

# SW100000GPD-TURBO-C **FACT SHEET**

## LOW PWR COMPSUTION

We use the most efficient energy recovery unit with average power consumption of 10-14 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:

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.



## DESCRIPTION:

Single pass, single stage, four pressure vessels total. Each pressure vessel contains 6 thin-film composite elements in series for a total of 24. System produces 380 m3/day (100000 GPD or 69.4 gpm) of product water at 45% recovery.

## OPERATING PARAMETERS:

- TDS..... 37,000-45,000 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 Consumption .....10-14 KWHr/KGal

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

- This specification defines the integrated design requirements for the SW-C line of containerized systems for the Industrial, Power and Municipal markets.
- All necessary equipment required for independent operation is provided given the necessary pretreatment precautions are taken.
- Design basis includes containerized system with duplex centrifugal pump as well as a containerized media filter and cartridge filter system.
- Optional configurations available based on market needs.

## COMPONENTS:

- Container designed for oversea transportation
- High Pressure Centrifugal RO Feed Pump w/ 400/460V 3 phase 50/60 Hz TEFC motor
- Energy Recovery Device Turbo Charger
- VFD for RO Pump & RO Feed Pump
- Digital flowmeteres
- PLC
- Pressure switches: High and low
- Isolation butterfly valves
- Integral permeate flush and CIP system

## CONTROL AND POWER:

- PLC with Ethernet card and spare cards
- 6-inch HMI
- Remote start/stop & alarm capabilities
- Zero recovery flush on shutdown
- Power: 400/460V, 3 phase, 50/60Hz

## Service Features and Benefits

### 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 us:

- 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.advances.com](http://www.advances.com)



### MEMBRANE AND HOUSINGS

- Multi Ported FRP pressure vessel design, 1000psi rated
- Spiral wound thin film composite membranes 98% nominal salt rejection.

### MATERIALS OF CONSTRUCTION

- Power Distribution Panels .....NEMA 12
- Control Enclosure ..... NEMA 12
- High pressure piping .....Super Duplex SS
- Low pressure piping .....PVC Sch 80
- Low Pressure Tubing..... Polyethylene
- High Pressure Tubing.....Parflex
- Pressure vessel rack.....Marine- anodize- Aluminum
- PVC Sample Valves on each vessel, feed, permeate and reject
- Multimedia Filters .....FRP

### OPTIONALS

- ASME Code stamped pressure vessels
- Post-treatment degasifier
- 400 V, 3 Ph, 50 Hz fuse, A/C, Lighting kit
- pH meter and H2SO4 chemical feed
- NaOCl pretreatment chemical feed
- SBS chemical feed
- Installation and commissioning
- Supervision/services are available

### INSTRUMENTS:

- Conductivity..... Permeate, Final product.
- Flow meters digital..... Feed and Permeate.
- Pressure switch.....RO Feed and discharge pump
- Pressure gauges.....Liquid filled for high and low pressures

### ALARMS:

- Low pump suction pressure
- High pump pressure discharge
- Permeate water quality
- Low permeate flow
- High permeate flow
- Low reject flow
- Low/high voltage
- Phase protection
- Pump motor overload
- High membrane feed pressure
- Chemical tank protection level
- Flush storage tank level protection

### PHYSICAL DATA & DIMENSIONS:

- Dry Weight: 24500 lbs
- Dimensions Container 4800" x 96" x 96".
- Piping Connections:
  - Feed 4"
  - Permeate 3"
  - Reject 3"
- Power consumption: 10– 814 Kwh/1000 Gallons.

### Desalination

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