

# eNPure UFS-Series ULTRAFILTRATION SYSTEM

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## Water Treatment and Process Systems

### Ultrafiltration covers a wide range of filtration and separation technologies.

Separation of both suspended and dissolved particles can be achieved with a low pressure applied feed utilizing a semi-permeable membrane. Membranes are available in three configurations: Tubular, Hollow Fiber or Spiral Wound Flat Sheet. Selection of the appropriate membrane is a function of two factors: the filtration / separation required and the cost to implement it.

As an integrator of Ultrafiltration technologies, as opposed to a manufacturer of membranes, eNPure is best positioned to select the most appropriate and cost effective technology for our customer's applications. Ultrafiltration membranes and technologies are integrated in three general system configurations:

#### Crossflow:

In a crossflow application, the feed stream passes over the membrane surface in a controlled flow path under pressure. A percentage (varying from application to application) of the feed stream passes through the membrane as permeate (product), with the rejected material flushed away in the concentrate stream. An added benefit is that the high flowrate enhances permeate passage and reduces membrane fouling.

#### Dead End:

In a dead end application, the feed stream passes through the membrane under pressure. Dissolved molecules or suspended particles that are larger than the membrane pores are prohibited from passing through. Unlike a crossflow application, the membrane must be backwashed / drained periodically to remove accumulated particulate material, to avoid fouling, and to enhance the long term operation of the system.

#### Submerged:

In a submerged application, the membrane is immersed in a tank or body of water or liquid. A slight negative pressure draws the water from the outside to the inside of the membrane, providing a high quality effluent meeting or exceeding discharge regulations.

#### Typical Applications:

- Reverse Osmosis Pretreatment
- Seawater Reverse Osmosis Pretreatment
- Oily Wastewater
- Removal of Suspended Solids from Potable Water
- Municipal Wastewater Reuse



#### Available Options

- Stainless Steel Piping
- High Purity Non-metallic piping
- Backwash / Transfer pumps
- Backwash / Break Tanks
- Targeted Instrumentation
- Chemical Feed Sets



Your source for Value Engineered Water and Process Systems

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