



FILMTEC Membranes System Design: Special Design Possibilities

Special Design Possibilities

There are a number of special design possibilities for specific requirements:

- Improve product quality:
 - Use part or all seawater elements for brackish feed water
 - Use seawater elements in one or both stages of a permeate staged system
 - Recycle permeate of last stage into feed

- Increase system recovery:
 - Feed the concentrate to a second system, after specific pretreatment

- Obtain high system recovery and uniform permeate flow per element with medium salinity feed water:
 - Use booster pumps between stages to compensate for osmotic pressure increase
 - Use declining permeate back pressure from first to last stage
 - Use hybrid system design with tighter membranes in the first stage than in the second stage, e.g. BW30 membranes in the first and XLE membranes in the second stage

- Produce different permeate qualities:
 - Separate the permeates from the different stages: the permeate from the first stage has the best quality—especially when the first stage is equipped with higher rejection membranes

- Reduce the plant capacity to obtain just the required permeate quality:
 - Blend the permeate with feed water

- Make provisions for later system extension:
 - Use free space in pressure vessel (element spacer to replace element)
 - Design module support racks to accommodate extra pressure vessels

FILMTEC™ Membranes
For more information about FILMTEC membranes, call the Dow Liquid Separations business:

North America: 1-800-447-4369
Latin America: (+55) 11-5188-9222
Europe: (+32) 3-450-2240
Pacific (ex. China): +800-7776-7776
China: +10-800-600-0015
<http://www.filmtec.com>

Notice: The use of this product in and of itself does not necessarily guarantee the removal of cysts and pathogens from water. Effective cyst and pathogen reduction is dependent on the complete system design and on the operation and maintenance of the system.

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