

# MERITO



*Commitment to a  
Cleaner Environment*



*Containerized Brackish & Seawater Reverse Osmosis Systems*

*CB and CS Series*



Metito's containerized reverse osmosis water purification system is especially designed for use at remote locations and worksites,

where mobility and ease of installation are crucial.

As an ISO container is used, it can be shipped without crating and placed directly onto a truck trailer for inland transportation. For short-term water treatment requirements, the air-conditioned container can be left in place on the trailer. For

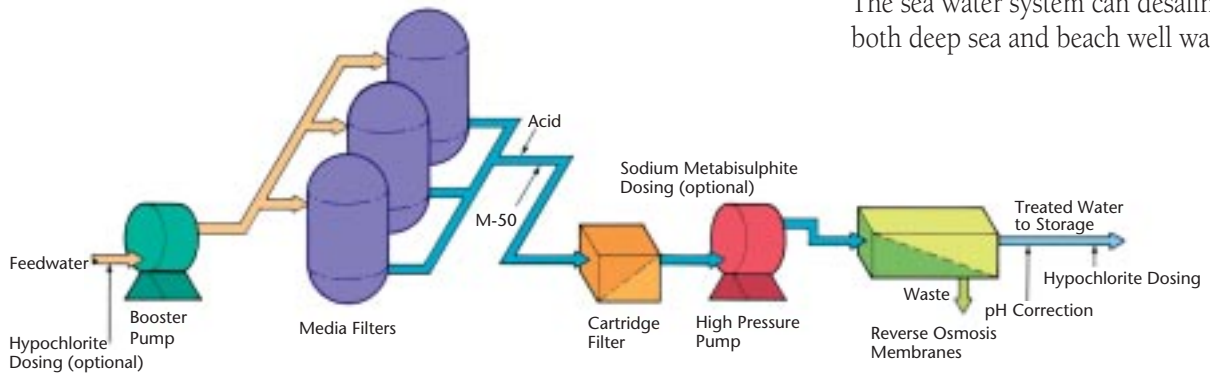
long-term use, it can easily be installed on level ground.

Like Metito's packaged treatment systems, the containerized unit is highly automated and operating the system requires few special skills — an important consideration for remote areas, where there are few technical personnel.

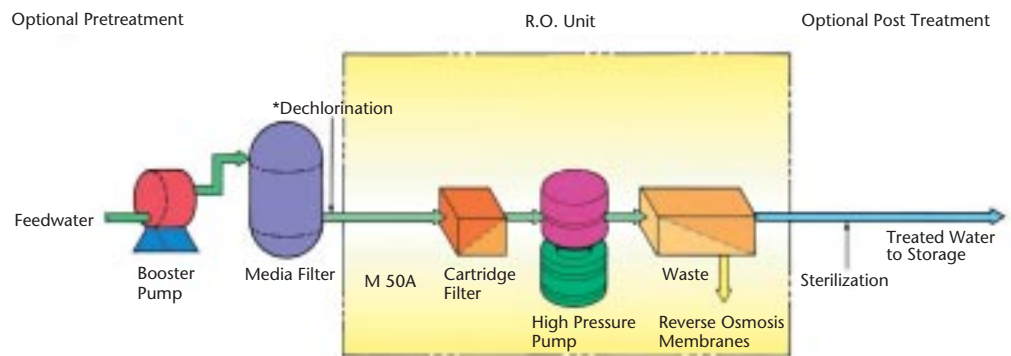
The water desalination equipment is identical to that of our skid mounted reverse osmosis treatment systems but includes the pre- and post-treatment within the container. The pre-treatment removes suspended solids and other components to a level that is suitable for drinking, boiler feed, process cement mixing or other applications.

The brackish water system can be designed to treat a wide variety of waters — rivers, lakes and wells depending on the choice of filtration equipment.

The sea water system can desalinate both deep sea and beach well waters.



TYPICAL FLOW DIAGRAM FOR CONTAINERIZED (BRACKISH) R.O.



TYPICAL FLOW DIAGRAM FOR SEAWATER



### Size Range

Metito's standard 20-foot ISO container can be equipped with a range of packaged treatment plants. The brackish units handle capacities from 134 m<sup>3</sup>/d (35,400 US gpd) to 403 m<sup>3</sup>/d (106,000 US gpd). The sea water units handle capacities from 40 m<sup>3</sup>/d (10,800 US gpd) up to 240 m<sup>3</sup>/d (63,000 US gpd). For larger capacities, multiple units can be used in parallel.

### Storage

For long-term storage of product water, Metito can supply any type of tank including inflatable, glass lined and containerized.

### Accessories

Trailer or skid-mounted generators to make the system fully self-contained are also available.

This unit can be equipped with an inside laboratory. Another container unit can be provided to give storage for spares and chemicals and living quarters for on-site personnel. The laboratory work area can be included in this container, if preferred.

### Field Proven for Minimal Maintenance

Metito's long experience at water treatment in the Middle East assures you of trouble-free operation. Our systems are operating successfully in some of the world's most remote and hostile environments.

All Metito components are built with materials that have been tested thoroughly for their reliability in harsh, corrosive environments.

Each treatment system is assembled in one of our factories and fully tested prior to shipment, assuring you of an easy on-site start-up.

### Feedwater Temperature

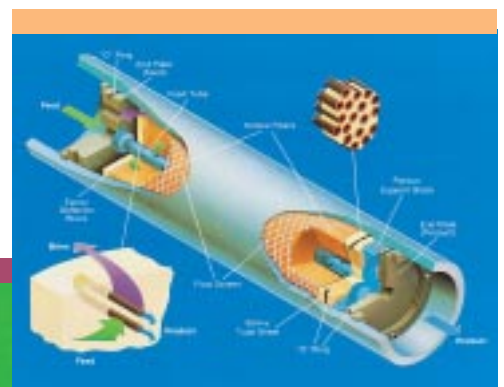
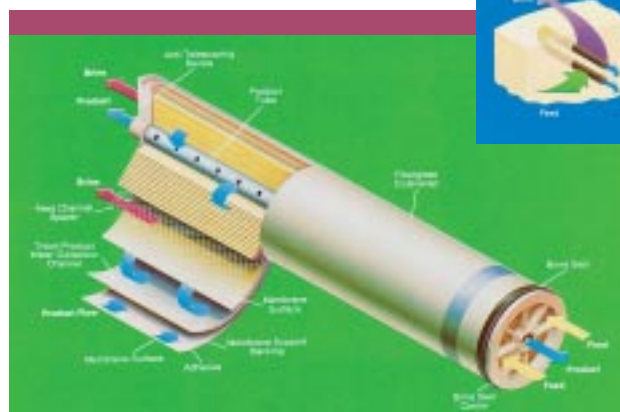
The plant can operate at full pressure when the feedwater temperature is below 35°C. It can operate at a reduced pressure up to 40°C; this would reduce the output. The plant

can also operate at temperatures below 25°C; however, the output would be reduced but would return to normal capacity when the temperature rises.



### Maintenance

Maintenance, when required, is simple since all components are easily accessible. Metito's extensive spare-parts inventories at our offices around the world ensure that the right part will be available, when and where you need it.



## Specification

A 6 m (20 ft) ISO container, insulated and air-conditioned, housing the following equipment:

- Inlet booster pump
- GRP media filters
- Hypochlorite and bisulfite dosing systems
- M-50 or M-50A and \*acid dosing systems with manual dosage control
- Thermoplastic pre-filter with five micron polypropylene cartridge elements, vent-valve and inlet and outlet pressure gauges.
- 316 stainless steel or aluminum bronze high pressure pump with TEFC motor
- Reverse osmosis membranes in GRP pressure housings
- Temperature indicator\*
- Low pressure piping in PVC
- High pressure piping in 316L stainless steel
- A reject control valve
- Low feedwater pressure switch\*
- pH meter with high and low alarms\*
- Product flow indicator
- Zero recovery flush pipework and valves\*
- Flushing water tank, pipework and valves<sup>+</sup>
- Hypochlorite dosing system for product water
- Control panel to NEMA 12 including programmable micro-processor, star-delta starter, integral disconnect



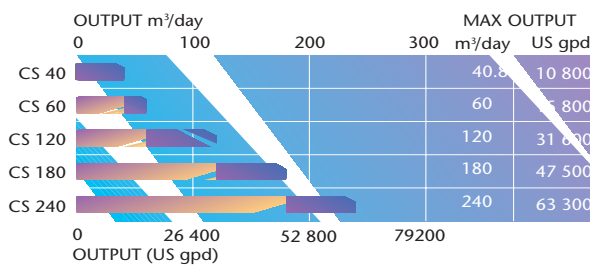
switch, control circuit transformer, control switches, status and fault indication lights

- Standard power supply is 380-440 V. 3 phase, 50 or 60 Hz
- Operation and maintenance manual (in English)

NOTE:

\*Only for brackish units +Only for seawater

TABLE OF PLANT CAPACITIES - SEAWATER



NOTE: Capacity is based on TDS 40,000 mg/l nominal 25% conversion, temperature range 25-30°C.

TABLE OF PLANT CAPACITIES - BRACKISH LOW RECOVERY

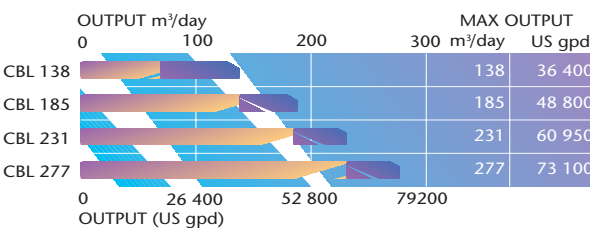
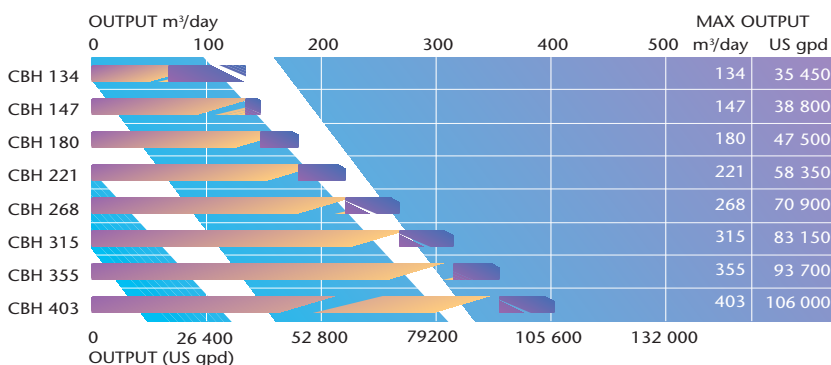


TABLE OF PLANT CAPACITIES - BRACKISH HIGH RECOVERY



NOTES: Capacity after 1 year operation based on feed TDS 1500 mg/l NaCl, operating pressure 27.5 bar, operating temperatures within range 25-30°C.

If the feed TDS is higher, the capacity will be reduced.



### ***Options and Accessories***

- Alternate voltages or frequencies
- Membrane cleaning kit
- Portable TDS/conductivity meter
- Silt density index (SDI) test kit
- Chlorine test kit
- NEMA 4 or 7 control panel
- Auto isolating valve to close feed line at system shutdown
- Operating instructions in other than English
- pH chart recorder
- Conductivity indicator
- Conductivity chart recorder
- Product pressure relief valve
- High temperature alarm/shutdown
- Trailer or skid mounted generator sets
- Flexible or containerized water storage tanks
- Polyelectrolyte dosing system
- Iron removal filters
- Special color for container
- Laboratory





Commitment to a  
Cleaner  
Environment

# METITO

The Americas (Houston,  
Texas)  
METITO INTERNATIONAL  
INC.  
11931 Wickchester Lane,  
Suite 201  
Houston, Texas 77043  
U.S.A.  
Tel.: +1 (281) 293 8500  
Fax: +1 (281) 759 3646  
E-mail: metito@vonl.com

Africa (Cairo, Egypt)  
METITO EGYPT LTD.  
22 Shehab Street,  
Mohandiseen, Giza  
Cairo, Egypt  
Tel.: +20 (2) 749 7126  
Fax: +20 (2) 749 7128  
E-mail:  
metito@intouch.com

Asia (Jakarta, Indonesia)  
PT METITO INDONESIA  
Jl. Ampera Raya No. 18 A  
Cilandak Timur–Pasar Minggu  
Jakarta 12560, Indonesia  
Tel.: +62 (21) 7800 394  
Fax: +62 (21) 780 0395  
E-mail: metito@indo.net.id

Headquarters for Europe, Africa and Asia  
(Sharjah, U.A.E.)

METITO (OVERSEAS) LTD.  
Al Sayegh Tower, Corniche Road  
P.O. Box 22701, Sharjah, UAE  
Tel.: +971 (6) 556 1818  
Fax: +971 (6) 556 4777  
E-mail: metito@emirates.net.ae  
website: metito.com

## METITO WORLDWIDE LOCATIONS

▮ Houston, Texas, USA ▮ Nicosia, Cyprus ▮ Jakarta, Indonesia ▮ Beirut,  
Lebanon ▮ Tehran, Iran ▮ Sharjah, United Arab Emirates ▮ Abu Dhabi, United Arab  
Emirates ▮ Cairo, Egypt ▮ Baghdad, Iraq ▮ Tripoli, Libya ▮ Tunis, Tunisia ▮  
Mumbai, India ▮ Kuala Lumpur, Malaysia ▮ Amman, Jordan ▮ Tokyo, Japan ▮  
Seoul, S. Korea

