

## Instructions for Regenerating Filter Cartridges

### BECO® MEMBRAN PFplus



## Membrane Filter Cartridges

### Regeneration

The BECO MEMBRAN PFplus filter cartridges should always be flushed out as follows after each filtration:

- Drain the filter cartridge housing.
- Flush out with cold water in the direction of filtration for at least 2 minutes. If possible, the flow rate should be one and a half times the previous filtration output. Set the counter pressure to 7.3 psi, 50 kPa, 0.5 bar.
- Flush out with hot water 176 °F (80 °C) in the direction of filtration for at least 5 minutes. The flow rate should be one and a half times the previous filtration output in this case as well. Then circulate for 15 to 30 minutes. Set the counter pressure to 7.3 psi, 50 kPa, 0.5 bar. Let the hot water stand in the housing overnight and flush out again with hot water for approx. 2 minutes the next morning.
- In order to increase the service life, we always recommend this kind of cleaning when the effectiveness of the daily regeneration diminishes. For this reason, watch the initial pressure every day at the beginning of the filtration process.

### Note

Best regeneration results are achieved when the filter cartridge is flushed out regularly after each filtration. If possible, the flow rate should be one and a half times the filtration output. The effectiveness can be increased further by letting the filter cartridge stand filled with hot water overnight after flushing out as indicated above and flushing the cartridge again with hot water for approx. 2 minutes the following day. Ensure that the water used for flushing is free of rust, lime, and other impurities.

Eaton recommends filtering the water used for flushing as a precautionary measure. Match the fineness of the filter to the filter to be flushed out.

Also filter any steam used to sterilize the filter cartridges. Metal filter cartridges with a clarifying strength of 10 µm are suitable for this purpose.

### Special Cleaning if Hot Water Flushing is no longer Sufficient due to a Differential Pressure of > 7.3 psi, 50 kPa, 0.5 bar

Application of special cleaning in the following cases:

- The filter cartridges can no longer be regenerated with steam or hot water.
- The filter cartridges are burdened heavily when used to filter difficult to filter products.
- Soaking the filter cartridges in water increased the differential pressure.

Eaton will assume no guarantee for the success of special cleaning or that the filter cartridges will not be damaged.

### Processing Sequence for Special Cleaning with Caustic and H<sub>2</sub>O<sub>2</sub>

1. BECO MEMBRAN PFplus filter cartridges must be rinsed in the direction of the flow. Install pump, hoses and dosing tanks such that recirculation is ensured.
2. First rinse the filter cartridges with cold water and subsequently with hot water (122 °F (50 °C)), like for normal rinsing.
3. This should be followed by a caustic rinse with < 0.5% NaOH (pH < 12!) at a temperature of 122 °F (50 °C). Please check the pH value! (pH > 12 would damage the cartridges.)
4. In case of strong contamination, Eaton recommends discarding the first few liters of liquid discharged from the filter housing, since they often contain large quantities of impurities. Rinsing (with recirculation) should continue for about 5 – 10 minutes at an inlet pressure of approx. 14.5 psi, 100 kPa, 1.0 bar.
5. Then carefully add 0.5% H<sub>2</sub>O<sub>2</sub> and circulate for a further 30 minutes.
6. After the cleaning process, continue rinsing with cold water until all caustic solution has been removed (test with pH strip!).
7. For neutralization, circulate 0.5 – 1% citric acid solution for 5 minutes at approx. 86 °F (30 °C).
8. Then rinse once again with hot water until the pH value 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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