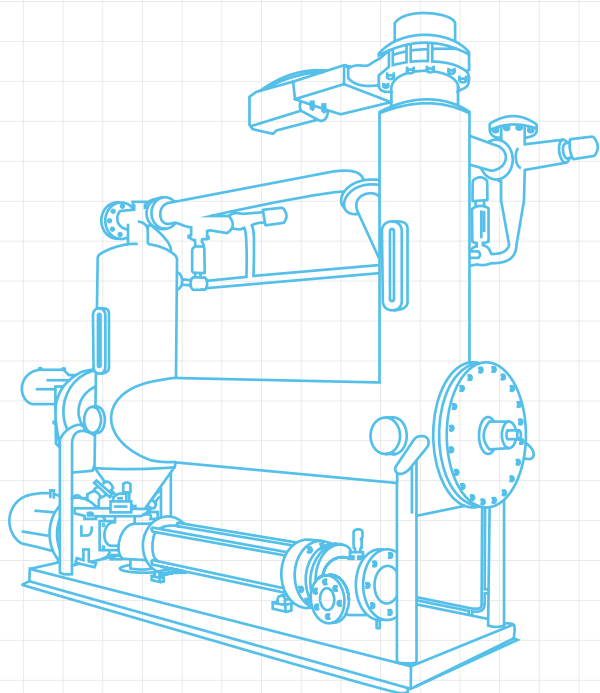
- ▶ High oxidation of the mash occurs when it falls inside the mash conversion vessel;
- ▶ Lump formation is almost unavoidable for the thick mashes that are necessary for H.G.B.;
- ▶ High agitator speed is required afterwards to up break the lumps, resulting in the generation of shear forces that finally reduce the mash filterability.

To prevent these process issues, MEURA has developed a mechanical pre-masher, the MECHAMASHER.



MAIN ASSETS

- ▶ Excellent hydration of the grist **without any lump formation.**
- ▶ The mash can be **pumped to any mash conversion vessels or cereal cookers** avoiding a problematic grist transport and its oxidation in existing plants.
- ▶ **Very low oxidation** during mashing due to reduced air/product interface and therefore the ideal partner for the CARBOMILL (drastic reduction in the nonenal potential).
- ▶ **Ideally suited to H.G.B.** - high gravity brewing (production of thick mash down to 1.8 l water per kg malt grist).
- ▶ Able to pre-mash **all types of adjuncts.**
- ▶ **Easy maintenance.**



TECHNICAL DESCRIPTION

Meura's mechanical pre-masher, the **MECHAMASHER** is based on the hydrating technology of Steel's mashing machine. It consists of a horizontal tank in which a specially designed pre-mashing screw rotates. This screw provides constant and homogeneous lump-free mixing of malt grist and water, whilst eliminating air from the grist and consequently limiting oxidation.

The **MECHAMASHER** is first filled with water in order to drive out the air. When a pre-set water level is reached, mashing-in water is transferred to the mash conversion vessel by means of a screw-type transfer pump located underneath the **MECHAMASHER**. When the preset volume of water has been transferred to the mash conversion vessel, the grist is fed at a constant flow rate into the **MECHAMASHER** through a hydrator where mashing-in water is supplied at a present water/grist ratio and temperature.

When the required amount of grist has been fed into the **MECHAMASHER**, additional mashing-in water is supplied for rinsing and reaching the desired density in the mash conversion vessel.

The **MECHAMASHER** is cleaned once a week using normal brewhouse CIP solutions.

Type	Capacity (tons malt grist/ hour)
MEC 1	Up to 15
MEC 2	From 15 to 30
MEC 3	From 30 to 50
MEC 4	From 50 to 80
MEC 5	From 80 to 120