MEURA 2001 CARBO+

Thin bed membrane-assisted mash filter

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The **MEURA 2001 CARBO+** is a thin bed membrane-assisted mash filter. It was developed to facilitate the production of a clear high gravity wort with short filtration cycles, independently of the presence of husk material within the mash. Extract yield in excess of the laboratory yield can be realised due to the fine milling and the most efficient possible sparging.

The **MEURA 2001 CARBO+** fully satisfies the most stringent requirements of the modern brewer. Its main advantages, unlikely to be obtained by any other lautering equipment, are that this filter is able to deliver simultaneously:

High productivity
(at least 14 brews per day)

AND

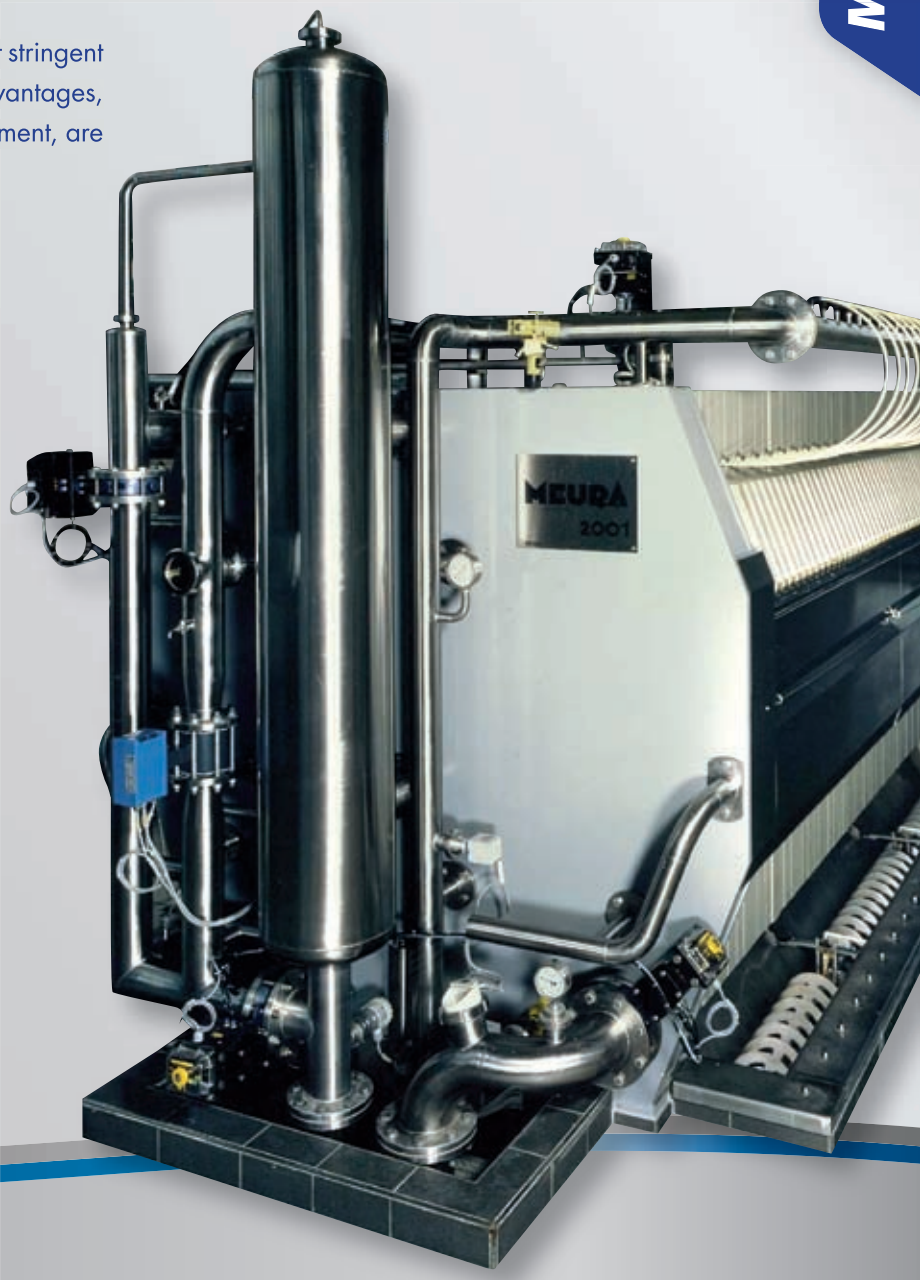
High extract yield
(min. equal to laboratory yield)

AND

Very bright wort
(Imhoff < 5 ml/l)

AND

High gravity wort
(> 16°P cold wort)



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MEURA

MEURA 2001 CARBO+

MAIN ASSETS

Productivity

- Short filtration cycles with the highest possible efficiency: 14 brews per day and more are common.
- Perfect for high gravity brewing with first wort up to 30° Plato (with the use of a weak wort tank).
- Short mash cycles due to the fine milling.
- Flexible load: 80 to 110% of the nominal capacity.
- Full automated process.

EFFICIENCY

- Extract yield equal to the laboratory yield resulting in savings of raw materials.
- Very dry spent grains up to 30% of dry material.
- Trub volume is reduced by 30 - 50% (clear wort), resulting in a lower hop consumption (ca 5-15%).
- Clear worts can be produced regardless of the presence or absence of husk material (from 0 to 100%) in the mash.
- Easy filtration with many different kinds of raw material (malted or not) and even with poorly modified malt.
- Acceptance of a high proportion of adjuncts (up to 100% with the use of exogenous enzymes).
- No final rinsing between filtration cycles, which reduces the amount of waste water.
- Maintenance that is limited and easy (no complicated mechanical parts).
- Limited space and infrastructure requirements.
- Savings in transport and set-up costs.
- Easy integration into any brewhouse.

QUALITY

- Possibility to pre-fill the filter with a CO_2 blanket to prevent oxidation of the mash or wort.
- Leaching of undesired components such as polyphenols reduced thanks to short sparging cycles (less than 45 minutes) and low sparging rates (less than 2.5 litres per kilogram of grist).
- Bright wort (Imhoff cone < 5 ml/l) without first wort recirculation.

TECHNICAL DESCRIPTION

The **MEURA 2001 CARBO+** Mash Filter is designed to filter all kinds of malt and raw materials that have been finely milled and well converted. The fine grist can be obtained by using a ***CLASSIC*MILL** (a hammermill), a ***CARBO*MILL** (a hammermill working under CO_2 atmosphere) or a ***HYDRO*MILL** (disc mill for fine milling under water).

The **MEURA 2001 CARBO+** consists of a fixed endplate and a rear caisson which together with the side support beams form the basic framework of the machine. The internal plate pack is composed of alternating filter plates (covered on both sides with filter cloths through which the wort can flow) and membrane frames (covered on both sides with elastic membranes that expand via air injection in order to compress the filtering cake against the filter cloths).
The filter can be pre-filled with CO_2 to avoid oxygen uptake. A thick mash (22–26°P) is supplied from the bottom of the chambers. After the mash has been transferred from the mash tun to the filter, the membranes apply pressure to compress the filter cake. Thanks to pre-compression, more than 80% of the soluble sugars can be recovered before sparging. The sparge rate can thus be reduced to less than 2.5 hectolitres per 100 kilograms of malt grist. The sparging cycle takes about 35 to 45 minutes and is followed by final compression, which yields spent grain with up to 30% dry matter.
As a result of the bottom mash supply and wort collection, minimal oxygen uptake is achieved.

Types	Chambers Size (Height/Width)	Capacity in malt equivalent
Meura 2001	2000/1800	3.000 to 24.000 kg
Meura 2001 Junior	1200/1200	500 to 3.500 kg
Meura 2001 Pilot	500/500 and 800/800	20 to 500 kg

SOME REFERENCES :

In the Brewing Industry:

Alaskan Breweries, BBH Baltika, Balaji, Bavaria, Blossom, Boliviana Nacional, Brok Koszalin, Carlsberg, Castel, Centralcer, Cervejas da Madeira, Changqing Brewery, Coopers, Coors, Craiova, CUCA Brewery, De Koninck, Far Eastern Industry, Faxe Brewery, Florida Bebidas , Frankenheim, Fuzhou Brewery, Guinness, Haacht, Haikou APB, Harbin Brewery, Harboes Skaelskor, Heineken, Inbev, Jurand, Kaiser, Karlsberg Brauerei, Kirin, Krostitzer Brauerei, Labatt, Laihian Mallas, Lao Brewery, NLDC (Martens Brewery), Palm, Pilsner, Polar, Quilmès, Rheinisch Bergische, Rodenbach, SABC Cameroon, SABECO Vietnam, SABMiller, Sapporo, Schincariol, Sedrin, Shanghai Asia Pacific, Sinebrychoff, Slavutitch Brewery, Star Brewery, Stavropol Brewery, Sun Inbev, Suntory, Surabaya Brewery, Tagil Brewery, Thai APB, Trappisten Westmalle, Unicer, Van Pur, Wenzhou Lion, Zhu Jiang

In Malt Extract Production:

Barmalt, Cereal & Malt, Coopers, Diamalteria, Hansen, Jagatjit, Laihan Mallas, Maltax, Munton Fison, Nestlé, Productos Alimentarios, Pure Malt, Wander.

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MEURA

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