



# High Efficiency Reverse Osmosis (HERO™)

## Technology for Difficult to Treat Water

High Efficiency Reverse Osmosis (HERO) is a reverse osmosis technology specially designed to treat high silica and difficult to treat wastewater. By effectively preventing membrane fouling or scaling, the high efficiency reverse osmosis process offers the end user higher recoveries as well as significant operational benefits. The process has an excellent track record of treatment of [cooling tower blowdown](#) where conventional reverse osmosis (RO) is generally considered to be a less effective technology.



In some instances, HERO™ may be used to replace or supplement an evaporation process as a cost-effective method of achieving [zero liquid discharge \(ZLD\)](#). Aquatech has unmatched experience with HERO™ technology with over 60 installations around the world.

**Basic process consists of three steps:** Hardness and suspended solids removal, Carbon dioxide removal, and reverse osmosis treatment at elevated pH.

### Benefits of HERO:

- High Recovery
- High Salt Rejection
- High Flux
- Reduced Fouling
- Lower Operating Costs
- Reduced Maintenance

### HERO is Perfect For:

- High Silica Water
- Cooling Tower Blowdown
- Tertiary Treated Effluent (Sewage)
- High TOC / Biologically Active Water

### Economic Considerations:

Besides having technical superiority over conventional reverse osmosis, the HERO process offers significant economic advantage.

- **Higher recovery**
  - Since the HERO system allows increased water recovery, the cost per gallon for pure water production is reduced.
- **Minimal Offline Cleaning**
  - Operating data shows a frequency requirement of once a year for HERO vs. twice to three times a year for conventional reverse osmosis. Substantially reduce the time your system is off-line for the time your system is off-line for membrane cleaning
- **No propriety chemicals**
  - The HERO technology runs on common chemical feed requirements allowing you to cut the cost of expensive cleaning chemicals typically required.
- **Eliminate Redundancy**
  - Due to HERO's high pH operating environment, it is in a "continuous cleaning mode" thus eliminating redundancies in capital equipment to compensate for cleaning downtime.

## Contact Us

Leverage our experience and expertise to find the best solution to your water challenge. Our sales managers are always available share our solutions and expertise.



## Downloads

[Aquatech Corporate Brochure](#)

[Total Water Management Brochure](#)

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