

Desalination Technologies in use by Electrolyzers



Tomer Efrat | Director of Business Development & Product Management



KNOW YOUR WATER PARTNERS



Established
in 1965

Technology leaders in
Desalination & Water
Treatment in both membrane
& thermal technologies

Hundreds of
installations in
over 40 countries

Worldwide
offices in Israel,
US, China, India,
Chile & Australia



AlfaPartners.

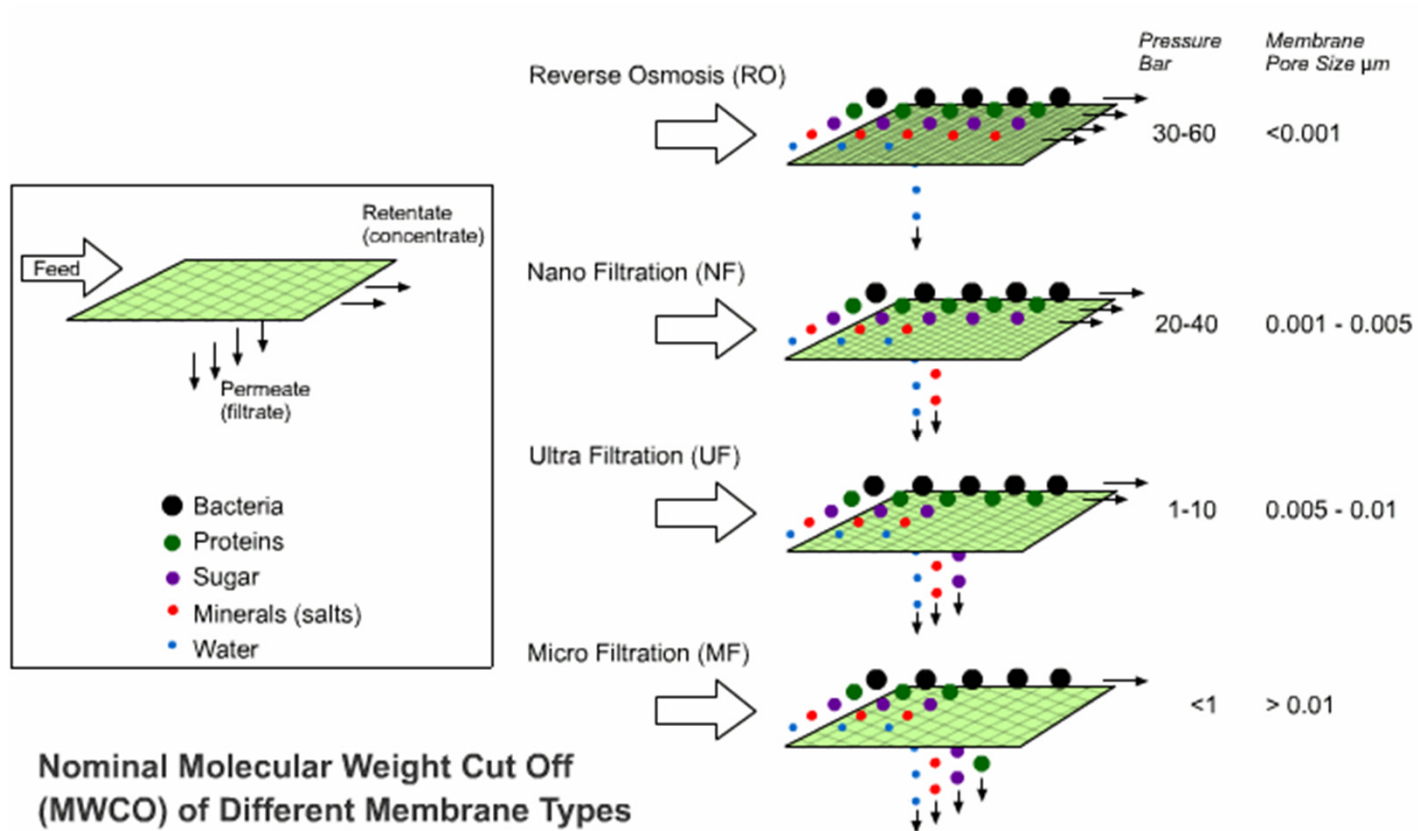


Available Desalination Approaches

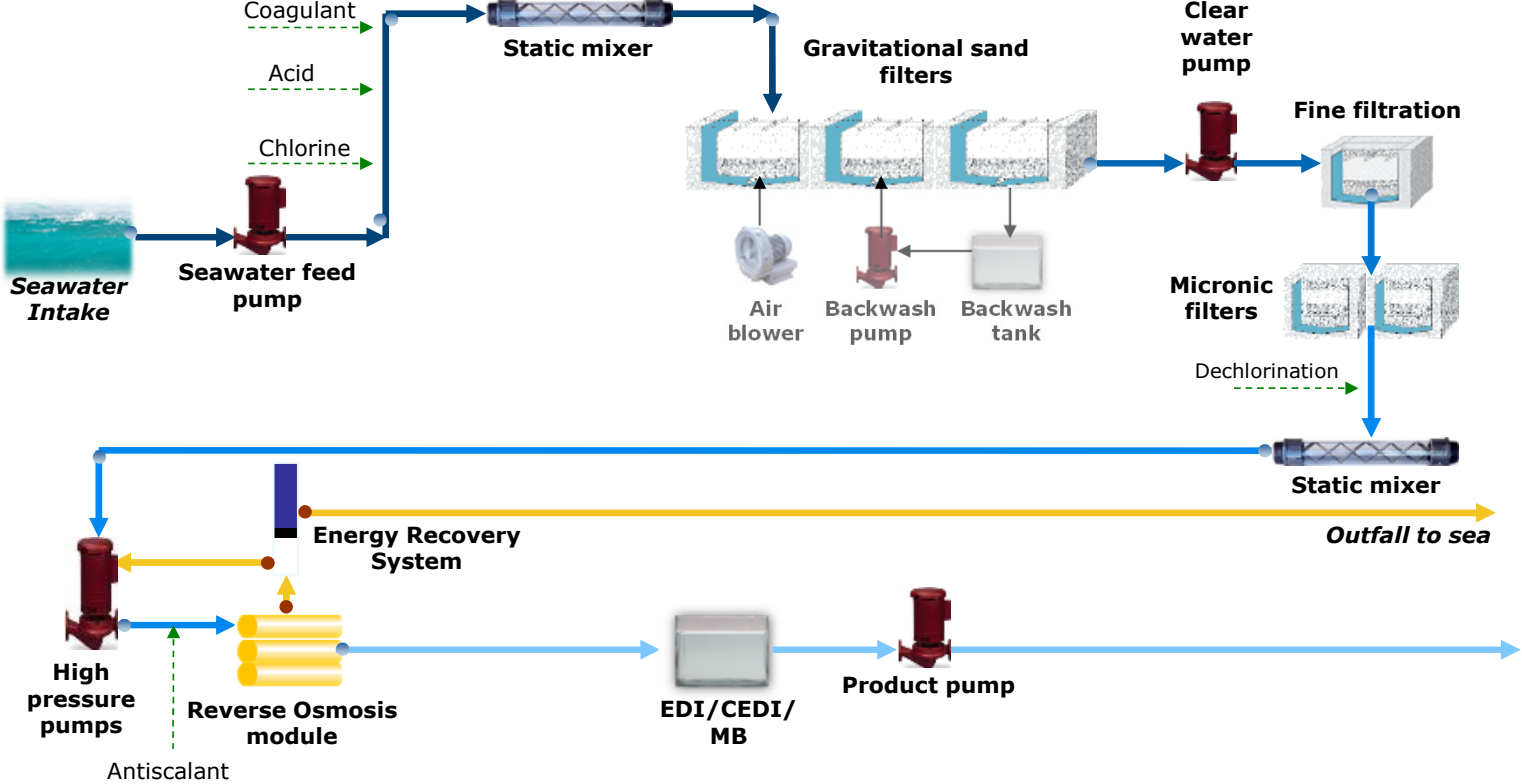
SWRO

Thermal
Desalination

Membrane processes Classification



RO Process



The Hadera Plant



The Hadera Plant



The Hadera Plant – Aerial View



Pretreatment

SWRO

BWRO (Cascade)

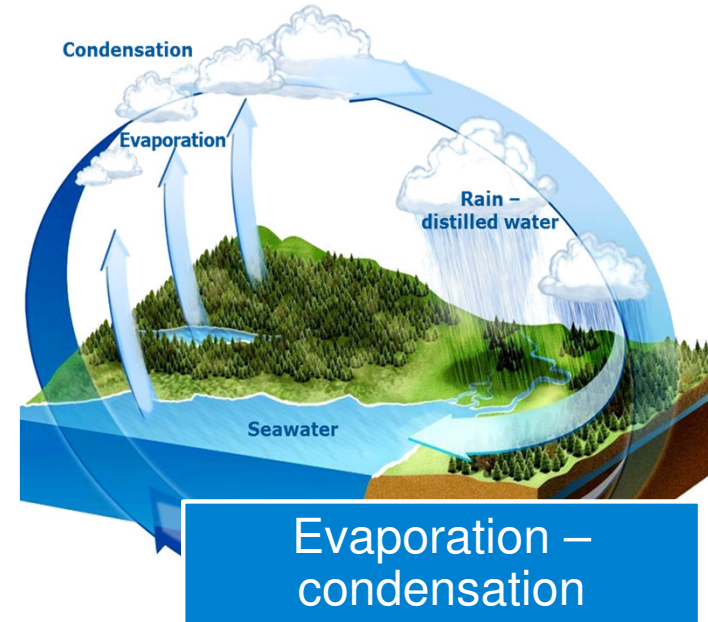
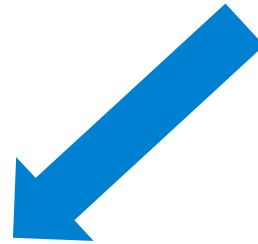
Post-treatment

Product water tank



Thermal Desalination

MVC



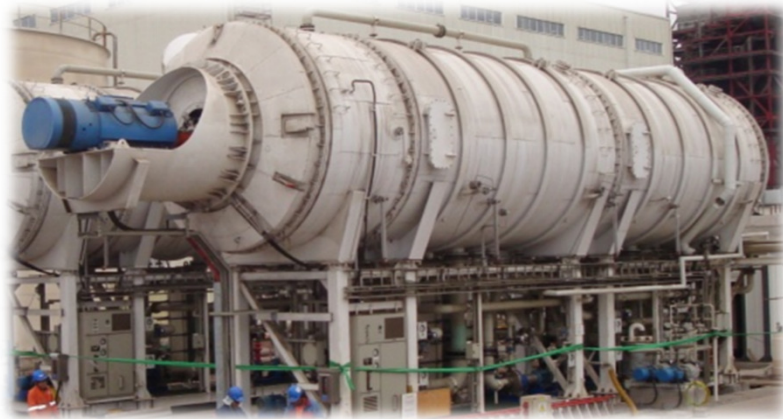
MED



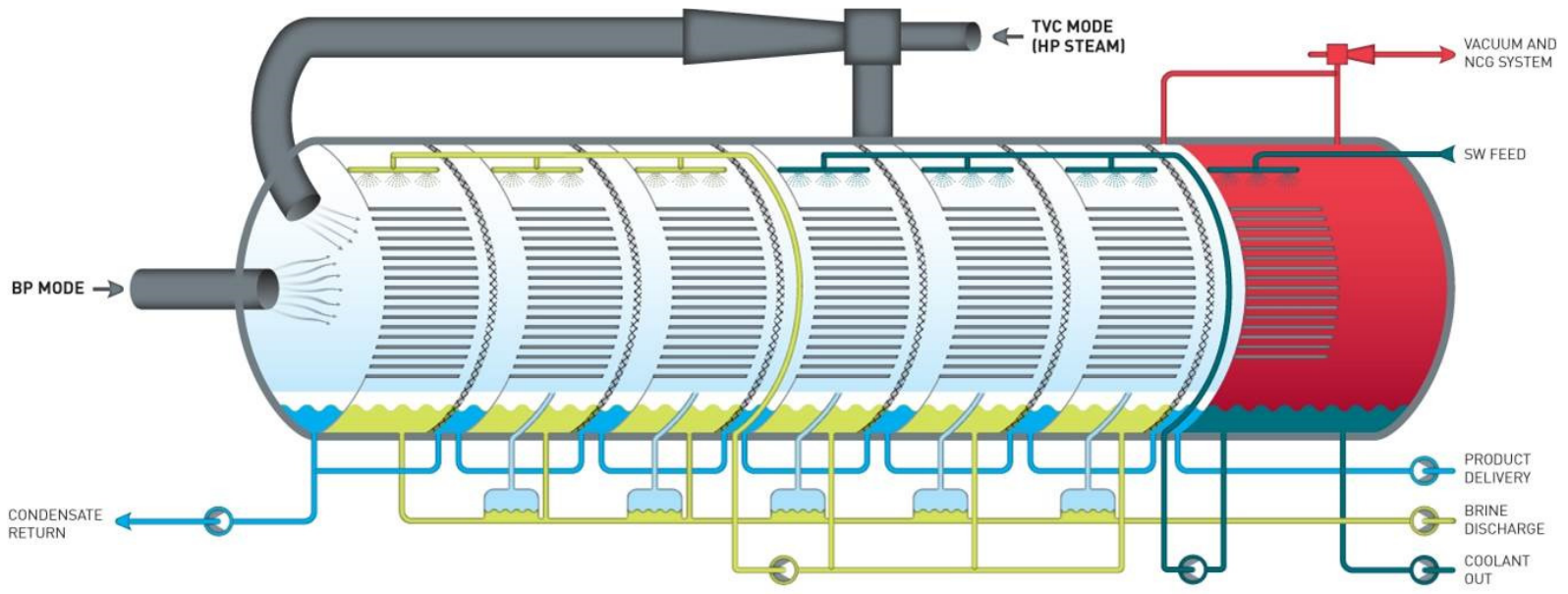
Process Animation



1, 2 and 3 Effect MVC



MED is... a Series of Evaporators + Condenser

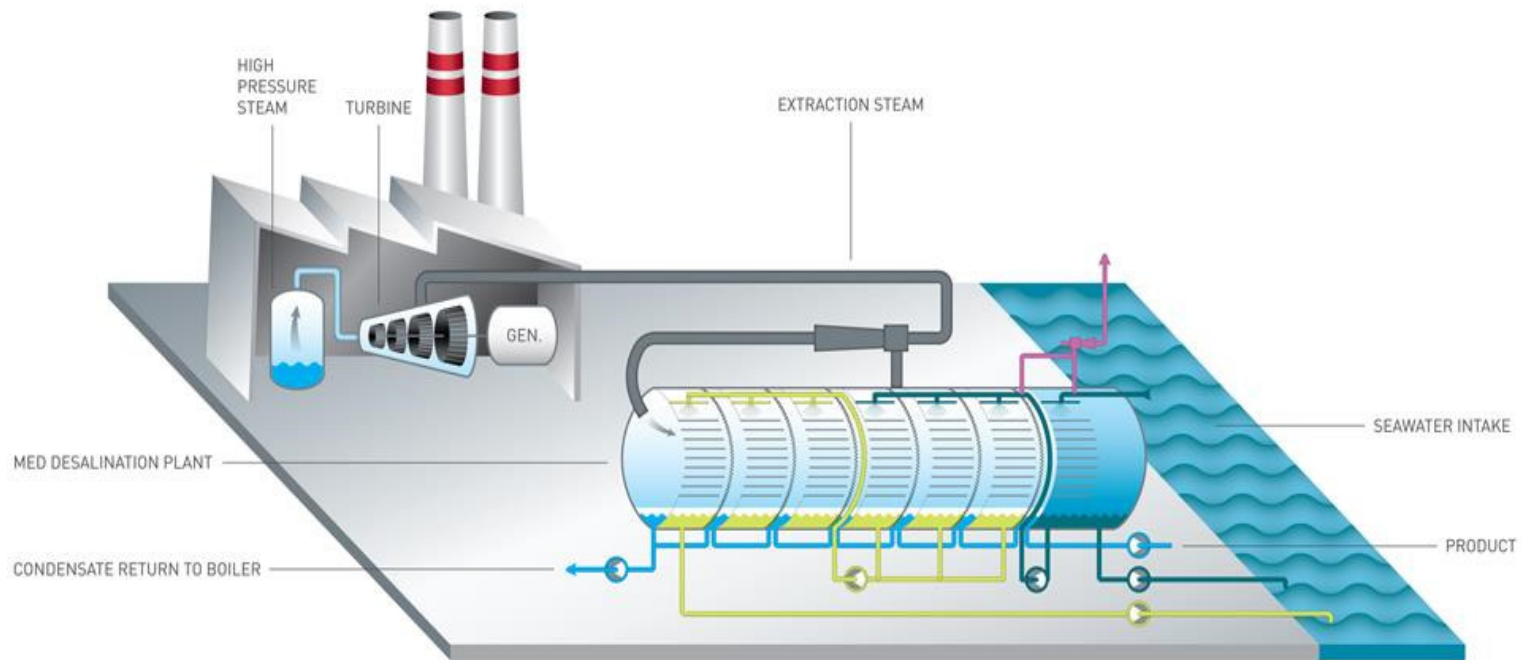


Sources of Low-Grade Heat

- ▶ When integrating MED into an industrial plant, as the ability to utilize low grade heat increases, so do the heat sources
- ▶ Low grade heat sources can be:
 - LP & LLP waste steam from refining process
 - Extraction Steam for the last stages of a steam turbine
 - BP steam from steam turbine
 - Hot water from process coolers
 - Jacket water
 - Flue-Gases
 - Others

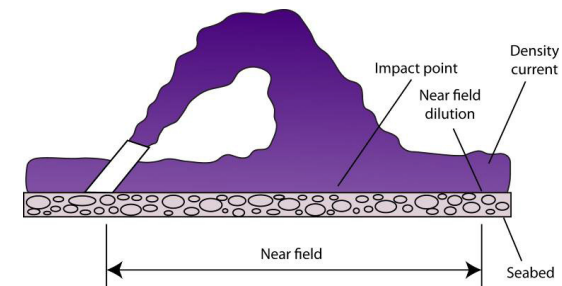
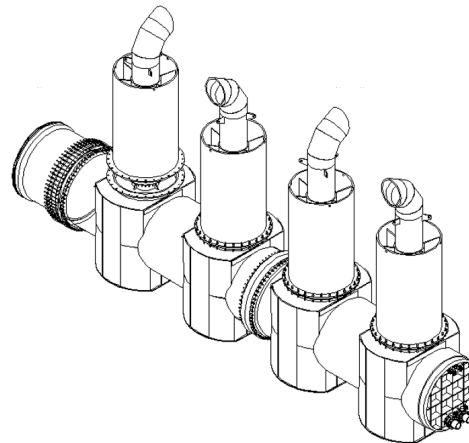


Energy Input from Steam Extraction or Waste Steam Source



And... What do we do with the brine?

- › “Solution by Dilution”
- › Brine Diffusers
- › Further Treatment for additional products...



Thank You

Questions ?

