

## Regeneration Instructions for Filter Cartridges BECO® MEMBRAN PS Beer

### Membrane Filter Cartridges

#### Regeneration

As a basic rule, the BECO MEMBRAN PS Beer filter cartridges should be regenerated at a differential pressure of <7.3 psid, (50 kPa, 0.5 bar) and in all cases after each filtration:

- Empty the filter cartridge housing.
- Cold water rinsing:  
Rinse with cold water in filtration direction for at least 2 minutes. The throughput should be set to 1–1.5 times the value for the preceding filtration, if possible. The counter pressure should be set to 7.3 psi, (50 kPa, 0.5 bar).
- Empty the cartridge housing.
- Hot water rinsing:  
Rinse with hot water (176°F (80°C)) in filtration direction for at least 5 minutes. Here too, the throughput should be set to 1–1.5 times the value for the preceding filtration.

Then operate the system in circulation mode for 10–15 minutes. The counter pressure should be set to 7.3 psi, (50 kPa, 0.5 bar).

Leave hot water in the housing overnight. Next morning rinse again the filter shortly with hot and cold water.

#### Note

The best regeneration success is achieved if the filter cartridges are left overnight in hot water after rinsing.

The rinsing water must be free from rust, lime, or other contamination.

Eaton recommends that the rinsing water should be filtered. The filter fineness should be based on the filter to be rinsed.

If the filter cartridges are sterilized with steam, the steam should also be filtered. Sintered stainless steel filter cartridges with a retention rating of 10 µm are suitable for this purpose.

#### Special Cleaning Procedure if Rinsing with Hot Water is no Longer Sufficient (Differential Pressure >7.3 psid, (50 kPa, 0.5 bar))

The special cleaning procedure should be used in the following cases:

- The filter cartridges can no longer be regenerated with cold and hot water
- Products that are difficult to filter have placed a heavy strain on the filter cartridges
- Increased differential pressure during rinsing of the filter cartridges

We are unable to offer a guarantee for the success of the special cleaning procedure or for any damage to the filter cartridges!

#### Special Cleaning Procedure with Caustic Soda (NaOH) and Acid

1. Rinse BECO MEMBRAN PS Beer filter cartridges in the direction of the flow (Important!). Install pump, hoses and dosing tanks such that recirculation is ensured.
2. First rinse the filter cartridges with cold water and subsequently with warm water (122°F (50°C)), like for normal rinsing.
3. This is followed by a caustic rinse with 1–2% NaOH, pH 13, at a temperature of 131°F (55 °C).
4. In cases with strong contamination, Eaton recommends discarding the first few liters that are discharged from the filter housing during the caustic rinse, since they usually contain a large amount of impurities. Continue the cleaning process in circulation mode for about 30–45 minutes at an intake pressure of approx. 14.5 psi (100 kPa, 1.0 bar).
5. Subsequently rinse with cold water until no residual alkalinity is detectable. (test using a pH strip)
6. In the next step a cold 0.5% phosphoric acid solution, pH 3.2, is metered in and rinsed for 20 minutes.
7. After the cleaning process rinse with cold water until no more caustic solution is present (test using a pH strip).
8. For neutralization, use an alkaline cleaning with 0.5% NaOH, pH 8-9, temperature 131°F (55°C), with differential pressure 7,3 psid (50 kPa, 0.5 bar).
9. Then rinse again with water until the pH is neutral.



Eaton will be glad to answer any further questions you might have. You can call either the sales manager in your area or contact the application technology department at Eaton directly at: +49 6704 204-0.

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