

APPLICATION SHEET **DESALINATION**

LOW POWER CONSUMPTION

We use the most efficient energy recovery unit with average power consumption of 7.8-14 Kwh/1000 gallons.

NETWORK READY

We provide an Ethernet port in our PLC so you can connect and pull all the information you need.

LOW NOISE

We use low rpm motor for the RO pump. This reduces substantially the noise level making the system surrounds a much better place to work.

CONTAINERIZED OPTION:

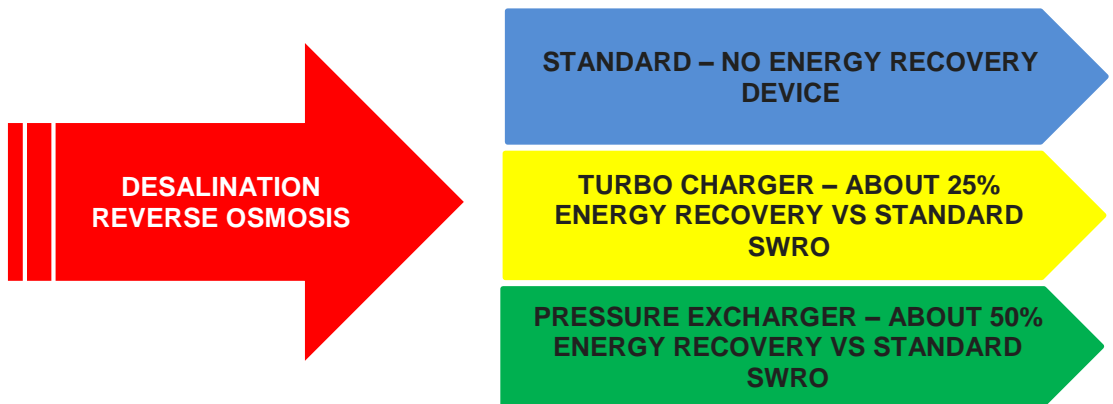
System is build inside the standard ISO 40 feet acoustic and thermal isolated container proving a robust and reliable housing for the delicate equipment inside and expediting the deployment and commissioning of the system substantially.

RO desalination technology was initially developed in the late 1950s, and has now evolved into the leading desalination technology globally. There are many different processes used in RO desalination, and a variety of factors come into play when selecting the appropriate solution for each situation – the quality of the source water, the desired quantity and quality of the water produced, pretreatment, energy requirements and disposal of concentrate.

At Advanced Equipment and Services we focus on desalination technology by Reverse Osmosis using different energy recovery devices, options and ancillary systems to fulfill customer's particular needs

SOLUTION:

In general these are the main three types of desalination systems we build



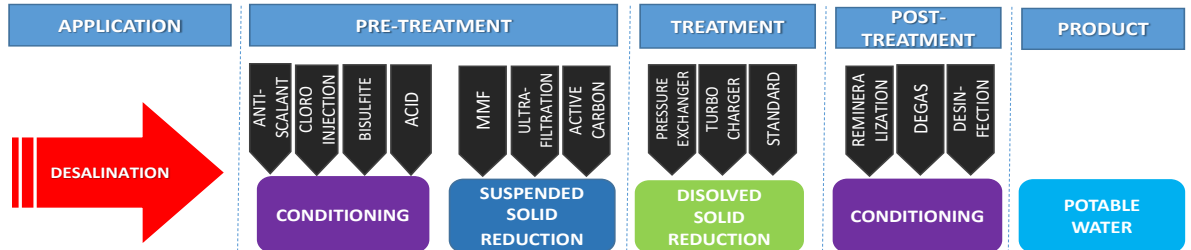
OPERATING PARAMETERS:

- TDS..... 17,000-45,000 mg/l (as NaCl)
- SDI15.....< 3.0
- Temperature..... 25 to 35°C (77 to 95°F)
- Recovery 40 to 45%
- Nominal Rejection >98%
- Incoming Power.....480/380Hz 60/50Hz
- Power Consumption7.8-14.0 KWHr/KGal

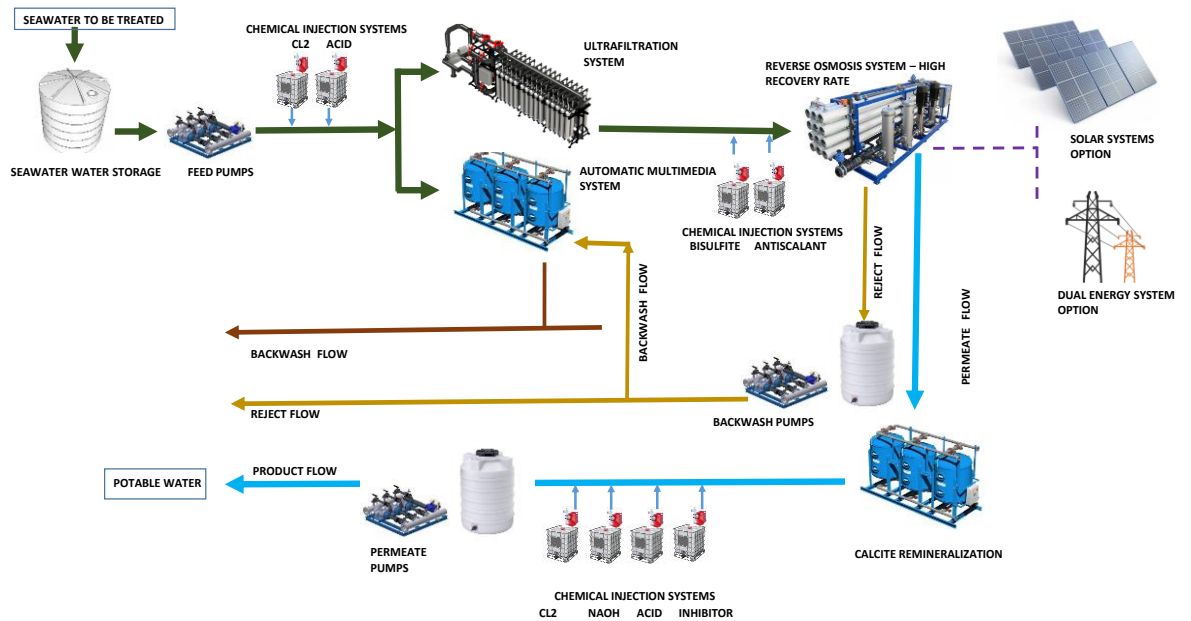
Note: Required 3bar (45psi) minimum customer supplied pressure to high pressure RO Feed Pump. Temperatures and high salinities will reduce system productivity

OUR SOLUTION

Typically we recommend the following steps:



Complete flowchart for arsenic removal below showing the ADVANCEES systems. This flowchart vary based on raw water quality and customer's requirement. Many options and combinations are possible, the best solution needs to accommodate the minimum life cycle cost such as low operating cost, low maintenance, easy to operate and monitor.



Most common energy device to save energy with efficiencies: Basically we can save about 70% energy compare with Standard desalination systems.

TECHNICAL SUPPORT

Commissioning, Start-up, operators training, maintenance training, retrofits and modernization are available.

ZERO DOWNTIME

We supply all the basic two years critical spare parts with our units. Also we use very well know and proved components in all of our systems.

TURNKEY SOLUTIONS

We can provide the basic RO systems plus all pretreatment and Post treatment such as:

- Chemical injection systems
- Multimedia systems.
- Calcite contact tanks
- Ozono generators
- UV disinfection
- H2S removal

For more information on any of our products or services please visit us on the Web at: www.advancees.com



Turbo charger
25% energy



Pressure Exchanger
50% energy



Pressure Exchanger
50% energy



Solar energy
33% energy



Power Factor Correction
20% energy

Technical Data:

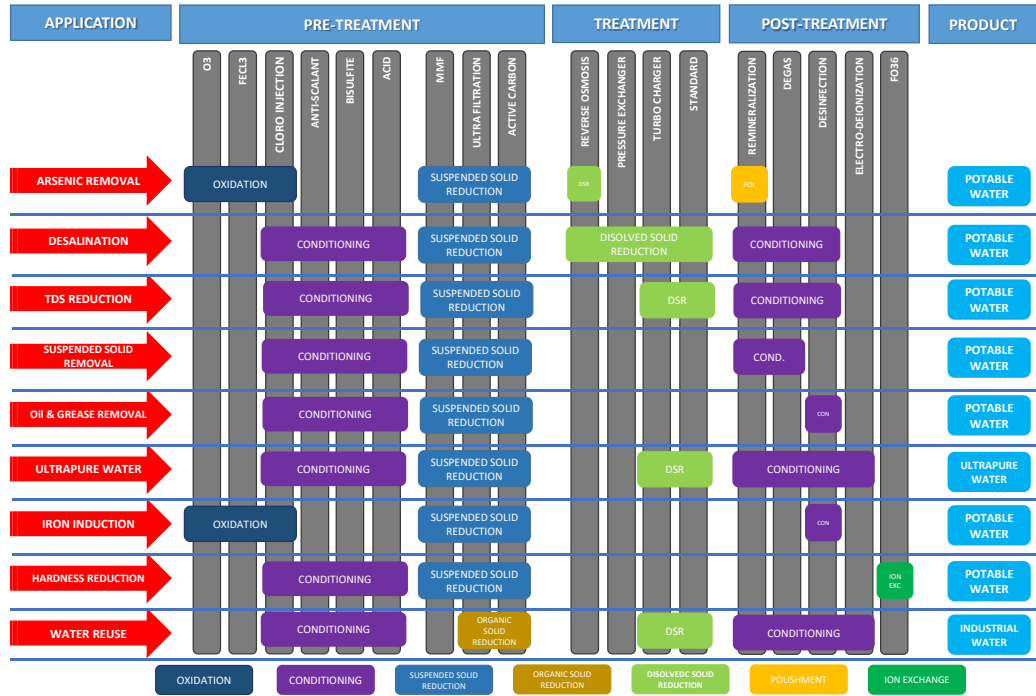
Component	Brand	Model
RO pump	FEDCO	MSS - duplex
Energy recovery Device	FEDCO ERI Danfoss	HPB – duplex PX ISAVE
Pressure vessels	PROTEC	RO-1000 – 4
Membranes	HYDRANAUTICS LG NanoH2O Lewabrane	SWC6-LD SW SW
Plc	DIRECT LOGIC	06
HMI (touch screen)	C-MORE	EA9 – 7”
Flush pump	GOULDS GRUNDFOS	ESV-316 CRN
High pressure piping	ZENON	Super duplex
Low pressure piping	GF	Sch 80 – Gray
High pressure switch	PROSENSE	MPS - 150 PSI
Low pressure switch	PROSENSE	MPS – 1500 PSI
Variable frequency drive	POWTRAN LSIS	P19000 IV
Multimedia filters	WATERCO FLUIDRA	SW MSS
Filters media	TURBIDEZ	Zeolite
Cartridge filter 5 micros	HMD	7-40
Inlet Valve actuator	VALWORX	45554 - 3”
Conductivity meter	HM-DIGITAL	PS-150
Flow meter digital product	GF-SIGNET	2536
Flow meter digital reject	GF-SIGNET	2536
UF modules	Qua Polycera	Qua-sep Titan

CUSTOMIZATION

We customize any of our system to your needs, please send us your inquiry for a quick proposal.
sales@advancees.com

For more information on any of our products or services please visit us on the Web at:
www.advancees.com

Other Applications Offered:



You can find more detailed information of the different applications at www.advancees.com/applications

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