Storage for Offline Elements

The following are recommendations for short-term and long-term storage of Membrania® membrane elements that have been installed, but are offline. For additional storage or handling instructions, or specific instructions for cellulose acetate membranes, please contact DC Solutions Technical Service.

SHORT-TERM STORAGE

For short-term storage of membrane elements in place within a water treatment system, the elements should be cleaned and then flushed daily with high-quality water.

The following steps to minimize biogrowth or scale formation are recommended:

1. When taking the membrane system offline, it is suggested that a full cleaning and flush of the system be performed. High-quality water is recommended for both cleaning and flush water.
2. During the storage period, it is recommended that the membrane system be flushed once daily with RO quality water to maintain an environment free from biological growth, oxidants and sparingly soluble salts that may scale the membrane.
3. Precautions should be taken to prevent exposing membranes to permeate backpressure when the high pressure pump is turned off (especially in cases where the permeate line is pressurized).
4. Precautions should also be taken to ensure the elements remain wet and are protected from temperature extremes during the shut-down period.

LONG-TERM STORAGE

For long-term storage of the membrane elements in place within a system, it is recommended that the elements be cleaned and then preserved using a solution of sodium metabisulfite.

The following steps are recommended:

1. When taking the membrane system offline, it is suggested that a full cleaning and flush of the system be performed. High-quality water meeting the recommended flush water quality should be used for both cleaning and flushing.

DC Solutions s.r.o.
Voskovcova 1075/51
Praha 5, Czech Republic

www.membrania.com
info@membrania.com
+420 739 09 89 89

2. During the storage period, it is recommended that the membrane system be preserved using a 1% food-grade sodium metabisulfite (SMBS) solution to inhibit microbial growth. The SMBS solution should be recirculated through the membrane system for 30-60 minutes.

3. Vent air from the system and recirculate in a manner to minimize air in the system as oxygen will cause the SMBS to oxidize, dropping the pH and increasing the potential for microbial growth.

4. Following preservation, the feed, permeate, and concentrate valves should be closed to isolate the system. During the storage period, the system should be periodically checked to insure that pH does not drop below 3. The recommended frequency of checks is every 30 days. If the pH should drop below 3 during storage, or if the preservative solution becomes discolored, the system should be flushed and the preservation process should be repeated.

5. Precautions should be taken to prevent exposing membranes to permeate backpressure when the high pressure pump is turned off (especially in cases where the permeate line is pressurized).

6. Precautions should also be taken to ensure the elements remain wet and protected from temperature extremes during the shut-down period.

7. When returning the membrane system to service, the preserved elements should be flushed to remove the SMBS solution prior to restart. Permeate from the first hour of operation should be discarded.