CARBOMILL

Hammer milling and grist storage technology under CO_2

Fine grinding, carried out with a hammer mill and combined with the thin bed filter **Meura 2001** leads to the production of a clear wort with a low fatty acid content and a higher yield, at least 100% of the laboratory yield.

In order to improve the filterability and quality of the wort produced as well as the shelf life of the final beer, **MEURA** has developed the ***CARBO*MILL**, a hammer mill working under a CO_2 atmosphere. In association with the Mechamasher, the **MEURA** mechanical pre-masher, this system provides a complete oxygen-free mash preparation solution.

CARBOMILL

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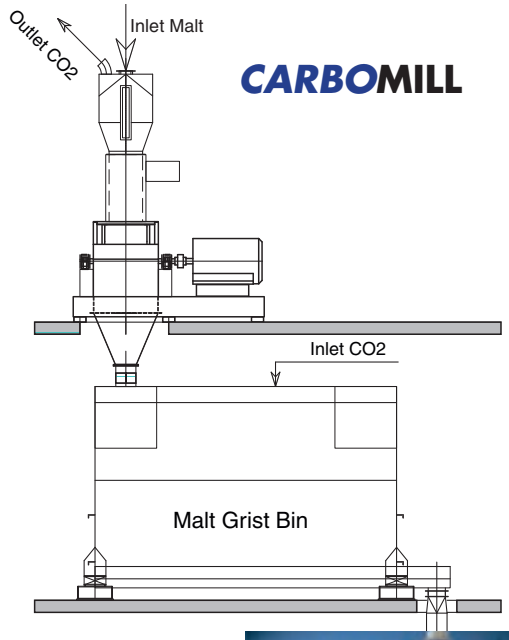
CARBOMILL

MAIN ASSETS

- Oxidation of the grist is avoided during milling and storage (no LOX activity) by the injection of CO_2 in the grist case. This improves the mash filterability and the flavour stability of the beer.
- The ***CARBOMILL*** is a hammer mill with a horizontal shaft. Breaking plates in the upper part of the mill protect the sieves against early wearing out.
- The mill is explosion-proof due to the working conditions under CO_2 atmosphere.
- The CO_2 consumption is about 3 to 4 kg per ton of malt.
- The ***CARBOMILL*** has a low initial cost as well as a low maintenance cost.
- Possibility of using other gases, such as N_2.



CARBOMILL

MECHAMASHER

TECHNICAL DESCRIPTION

The ***CARBOMILL*** consists of a rotor made of plates with pins to carry the hammers. Grinding is a result of impact between the hammers and the particles that are propelled onto the breaking-plates.
Prior to start-up, the CO_2 (or N_2) is injected in the grist bin to provide a gas blanket.
During the milling, the malt grist falls into the grist bin and pushes the CO_2 back through the hammer mill and the malt feeding system. In this way, the air surrounding the malt grains is replaced by the gas, protecting the malt grains from oxidation before entering the mill. The milling itself also occurs under a CO_2 atmosphere.
The malt grist then falls directly into the grist bin where it can be stored under CO_2 between brews. During the emptying of the grist bin CO_2 is injected into it to replace the grist.

Type	Motor power (kW)	Capacity (tons malt/hour)
CRM 90/6	90	6
CRM 110/9	110	9
CRM 132/12	132	12
CRM 160/15	160	15
CRM 200/20	200	20

SOME REFERENCES:

- Brasseries du Cameroun (Castel), Cameroon (9 t/h)
- Confidential project, Japan (12 t/h)
- Polar Cortijos, Venezuela (12 t/h)
- Polar San Joaquin, Venezuela (20 t/h)
- Polar San Joaquin, Venezuela (20 t/h)
- Slavutich Brewery (BBH), Ukraine (12 t/h)

Edition 2009

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