



Element Loading Guidelines

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The following provides general information for installing Hydranautics elements to provide optimally reliable performance.

Flushing

If the system is new, it is strongly recommended to flush the system first before loading elements. This allows any debris, solvents, or chlorine to be cleared so that they do not come in contact with the membranes.

Vessel Preparation

Clean the inside of the vessels before loading. This will remove any dust and debris that could collect on the membrane surface. Hosing down the insides of the vessels usually **will not** be sufficient to clean the vessels. Use of a sponge ball wrapped in a towel and soaked in a 50% solution of glycerin and water is highly recommended. The sponge ball can be pulled through the vessel with a piece of rope. Alternatively, the sponge ball can be pushed through the length of the tube with a piece of 2 inch PVC pipe with a PVC flange attached to the end.

Caution: Be sure to avoid scraping the pipe along the vessel surface.

Storage

If elements cannot be loaded upon delivery, store elements out of direct sunlight. Do not allow the elements to freeze. (Please refer to Hydranautics Technical Service Bulletin 101 for cellulose acetate elements or Technical Service Bulletin 108 for composite elements).

Lubricants

- When loading elements into a system, do **NOT** use oil, grease, or petroleum jelly based compounds to lubricate o-rings and brine seals.
- Use silicone based gel or a mixture of 50% glycerin in water to lubricate O-rings and brine seals.

Shimming

Due to inconsistencies in vessel length, it is highly recommended to shim elements to take up free space in the vessel. This helps to prevent elements from moving when the system is shut down and restarted. The appearance of leaks between elements is also minimized when the elements are shimmed.

To shim, simply place PVC “washers” of varying thickness (1/8” to 3/8”) over the FEED side inboard adapter. Add as many shims as necessary until the end plate fits snugly against the shims. If necessary a shim may be removed if the end cap is difficult to reinstall. A gap of 1/4 inch between the end plate and the shims will not cause problems in performance.

Operation

With all composite membranes, do not expose the membrane to chlorine or other strong oxidants. A concentration of chlorine in excess of 0.1 PPM can cause irreversible damage to the membrane.

With cellulose acetate (CAB) membranes, operate in the pH range of 4-6. Operation outside of this range will cause premature degradation of the membrane.

Note: Assure that flush sequences are within these pH ranges. Failure to do so may cause severe damage to the membranes.

For further information on the installation and care of Hydranautics products, contact your Sales Representative or the Technical Support department at Hydranautics.

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