

RO Membranes

Unlike conventional filtration, which can be maintenance-intensive, costly, and environmentally unfriendly, membrane-separation technology employs crossflow filtration where captured impurities on the membrane are constantly swept away by the concentrate stream. Thus the membrane surface is continuously cleaned, prolonging the life of the membrane and reducing maintenance costs.

In both residential and commercial applications, RO Membranes are used to purify varying qualities of hard water. In a common application, the appropriate RO Membrane element is housed inside a pressure vessel that accepts inflowing, pressurized feedwater. Crossflow Filtration across the membrane then divides the flow into two outflow streams: permeate feed (Clean/Filtered Water) and the concentrate or reject stream.

Applications

In addition to residential applications, these RO Membrane elements are available for commercial applications including:

- Drinking water for restaurants
- Drinking water vending machines
- Aquarium water treatment
- Softened water for homes, hotels, commercial laundries and car washes
- Post-treatment of deionized water
- Pure water for Pharmaceuticals, Laboratories and Microelectronics
- Hemodialysis



Construction

The RO Membrane is constructed of a Polyamide Thin-Film Composite Membrane media. The Membrane Element is constructed in a spiral wound configuration made up of multiple membrane envelopes. The membrane envelope consists of a three layer design having two Thin Film Membrane medias on either side of a Permeate Collection material. These membrane envelopes are separated by a feed channel spacer. The Membrane envelopes and feed channel spacers are glued to the internal perforated core and wrapped around the center tube. An outer wrap is then wound around the outside of the membrane to secure and protect the membrane.

