

# Heat Sanitizable Elements

For applications requiring hot water sanitization, eliminating sanitization by chemicals.



Heat sanitizable elements are designed for periodic sanitization with hot water. Effective sanitization with hot water is accomplished through an appropriate combination of exposure time and temperature.

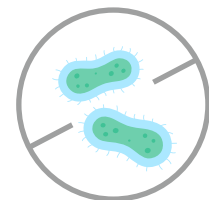
A primary use for hot water sanitization is to inactivate viable microbes. Generally, hot water sanitation is performed more frequently than chemical cleanings, based on microbe counts and/or regular sanitization schedule.

## Safe Sterilization

Heat sanitizable membrane elements deliver outstanding quality water with the added capability to withstand sanitization with hot water. Hot water sanitization eliminates the need for chemical sanitizers. The outer wrap provides a controlled bypass and delivers higher membrane performance. The full-fit configuration minimizes stagnant areas and is optimal for applications requiring a sanitary design. All components comply with FDA standards.

Heat kills most bacteria at 80°C, and kills essentially all bacterial above 85°C.

This heat sanitization elements are sanitized with hot water as the preferred method in food and pharmaceutical applications eliminating the need for chemicals and other disposals.

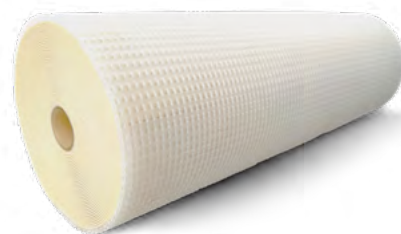
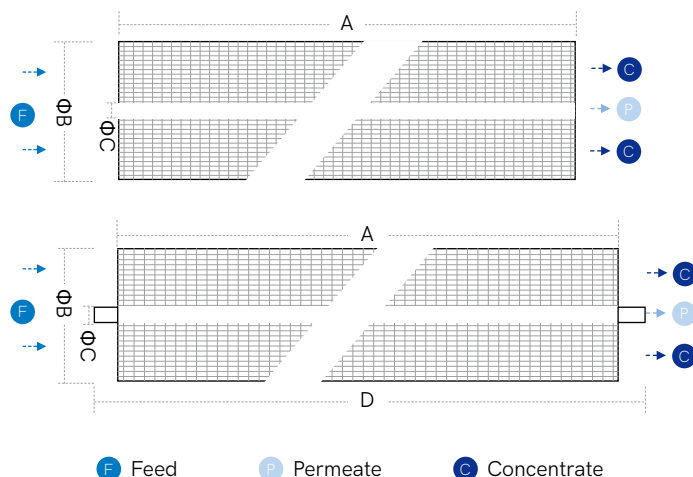


Bacteria are killed at temperatures above 80°C.

## Why Choose UNISOL

UNISOL heat sanitizable membrane elements is specially designed to maximize the benefits of hot water sanitization for industries relying on chemical free sanitization for product quality and industry compliance standards.

The heat sanitizable membrane elements provide superior permeate quality for hygienic purified water applications. It is applied for food & beverage, biopharmaceutical, electronics and chemical etc.



Microbial control in water systems is achieved primarily through continuous or intermittent sanitization procedures.

Even small numbers of bacteria are a problem for critical water systems like pharmaceutical USP water, dialysis water, and ultrapure water for semiconductor manufacturing. Bacteria are often killed with UV-254, chemicals, and heat. Chemical sanitization is often undesirable or prohibited, creating a steady change-over to pure water systems that can be sanitized with heat.

### Operating Reference

Membrane Type	Polyamide
Max. Operating Temperature	50 °C (122 °F)
Max. Sanitization Temperature	85 °C (185°F)
Max. Operating Pressure	40 bar (580psi)
Max. Pressure Drop	1 bar (14.5 psi) for individual element
Operating pH Range	2-11
Cleaning pH Range	1-12
Stabilized Salt Rejection	99%
Free Chlorine Tolerance	< 0.1 ppm



## Advantages

- Designed to withstand hot water sanitization, eliminating the need for chemical sanitizers.
- Designed to fit industry-standard size membrane housings
- Reverse osmosis membranes remove up to 99% of total dissolved solids.
- RO membranes remove dissolved impurities such as chloride, lead, chromate, fluoride, bacteria and others.
- Customizes available.

## Applications

- Food & beverage
- Pharmaceutical (water for injection)
- Diafiltration
- Sugar concentration
- Flavor concentration
- Aroma concentration
- Wine de-alcoholization
- Beer de-alcoholization



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