



WATER  
TECHNOLOGY®



Compact and mobile systems  
for water treatment



# Experience and quality to the service of the environment

**EMS Water Technology** was born from the great experience acquired by a team of experts in the design and construction of water purification plants both for the treatment of waste water and for the purification and desalination of sea water with particular attention to the search for the best technologies to make the plants transportable in containers, ready to use reliable and easy to maintain, with the ultimate aim of bringing even in the most disadvantaged areas of the world and in emergency situations the optimal solution to allow access to drinking water and possibly its reuse.

**EMS Water Technology** offers rental solutions with systems in comfort of use or long termine, with the option of ransom at the end of the constraint .

**EMS Water Technology** also has experienced and qualified technicians for an optimal technical assistance service for the installation, education and training of the personnel responsible for the management, management and maintenance of the plants.



The modulated systems contained by **EMS Water Technology** are indicated for:

**Public and municipal companies**

- temporary plants for wastewater treatment in cases of expansion or maintenance of fixed installations.
- airports
- ship dry docks
- situations of water emergence

**Military army**

- modular field systems for the purification and recovery of wastewater in war theaters and peace kiping activities.
- arsenals of the Navy
- airports and military bases

**Governmental and No-governmental organizations**

- package systems for drinking water in refugee camps and gray water reuse
- compound peacekeepers
- rural villages

**Private sector**

- hotels and hotel complexes
- tourist resorts
- residential centers
- private clinics
- construction sites in disadvantaged areas
- work camps
- manufacturing industries



# Compact and mobile systems for water purification

## Production program

### Containerized plants for the treatment of drinking water

- **FWCP** - Filtration systems for well, surface river or lake water
- **BWRO** - Reverse osmosis drinking water systems for brackish water
- **SWRO** - Reverse osmosis seawater desalination systems

### Containerized plants for the treatment of civil and industrial wastewater

- **WWMBBR** - Containerized wastewater treatment systems with MBBR (Moving Bed Bio Reactor) technology
- **WWMBR** - Containerized wastewater treatment systems with MBR (Membrane Bio Reactor) technology

### Mobile drinking water treatment and emergency management systems

- **MINION BWRO** - Mini plant for the purification of fresh and brackish water on skids
- **COMBI BWRO** - Mobile systems on trailer for fresh and brackish water purification
- **COMBI SWRO** - Mobile systems on trailer for seawater desalination
- **PILLOW** - Transportable flexible tanks for water storage

### After-sales service

- **TRAINING & POSTSERVICE** - Plant start-up, education courses, after-sales technical assistance, repair and overhaul of plants.



# Containerized plants for drinking water treatment

## FWCP

### Filtration systems for well, surface river or lake water.

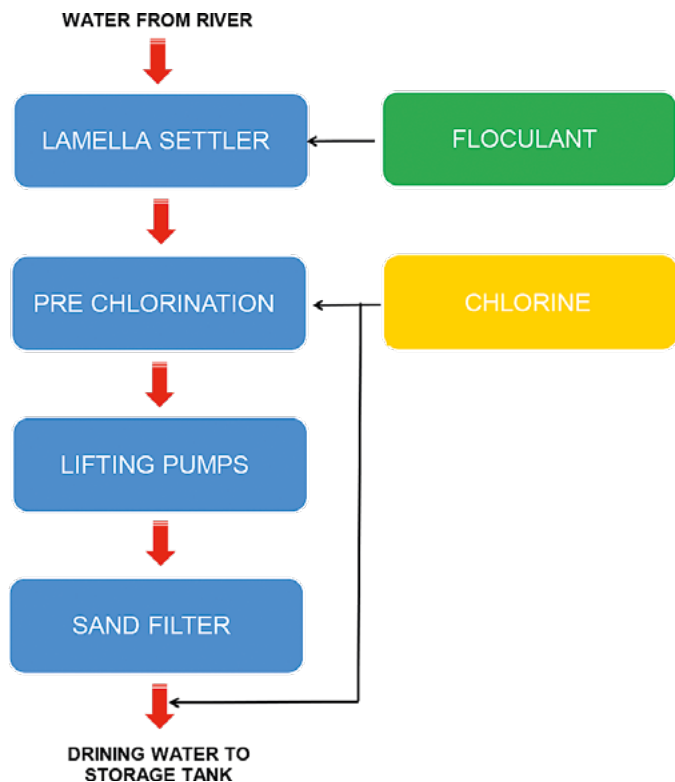
**EMS Water Technology FWCP series** containerized drinking water systems are designed to produce safe drinking water from freshwater sources, including those with high turbidity. They are ideal for the treatment of river water with high turbidity as is the case in Africa during the rainy season. The containerized drinking water plants **EMS Water Technology FWCP series** are housed in modified and recertified transport containers and are therefore easily transportable. They can also be supplied with traditional or alternative energy sources such as generators, photovoltaic or wind systems thus making the plants completely independent.

#### Operation

The containerized drinking water systems **EMS Water Technology FWCP series** are complete with chemical dosing system, lamellar pack settler, lifting pumps, sand filters, sludge dewatering units and electrical control panel. The unit can be supplied with a wide range of additional equipment and accessories such as drinking water tanks, distribution system, water supply pipes and if necessary drinking water distribution fountains.

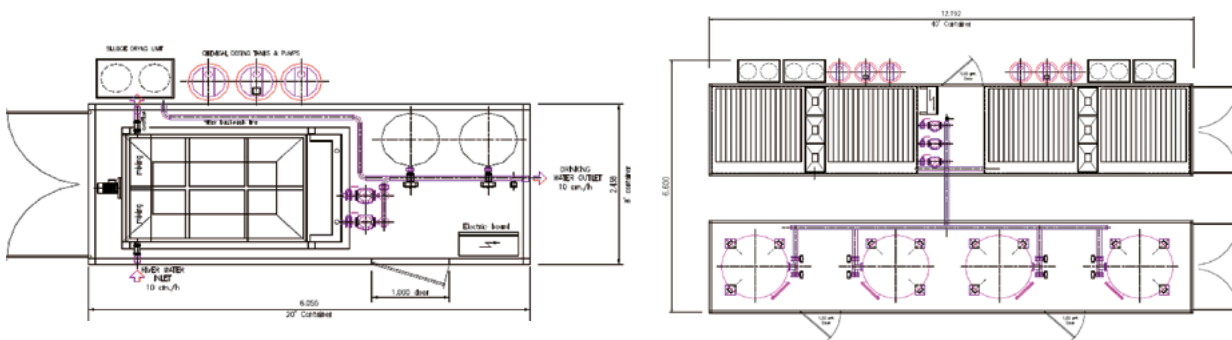
The containerized drinking water systems **EMS Water Technology FWCP series** are available in four standard modules, however the system is completely modular, so it is possible to satisfy a wide range of hydraulic flow rates

The process flow is represented in the following diagram:





### Type of construction



### Technical data

TECHNICAL DATA	UNIT OF MEASURE	MODEL			
		FWCP 10	FWCP 20	FWCP 40	FWCP 100
Raw (feed) water			Fresh water, including with high turbidity		
Drinking water flow rate (others available upon request)	m <sup>3</sup> /hr	10	20	40	100
Hours of operation	hr/day	8 – 24	8 – 24	8 – 24	8 – 24
Daily production (based on hours of operation)	m <sup>3</sup> /day	80 – 240	160 – 480	320 – 960	800 – 2,400
People served per day (assuming 25 lt/person/day)	ppl/d	3,200 – 9,600	6,400 – 19,200	12,800 – 38,400	23,000 – 96,000
Number of containers (for transport and/or housing)	n.	1x 20' cntr	2x 20' cntrs	2x 20' cntrs	2x 40' cntrs
Installed power (excluding water intake pump)	kW	5-6kW 400V 50Hz	10kW 400V 50Hz	14-15kW 400V 50Hz	28-30kW 400V 50Hz

### Spare parts and accessories

✓ = Available

DESCRIPTION	FWCP 10	FWCP 20	FWCP 40	FWCP 100
Spare parts and consumables kits (1, 2 or 3+ year's supply)	✓	✓	✓	✓
Lifetime spare parts and consumables	✓	✓	✓	✓
Chemicals, cleaning and conservation products (kits)	✓	✓	✓	✓
Water intake pump with floatation device for	✓	✓	✓	✓
Raw and treated water storage tanks (various types)	✓	✓	✓	✓
Photovoltaic system	✓	✓		
Training on-site or in Euro Mec facilities	✓	✓	✓	✓
User and O&M manuals in languages other than Eng./Italian	✓	✓	✓	✓

# Containerized plants for drinking water treatment

## **BWRO**

### **Reverse osmosis drinking water systems for brackish water.**

The containerized drinking water plants **EMS Water Technology BWRO series** are designed to produce drinking water of excellent quality from sources of fresh and brackish water, including those with high turbidity. They are ideal for the treatment of river water with high turbidity or from artesian wells.

The containerized drinking water plants **EMS Water Technology BWRO series** are housed in modified and recertified transport containers and are therefore easily transportable. They can also be supplied with traditional or alternative energy sources such as generators, photovoltaic or wind systems thus making the plants completely independent.

These units are ideal for temporary or permanent water supply systems for camps, work sites, missions, rural villages and tourist complexes.

#### **Operation**

The heart of the water treatment system is reverse osmosis and is designed to treat raw water from a range of conventional and unconventional sources in order to produce high purity drinking water.

- Submersible electric pump with flexible system supply pipe.
- Pre-treatment and prefiltration of raw water.
- Reverse osmosis unit RO.
- Post mineralization and disinfection treatment.
- PLC electrical control panel with remote control system via GSM.

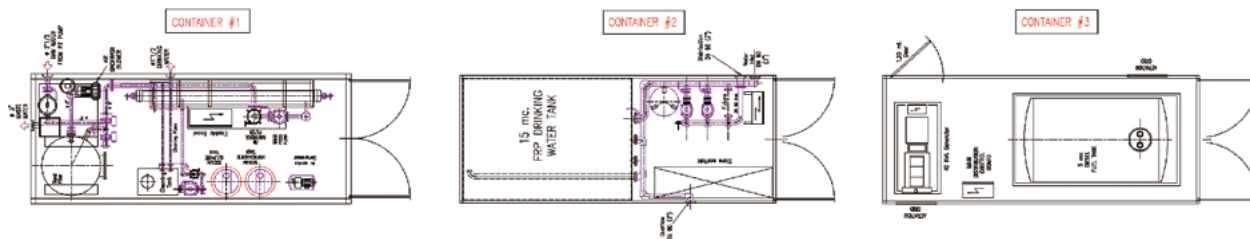




### Modularity

The **BWRO series EMS Water Technology** drinking water containerized plants can be supplied in 20' or 40' containers and are fully pre-assembled and factory tested before being transported on site along with all the necessary accessories for quick installation and start-up.

The modular system can be easily adapted to specific projects, for example by adding additional containers to increase raw water and/or the storage of treated water. A photovoltaic system can also be included to allow water distribution 24 hours/day.



### Technical data

TECHNICAL DATA	MODEL		
	BWRO 100	BWRO 240	BWRO 360
Capacity	5 m <sup>3</sup> /hr	8,33 m <sup>3</sup> /hr	12,5 m <sup>3</sup> /hr
Production	40 – 120 m <sup>3</sup> /day	64 – 200 m <sup>3</sup> /day	96 – 300 m <sup>3</sup> /day
Hours of operation	8 – 24 hrs/day	8 – 24 hrs/day	8 – 24 hrs/day
Daily consumption (drinking only)	25 litres per capita	25 litres per capita	25 litres per capita
People served	1,600 - 4,800 /day	2,560 - 7,680 /day	3,840 - 11,520 /day
Effective salinity	< 2000 TDS	< 2000 TDS	< 2000 TDS
Treated water salinity	< 500 TDS	< 500 TDS	< 500 TDS
Power generator	44 kVA	52 kVA	65 kVA

### Spare parts and accessories

✓ = Available

DESCRIPTION	BWRO 100	BWRO 240	BWRO 360
Street taps (drinking fountains)	✓	✓	✓
Spare parts and consumables kits (1, 2 or 3+ year's supply)	✓	✓	✓
Lifetime spare parts and consumables	✓	✓	✓
Chemicals, cleaning and conservation products (kits)	✓	✓	✓
Remineralization system	✓	✓	✓
Raw and treated water storage tanks (various types)	✓	✓	✓
Photovoltaic system	✓	✓	✓
Training on-site or in EMS facilities	✓	✓	✓
User and O&M manuals in languages other than English/Italian	✓	✓	✓

# Containerized plants for drinking water treatment

## **SWRO** Reverse osmosis drinking water systems for sea water.

The containerized drinking water systems **EMS Water Technology SWRO series** are designed to desalinate bacteriologically and organoleptically polluted seawater, with a high salinity of 35,000 - 45,000 TDS. The high-pressure reverse osmosis system uses high-rejection membranes capable of removing more than 95% of the salinity and also all the plants are complete with the remineralization section of the drinking water produced.

### **Operation**

The heart of the water treatment system is reverse osmosis and is it designed to treat raw water coming directly from the sea or from wells located near the beaches. Containerized drinking water systems **EMS Water Technology SWRO series** are complete with:

- Submersible electric pump with flexible system supply pipe
- Pre-treatment and prefiltration of raw water
- Reverse osmosis unit RO
- Post-treatment of mineralization and disinfection
- PLC control panel with remote control system via GSM

### **Modularity**

The **EMS Water Technology SWRO series** containerized drinking water systems can be supplied in 20' or 40' containers and are fully pre-assembled and factory tested before being transported on site along with all the necessary accessories for quick installation and start-up. The modular system can be easily adapted to specific projects, for example by adding additional containers to increase raw water and/or the storage of treated water. A photovoltaic system can be included to allow water distribution 24 hours.







### Technical data

TECHNICAL DATA	MODEL		
	SWRO 100	SWRO 240	SWRO 360
Capacity	5 m <sup>3</sup> /hr	8,33 m <sup>3</sup> /hr	12,5 m <sup>3</sup> /hr
Production	40 – 120 m <sup>3</sup> /day	64 – 200 m <sup>3</sup> /day	96 – 300 m <sup>3</sup> /day
Effective salinity	35.000-45.000 TDS	35.000-45.000 TDS	35.000-45.000 TDS
Treated water salinity	< 500 TDS	< 500 TDS	< 500 TDS
Installed power	18,5 kW	45,00 kW	55,00 kW

### Spare parts and accessories

✓ = Available

DESCRIPTION	MDWS-5	MDWS-8	MDWS-12
Spare parts and consumables kits (1, 2 or 3+ year's supply)	✓	✓	✓
Lifetime spare parts and consumables	✓	✓	✓
Chemicals, cleaning and conservation products (kits)	✓	✓	✓
Remineralization system	✓	✓	✓
Raw and treated water storage tanks (various types)	✓	✓	✓
Training on-site or in EMS facilities	✓	✓	✓
User and O&M manuals in languages other than English/Italian	✓	✓	✓

# Containerized plants for the treatment of civil and industrial wastewater

## **WWMBBR** Containerized wastewater treatment systems with MBBR (Moving Bed Bio Reactor) technology.



## MBBR wastewater treatment plant Capacity: 50/500 m<sup>3</sup>/day

### Treatment process

The **EMS Water Technology EMBBR series** wastewater treatment plant is an independent compartment module that receives wastewater directly from sewage or septic tanks. The process consists of the following sections:

- Pre-treatment • Denitrification on mobile bed
- Biological oxidation aerated on mobile bed
- Final clarification in lamellar packs
- Mud recirculation • Reagent dosing
- Electrical panel of general control

### Pre-treatment

The pre-treatment consists of a fine grating system with the aim of retaining materials of medium coarse consistency to prevent them from entering the system and which can be the cause of any malfunction problems of the installed equipment. The standard system involves the installation of a drum filter with steel structure AISI 304.

### Denitrification section

To reduce TKN you need a dedicated denitrification section. The part of NH<sub>4</sub> contained in the TKN, as soon as it comes into contact with oxygen (present in the oxidation tank) turns into (NO<sub>2</sub>) nitrites and eventually into NO<sub>3</sub> (nitrates). So after being treated in the oxidation section, the wastewater no longer contains TKN but nitrates. To remove nitrates it is necessary to recirculate wastewater in an area of denitrification in which bacteria will be present, which break down the NO<sub>3</sub> into: N<sub>2</sub> (nitrogen gas) and O<sub>2</sub> (oxygen) which is used for the respiration of bacteria.

### Aerated biological oxidation process

This technology is based on an MBBR (Moving Bed Bio- film Reactor) adhesive biomass process. This process is based on the use of plastic supports, kept in suspension and in continuous movement in the treatment reactor by insufflation of compressed air. The excess biomass detaches from the support and is sent together with the oxidized slurry to the next final sedimentation section.

The heart of the process is composed of the supporting elements of the high specific surface (500-800 sqm x mc) on which the growth of microorganisms responsible for the biological purification of the polluting organic substance takes place.

Oxygen is supplied by electroblowers in the form of air introduced through microbubbles by medium bubble diffusers located at the bottom of the basins. The oxidation section is sized as a useful volume to allow the complete mineralization of the sludge contained in it.



### Phosphate removal

The residual phosphorus is removed by means of a coagulant dosed through of appropriate dosing pumps directly in the oxidation tank, before the final sedimentation treatment. The chemical precipitation allows the abatement of the residual phosphorus, which is deposited by gravity on the bottom of the final sedimentation tank.

### Final settler with lamellar pack

The slurry aerated in the oxidation tank is sent, by gravity, to the final clarifier. The clarifier is a tank of particular geometry that, in quiet conditions, allows the sedimentation of the mud flakes and therefore a separation between clear waters and sludge. The passage of sewage through the channels of the lamellar pack, with an ascending flow at low speed, favors the sedimentation of suspended substances which, by gravity, precipitate to the bottom while the slurry thus clarified, reaches the surface of the basin to be subsequently discharged.



### Sludge recirculation

The activated sludge, collected at the bottom of the sedimentation section, is sent back to the oxidation phase, through an electric pump.

### Sludge extraction

The extraction of the sludge is carried out through a specific manual valve, which is present on the sludge recirculation line.

### Transport

These wastewater treatment plants type **EMS Water Technology** with MBBR technology are designed to be easily transported on the Italian territory and abroad since the dimensions are compatible both with road transport and in standard containers or flat racks.



### Technical data

DESCRIPTION	UNITS OF MEASUREMENT	MODEL					
		EMBBR 250	EMBBR 500	EMBBR 1000	EMBBR 1500	EMBBR 2000	EMBBR 2500
Population equivalents, Ae	N.	250	500	1000	1500	2000	2500
Daily flow, Qd	Mc/d	50	100	200	300	400	500
DBO 5	Kg/d	15	30	60	90	120	150
Installed power	kW	7,5	9,0	12,5	17,5	20,0	23,5
Dimensions in plan	m	7x5	9x5	13x6	17x6	12x8	16x8
Pipe diameter in/out	DN	DN 100	DN 100	DN 150	DN 200	DN 200	DN 200

### Technical specifications

Flow rate	50 - 500 m <sup>3</sup> /day
DBO 5 in	250 ppm
TSS	200 ppm
Water temperature	0 - 50 °C
DBO 5 (after the biological process)	< 15 ppm
TSS (after the biological process)	< 30 ppm
DBO 5 (after optional filtration)	6 ppm
TSS	10 ppm
Specific surface	250 - 350 m <sup>2</sup> /m <sup>3</sup>
Installed power	4 - 16 Kw, 380V, 50Hz

### Optional

UV disinfection	OPTIONAL
Sand filter	OPTIONAL
Carbon filter	OPTIONAL
Personal training in the country of destination	OPTIONAL
Personal training in our company	OPTIONAL
Operating manual in a language other than Italian or English	OPTIONAL

The values shown are for informational purposes only. The company **EMS Water Technology S.r.l.** reserves the right to change them at any time.

# Containerized plants for the treatment of civil and industrial wastewater

## WWEMBR

### Containerized wastewater treatment systems with MBR (Membrane Bio Reactor) technology.

## MBR wastewater treatment plant

### Treatment process

The wastewater treatment plant type **EMS Water Technology WWEMBR series** is an autonomous module, able to receive waste water directly from sewage drains or arriving from septic tanks. The process is divided into the following sections:

- Pre-treatments of fine grating, desanding and de-oiling
- Biological oxidation of aerated type
- Membrane filtration system (flat or hollow fiber)
- Sludge recirculation
- Sludge treatment and thickening
- Final disinfection
- Effluent exhaust system
- Electrical panel of general control

### Pre-treatments

The purpose of pre-treatment is to significantly reduce the amount of coarse solids arriving from the drains by automated fine grating or by primary se-dimentation, in the case of small communities. In addition, to ensure a good degree of protection of the membranes, it is advisable to follow with a pre-treatment of desanding and de-oiling by flotation and separation of light substances such as oils and greases.

### Biological oxidation of aerated type

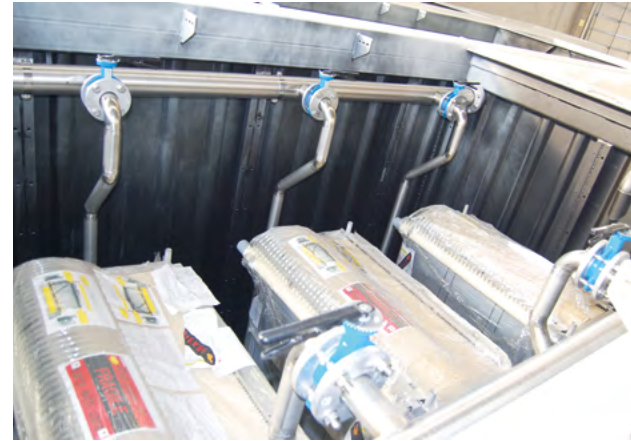
The activated sludge plants type **EMS Water Technology WWEMBR series** carry out a biological treatment that uses colonies of bacteria that, remaining in suspension in the wastewater, use biodegradable organic material that provides them with nourishment in order to obtain the necessary energy and the material for the synthesis of new cells. In this way, it is possible to achieve the formation of progressively more stable substances until the complete degradation of the organic load. The proposed activated sludge system consists of one or more oxidation tanks ventilated in series, a supply blower to the distribution network consisting of pipes and fine bubble air diffusers installed on the bottom of the tanks.

### Membrane filtration system

To ensure compliance with the restrictive parameters at the output (<20 ppm of DBO 5 and <20 ppm of SS), the best technology currently available is membrane filtration, which ensures maximum efficiency in the removal of BOD and Suspended Solids, in addition to complete bacterial purification, and allows the complete reuse of water in agriculture or conveniently for toilets w.c. .

The membrane module is installed inside one or more tanks that take access from the plowed oxidation sections. Inside these tanks the separation of the biological sludge from the water takes place. The filtration of the waste water to be treated takes place from the outer part to the innermost part of the membranes thanks to the suction action of a particular pump that subsequently sends the permeate to the disinfection phase before the final spillage to the discharge or reuse.





### Sludge recirculation

The separate sludge is recirculated by means of a pump in order to guarantee the maximum yield of the total oxidation process. Excess sludge is sent to the final dehydration system.

### Sludge treatment

Excess sludge coming from the sludge pump is sent to a dewatering unit. This unit is normally composed of draining bags placed inside a steel structure that allows to reach 15-30% of dried solids content after only an hour, up to 50-80% after storage and dehydration. When the sludge contained in the drainage bags reaches the desired concentration of water, it can be removed, closed and disposed of. The drained water is collected and fed through an external pump at the head of the wastewater treatment plant.

### Disinfection

Final disinfection intended as safety can be carried out by dosing liquid or solid hypochlorite in tablets. Alternatively the final disinfection can be performed by treatment with rays U.V. by means of special lamps.



### Effluent exhaust system

The treated and disinfected water is collected and stored in special tanks and from here it is released or reused by means of an electric pump enslaved by float levels.

### Technical data

DESCRIPTION	UNITS OF MEASUREMENT	MODEL					
		EMBR 75	EMBR 100	EMBR 150	EMBR 250	EMBR 500	EMBR 750
Population equivalent,AE	N.	75	100	150	250	500	750
Daily flow, Qd	Mc/d	15	20	30	50	100	150
DBO 5	Kg/d	4,05	5,4	8,1	13,5	27	40,5
Membrane Surface	Mq.	22,5	45	90	180	360	540
Membrane Modules	n.	1	1	1	2	4	4
Container type	n.	1x20"	1x20"	1x40"	1x40"HC	2x40"HC	2x40"HC
Pipe diameter in/out.	DN	DN 80	DN 80	DN 100	DN 100	DN 150	DN 150

### Optional

Audiovisual support	OPTIONAL
Personal training in the country of destination	OPTIONAL
Personal training in our factory	OPTIONAL
Operating manual in a language other than Italian or English	OPTIONAL

The values shown are for informational purposes only. The company EMS Water Technology S.r.l. reserves the right to change them at any time.

# Mobile drinking water treatment and emergency management systems

## **MINION BWRO**

**Mini plant for the  
purification of fresh  
water and brackish  
on skid.**

### **Description**

Osmosis is a natural process by which a more diluted solution spontaneously passes to a more concentrated solution through a semipermeable membrane. The concept of reverse osmosis is simple, as it is enough to apply pressure to a concentrated solution higher than the osmotic pressure to cause a reverse flow to the natural one, extracting the dissolved salts from the concentrated solution that manages a discharge flow; doing so on the other side of the membrane you have a low salinity solution.

### **Operation**

The reverse osmosis system basically consists of a pressurization pump and a variable number of osmotic membranes depending on the flow rate and characteristics to be obtained; for this reason it is a reliable type of system and can operate continuously without the need of regeneration or washing. The operation of the system is managed automatically by a control panel sometimes preceded by a pre-treatment also managed automatically.



## Technical data

MODEL PLANT	UNITS OF MEASUREMENT	M 15	M 30	M 50	M 100	M 150	M 200	M 300
Feeding salinity	Mg/l	< 2000	< 2000	< 2000	< 2000	< 2000	< 2000	< 2000
Temperature	°C	25	25	25	25	25	25	25
Salinity approx. permeated	%	1	1	1	1	1	1	1
Standard capacity	Mc/h	0.15	0.3	0.5	1	1.5	2	3
Recovery max.	%	35-50	52-70	35-50	52-70	62-76	68-76	76
Vessel quantity	n.	2	4	2	4	2	3	5
Membrane quantity	n.	2	4	2	4	6	9	15
High pressure pump power	kW	0.6	0.8	1.5	2.2	2.2	3.0	4.0
Connections in/conc/ perm.	DN	15,15,15	15,15,15	25,15,15	25,15,15	32,25,25	32,25,25	32,25,25

## Technical specifications

Supply water pressure	Min. 2 – max 6 bar
Water temperature food	Min. 5 – max 35°C
Water safety filter	5 micron cartridge filter
Minimum pressure alarm	Pressure switch with adjustable threshold
Power supply shut-off valve	Solenoid valve
Antiscalant dosing	Electromagnetic dosing pump with variable flow rate
Pressurization pump	Vertical multi-rotating pressurization pump in AISI 304
Vessel for Membranes	PRVF 300 PSI Polyamide wound spiral membranes, diameter 2.5" or 4", length 40"
Pressure gauges	AISI 316
Flow meters	Variable area
permeate conduction	Electronic, digital display, AISI 316 cell
Washing circuit	Predisposition for external equipment
High pressure pipes	AISI 316
Low pressure pipes	PE, PVC PN 10
Electrical control panel	Made according to current regulations
Support frame	Carbon steel, sandblasted and painted polyurethane cycle
Supply voltage	220 V or 380 V / 50 Hz

## Optional

Pre-treatment unit	Dual-media filters, activated carbon filters, self-cleaning filters
Antiscalant dosing unit	PE tank and dosing pump
Concentrated recirculation circuit	Control valve, check and flow meter
Pressurization pump	AISI 316
Thermometer	Electronic , digital display, output 4-20 mA
Pressure transmitters	AISI 316, 4-20 mA
Flow meters	Electronic , digital display, output 4-20 mA
Permeate drain valve	Pneumatic, controlled by conductivity
Flushing circuit and washing	PE tank, AISI 316 pump, cartridge filter
Support frame	AISI 304

## Dimensions and weight

PLANT MODEL	UNITS OF MEASUREMENT	M 15	M 30	M 50	M 100	M 150	M 200	M 300
Dimensions (LxVxH)	m	0.8x0.8x1.5	0.8x0.8x1.5	0.8x0.8x1.5	0.8x0.8x1.5	3.5x1x1.5	3.5x1x1.5	3.5x1x1.5
Approximate weight	kg	80	100	150	180	300	350	400

# Mobile drinking water treatment and emergency management systems

## COMBI BWRO

**Mobile systems on trailer for fresh water purification and brackish.**

## COMBI SWRO

**Mobile plants on trailers for sea water desalination.**

### Description

The **COMBI BW/SWRO** plant is designed and built by **EMS Water Technology** to produce drinking water from the well, river, lake or sea in areas with very limited water resources. The mobility of the trailer on which the unit is mounted also makes it ideal for emergency interventions as may be necessary following natural disasters or in camps for displaced people. Alternatively, these units may be part of the furniture or temporary camps of water supply systems for workplaces, missions, villages and their extended communities.

The **COMBI BW/SWRO** can be easily transported by a wide range of vehicles and thanks to a supplied generator it is completely autonomous once it arrives near a water source. The power of the current generator has been designed to have in addition to the availability of water also the necessary electricity for other uses such as night lighting and hence the name of COMBI = POWER+ H2O

### Operation

The **COMBI BW/SWRO** system is easy to use and has been designed to minimize the use of chemicals without compromising their performance. At the heart of the machine is the reverse osmosis (RO) complete system of pressure pumps and osmosis membranes specifically selected according to the quality and quantity of water needed. The **COMBI BW/SWRO** is a very reliable unit capable of continuous operation without requiring maintenance or cleaning. The unit is managed automatically through a control panel and, if necessary, they can also pre-treatment, also managed automatically.

Reverse osmosis (RO) water treatment:

- Single or double pass according to available RO systems;
- Integrated automatic backwash system;
- Disinfection with U.V. rays
- Stainless steel structure and accessories;

### Quick response:

- Plant delivered "ready to start" and highly mobile which makes it ideal for water emergency interventions;
- The configuration of the plant is optimized as dimensions both for movement on site and for container transport

### Trailer:

- Optional, but included as standard;
- The system has twist-lock quick couplings;
- On request, the system is available with towbar and NATO-specific couplings;

### Integrated generator:

- The unit is autonomous for its energy source;
- The generator is mounted on the sliding frame to be extracted to obtain maximum ventilation;
- Diesel or petrol generators are available;







### Technical data

TECHNICAL DATA	MODEL	
	COMBI TRAILER BW	COMBI TRAILER SW
Raw water origin	Brackish water	Sea water
Drinking water flow rate (depending on salinity)	0.5 ~ 1.5 m <sup>3</sup> / h MAX	0.5 ~ 1.5 m <sup>3</sup> / h MAX
Working environment temperature	5 °C ~ 50 °C	5 °C ~ 50 °C
Installed power of the power generator	5,5 Kw - 380 V 50 Hz	10 Kw - 380 V 50 Hz
Power required	3,0 kW - 380 V 50 Hz	9 Kw - 380 V 50 Hz
Dimensions	1140 x 2850 x 1400h mm	1140 x 2850 x 1400h mm
Total weight (including generator)	800 kg	900 kg

### Spare parts and accessories

✓ = Available

DESCRIPTION	COMBI TRAILER BW	COMBI TRAILER SW
Spare parts and consumables kits	✓	✓
Chemicals, cleaning and storage (kit)	✓	✓
Trailer	✓	✓
Trailer with NATO attachment, height adjusta	✓	✓
Final remineralization of water	✓	✓
Flotation device for the suction pump	✓	✓
Treated water storage tanks	✓	✓
Photovoltaic	✓	✓
Formazione on-site o in EMS Water Technology	✓	✓
User manuals and O&M in different languages English / Italian	✓	✓

# Mobile drinking water treatment and emergency management systems

## **PILLOW**

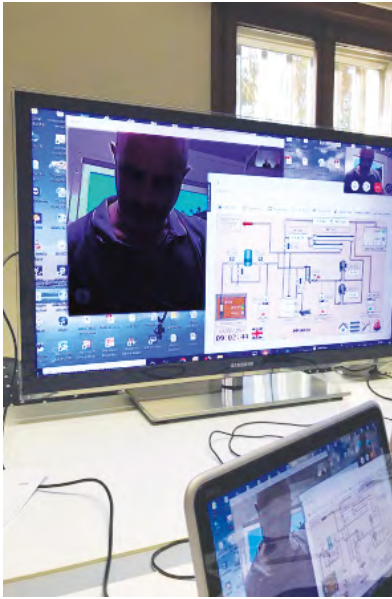
### **Transportable flexible tanks for water storage.**

In the management of water emergencies it is necessary to use special flexible tanks for the accumulation of drinking water. **EMS Water Technology** has a complete series of transportable tanks with a volume of 1,000 0 12,000 lt. The packaging material is IN P. V.C non-toxic food and is treated to be insensitizable to ultraviolet rays. The flexible tanks are complete with outlet nozzle with exclusion valve and vent valve with overflow.

For the collection of raw water can be conveniently used the "onion" tanks that have the characteristic of being self-supporting and ready for use without steel support structures.



# After-sales service



**EMS Water Technology** thanks to over twenty years of experience in the construction and management of water treatment plants is able to ensure a correct control service of the purification process and maintenance of all the electromechanical components constituting the plant performed by experienced and professional personnel.

**EMS Water Technology** operates on all types of purification plants for both civil and industrial wastewater, drinking water and reverse osmosis plants, in particular for sea water, with adequate personnel for any trip abroad, also with specific software for remote control via GSM or SAT.

With the aim of guaranteeing an adequate service to the Client **EMS Water Technology** is able to carry out training courses for local technical operators in the field; with an accurate spare parts service with reduced delivery times.





**EMS Water Technology S.r.l.**

Strada Castelletto, 1 - 46048 Roverbella - MN - Italy - Tel. +39 0376 323679 - 1888053 - Fax +39 0376 323082  
info@emswater.it - www.emswater.it