



Aquamove

Mobile Water Solutions

Pure
Water



Waste
Water



Aquamove

Mobile Water Solutions

MOBILE WATER SOLUTIONS

Veolia Water Solutions & Technologies (VWS), subsidiary of Veolia Water, is a leading design & build company and a specialized provider of technological solutions in water treatment.

AQUAMOVE™, the VWS brand for *Mobile Water Solutions*, offers a complete range of solutions and services meeting short or long term purified water needs:

- Large fleet of trailers and containers
- Full assistance and availability
- High flow rates capacity solutions
- Continuous production
- ReAct preventive service
- Pure water production: filtration, softening, reverse osmosis, ion exchange
- Wastewater treatment: clarification, dissolved air flotation, MBR, ultrafiltration, evaporation, etc.



Emergency rental

Continuity of the production cycle is essential. In case of emergency, a trailer or container will be on site in less than 24 hours (depending on the client's location).

Planned temporary hire

AQUAMOVE™ mobile water solutions and services are typically used for new plant commissioning applications such as steam blowing, chemical filling, temporary production of extra water, maintenance outages...

Long-term contract

Thanks to our full on-site service, temporary hire contracts can evolve to long term contracts -up to several years.

ACTIFLO® TURBO Trailer

HIGH-RATE CLARIFICATION

Aquamove
Mobile Water Solutions

Mid to long-term temporary solution

- State-of-the-art clarification technology
- Treats up to 125 m³/h
- Operating flexibility
- Easy start-up ; Rapid commissioning
- Outstanding capacity to cope with flow peak and load variations
- High settling rates
Combination of weighted flocculation and lamella settlement

Since its launch in 1989, ACTIFLO® has been constantly improved to optimize its performance and applications. With more than 700 references installed worldwide, Veolia Water Solutions & Technologies has unparalleled feedback which has made it possible to **develop and exclusively patent** the next generation of microsand ballasted clarifiers.

ACTIFLO® TURBO is equipped with:

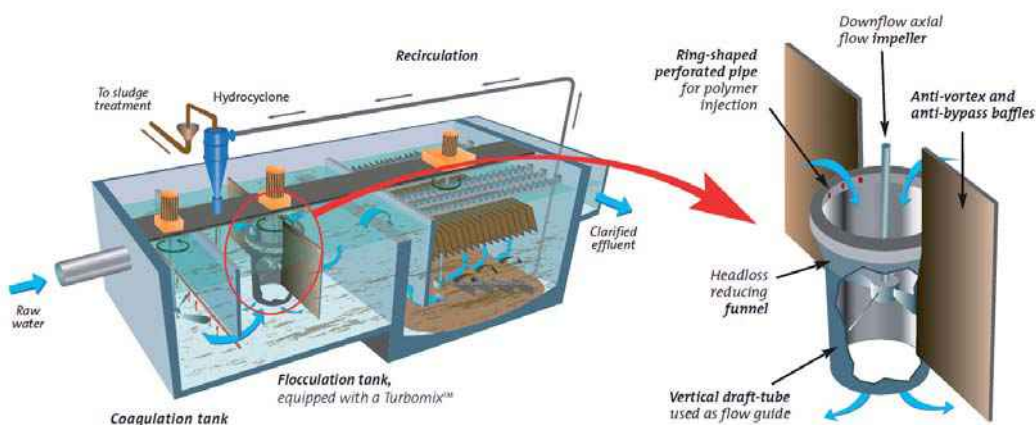
- a coagulation tank
- a flocculation tank with a **Turbomix™**
- a hydraulically optimized settling tank with lamella
- a hydrocyclone for microsand recovery
- a sludge thickening system / a contact tank when the unit operates with powdered activated carbon (Actiflo Carb) or as a softener (Acti Soft)

The Turbomix™

- Enhance flocculation efficiency
- High level of homogeneous mixing of the coagulated water with the microsand and polymer
- Reduced retention times
- Reduced energy consumption

Typical applications

- All clarification needs
- Drinking water clarification
- Process water, softening, waste water primary settlement
- Tertiary solids and phosphate polishing
- Sludge liquors treatment
- Activated sludge clarification
- RO pretreatment (combined with filtration)
- Trickling filters humus tank, combined sewer overflow treatment



ACTIFLO® TURBO Trailer

HIGH-RATE CLARIFICATION

Aquamove
Mobile Water Solutions

System Performance	
Flow Rate	25-125 m ³ /h
Softening Mode (Actiflo Soft)	40 m ³ /h
Typical Clarification Rate	80 m ³ /h
Carbon Filtration Mode (Actiflo Carb)	40 m ³ /h
System Dimensions	
Length	13650 mm
Width	2500 mm
Height	4510 mm
System Connections	
Inlet Connection	DN 150mm PN16
Outlet Connection	DN 200mm PN16
Sludge Connection	DN 80mm PN16
Electrical Supply	
Electrical Type	125A ; 400V ; 3 phases + earth + neutral



ACTIFLO® AS1 Trailer

HIGH-RATE CLARIFICATION

Aquamove
Mobile Water Solutions

Mid to long-term temporary solution

- State-of-the-art clarification technology
- Treats up to 125 m³/h
- Operating flexibility
- Easy start-up ; Rapid commissioning
- Outstanding capacity to cope with flow peak and load variations
- High settling rates
Combination of weighted flocculation and lamella settlement

Since its launch in 1989, ACTIFLO® has been constantly improved to optimize its performance and applications. With more than 700 references installed worldwide, Veolia Water Solutions & Technologies has unparalleled feedback which has made it possible to **develop and exclusively patent** the next generation of microsand ballasted clarifiers.

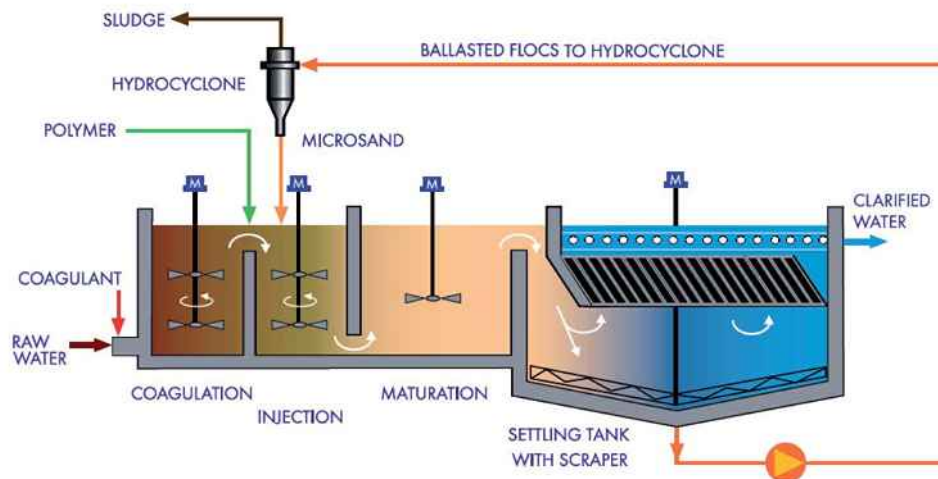
ACTIFLO® CLASSIC is equipped with:

- a coagulation tank
- an injection tank
- a flocculation tank
- a hydraulically optimized settling tank with lamella
- a hydrocyclone for microsand recovery



Typical applications

- All clarification needs
- Drinking water clarification
- Tertiary waste water treatment
- Tertiary solids and phosphate polishing
- Sludge liquors treatment
- Activated sludge clarification
- RO pretreatment (combined with filtration)
- Trickling filters humus tank, combined sewer overflow treatment



ACTIFLO® AS1 Trailer

HIGH-RATE CLARIFICATION

Aquamove
Mobile Water Solutions

System Performance		
Flow Rate	25-125 m ³ /h	
Typical Clarification Rate	60 m ³ /h	
Max Clarified Water	115 m ³ /h	
Min Inlet Pressure	0.1 bar	
Max Inlet Pressure	6 bar	
System Dimensions	ACTIFLO® AS1-A	ACTIFLO® AS1-B
Length	13650 mm	12000 mm
Width	2500 mm	2200 mm
Height	4510 mm	4100 mm
System Connections		
Inlet Connection	DN 150mm PN16	
Outlet Connection	DN 200mm PN16	
Sludge Connection	DN 80mm PN16	
Electrical Supply		
Electrical Type	125A ; 400V	



Mobile ACTIFLO® AS1-A unit



Mobile ACTIFLO® AS1-B unit

MOFI-DF1702-1F

DISC FILTRATION

Aquamove

Mobile Water Solutions

Mid to long-term temporary solution

- Compact skid-mounted unit
- Flow capacity 20 m³/hr
- Microscreen filter opening 10 µm
- Moving backwash system
- Efficient filter media cleaning
- Minimal water consumption
- Simplified control system



Aquamove™ MODF-1702-1F disc filter is a woven media filter for **fine solids removal and product recovery**. The disc filter offers a large filter area in a small footprint.

Moving backwash spray header

The moving backwash spray header of the Aquamove™ MODF-1702-1F disc filter guarantees **efficient cleaning of the filter media**. This feature increases the life expectancy of the filter media and results in a **20% savings** in rinse water consumption. The backwash spray header also folds out to **facilitate maintenance** of the spray nozzles, which can be removed and replaced without the use of any tools.

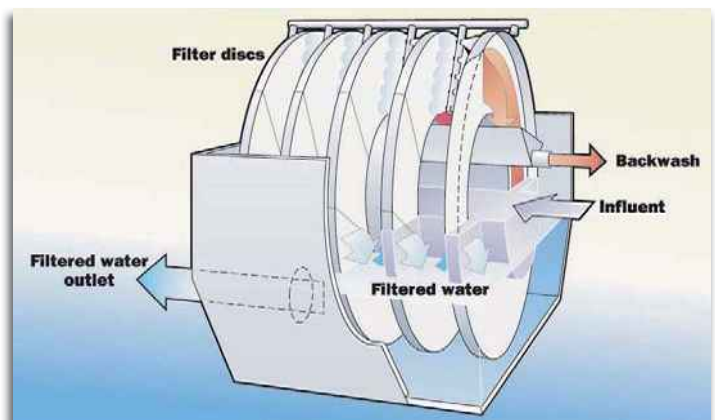
How does it work

The influent flows by gravity into the filter discs from the center drum. Solids are separated from the water by the filter media mounted on the two sides of the discs, which are partially submerged. With this arrangement, the solids are retained within the filter discs while only the clean water flows to the outside of the discs and into the collection tank. This allows for the effective **removal of large solids and floatable material**. Maintenance is reduced since there is **no accumulation of solids in the tank**. During normal operation, the discs remain static until the water level in the inlet channels rises to a specific point. A sensor located at this point **automatically initiates the backwash cycle**. The filtered effluent provides a perfect source of backwash water, eliminating the need for a separate source of cleaning water or an additional clean water collection tank. Clean effluent is pumped to the backwash spray header and nozzles, washing solids into the collection trough as the discs rotate. The backwash water required is typically 1-3 percent of the total flow to the filter, depending on solids loading rates.



Typical applications

- Emergency/ temporary water needs
- Process water pretreatment
- Surface water treatment
- Wastewater treatment



MOFI-DF1702-1F

DISC FILTRATION

Aquamove
Mobile Water Solutions

Equipment Components	
<ul style="list-style-type: none"> • 1 x discfilter pilot with one 1.7 m dia disc fitted • 1 x backwash pump • 1 x SEW-Eurodrive motor and gearbox • 1 x level inlet probe • 1 x inlet flange connection • 1 x final effluent flange connection 	<ul style="list-style-type: none"> • 1 x dirty backwash water flange connection • 1 x segregated bypass/overflow facility • 1 x tank drain connection • 20 x left-hand 10 micron or 20 micron filter elements • 20 x right-hand 10 micron or 20 micron filter elements • 1 x local control panel fixed to the Discfilter
Typical Data	
Type	HSF1702-1F
Capacity	20 m ³ /hr
TSS in	20 - 30 mg/l
Material	RVS 304
Drive	Chain, 0.55 kW (SEW)
Level sensor	1 level sensor with connection box
Filter	
Type	HSF 17 LVR
Filter	10 micron
Filter panels	1
Filter material	Polyester in RVS 304 frame
Filter surface	2.8 m ²
Backwash Pump	
Type	Grundfos - 1,1 kW – 415 V / 50 Hz / 3 Fase
Backwash filter	Amiad 1,5", 200 µm
Backwash inlet	2"
Backwash outlet	Polyester in RVS 304 frame
Filter surface	Ø 100 mm – PN10
Dimensions & Weights	
Length / Width / Height	L2500 mm / W2500 mm / H 2330 mm
Weight	approx. 1500 kg
Connections	
Feed water inlet	Flange 250 mm PN 10
Product water	Flange DN 250 PN10
Solids outlet	Flange 100 mm PN10
Separate by-pass	Flange 200 mm PN10
Control System	
Type	1700 PFI
Class	IP 65
Power connection	380 V / 50 Hz / 16 A
Lay-out	Start/stop on level switch
Accessories	Switch hand – auto – stop Presser switch for protection pump low water 2 potential free contacts report in use and alarm 3 signal lights: fault filter, fault pump and low water level

MOFI-3x80S

FILTRATION

Aquamove
Mobile Water Solutions

Short to long-term temporary solution

- Skid-mounted system
- Cartridge filtration technology, absolute rated from 1-70 micron
- System capacity up to 198 m³/hr via DN100 connections
- Simple operation, can easily be operated by one person
- High dirt holding capacity



Typical applications

- Equipment protection
- Filtration (solids removal)
- Changes in raw water quality
- Flushing and cleaning of closed water systems
- Prefiltration for Aquamove™ MORO, MOFI and MODI units



The Aquamove™ MOFI-3x80S mobile filtration system is an advanced design which uses radially pleated large diameter filter cartridges in a flexible flow set-up to allow the **three filter housings** to be operated in series, parallel or sequentially.

Cartridges are absolute rated from 1-70µ and are each capable of flowing up to 80 m³/hour flow rate. Three cartridges per housing for maximum dirt loading and process life.

Fitted dP gauges indicate filter blocking.

Skid mounted unit can be moved by fork lift or by using fitted slings and fits into 20' container.

Filter Vessel / Skid Design

- Innovative compact skid design to reduce operational footprint and minimises capital expenditure ; Facilitates ease of location during installation
- Flow design: 3 vessels (each holding 3 filter cartridges) sequential in series, parallel or individual vessels
- Light weight and compact to facilitate transport and installation considerations
- Stainless steel construction: Crash frame to DNV 2.7-1, vessels to EN 13445 Group 3 stainless steel, DNV approved lifting system, resulting in reduced maintenance demands
- Corrosion resistant materials, aiding longevity of the unit

Filter Cartridges

- High flow capability of up to 80 m³/hr per cartridge: Fewer cartridges required, minimising transport, labour and disposal costs
- Reduced operator downtime: High dirt loading capacity for longer operational life and the potential to reduce unit costs per cubic metre (bbl) filtered
- High dirt holding capacity: Compound radial pleat design extends operational life before filter change out and minimises product loss, operator exposure and cartridge waste for disposal
- Solids control: Consistent effluent quality throughout the cartridge life; and available in absolute ratings of 70, 40, 25, 15, 10, 2 and 1 micron
- Twist to lock: Secure cartridge seating mechanism provides positive seal, preventing potential fluid by-pass
- Ease of use: No special tools or hardware required for filter change outs, reducing downtime (typically less than 5 minutes per vessel)
- Robust handle design: Facilitates easy cartridge loading and removal

MOFI-3x80S

FILTRATION

Aquamove
Mobile Water Solutions

Typical Data	
Permeate capacity (nominal)	80 m ³ /h per filter
Feed flow (max)	160 m ³ /h
Number of filters	3
Cartridge type	High Flow large diameter (165mm)
Cartridge material	100% Polypropylene, fully welded
Standard filtration slot	70 µm
Effective filtration area	117m ²
Dirt loading capacity	99 kg (approx.)
Change out	10 minutes per vessel
Operators	One
Run options	3 vessel sequential, series and parallel
Pipe Material	316L stainless steel
Feed water pressure requirements	10 Barg max
Feed water temperature requirements	71 °C max
Maximum forward dP	3.4 bar
Recommended change	2.4 bar
Dimensions & Weights	
Footprint	1700 m x 1700 m = 2.72 m ²
Height	2400 mm
Shipping weight	1.75 metric tonnes
Operation weight	2.65 metric tonnes
Connections	
Inlet / Outlet	4" DIN Flange



MOFI 3x60S

FILTRATION

Aquamove
Mobile Water Solutions

Mid to long-term temporary solution

- Skid-mounted system
- Bag filtration technology
- Plug & play equipment
- Easy manual use



The Aquamove™ MOFI-3x60S is a mobile filtration **skid-mounted system**. It constitutes **three housings** mounted **in parallel** and fitted with **bag filters**.

A **pressure gauge** measures the inlet and outlet and inform on the filter clogging.

Each filter can be isolated by two manual closing valves enabling bag exchange for one filter without stopping flow on the two others filters 6" inlet and outlet pipe collect water. The Aquamove™ MOFI-3x60 can be moved **easily** with a standard fork-lift truck.

Typical applications

- Equipment protection
- Filtration (solids removal)
- Changes in raw water quality
- Flushing and cleaning of closed water systems
- Prefiltration for Aquamove™ MORO, MOFI and MODI units



Typical Data

Permeate capacity (nominal)	3x60 m ³ /h
Feed flow (max)	3x60 m ³ /h
Recovery (typical)	100%
Number of filters	3
Bags material	Polyester
Standard filtration slot	10 µm (other on request)
Membrane area	0.85m ² per filter
Feed water quality requirements	max 5 ppm TSS
Filter Material	SS316L
Feed water pressure requirements	6 Bar
Feed water temperature requirements	60°C

Dimensions & Weights

Length	1700 mm
Width	1400 mm
Height	1700 mm
Shipping weight	450 Kg
Operation weight	750 Kg

Connections

Feed water	Flange 6" (DN 150)
Product water (permeate)	Flange 6" (DN 150)

MOFI-2x73S

FILTRATION

Aquamove
Mobile Water Solutions

Short to long-term temporary solution

- Flexible unit
- Parallel filtration or series filtration
- 2 filtration vessels filled with sand, anthracite or garnet
- Epoxy coated carbon steel vessel
- Manual backwash system



Veolia Water Solutions & Technologies have developed a range of flexible **filtration units**.

Installation, commissioning and ongoing service support from our service engineers are provided, ensuring the continued operation of the plant.

By utilising the now familiar MOFI-2x73S vessel with suitable media, a temporary engineered system can be set-up with relatively short notice.

The **Aquamove™ MOFI-2x73S**, like other **Aquamove™** equipment has been designed to be **modular** so it can form part of a much larger system when combined with other assets from the **Aquamove™** stable.

This unit has proven invaluable as **pre-treatment for reverse osmosis** plant on a temporary basis as well as for **iron and manganese removal**.

Flexible configuration

Whether it's **lead/lag filtration**, **parallel filtration for iron and manganese removal**, the **Aquamove™ MOFI-2x73S** can be customised for your process.



Typical applications

- Pre-treatment
- Emergency water supply
- Capacity uplift
- Scheduled outage periods

System Typical Data	
Flow Rate (per filtration vessel)	nom. 73 m ³ /hr (min. 49 m ³ /hr ; max 98 m ³ /hr)
Backwash Flow Rate	120 m ³ /hr
Waste per Backwash Sequence	30 m ³
Max Operation Pressure	6 bar
Max Operation Temperature	40 °C
Backwash Control	Manual
System Dimensions	
Vessel Diameter	2500 mm
Vessel Height	2610 mm
Cylindrical Height	1000 mm
System Width	3300 mm
System Depth	2700 mm
System Height	3060 mm
Shipping weight (filled with media) per vessel	10 tons
System Connections	
Vessel Connection	6"
Piping	
uPVC	

Short to long-term temporary solution

- Skid-mounted system
- Bag & cartridge filtration technology
- Plug & play equipment
- Easy manual use

Veolia Water Solutions & Technologies have developed a range of flexible **filtration units**.

The **Aquamove™ MOFI – 57S** is a mobile filtration, skid mounted system. It constitutes a bag filter and cartridge filter **mounted in series** on a mobile platform.

Each skid can operate separately or both skids can be bolted together thus doubling the capacity to allow for increased flows.

Each skid comes complete with pipework, valves and gauges to allow monitoring of the pressures into and out of each filter.

Each skid is fitted with swivel wheels to allow **easy manoeuvring and positioning** of the units.

The **Aquamove™ MOFI-57S**, like other Aquamove™ equipment has been designed to be **modular** so it can form part of a much larger system when combined with other assets from the Aquamove™ range.

Installation, commissioning and ongoing **service support** from our service engineers are provided, ensuring the **continued operation** of the plant.



Typical applications

- Equipment protection
- Filtration (solids removal)
- Changes in raw water quality
- Flushing and cleaning of closed water systems
- Pre-filtration for Aquamove™ MORO, MOFI and MODI units



Filter Typical Data	Bag	Cartridge
Feed Flow (single unit)	36 m ³ /hr*	57 m ³ /hr*
Feed Flow (2 units in parallel)	72 m ³ /hr*	115m ³ /hr*
Number of bags / cartridges	1	12
Bag & cartridge material options	Polypropylene Nylon Polyester	Nylon Polyester Polypropylene
Bag porosity	5 – 10 µm Other sizes available	5 – 10 µm Other sizes available
Housing material	316SS	316SS
Maximum feed pressure	10 bar	10 bar
Maximum operating temperature	149 °C	149 °C
System Dimensions	Each Skid	
Length	1800 mm	
Width	600 mm	
Height	1700 mm	
Weight	205 kg per skid	
System Connections	Single Unit	Dual Unit
Feed water	2" PN 10 Flange	3" PN 16 Flange
Treated water	2" PN 10 Flange	3" PN 16 Flange

* Raw water quality or solids content will affect the performance of the filters

MOFI-4x1200C

FILTRATION

Aquamove
Mobile Water Solutions

Mid to long-term temporary solution

- Flexible ISO containerised system
- Controls inputs and outputs for automatic operation
- Automatic backwash system
- Flexible vessels can be filled with any suitable media
- Tri-mode
 - parallel filtration
 - lead/lag filtration
 - deionisation
- External pump skid can be easily added to boost water pressure



Typical applications

- Pilot trials
- Pre-treatment
- Emergency water supply
- Capacity uplift
- Scheduled outage periods

Veolia Water Solutions & Technologies have developed a range of containerised plant for **organic scavenging and filtration**.

The modular solution, using standard components from other Aquamove™ assets, is housed in heated and lit standard ISO containers. Installation, commissioning and ongoing service support from our service engineers are provided, ensuring the continued operation of the plant.

By utilising the now familiar MOFI flexible vessel with suitable media, a temporary engineered system can be set-up with relatively short notice. The Aquamove™ MOFI-4x1200C, like other Aquamove™



equipment has been designed to be **modular** so it can form part of a much larger system when combined with other assets from the Aquamove™ stable. This unit has proven invaluable as **pre-treatment for reverse osmosis** plant on a temporary basis as well as for **iron and manganese removal**. The unit can also be configured for working or polishing **mixed bed de-ionisation** when in DI mode. Using interchangeable MOFI vessels from Aquamove™ stocks available 24 hours a day, eliminates major chemical handling and regeneration on site.

Flexible configuration

Whether it's **lead/lag filtration**, **parallel filtration for iron and manganese removal**, or **deionisation**, the Aquamove™ MOFI-4x1200C can be customised for your process. By using a high specification Siemens PLC control system, pre programmed with three operating modes, the unit can be quickly configured to the required mode.

Automatic self-contained back wash system

The Aquamove™ MOFI-4x1200C unit can **monitor and control** all typical operations utilised for **backwashing and / or conductivity monitoring**. The unit can also be connected with an external alarm output and connections for power and demand for external equipment such as feed and dosing pumps.

System Performance	
Flow Rate	
Parallel Filter Mode*	7 - 70 m ³ /hr
Lead / Lag Filter Mode*	7 - 36 m ³ /hr
Carbon Filter Mode*	7 - 60 m ³ /hr
DI Mode	15 - 70 m ³ /hr
Pressure Drop (Max.)	2.5 barg
Min Inlet Pressure	3 barg
Max Inlet Pressure	6 barg
Effluent Flow (Max.)	30 m ³ /hr
Remote Controls	Demand/ Permit / Feed pump run / Upstream inhibit / General alarm output / Dosing pump run x 2
* Filtration design based on 5 ppm suspended solids	
ISO Container Dimensions	
Length	7.30 m
Width	2.44 m
Height	2.89 m
System Connections	
Inlet Connection	3" , Male Camlock
Outlet Connection	3" , Male Camlock
Effluent Connection	2½" , Male Camlock
Electrical Supply	
Electrical Connection	3-pin BS4343 chassis mounted appliance inlet
Electrical Type	1-phase 220V 32A
Full Load Running Power	4kW

MOFI-4x10C

FILTRATION

Aquamove
Mobile Water Solutions

Mid to long-term temporary solution

- ISO containerised system
- Controls inputs and outputs for automatic operation
- Automatic backwash system
- 4 filtration vessels filled with sand
- Bi-mode
 - parallel filtration
 - lead/lag filtration
- External pump skid can be easily added to boost water pressure

Veolia Water Solutions & Technologies have developed a range of containerised plant for **filtration**.

The modular solution, using standard components from other Aquamove™ assets, is housed in heated and lit standard ISO containers. Installation, commissioning and ongoing service support from our service engineers are provided, ensuring the continued operation of the plant.

By utilising the now familiar MOFI-4x10C vessel with sand, a temporary engineered system can be set-up with relatively short notice. The **Aquamove™ MOFI-4x10C**, like other Aquamove™ equipment has been designed to be **modular** so it can form part of a much larger system when combined with other assets from the Aquamove™ stable. MOFI-4x10C comes with 15-20m of flexible hose for feed, product and waste.

This unit has proven invaluable as **pre-treatment for reverse osmosis plant** on a temporary basis as well as for **iron and manganese removal**.

Flexible configuration

Whether it's **lead/lag filtration**, **parallel filtration for iron and manganese removal**, the **Aquamove™ MOFI-4x10C** can be **customised** for your process.

Automatic self-contained back wash system

The **Aquamove™ MOFI-4x1200C** unit can **monitor and control** all typical operations utilised for **backwashing**.



Typical applications

- Pre-treatment
- Emergency water supply
- Capacity uplift
- Scheduled outage periods

System Typical Data	
Flow Rate	6 - 40 m ³ /hr
Pressure Drop (Max.)	2.5 barg
Min Inlet Pressure	3 barg
Max Inlet Pressure	6 barg
Backwash Control	Manual or time controlled with filtrate of other 3 filters
Sand Filter (HF9 UF36)	
Size	D x H = 960 x 2130 mm per filter
Filter Filling	Sand 0.6 x 0,8 mm 700 kg Gravel 2 x 3 mm 150 kg Gravel 6 x 9 mm 150 kg Gravel 10 x 18 mm 350 kg
ISO Container Dimensions	
Length	6058 mm
Width	2438 mm
Height	2591 mm
Shipping Weight	± 10 tons
System Connections	
Water	
Inlet Connection	3", Male Camlock
Outlet Connection	3", Male Camlock
Effluent Connection	3" , Male Camlock
Air	
Air connection	½"
Electrical	
Electrical Connection	230 V, 50 Hz, 2 kW
Piping	
All the internal piping at the trailer is executed in PVC PN10/16 Saddle connections PN6, Flexible hoses PN6.	
Optional Equipment	
- 1x feed pump - Flange/ Camlock couplings 3"	

MOSO-3x700C

SOFTENING

Aquamove
Mobile Water Solutions

Mid to long-term temporary solution

- Flexible ISO containerised system
- Softening < 0.1°dH, < 5 mg/l as CaCO₃
- Organic scavenging
- Filtration
- Autonomous operation
- Automatic regeneration
- Flexible flow rates
- Triplex configuration

Aquamove™ have developed a range of containerised plant for **softening, organic scavenging and filtration.**

The modular solution, using standard components from other Aquamove™ assets, is housed in heated and lit standard **ISO containers.**

Each MOSO-3x700C unit comes with 15-20m of hose with Camlock connectors for feed, product and waste and can be integrated with feed pumps.

Installation, commissioning and ongoing service support from our service engineers are provided, ensuring the **continued operation** of the plant.



Flexible configuration

Whichever mode is used, the configuration allows the unit to adapt to suit your requirements. By configuring the number of streams available and the mode of operation, flow rates are available from **10-45 m³/hr.**

Automatic self-contained regeneration

Utilising our tried and tested equipment; each unit comes with **automatic controls** to manage the self contained regeneration plant.

Once installed and commissioned, the usual monitoring and regeneration chemical replenishment is all that is required.



Typical applications

- Low pressure boiler feed
- Pilot trials
- Glass finishing
- Food and beverage
- Pre-treatment
- Emergency water supply
- Capacity uplift
- Scheduled outage periods

Health and safety

Each MOSO-3x700C unit is insulated and ventilated and lit to provide comfortable working conditions. It can be heated for frost protection. Safety kits including first aid kit, fire extinguisher, fire blanket, chemical safety data sheets and operating manual are provided as standard.

System Performance	
Configuration	Triplex 3 x 700 L
Capacity	45 m ³ /h
Min. capacity	10 m ³ /h
Period capacity / vessel mg/l as CaCO ₃	42 kg
Feed water pressure requirements	3 bar (min 1.5-2 bar , max 6 bar)
Pressure loss @ 25 m ³ /h	2 bar
Feed water temperature requirements	2-35 °C
Regeneration cycle	Automatic Volume Initiation
Salt consumption per vessel	85 kg
Volume regeneration tank	3 x 1153 L
System Connections	
Inlet Connection	4" Camlock Male
Outlet Connection	4" Camlock Male
Effluent Connection	4" Camlock Male
System Dimensions	
Length	12200 mm
Width	2444 mm
Height	3200 mm
Shipping weight	± 5 T
Electrical Supply	
Electrical connection	380-415V, 63A, 3 Phases + neutral
Full load running power	22 KW (with internal pump), 16A 240V if not used
Control System	
Control cabinet	24V DC Demand/ Permit
Hardness measuring	Optional
Alarms	General alarms terminals

MOSO-2x700C

SOFTENING

Aquamove
Mobile Water Solutions

Mid to long-term temporary solution

- Flexible ISO containerised system
- Softening < 0.1°dH, <5 mg/l as CaCO₃
- Dealkalisation
- Organic scavenging
- Filtration
- Autonomous operation
- Automatic regeneration
- Flexible flow rates
- Duplex configuration

Aquamove™ have developed a range of containerised plant for **softening, dealkalisation, organic scavenging and filtration.**

The modular solution, using standard components from other Aquamove™ assets, is housed in heated and lit standard **ISO containers.** Each MOSO-2x700C unit comes with 15-20m of hose with Camlock connectors for feed, product and waste and can be integrated with feed pumps. Installation, commissioning and ongoing service support from our service engineers are provided, ensuring the **continued operation** of the plant.

Flexible configuration

Whichever mode is used, the configuration allows the unit to adapt to suit your requirements. By configuring the number of streams available and the mode of operation, flow rates are available from **2.5-30 m³/hr.**

Automatic self-contained regeneration

Utilising our tried and tested equipment; each unit comes with **automatic controls** to manage the self contained regeneration plant. Once installed and commissioned, the usual monitoring and regeneration chemical replenishment is all that is required.

Health and safety

Each MOSO-2x700C unit is insulated and ventilated and lit to provide comfortable working conditions. It can be heated for frost protection. Safety kits including first aid kit, fire extinguisher, fire blanket, chemical safety data sheets and operating manual are provided as standard.



Typical applications

- Low pressure boiler feed
- Pilot trials
- Glass finishing
- Food and beverage
- Pre-treatment
- Emergency water supply
- Capacity uplift
- Scheduled outage periods



MOSO-2x700C

SOFTENING

Aquamove
Mobile Water Solutions

System Performance	MOSO-2x700C N	MOSO-2x700C U
Configuration	Duplex 2 x 700 L	
Capacity	25 m ³ /h	30 m ³ /h
Min. capacity	2.5 m ³ /h	6.8 m ³ /h
Period capacity	2600 m ³ /°D	40200 m ³ /mg/l as CaCO ₃ each vessel
Feed water pressure requirements	3 bar (min 1.5-2 bar , max 6 bar)	3 bar (min 1.5-2 bar , max 6 bar)
Pressure loss @ 25 m ³ /h	1.6 bar (1.4 bar valve + 0.2 bar resin)	2 bar
Feed water temperature requirements	2-35 °C	2-35 °C
Regeneration cycle	24V DC Demand/ Permit	Automatic volume initiation
Salt consumption	163 kg per regeneration (max)	77 kg per vessel regeneration
Volume regeneration tank	± 1000 kg	1078 kg
System Connections	MOSO-2x700C N	MOSO-2x700C U
Inlet Connection	3" Camlock Male	
Outlet Connection	3" Camlock Male	
Effluent Connection	3" Camlock Male	
System Dimensions	MOSO-2x700C N	MOSO-2x700C U
Length	6058 mm	6100 mm
Width	2438 mm	2444 mm
Height	2591 mm	2740 mm
Shipping weight	± 5 T	± 5 T
Electrical Supply	MOSO-2x700C N	MOSO-2x700C U
Electrical connection	230V, 6A, 3 Phases + neutral	220V, 32A, 1 Phase
Full load running power	6 A	4 KW
Control System	MOSO-2x700C N	MOSO-2x700C U
Control cabinet	Testomat F-BOB	MS2050
Hardness measuring	Alarm > 0.3 °D	N/A
Alarms	General alarms terminals	General alarms terminals
External connections	Start / Stop WM puls MMP 81	Start / Stop Feed pump run output
		MOSO-2x700C U
Outlet UV Disinfection/Deozonisation		at 30 mJ/cm ² 30 m ³ /h at 90 mJ/cm ² 16.8 m ³ /h

MOSO-2x140S

SOFTENING

Aquamove
Mobile Water Solutions

Mid to long-term temporary solution

- Skid-mounted system
- Softening < 0.1°dH
- Alkalisiation reduction
- Autonomous operation
- Automatic regeneration
- Flexible flow rates



Veolia Water Solutions & Technologies offers Aquamove™ MOSO-2x140S range of mobile skid-mounted system for softening and dealkalisation.

The **modular solution**, using standard components from other Aquamove™ assets, comes with 5-10m of flexible hose for feed, product and waste and can be integrated with a feed pumps.

Installation, commissioning and ongoing service support from **our service engineers** are provided, ensuring the continued operation of the plant.



Business continuity

In today's highly competitive environment no company can afford to lose valuable production time. **Regular maintenance of capital plant** aims to prevent this but should the unthinkable happen then business continuity is the first priority. Aquamove systems are increasingly being factored into the contingency plans – ensuring that the flow of softened water continues no matter what.

Flexible configuration

The configuration allows the unit to adapt to suit your requirements. **Flow rates are available from 5-9 m³/hr.**

Automatic self-contained regeneration

Utilising our tried and tested equipment; each unit comes with **automatic controls to manage the self contained regeneration plant.** Once installed and commissioned, the usual monitoring and regeneration chemical replenishment is all that is required.

Typical applications

- Low pressure boiler feed
- Process water
- Alkalinity reduction
- Pilot trials
- Glass finishing
- Food and beverage
- Pre-treatment
- Emergency water supply
- Capacity uplift
- Scheduled outage periods



Typical Data	
Configuration	Duplex 2 x 140 L
Capacity	5-9 m ³ /h (nom-max)
Min. capacity	0.6 m ³ /h
Period capacity	530 m ³ /°D
Feed water pressure requirements	3 bar (min 1.5-2 bar , max 6 bar)
Feed water temperature requirements	2-35 °C
Salt consumption	33.6 kg per regeneration (max)
Volume regeneration tanks	2 x 150 kg
System Connections	
Inlet Connection	PVC DN32/40mm female thread – 1,5” hose
Outlet Connection	PVC DN25/32mm male thread – 1” hose
Effluent Connection	PVC DN50/63mm female thread – 1,5” hose
Electrical Connection	230V, 6A
System Dimensions & Weight	
Length	1300 mm
Width	1100 mm
Height	2300 mm
Weight	± 650 kg
Control System	
Control cabinet	MMP 80/81
Alarms	General alarms terminals
External connections	Start regeneration / WM puls

MORO-4x24T

REVERSE OSMOSIS

Aquamove
Mobile Water Solutions

Short-term emergency response

- 40' articulated insulated trailer
- 4 skids of reverse osmosis plant
- Treats up to 100 m³/hr
- Treated water < 5% salt passage
- No regeneration required
- Cost effective
- Pre-treatment available



Typical applications

- Temporary water
- Emergency response
- Commissioning supplies
- Steam blows
- Pipe flushing
- Shut down supplies
- Seasonal capacity uplift
- Changing water quality



The Aquamove™ MORO-4x24T provides 4 reverse osmosis plant skids in a 40' articulated, insulated semi-trailer. Each skid can produce 25 m³/h, in parallel for a global production of 25 to 100 m³/h at < 5% salt passage, between 0.1 and 0.5 ppm SiO₂. Each MORO-4x24T unit is equipped with 15-20m flexible hose with Camlock connectors for feed, permeate and reject and can be controlled by level switches and integrated in a complete production plant with feed and treated water pumps.

Optional pretreatment and polishing

Where required Aquamove™ MORO-4x24T trailers can be integrated with Aquamove™ MOFI mobile pretreatment systems and Aquamove MOFI or MODI mixed-bed polishing systems. MOFI and MODI polishers are regenerated off-site and offer economic run lengths and zero discharge.

Health and safety

Each MORO-4X24T unit is insulated and ventilated and lit to provide comfortable working conditions. It can be heated for frost protection. Safety kits including first aid kit, fire extinguishers, chemical safety data sheets and eye wash are provided as standard.

Service and operation

Once installed and commissioned our local service engineer will visit your site at an agreed frequency to ensure that the unit is operating correctly, that chemical supplies are topped up and that filters are replaced as required. A full time operator can be provided at your request.

Chemical dosing

All systems are deployed with appropriate chemical dosing to enhance process performance including scale control and chlorine elimination and pH control.

Clean in place (CIP)

For extended use it is likely that the membranes could require cleaning. Our engineers will perform this service using a mobile CIP system. You will be advised in advance of the chemicals to be used so that waste disposal requirements can be attended to. Alternatively, a fresh cleaned MORO 24x4T can replace the previous one to avoid chemicals use on site.



MORO-4x24T

REVERSE OSMOSIS

Aquamove

Mobile Water Solutions

Typical data	Single pass RO (4 units in parallel)	Double pass RO (2x2 skids in parallel x series)
Capacity (total)	80 - 100 m ³ /hr	40 m ³ /hr
Feed Flow (total)	117 - 133 m ³ /hr	56 - 66 m ³ /hr
Reject Flow (total)	29 - 40 m ³ /hr	16 - 26 m ³ /hr
Recovery (SDI<5)	75%	1 st pass 75 %; 2 nd pass 90%
Permeate quality		<2% salt passage
Operation pressure pump	10.7 bar each RO skid	
Array	3:2:1 each RO skid	
Membranes	Spiral wound 8", brackish water, low energy	
Feed water quality requirements	Fe < 0.1 mg/l, Mn < 0.1 mg/l, pH 2-11, < 1 NTU	
Feed water pressure requirements	3 bar (min. 1.5-2 bar ; max 6 bar)	
Feed water temperature requirements	2-35°C	
Silt Density Index (SDI 15) feed water	<5	
Max TDS feed water	2000 mg/l	
Connections		
Feed water	6" Camlock SS female (30-130 m ³ /hr, ~3 bar)	
Product water	6" Camlock SS female (20-100 m ³ /hr)	
Waste water	3" Camlock SS female (14-40 m ³ /hr)	
Power	54 kW (2 x RO skid) ; 108 kW (4 x RO skid)	
Power connection	Wire connection (400V 5-pole)	
Control System		
Control cabinet	Siemens PLC S7	
Start-up	4x soft starter	
Alarms	General alarm terminals	
External connections	Terminal for start and stop function Terminal for start/ stop external booster pump	
MCC	4x	
Dimensions & Weight		
Length	13850 mm or 13720 mm (depending on models)	
Width	2600 mm	
Height	4000 mm	
Shipping weight	± 15.3 T	



MORO-60T

REVERSE OSMOSIS

Aquamove
Mobile Water Solutions

Mid-term temporary solution

- Flexible and modular units
- Treats up to 60 m³/hr
- Treated water to: < 5% salt passage
- No regeneration required
- Cost effective
- Pre-treatment available



The Aquamove™ MORO-60T is a 40' trailer capable to **produce up to 60 m³/h of purified water.**

Each MORO-60T unit comes with 15/20m of hose with Camlock connectors for feed, permeate and reject and can be integrated with feed pumps and level controls.

Optional pretreatment and polishing

Where required MORO-60T units can be integrated with Aquamove mobile pretreatment systems and Aquamove™ MOFI mixed-bed polishing systems. MOFI units are regenerated off-site and offer economic run lengths and zero discharge.

Health and safety

Each Aquamove™ MORO-60T unit is isolated and ventilated and lit to provide **comfortable working conditions.** It can be heated for frost protection.

Safety kits including first aid kit, fire extinguishers, fire blanket, chemical handling protective clothing and chemical safety data sheets are provided as standard.

Service and operation

Once installed and commissioned our local service engineer will visit your site at an agreed frequency to ensure that the unit is operating correctly, that chemical supplies are topped up and that filters are replaced as required. A full time operator can be provided at your request.

Chemical dosing

All systems are deployed with appropriate chemical dosing to **enhance process performance** including scale control and chlorine elimination.

Clean in place (CIP)

For extended use it is likely that the membranes will require cleaning. Our engineers will perform this service using a **mobile CIP system.** You will be advised in advance of the chemicals to be used so that waste disposal requirements can be attended to.



Typical applications

- Temporary water
- Pilot plant
- Commissioning supplies
- Steam blows
- Pipe flushing
- Shut down supplies
- Seasonal capacity uplift
- Changing water quality

MORO-60T Typical Data Single Pass RO	
Capacity (permeate)	50-60 m ³ /h
Feed Flow (total)	80– 90 m ³ /h
Reject Flow (total)	15 - 30 m ³ /h
RO Recovery (SDI<5)	75%
Operation pressure pump	10.7 bar
Array	7:3
Membranes	Spiral wound 8"
Feed water quality requirements	Fe < 0.1 mg/l ; Mn < 0.1 mg/l ; pH 2-11 ; < 1 NTU
Feed water temperature requirements	5 – 35°C
Feed water pressure requirements	3 bar (min 1.5-2 bar ; max 6 bar)
Silt Density Index (SDI 15) feed water	<5
Connections	
Feed water	6" Camlock SS female (80-90 m ³ /h, ~3 bar)
Product water	6" Camlock SS female (50-60 m ³ /h)
Waste water	3" Camlock SS female (15-30 m ³ /h)
Power connection	63 Amp CEE ; 400V, L1, L2, L3, N, Earth (30 KVA)
Control system	
Control cabinet	Veolia Water RO30 Processor
Alarms	General alarm terminals
External connections	Terminal for start & stop function Terminal for start/stop external booster pump
MCC	1x
Dimensions & Weight	
Length	13850 mm
Width	2600 mm
Height	4000 mm
Shipping weight	± 15.3 tons

MORO-24C

REVERSE OSMOSIS

Aquamove

Mobile Water Solutions

Mid to long-term temporary solution

- Flexible, modular systems
- Each skid treats up to 25 m³/hr
- Treated water to: <5% salt passage
- No regeneration required
- Cost effective
- Pre-treatment available



Flexible configuration and deployment

Aquamove™ MORO-24C units may be combined in parallel or series to achieve higher flow rates or quality of water. Units may be deployed onsite as follows:

- Stand-alone or multiple units
- One-off in a 20' container – MORO-24C
- Two-off in a 40' trailer – MORO-48T
- Four-off in a 40' trailer – MORO-96T

Each MORO-24C unit comes with 15-20m of hose with Camlock connectors for feed, permeate and reject and can be integrated with feed and treated water pumps and level controls.



Typical applications

- Temporary water
- Pilot plant
- Commissioning supplies
- Steam blows
- Pipe flushing
- Shut down supplies
- Seasonal capacity uplift
- Changing water quality

Each containerised Aquamove™ MORO-24C houses a **robust stainless steel box frame-mounted RO** suitable for frequent transportation. It incorporates six 4 metre pressure tubes loaded with brackish water low energy RO membranes in a 3/2/1 array **providing up to 25 m³/hr at <5% salt passage**. Alarm and shut down functions ensure that the system is fail safe.

Optional pretreatment and polishing

Where required MORO-24C units **can be integrated with Aquamove mobile pretreatment systems and Aquamove MOFI mixed-bed polishing systems**. MOFI units are regenerated off-site and offer economic run lengths and zero discharge.

Health and safety

Each MORO-24C unit is insulated, heated, ventilated and lit to **provide comfortable working conditions**. Safety kits including first aid kit, fire extinguishers, fire blanket, chemical handling protective clothing, chemical safety data sheets and eye wash are provided as standard.

Service and operation

Once installed and commissioned **our local service engineer will visit your site at an agreed frequency** to ensure that the unit is operating correctly, that chemical supplies are topped up and that filters are replaced as required. A full time operator can be provided at your request.



Chemical dosing

All systems are deployed with appropriate chemical dosing **to enhance process performance** including scale control and chlorine elimination.

Clean in place (CIP)

For extended use it is likely that the membranes will require cleaning. Our engineers will perform this service using a **mobile CIP system**. You will be advised in advance of the chemicals to be used so that waste disposal requirements can be attended to.

MORO-24C Typical Data	
Capacity (total)	20 – 25 m ³ /hr
Feed Flow (total)	30 – 33 m ³ /hr
Reject Flow (total)	8 - 10 m ³ /hr
RO Recovery (SDI<5)	75%
Operation pressure pump	10.7 bar
Array	3:2:1
Membranes	Spiral wound 8"
Feed water quality requirements	Fe < 0.1 mg/l, Mn < 0.1 mg/l, pH 2-11, < 1 NTU
Feed water temperature requirements	5 – 35°C
Feed water temperature requirements	3 bar (min 1.5-2 bar ; max 6 bar)
Silt Density Index (SDI 15) feed water	<5
Connections	
Feed water	3" Camlock SS male
Product water	3" Camlock SS male
Waste water	3" Camlock SS male
Power connection	63 Amp CEE ; 400V, L1, L2, L3, N, Earth (30 KVA)
Control system	
Control cabinet	Siemens PLC
Alarms	General alarm terminals
External connections	Terminal for start and stop function Terminal for start/stop external booster pump
Dimensions & Weight	
Length	6058 mm
Width	2438 mm
Height	2591 mm
Shipping weight	± 7 tons

MORO-16C

REVERSE OSMOSIS

Aquamove

Mobile Water Solutions

Mid to long-term temporary solution

- Flexible and modular solution
- Housed in a 20' container
- Treats from 10 up to 20 m³/hr
- Treated water to: < 5% salt passage
- Cost effective
- Pre-treatment available



The containerised Aquamove™ MORO-16C is housed in a 20' container suitable for frequent transportation and comes with 3x 20 m of hose with Guillemain connectors for feed, permeate and reject.

The RO is loaded with 16 brackish water low energy membranes in 4 pressure vessels array 8/4/4 array providing up to 20 m³/hr at < 5% salt passage. Alarm and shut down functions ensure that the system is fail safe.

Optional pretreatment and polishing

Where required MORO-16C can be integrated with Aquamove™ mobile pretreatment systems and Aquamove™ MOFI mixed-bed polishing systems.

MOFI units are regenerated off-site and offer economic run lengths and zero discharge.

Health and safety

The Aquamove™ MORO-16C unit is heated, ventilated and lit to provide comfortable working conditions. Safety kits including first aid kit, fire extinguishers, chemical safety data sheets are provided as standard.

Service and operation

Once installed and commissioned our local service engineer will visit your site at an agreed frequency to ensure that the unit is operating correctly, that chemical supplies are topped up and that filters are replaced as required. A full time operator can be provided at your request.



Chemical dosing

All systems are deployed with appropriate chemical dosing to enhance process performance including chlorine elimination.



Typical applications

- Emergency supply
- Temporary water
- Pilot plant
- Commissioning supplies
- Steam blows
- Pipe flushing
- Shut down supplies
- Seasonal capacity uplift
- Changing water quality

MORO-16C Typical Data Single Pass RO

Capacity (permeate)	10-20 m ³ /h
Feed Flow	14-27 m ³ /h
Reject Flow	4-7 m ³ /h
RO Recovery (SDI<5)	75%
Operation pressure pump	16-21 Bar
Array	8:4:4
Membranes	Spiral wound 8" ; Brackish water, low energy
Feed water quality requirements	Fe<0.1mg ; Mn<0.1mg/l ; pH 2-11 ; <1 NTU
Feed water temperature requirements	5 - 35°C
Feed water pressure requirements	min 2.5 bar ; max 6 bar
Silt Density Index (SDI 15) feed water	<5

Connections

Feed water	Guillemin 3" SS (18-27 m ³ /h, ~ 3 bar)
Product water	Guillemin 3" SS (12-20 m ³ /h, ~ 2 bar)
Waste water	Guillemin 3" SS (4-7 m ³ /h)
Power connection	63 Amp CEE ; 400V, L1, L2, L3, N, Earth (50kVA)

Control system

Control cabinet	Siemens PLC
Alarms	General alarm terminals
External connections	Terminal for start and stop function
MCC	1x

Dimensions & Weight

Length	6058 mm
Width	2438 mm
Height	2591 mm
Shipping weight	6.5 tons



SIRION™ Mega is a flexible reverse osmosis product line manufactured by VEOLIA for purified water production.



Aquamove™ MORO-16C comprises a SIRION™ Mega system with a dosing set and cartridge filters, housed in a 20' container.

MORO-9C

REVERSE OSMOSIS

Aquamove
Mobile Water Solutions

Mid to long-term temporary solution

- Flexible and modular solution
- Housed in a 20' container
- Treats up to 10 m³/hr
- Treated water to: < 5% salt passage
- Water softener regeneration on place
- Cost effective
- Pre-treatment available



Each containerised **Aquamove™ MORO-9C** is housed in a **20' isolated container** suitable for frequent transportation and comes with 15-20 m of hose with Camlock connectors for feed, permeate and reject.

The RO is loaded with brackish water low energy membranes in a 1/1/1 array **providing up to 10 m³/hr at < 5% salt passage**. Alarm and shut down functions ensure that the system is fail safe.

Optional pretreatment and polishing

Where required MORO-9C units can be integrated with Aquamove™ mobile pretreatment systems and Aquamove™ MOFI mixed-bed polishing systems.

MOFI units are regenerated off-site and offer economic run lengths and zero discharge.

Health and safety

Each Aquamove™ MORO-9C unit is insulated, heated, ventilated and lit to provide **comfortable working conditions**. Safety kits including first aid kit, fire extinguishers, fire blanket, chemical handling protective clothing, chemical safety data sheets and eye wash are provided as standard.

Service and operation

Once installed and commissioned **our local service engineer will visit your site at an agreed frequency** to ensure that the unit is operating correctly, that chemical supplies are topped up and that filters are replaced as required. A full time operator can be provided at your request.

Chemical dosing

All systems are deployed with **appropriate chemical dosing to enhance process performance** including chlorine elimination.

Clean in place (CIP)

For extended use it is likely that the membranes will require cleaning. Our engineers will perform this service using a **mobile CIP system**. You will be advised in advance of the chemicals to be used so that waste disposal requirements can be attended to.



Typical applications

- Temporary water
- Pilot plant
- Commissioning supplies
- Steam blows
- Pipe flushing
- Shut down supplies
- Seasonal capacity uplift
- Changing water quality

MORO-9C Typical Data Single Pass RO	
Capacity (permeate)	8-10 m ³ /h
Feed Flow	8-13 m ³ /h
Reject Flow	2-3 m ³ /h
RO Recovery (SDI<5)	75%
Operation pressure pump	16-21 Bar
Array	1:1:1
Membranes	Spiral wound 8" ; Brackish water, low energy
Feed water quality requirements	Fe<0.1mg ; Mn<0.1mg/l ; pH 2-11 ; <1 NTU
Feed water temperature requirements	2 - 35°C
Feed water pressure requirements	3 bar (min 1.5-2 bar; max 6 bar)
Silt Density Index (SDI 15) feed water	<5
Connections	
Feed water	3" Camlock SS male (max 6 bar)
Product water	3" Camlock SS male
Waste water	3" Camlock SS male
Power connection	63 Amp CEE ; 400V, L1, L2, L3, N, Earth
Control system	
Control cabinet	Relays
Alarms	General alarm terminals
External connections	Terminal for start and stop function
MCC	2x
Dimensions & Weight	
Length	6058 mm
Width	2438 mm
Height	2591 mm
Shipping weight	± 7 tons

MORO-4+3S

REVERSE OSMOSIS

Aquamove
Mobile Water Solutions

Mid-term temporary solution

- Skid-mounted on wheels for ease of movement
- Flexible and modular system
- Treats up to 7 m³/hr
- No regeneration required
- Cost effective
- Pre-treatment available



Typical applications

- Temporary water
- Deionised water production
- Shut down supplies
- Seasonal capacity uplift
- Changing water quality



The Aquamove™ MORO-4+3S is a **mobile skid-mounted system made up of two reverse osmosis units.**

Designed to produce flexible flow-rates and water qualities, the Aquamove™ MORO-4+3S unit may be combined **in parallel or series providing up to 7 m³/hr at 5-40 µS/cm in the first pass or 2-10 µS/cm in second pass.**

Flexible configuration and deployment

The Aquamove™ MORO-4+3S unit may be deployed onsite as follows:

- RO unit 1: 4 m³/hr
- RO unit 2: 3 m³/hr
- 2 RO units (parallel) : 7 m³/hr
- 2 RO units (2 pass): 3 m³/hr

The unit includes a pretreatment skid with either 10 m³/h duplex softening plant or antiscalant dosing fitted on a pretreatment skid.

The Aquamove™ MORO-4+3S unit comes with 2x10m of hose.

Optional polishing

Where required MORO-4+3S units can be integrated with Aquamove™ MOFI mixed-bed polishing systems. MOFI units are regenerated off-site and offer economic run lengths and zero discharge.

Service and operation

Once installed and commissioned **our local service engineer will visit your site at an agreed frequency** to ensure that the unit is operating correctly, that chemical supplies are topped up and that filters are replaced as required.

Chemical dosing

All systems are deployed with appropriate chemical dosing **to enhance process performance** including soda dosing and chlorine elimination (if required).

Typical Data	
Capacity (RO unit 1)	4 m ³ /hr
Capacity (RO unit 2)	3 m ³ /hr
Capacity (2 parallel RO units)	7 m ³ /hr
Capacity (2 RO units (2 pass RO))	3 m ³ /hr
Water quality (1 pass RO)	5 to 40 µS/cm (depending on raw water quality)
Water quality (2 pass RO)	2 to 10 µS/cm (depending on raw water quality)
Water quality (After mixed-bed addition)	1 to 0.05 µS/cm
RO Recovery (SDI<5)	75%
Operation pressure pump	± 10-15 bar
Feed water quality requirements	Fe<0.1 mg ; Mn<0.1 mg/l ; pH 2-11 ; <1 NTU
Feed water temperature requirements	3 bar (min 2.5 bar)
Silt Density Index (SDI 15) feed water	<5
Connections	
Feed water	2" symmetrical couplings
Product water	2" symmetrical couplings
Power connection	40 Amp 400V & 3 phases + neutral
Control system	
Control cabinet	PLC
Alarms	On terminal
External connections	Terminal for start & stop functions
Dimensions & Weight	
• Pre-treatment (duplex softeners, 2x dechlorination + soda dosing)	
Length	2.25 m
Width	1.12 m
Height	2.04 m
Weight	1600 kg
• Skid (2 RO units)	
Length	3.25 m
Width	1.15 m
Height	2.11 m
Weight	1200 kg

MORO-SW30C

SEA WATER DESALINATION

Aquamove

Mobile Water Solutions

Mid to long-term temporary solution

- Reverse osmosis system
- Pre-filtration included
- Treats up to 30 m³/hr (720 m³/d)
- Housed in 40' and 20' containers



The Aquamove™ MORO-SW30C is designed for the desalination of the sea with a salinity level of 32g/l approx. It is a **sea water treatment station obtained by two pre-filtration stages and a single stage reverse osmosis as desalting unit.**

Pretreatment: Filtering station

The filtration stage is composed by two batteries containing three filtering units each. **The filtering units operate in parallel with serial regeneration of every single unit.** Each filtration unit contains a 0.5 m thick bed made of alluvial quartzite.

The filtering station operates automatically through a pneumatic valve system driven by the plant PLC.

Energy recovery

The high pressure unit is equipped with an energy recovery turbine working with the residual pressure of the concentrate stream coming out from the osmotic membranes.

Health and Safety

Each MORO-SW30C unit is ventilated and lit to provide **comfortable working conditions.**

Safety kits including first aid kit, fire extinguishers, fire blanket, chemical handling protective clothing, chemical safety data sheets and eye wash are provided as standard.

Service and operation

Once installed and commissioned our local service engineer will visit your site at an agreed frequency to ensure that the unit is operating correctly, that chemical supplies are topped up and that filters are replaced as required. A full time operator can be provided at your request.

Chemical dosing

All systems are deployed with appropriate chemical dosing **to enhance process performance** including scale control, biocides and chlorine elimination.

Clean in place (CIP)

For extended use it is likely that the membranes will require cleaning. Our engineers will perform this service using a **built-in CIP system.** You will be advised in advance of the chemicals to be used so that waste disposal requirements can be attended to.

Technical characteristics	
Nominal production of permeate with sea water	30 m ³ /hr
Electrical equipment	400 V ; 50 Hz ; 3F
Construction	3 modules located inside three containers
Processing type	Sea water desalting after pre-filtration
Outlet purified water pressure	Maximum counter pressure: 4 meters of water column
Outlet concentrate water pressure	No counter pressure admitted
Pre-filtration technology	2 batteries containing 3 filters each. Filtering medium: quartzite
Desalting technology	Single stage reverse osmosis with energy recovery on the concentrate
Control	Automatic, continuous 24/24h 7/7 days by PLC (Siemens Simatic S7-300); possibility to make remote the functioning state signal and starting/shutdown of the plant;
Operator panel	Siemens TP177A
Electrical cabinet rating	IP 43 in a dedicated separate room of the container
Noise	< 70 dB(A) in the plant external area and on the working station of the operator during standard working phase.
In compliance with standards: (CE marking)	Machinery Directive Electromagnetic compatibility Electrical safety

Nominal performance	
Electrical feed	400 V ; 50 Hz ; 3F+Ground
Absorbed power	108 kW ± 10%
Installed power	145 kW
Maximum production of permeate with sea water	720 m ³ /24h ± 10%
Specific consumption of electric power per cubic meter of produced permeate	3.62 Wh/m ³ ± 10%

The nominal performances are guaranteed on the treatment of sea water having dispersed solids not higher

Dimensions & weight	
• Filtering units (each)	
Dimensions	20' Container: L6100 mm x W2550 mm x H2600 mm
Weight	11 tons
• Desalting unit	
Dimensions	40' Container: L12200 mm x W2550 mm x H2600 mm
Weight	12 tons
• Assembled plant	
Empty assembled plant	34 tons
Full assembled plant in normal stationary conditions	46 tons

REMOX-100C

DEGASSING

Aquamove
Mobile Water Solutions

Short to long-term temporary solution

- Flexible and modular system
- Efficient process
- Oxygen removal
- Carbon Dioxide removal
- Treats up to 100 m³/h
- Housed in a 40' container
- Global network service



Typical applications

- **Boiler feedwater**
Extend the life of your boiler by preventing corrosion of critical parts
- **Micro electronics**
Improve wafer and flat panel yields
- **Food and Beverage**
Improve the shelf life, taste and consistency of your products
- **Extend the capacity** of water treatment plants DI, CEDI
- **Improve the quality** of your treated water

The Aquamove™ REMOX-100C provides two streams of membrane removal for dissolved Oxygen or Carbon Dioxide. The highly efficient design can operate at up to 50 m³/hr per stream, giving a total continuous output of 100 m³/h with < 10ppb O₂, < 0.3 ppm CO₂.

The system is housed within a fully air conditioned and insulated 40ft container complete with all the necessary services onboard such as compressed air, vacuum and Nitrogen generation.

Automatic monitoring and security

A high level of automation allows for peace of mind and care free operation. Online monitoring of all critical parameters allows Aquamove™ to ensure safe guards are present for every eventuality.

Chemical free operation

Unlike other technologies the Aquamove™ REMOX requires **no chemicals** to be used on your site and produces no waste water.



REMOX-100C

DEGASSING

Aquamove
Mobile Water Solutions

Demin water supply		
Required raw water supply	50-100 m ³ /h	
Minimal allowable inlet pressure	0.8 bar	
Maximal allowable inlet pressure	2.0 bar	
Allowable temperature range	5 - 25 °C	
Quality of degasified demin water	2 line operation	1 line operation
Flow-rates	2 x 50 m ³ /h	75 m ³ /h
Diluted oxygen	< 10 ppb	< 20 ppb
Temperature	5 – 25 °C	
Outlet pressure	< 1 bar	
Electrical power supply		
400V 50 Hz 160A L1,L2,L3,PE		
Operation / control system		
Operation and control of the plant	Graphical user interface (touch panel)	
Dimensions & weight		
Length	12.192 m	
Width	2.438 m	
Height	2.591 m	
Shipping weight	12 t	



MODI-15000T

ION EXCHANGE DEIONISATION

Aquamove
Mobile Water Solutions

Short-term emergency response

- 45' articulated insulated trailer
- Two streams of ion exchange plant
- Flow rates up to 150 m³/hr
- Treated water to <0.1 µS/cm 20ppb silica
- Zero discharge
- Off-site regeneration



Typical applications

- Emergency water needs
- Zero discharge
- Pilot plant
- Commissioning supplies
- Steam blows
- Pipe flushing
- Shut down supplies
- Seasonal capacity uplift
- Changing water quality



The Aquamove™ MODI-15000T provides **two streams of mobile Cation/Anion/Mixed-bed ion exchange plant** on a 45' articulated, insulated trailer. Each stream is capable of treating **75 m³/hr or 150 m³/hr in parallel to 0.1 µS/cm conductivity, 20 ppb silica end point.**

Business continuity

In today's highly competitive environment no company can afford to lose valuable production time. Regular maintenance of capital plant aims to prevent this but should the unthinkable happen then business continuity is the first priority.

Aquamove systems are increasingly being factored into the contingency plans – ensuring that the flow of pure water continues no matter what.

25% more capacity

The Aquamove™ MODI-15000T trailer's unique configuration enables a capacity increase of up to 25% compared to earlier designs – resulting in increased run lengths and reduced transport and hook-up costs.

Automatic monitoring and security

MODI-15000T trailers are equipped with **conductivity monitors linked to automatic controls** that switch streams when the first is exhausted. When both streams are exhausted an alarm is triggered and the trailer is ready for exchange.

Zero discharge

The MODI-15000T requires **no chemicals** to be used on your site and produces **no wastewater**. Regeneration is off-site at our state-of-the-art regeneration station.

Rapide response

Within two hours of a call a Aquamove unit can be on the road. What's more, a VWS service engineer will also be dispatched to ensure the unit is correctly connected upon arrival.

- 24 hours a day*
- 7 days a week*
- 365 days a year*

* Depending on the client's location

MODI-15000T

ION EXCHANGE DEIONISATION

Aquamove
Mobile Water Solutions

Equipment Components

- Automatic inlet valves
- Electronic water meter
- Gross inlet filter
- 2 finishing mixed beds (optional)
- 2 final filters 20 µm
- Inlet and outlet conductivity meters and at each deionisation step

Standard accessories:

- 2 x 10, 4 x 20 m flexible 4" pipes
- Secure ladder
- 20 m electrical wire
- Electrical heating
- User manual

System Performance

2 streams + mixed bed	10 to 150 m ³ /hr max
1 steam	10 to 75 m ³ /hr max
Cation – Anion exchangers	1 to 15 µS/cm (potable feed water)
Cation – Anion + mixed beds	1 to 18 MΩ.cm (potable feed water)

System Dimensions & Weights

Length	13.17 m
Width	2.58 m
Height	3.95 m
Weight	Dry 32 tons ; Operating 47 tons

System Connections

Inlet / outlet connections	4" Camlock (male) / 4" Camlock (male)
Power connection	16A, 230V/110V AC - mono + earth

Possible Arrangements

- Automatic stop valve: An electrically actuated valve can automatically stop production when volume or quality maximum level are reached
- Additional flexible pipes



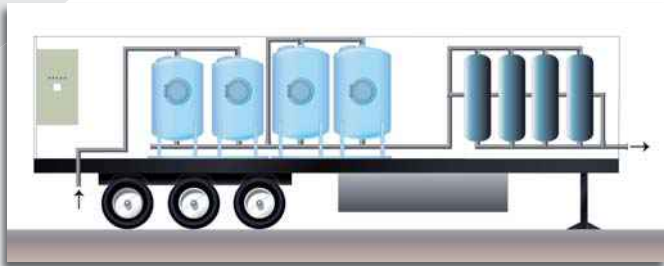
MODI-9000T

ION EXCHANGE DEIONISATION

Aquamove
Mobile Water Solutions

Short-term emergency response

- Articulated insulated trailer
- Two streams of ion exchange plant
- Flow rates up to 100 m³/hr
- Treated water to <0.1 µS/cm 20 ppb silica
- Zero discharge
- Off-site regeneration



Typical applications

- Emergency water needs
- Zero discharge
- Pilot plant
- Commissioning supplies
- Steam blows
- Pipe flushing
- Shut down supplies
- Seasonal capacity uplift
- Changing water quality



The Aquamove™ MODI-9000T provides **two streams of mobile Cation/Anion/Mixed-bed ion exchange plant** on a trailer. Each stream is capable of **treating 50 m³/hr or 100 m³/hr in parallel to 0.1 µS/cm conductivity, 20 ppb silica end point.**

Business continuity

In today's highly competitive environment no company can afford to lose valuable production time. **Regular maintenance** of capital plant aims to prevent this but should the unthinkable happen then business continuity is the first priority.

Aquamove systems are increasingly being factored into the contingency plans – ensuring that the flow of pure water continues no matter what.

Automatic monitoring and security

MODI-9000T trailers are equipped with **conductivity monitors** linked to automatic controls that stops production when exchangers are exhausted. Trailer is ready for exchange.

Zero discharge

The MODI-9000T **requires no chemicals** to be used on your site and **produces no wastewater**. Regeneration is off-site at our state-of-the-art regeneration station.

Rapide response

Within few hours of a call a Aquamove unit can be on the road. What's more, a **VWS service engineer** will also be dispatched to commission the unit upon arrival.

MODI 9000T is easy to connect and can be put under production within 12 to 36 open hours depending on the client's location.



MODI-9000T

ION EXCHANGE DEIONISATION

Aquamove
Mobile Water Solutions

Equipment Components

- Inlet valve
- Pressure limiter
- Mechanical water meter
- Non return valve
- Pre filters (optional)
- 2 cation-anion deionisation exchangers in parallel
- 4 finishing mixed beds (optional)
- 2 final filters 20 µm (0.2 µm optional)
- Inlet and outlet conductivity meters and at each deionisation step

Standard accessories:

- 2 x 15 m flexible pipes (ø 80) with Guillemain connections
- Secure ladder
- Electrical wire
- User manual

MODI-9000T Typical Data

2 streams + mixed bed	10 to 100m ³ /hr max
2 streams + optional polishers	10 to 80m ³ /hr max
1 steam	5 to 40 m ³ /hr max
Cation – Anion exchangers	2 to 20 µS/cm (potable feed water)
Cation – Anion + mixed beds	1 to 18 MΩ.cm (potable feed water)

MODI-9000T Dimensions & Weights

Length	13.80 m
Width	2.50 m
Height	4.00 m
Operation weight	approx. 33 t

MODI-9000T Connections

Inlet / outlet connections	Guillemain 3 or 4"
Power connection	16A, 230V AC - mono + earth

Security

The unit is equipped with a fire extinguisher installed at the front of a first aid kit, stop valves. It is earth connected.

Possible Arrangements

- Heating: Trailer can be equipped with a electrical heating (4.5 kW, 400V + E + N)
- Pre filtration: 20 and 10 µm cartridges can be fitted
- Values recording: Continuous recording of the production quality.
- Automatic stop valve: A pneumatic valve can automatically stop production when volume or quality maximum level are reached
- Post-filtration 0.2 µm : For ultrapure water production
- Special fittings: flanges, camlock connections, various diameters, etc.
- Additional flexible pipes

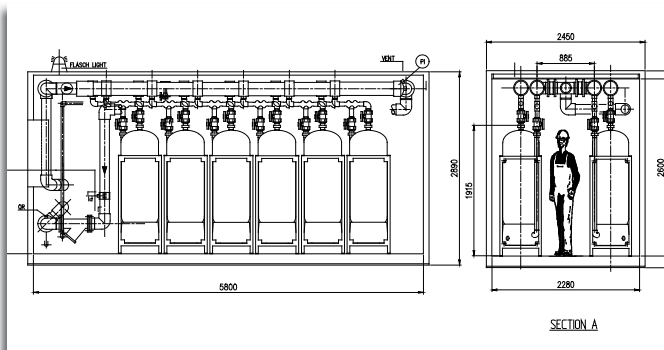
MODI-5x300C

ION EXCHANGE POLISHING

Aquamove
Mobile Water Solutions

Mid-term temporary solution

- No chemicals
- No wastewater
- No capital outlay
- High flow rates, up to 100 m³/hr
- Treated water to < 0.2 µS/cm
- 20' container



Typical applications

- Polishing
- Pilot plant water needs
- Interim usage
- Process water quality change
- Scheduled shutdowns
- Seasonal water needs
- Emergency water
- Water quality changes
- Condensate polishing

Each containerised Aquamove™ MODI-5x300C houses a **robust stainless steel box frame-mounted unit** suitable for frequent transportation. Aquamove™ MODI-5x300C ion exchange polishing units are designed to **treat flow ranging from 5 to 100 m³/hr.**

Regenerated off-site, these mobile units do not use any hazardous chemicals, do not generate any waste water and are ideal for polishing raw or RO permeate water. Each MODI-5x300C comes with 15-20m of flexible hose with Camlock connectors.

Health and safety

Each Aquamove™ MODI-5x300C mobile water treatment unit is isolated lit to provide **comfortable working conditions.** It can be heated for frost protection. Safety kits including first aid kit, fire extinguishers and operating manual are provided as standard.

Service and operation

Once installed and commissioned our local service engineer will visit your site at an agreed frequency to ensure that the unit is operating correctly. **A full time operator can be provided at your request.**

Rapid response

Within 2 hours* of a call a Aquamove™ MODI-5x300C unit can be on the road. What's more, a VWS service engineer will also be dispatched to ensure the unit is correctly connected upon arrival

- 24 hours a day*
- 7 days a week*
- 365 days a year*

* depending on the client's location



MODI-5x300C

ION EXCHANGE POLISHING

Aquamove
Mobile Water Solutions

System Performance	
Vessel diameter	10 x working vessels Diam 630mm each
Media volume	2 x 5 x 300L mixed bed ion exchange resins
Feed flow	2 - 100 m ³ /h
Capacity on potable feed water or equivalent	5 - 15 m ³ /h
Capacity on RO permeate or equivalent	5 - 100 m ³ /h
Reject flow	0 m ³ /h (only drain)
Recovery	100%
Feed water quality requirements	Potable water, RO permeate or equivalent
Feed water pressure requirements	2 - 6 bar
Feed water temperature requirements	2 - 35°C
Service connection	6" Camlock SS female
Materials of construction	Polyamide (bottles)
Connections	
Feed water	6" Camlock SS male
Product water	6" Camlock SS female
Drain	3" Camlock SS female
Power connection	1x 220/240V, 3kW, Euro connector with PE
Earthing place	Near connection
Dimensions & Weight	
Length	6100 mm
Width	2440 mm
Height	2960 mm
Shipping weight	± 9500 kg
Operating weight	± 10 500 Kg

MODI-1500S

ION EXCHANGE

Aquamove
Mobile Water Solutions

Short-term emergency response

- No chemicals
- No wastewater
- No capital outlay
- Less than 1 hour set up
- High flow rates – up to 50 m³/h
- High capacity
- Off -site regeneration
- Flexible configuration

Aquamove™ MODI-1500S are mobile skid-mounted ion exchange units designed **to treat flows ranging from 9 to 50 m³/h per unit**. Suitable for handling by forklift, Aquamove™ MODI-1500S units can be installed and brought on-line in a very short period of time using flexible hoses.

Aquamove™ MODI-1500S mobile units are **regenerated off-site and do not use any hazardous chemicals, do not generate any wastewater and are ideal for polishing raw or RO permeate water**. With their rugged design, small footprint and ability to treat high flow rates, the Aquamove™ units offer an economical alternative for high purity water production, particularly for temporary users. Controls and instrumentation may be added to meet your needs.

Aquamove™ MODI-1500S units can be used with **mixed bed ion exchange resins for water deionisation and ultrapure water production**.



Typical applications

- Polishing
- Pilot plant water needs
- Interim usage
- Process water quality change
- Scheduled shutdowns
- Seasonal water needs
- Emergency water
- Water quality changes
- Condensate polishing



Flexible configuration

Aquamove™ MODI-1500S units can be configured in **parallel or series** and combined with other products for a **fully integrated water treatment system** allowing to meet your flow and quality requirements.

Service excellence

Aquamove™ MODI-1500S units are serviced and exchanged by Veolia Water Solutions & Technologies' **extensive service network**. Our regeneration facilities and experienced service personnel ensure you receive an uninterrupted, consistent supply of treated water.

MODI-1500S

ION EXCHANGE

Aquamove
Mobile Water Solutions

Typical Data	
Equipment Specifications	1x Vessel Pevasa ECO PA 60x74" T&B 3x Handvalve 3" GF, PVC piping
Media Volume	1500 L mixed bed resin
Min Capacity	9 m ³ /hr
Max Capacity	50 m ³ /hr
Max Operating Pressure	6 bar
Max Temperature	30 °C
Connections	
Inlet	3" PVC Camlock female
Outlet	3" PVC Camlock male
System Dimensions & Weights	
Length	2000 mm
Width	2500 mm
Height	2700 mm
Shipping Weight	± 2 tons
Extra Accessory Equipment	
Conductivity meter, Flexible camlock hose 3" (Length each hose 15-20m)	

MOFI-P1200S

ION EXCHANGE

Aquamove
Mobile Water Solutions

Short-term emergency response

- Flexible configuration
- No chemicals
- No wastewater
- No capital outlay
- Less than 1 hour set up
- High flow rates – up to 35 m³/h
- High capacity – up to 1200 L of media
- Off -site regeneration



Aquamove™ MOFI-P1200S are mobile skid-mounted ion exchange units designed to **treat flows ranging from 10 to 35 m³/h per unit**. Suitable for handling by forklift, Aquamove™ MOFI-P1200S units can be installed and brought on-line in a very short period of time using flexible hoses.

Aquamove™ MOFI-P1200S mobile units are **regenerated off-site and do not use any hazardous chemicals, do not generate any wastewater and are ideal for polishing raw or RO permeate water**. With their rugged design, small footprint and ability to treat high flow rates, the Aquamove™ units offer an economical alternative for high purity water production, particularly for temporary users. Controls and instrumentation may be added to meet your needs.

Multi-use exchangers

Aquamove™ MOFI-P1200S units can be used with different media depending on the applications:

- Mixed bed ion exchange resins for water deionisation and ultrapure water production
- Ion exchange resins (C+) for softening
- Activated carbon for filtration, color reduction and free chlorine reduction
- Sand for filtration

Flexible configuration

Aquamove™ MOFI-P1200S units can be configured in **parallel or series** and combined with other products for a **fully integrated water treatment system** allowing to meet your flow and quality requirements.

Service excellence

Aquamove™ MOFI-P1200S units are serviced and exchanged by Veolia Water Solutions & Technologies' **extensive service network**. Our regeneration facilities and experienced service personnel ensure you receive an uninterrupted, consistent supply of treated water.



Typical applications

- Polishing
- Pilot plant water needs
- Interim usage
- Process water quality change
- Scheduled shutdowns
- Seasonal water needs
- Emergency water
- Water quality changes
- Condensate polishing

MOFI-P1200S

ION EXCHANGE

Aquamove
Mobile Water Solutions

Typical Data (M Model)		
Vessel Diameter	1200 mm	
Height on Straight	2300 mm	
Media Volume	1200 L	
Pressure Drop @ 25°C	0.4 bar @ 30 m ³ /h	
Max Operating Pressure	6 bar	
Max Operating Temperature	40°C	
Service Connection	Diam 80	
Materials of Construction	Polyamide	
Handling	by Lift	
System Dimensions & Weights		
Length	1100 mm	
Width	1334 mm	
Height	2160 mm	
Shipping Weight (Dry)	1400 kg (with IX resins)	
Service Capacity		
Media	Flow Rate	Capacity
Working Mixed Bed	10-35 m ³ /h	21 Kg CaCO ₃
Softening (C+)	10-35 m ³ /h	60 Kg CaCO ₃
Carbon – Cl ₂ removal	10 m ³ /h	Very High
Sand Filtration	10-12 m ³ /h	N/A
Optional Accessories		
Connectors, flexible hoses, flow meters, conductivity meters, valves, etc.		

MOFI-1200S

ION EXCHANGE

Aquamove
Mobile Water Solutions

Short-term emergency response

- No chemicals
- No wastewater
- No capital outlay
- Less than 1 hour set up
- High flow and high quality parallel or series set-ups
- High flow rates, up to 35 m³/hr
- High capacity – 1200 L of media
- Flexible configuration



Aquamove™ MOFI-1200S units are skid-mounted mobile ion exchange units designed to **treat flows ranging from 10 to 35 m³/h per unit**. Suitable for handling by forklift, MOFI-1200S units have Camlock connections and can be installed and brought on-line in a very short period of time using flexible hoses.

With their **rugged design, small footprint and ability to treat high flow rates**, these units offer an economical alternative for high purity water production, particularly for temporary users. They are ideal for **polishing raw or RO permeate water**.

Their **316 L SS construction** allows treatment up to 80°C making them ideal for condensate polishing applications. Controls and instrumentation may be added to meet your needs.

Flexible configuration

MOFI-1200S units can be configured **in parallel or series** and combined with other products for a fully integrated water treatment system to meet your flow and quality requirements.



Service excellence

They are serviced and exchanged by Veolia Water Solutions & Technologies' extensive **service network**.

Our regeneration facilities and experienced service personnel ensure you receive an uninterrupted, consistent supply of treated water.

Typical applications

- Polishing
- Pilot plant water needs
- Interim usage
- Process water quality changes
- Scheduled shutdowns
- Seasonal water needs
- Emergency water
- Water quality changes
- Condensate polishing



MOFI-1200S

ION EXCHANGE

Aquamove
Mobile Water Solutions

MODI-1200S Typical Data

Vessel Diameter	1050 mm
Height on Straight	1200 mm
Media Volume	1200 L
Service Flow Rate (Min/Max)	10 - 35 m ³ /hr
Pressure Drop @ 25°C	0.75 barg @ 22 m ³ /hr
Max Operating Pressure	6.8 barg
Max Operating Temperature	80°C
Service Connection	3" Camlock
Materials of Construction	316 L SS
Handling	Lifting Lugs and Fork ; Lift Ports

Dimensions & Weight

Width	1050 mm
Depth	1225 mm
Height	2250 mm
Shipping Weight (Dry)	1600 kg
Operating Weight	2000 kg

Service Capacity

Media	Flow Rate	Capacity
Polishing Mixed Bed	10 - 35 m ³ /hr	18 kg CaCO ₃
Working Mixed Bed	10 - 35 m ³ /hr	18 kg CaCO ₃
Strong Acid Cation	10 - 35 m ³ /hr	78 kg CaCO ₃
Strong Base Anion	10 - 35 m ³ /hr	35 kg CaCO ₃
Carbon – Cl ₂ removal	10 m ³ /hr	Very High

HF900 Cylinders

ION EXCHANGE

Aquamove
Mobile Water Solutions

Short-term emergency response

- Less than 1 hour to set up
- Variable flow rates from 1 to 10m³/hr
- Flexible configuration – 1 to 4 vessels
- Skid mounted for ease of movement
- Treated water to 0.1 µS/cm
- No wastewater
- No capital outlay
- No chemicals



The Aquamove™ High Flow range of cylinders produce from 1 to 10 m³/hr of high purity water for a wide range of process water and general manufacturing applications. They are ideal for polishing raw or RO permeate water. With the advantage of being integrated in a framed skid incorporating a manifold system they can quickly and easily be delivered to site as requirements arise.

Business continuity

In today's highly competitive environment no company can afford to lose valuable production time. Regular maintenance of capital plant aims to prevent this but should the unthinkable happen then business continuity is the first priority.

Aquamove systems are increasingly being factored into the contingency plans – ensuring that the flow of pure water continues no matter what.

Zero discharge

The Aquamove™ HF900 units **require no chemicals** to be used on your site and **produces no wastewater**. Regeneration is off-site at our state-of-the-art regeneration station.

Flexible configuration

With their **rugged design, small footprint and ability to treat a wide range of flow rates**, these units offer an **economical alternative** for high purity water production, particularly for temporary use.

Their quadruple vessel and manifold system construction allow the units to be **operationally flexible** and a battery powered meter monitors the treated water for quality during use.

Rapid response

Within 2 hours of the call an Aquamove HF900 can be on the road. A VWS service engineer can also be dispatched to ensure the unit is correctly connected upon arrival.

- 24 hours a day*
- 7 days a week*
- 365 days a year*

* Depending on the client's location

Typical applications

- Polishing
- Pilot plant trials
- Interim usage
- Process water quality changes
- Seasonal water needs
- Emergency water
- Water quality changes
- Scheduled shutdowns



HF900 Cylinders

ION EXCHANGE

Aquamove
Mobile Water Solutions

System Performance								
	Minimum Flow / ΔP		Maximum Flow / ΔP		Maximum Operating Pressure		Maximum Operating Temperature	Capacity Guidelines (approx)
	l/h	psi	l/h	psi	psi	bar	°C	m ³ per Mg/l impurities
HF900SB Standard DI (Strong)	940	7.5	10000	30	90	6.0	35	12000
HF900WB *Standard DI (Weak)	940	7.5	10000	30	90	6.0	35	18000
HF900NB *Nuclear Grade	940	7.5	10000	30	90	6.0	35	14000

System Dimensions (Frame with 4 cylinders)			
	Height	Footprint	Weight
	m	m ²	T
HF900SB Standard DI (Strong)	2.12	0.98	1.2
HF900WB *Standard DI (Weak)	2.12	0.98	1.2
HF900NB *Nuclear Grade	2.12	0.98	1.2

* NB: Weak and Nuclear Resin Grades only available to special order.
Please consult your VWS Sales Representative for further details

Treated Water Performance							
	Conduc-tivity	Resisti-vity	Silica	Carbon Dioxide	Trace Dissolved Metals	Residual Solids	Average pH
	μS/cm	MΩ - cm	mg/l	mg/l	mg/l	mg/l	
Standard DI (Strong)	1.0 - 0.1	1.0 - 10	<0.5	<0.5	<0.001	<0.5	Neutral
Standard DI (Weak)	10 - 50	0.02 - 0.1	Not removed	Not removed	<0.005	<10	4 - 7
Nuclear Grade	1.0-0.055	10 - 18	<0.01	<0.01	<0.001	<0.1	Neutral

Please note: connections on the HF900 units are PVC 1" hositails

ORION™ 2000

HOT WATER SANITISABLE SOLUTION

Aquamove

Mobile Water Solutions

Short to long-term temporary solution

- Pharmaceutical grade water
- Pre-validated, skid-mounted system
- Hot water sanitisable
- Nominal flow rate 2000 L/h
- Developed specifically for pharmaceutical industry
- Compliant with all industry requirements



Veolia Water Solutions & Technologies offers the ORION™ unit, a thermally sanitised, integrated packaged system which produces Pharmaceutical grade water from a potable water feed.

ORION™ is designed to operate on a continuous basis and can produce purified water at all times except when performing a thermal sanitisation, or during cleaning or maintenance.

Features and benefits

- Regular hot water sanitisation at 85°C ; guaranteed microbiological compliance
- Designed, manufactured, validated to GAMP
- Fully compliant with latest ISPE, USP, Ph Eur
- Automated PLC control
- Secure access key of HMI
- Unique CEDI design ; efficiently and reliably ensures water quality
- Skid-mounted, pre-assembled, pre-tested
- Comprehensive validation pack (FAT, IQ, OQ) available as an option

Service and operation

Once installed and commissioned our local service engineer will visit your site at an agreed frequency to ensure that the unit is operating correctly, that chemical supplies are topped up and that filters are replaced as required. A full time operator can be provided at your request.

Typical applications

- Purified Water
 - Ophthalmics
 - Antibiotics
 - Tablet coating
 - Granulation
 - Diagnostics
 - Veterinary products
- Highly Purified Water
 - Nasal/ Ear preparations
 - Nebuliser solutions
- Water For Injection
 - Parenterals
 - Haemo filtration solutions
 - Irrigation solutions



For more information on ORION™, please don't hesitate to ask for the specific ORION™ range brochure.

ORION 2000

HOT WATER SANITABLE SOLUTION

Aquamove
Mobile Water Solutions

ORION™ 2000 Equipment Performance

Model	Single pass RO
Nominal flow rate (L/h)	2000
Permeate (L/h)	2000
Feed (L/h)	2500
Concentrate (L/h)	500
Recovery (%)	75-90

ORION™ 2000 Material Specifications

Pre-treatment system	
Pipework	PVC
Softeners	High Density Polyethylene & GRP Composite
Filter vessels	Polypropylene
Purified water system	
Tank	316L stainless steel
Reverse osmosis	316L stainless steel
CEDI	FDA approved materials
Pipework	316L stainless steel
General	
Skid	304 stainless steel
Control panel	304 stainless steel

ORION™ 2000 Dimensions

Model	Single pass RO
Height (max) (mm)	2100
Width (mm)	3000
Depth (mm)	1500
Weight (kg)	2950

ORION™ 2000 Feed Water Supply Requirements

General	Potable water free from organics, colloids and suspended matter, SDI <3
Free chlorine	<0.25 ppm
Temperature	10-30 °C
Pressure	4-6 bar

ORION™ 2000 Typical Treated Water Quality

Configuration	Standard configuration	With UF Option
Conductivity	< 0.2 µS/cm	
TOC	< 250 ppb	
Bacteria (cfu/ml)	< 10 cfu/ml	< 10 cfu/100ml

ORION™ 2000 Electricity and Air Supply

Electrical	380-480V ; 3 phase ; 50/60 Hz	
Compressed Air	Oil free, instrument grade, 6-9 bar	
Endotoxins	N/	< 0.125 EU/ml

QUATTRO™ 3000

HIGH PURITY WATER PRODUCTION

Aquamove
Mobile Water Solutions

Short to long-term temporary solution

- Multi-technology solution
- Pre-validated, skid-mounted system
- Nominal flow rate 3000 L/h
- Microprocessor controller with HMI screen
- Simple monitoring and operation
- Stainless steel RO vessels with sanitary flow path design
- HMI has secure access keys
- Integrated Cleaning In Place (CIP) tank; maintains RO membrane performance

Veolia Water Solutions & Technologies offers the QUATTRO™ unit, a convenient and cost-effective solution for supplying up to 3000 L/h of high purity water (less than 0.7 µS/cm conductivity).

It combines in a single compact skid-mounted assembly four treatment processes:

- **Softening:** Softener columns pre-condition the process feedwater by removing water hardness due to calcium and magnesium ions.
- **Filtration:** The pre-filter step serves to extend the lifetime of the reverse osmosis membranes by capturing any fines particulates.
- **Reverse osmosis:** The pretreated water enters then into the RO membranes. In addition to removing microbial impurities, the RO phase removes up to 97% of dissolved inorganics and over 99% of total dissolved organics, colloids and particles.
- **Continuous electro-deionisation:** The final polishing step is done through CEDI. The CEDI is an electrically driven, ion exchange technology combined to ion selective membranes, which operates continuously without chemical regeneration.

Service and operation

Once installed and commissioned our local service engineer will visit your site at an agreed frequency to ensure that the unit is operating correctly, that chemical supplies are topped up and that filters are replaced as required. A full time operator can be provided at your request.



Typical applications

- Cosmetics
- Industrial laboratories
- Microelectronics
- Boiler feed
- Biotechnology
- Healthcare
- Pharmaceutical products



For more information on QUATTRO™, please don't hesitate to ask for the specific QUATTRO™ range brochure.

QUATTRO 3000

HIGH PURITY WATER PRODUCTION

Aquamove
Mobile Water Solutions

Equipment Performance	
Nominal flow rate*	
Permeate**	3000 L/h
Feed	4110 L/h
Concentrate	1110 L/h
Pump motor size	7.5 kW
Recovery (maximum)	73 %
*Nominal flows are based on operation of RO/CEDI system at 15°C (60°F), SDI<3 and are dependent on feed water quality	
**Maximum outlet pressure of 0 - 4 bar (15 - 60 PSI), dependent on the sizing program, site conditions and customer requirements	
Connections	
Inlet Union	32
Outlet Union	25
Outlet Triclamp	25
Drain Union	50
Dimensions	
Height	2060 mm
Width	2250 mm
Depth	1300 mm
Material Specifications	
Pre RO Pipework	uPVC
Softeners	HDPE and GRP Composite
Cartridge Filter Housing	Polypropylene
Multi-purpose Tank	HDPE
Reverse Osmosis - High Pressure Pipework & Vessels	316L Stainless Steel
Pipework	uPVC
Skid	304 Stainless Steel
Control Cabinet	Painted Mild Steel
Feed Water Requirements	
General	Potable water free from organics, colloids and suspended matter, SDI <3
Free chlorine	<0.25 mg/L *
Temperature	5-30 °C
Pressure	4-6 bar
* with activated carbon cartridge filters fitted	
Typical Treated Water Quality (RO/CEDI)	
Conductivity*	< 0.2 µS/cm
TOC	< 500 ppb
Bacteria (cfu/ml)	< 100 cfu/ml
* depends on feed water quality, flow-rate & product option selected	

IDRAFLOT™ IFS7

DISSOLVED AIR FLOTATION

Aquamove
Mobile Water Solutions

Mid to long-term temporary solution

- Temporary wastewater treatment
- Solid/liquid separation
- Capacity from 7 to 15 m³/hr
- Modular and compact solution
- Patented solution



Typical applications

- Pretreatment upstream of a biological plant to remove biodegradable fats, TSS and fibers
- Clarification plant downstream of a biological plant to remove light sludge particles not captured by secondary decanters
- Tertiary treatment
- Sludge thickening
- For liquid/solid separation in industrial process plants

Flotation DAF is a process using air dissolved in water in order to achieve solid/liquid separation.

Aquamove™ IDRAFLOT™ IFS7 is a very compact and mobile flotation unit which can attain such high thickening and clarification grades as allow ultra flotation with the highest removal efficiency for COD, suspended solids and fat.

IDRAFLOT™ flotation units are protected by three patents. They are intended to assure a perfect mixing of the waste with saturated water and an uniform distribution of the water flow along the entire surface of the unit.

IDRAFLOT™ is a rectangular unit, easily transportable, entirely in stainless steel. It is provided with lamellar packs, to achieve high treatment capacity compared to its compact size, telescopic level adjustment to optimize the sludge extraction with dry matter up to 8%. The saturation system warrants a complete and even saturation free from formation of big bubbles. The reactor allows to sample and optimize the desired parameters through e very simple adjustment of chemicals (coagulant/flocculant).

Typical users

- Dairy, slaughterhouses
- Meat, salami, fat processing
- Fishing industry
- Canneries
- Confectionery industry
- Wine industry
- Soft drink production
- Dye-works, tanneries
- Pulp & paper industry



Technical characteristics	
Nominal treating capacity	7-15 m ³ /h
Model	IFS 7 BB
Electrical equipment	IFS 7 --3 (400 [V] 50 [Hz] 3F)
Construction	Flotation module on a skid made of inox steel
Flotation typology	Dissolved air flotation (DAF), preceded by coagulation, flocculation and with sequential phase separation
Phase separation	On laminar packed bed
Sludge discharge pump	Screw pump with manual motor speed variator
Saturation pump	Single stage horizontal centrifugal pump
Air/liquid dissolution system	By means of saturator and one air/liquid ejector
Control	Automatic, continuous 24/24h 7/7 days by PLC; possibility to make remote the functioning state signal starting and shutdown of machine
Electrical cabinet rating	IP 55
Noise	< 80 [dB(A)]
In compliance with standards: (CE marking)	Machinery Directive Electromagnetic compatibility Electrical safety
Nominal performance	
Electrical feed	400 [V] 50 [Hz] 3F
Maximum treated water capacity	15 [m ³ /h] ± 10%
Absorbed power	7 [kW] ± 10%
Power factor	[cosφ] 0.9
Specific consumption (electric power per cubic meter of treated fluid)	466 - 1000 [Wh/m ³] ± 10%
Dimensions & Weight	
Length	3250 mm
Width	1800 mm
Height	1900 mm
Weight (empty)	900 kg
Weight (in operation)	2800 kg

IDRAFLOT™ IFS60

DISSOLVED AIR FLOTATION

Aquamove
Mobile Water Solutions

Mid to long-term temporary solution

- Temporary wastewater treatment
- Solid/liquid separation
- Capacity from 42 to 120 m³/hr
- Modular and compact solution
- Patented solution



Flotation DAF is a process using air dissolved in water in order to achieve solid/liquid separation.

Aquamove™ IDRAFLOT™ IFS60 is a very compact and mobile flotation unit which can attain such high thickening and clarification grades as allow ultra flotation with the highest removal efficiency for COD, suspended solids and fat.

IDRAFLOT™ flotation units are protected by three patents. They are intended to assure a perfect mixing of the waste with saturated water and an uniform distribution of the water flow along the entire surface of the unit.

IDRAFLOT™ is a rectangular unit, easily transportable, entirely in stainless steel. It is provided with lamellar packs, to achieve high treatment capacity compared to its compact size, telescopic level adjustment to optimize the sludge extraction with dry matter up to 8%. The saturation system warrants a complete and even saturation free from formation of big bubbles. The reactor allows to sample and optimize the desired parameters through a very simple adjustment of chemicals (coagulant/flocculant).

Typical users

- Dairy, slaughterhouses, meat, salami, fat processing
- Fishing industry, canneries
- Confectionery industry
- Wine industry, soft drink production
- Dye-works, tanneries
- Pulp & paper industry

Typical applications

- Pretreatment upstream of a biological plant to remove biodegradable fats, TSS and fibers
- Clarification plant downstream of a biological plant to remove light sludge particles not captured by secondary decanters
- Tertiary treatment
- Sludge thickening
- For liquid/solid separation in industrial process plants



IDRAFLOT™ IFS60

DISSOLVED AIR FLOTATION

Aquamove
Mobile Water Solutions

Technical characteristics	
Nominal treating capacity	42-120 m ³ /h
Model	IFS 60 BB# ; AISI 304 inox steel
Electrical equipment	400 V ; 50 Hz ; 3F
Construction	3 flotation modules on a skid made of inox steel
Flotation typology	Dissolved air flotation (DAF), preceded by coagulation, flocculation and with sequential phase separation
Phase separation	On laminar packed bed
Sludge discharge pump	Screw pump with manual motor speed variator
Saturation pump	Single stage horizontal centrifugal pump
Air/liquid dissolution system	By means of saturator and air liquid ejector
Control	Automatic, continuous 24/24h 7/7 days by PLC; possibility to make remote the functioning state signal starting and shutdown of machine
Electrical cabinet rating	IP 54
Noise	< 80 dB(A)
In compliance with standards: (CE marking)	Machinery Directive Electromagnetic compatibility Electrical safety
Patent references	Protocol n. TO 2008 A 399, n. TO 2008 A 401, n. TO 2008 A 402 registered at Board of Trade of Torino (Italy)
Nominal performance	
Electrical feed	400 V ; 50 Hz ; 3F
Maximum treated water capacity	120 m ³ /h ± 10%
Absorbed power	12 kW ± 10%
Power factor	[cosφ] 0,9
Specific consumption (electric power per cubic meter of treated fluid)	0.100-0.285 kWh/m ³ ± 10%
Dimensions & Weight	
Length	6300 mm
Width	2400 mm
Height	2800 mm
Weight (empty)	3500 kg
Weight (in operation)	18000 kg

IDRAFLOT™ IFS80

DISSOLVED AIR FLOTATION

Aquamove
Mobile Water Solutions

Mid to long-term temporary solution

- Temporary wastewater treatment
- Solid/liquid separation
- Capacity from 56 to 160 m³/hr
- Modular and compact solution
- Patented solution



Flotation DAF is a process using air dissolved in water in order to achieve solid/liquid separation.

Aquamove™ IDRAFLOT™ IFS80 is a very compact and mobile flotation unit which can attain such high thickening and clarification grades as allow ultra flotation with the highest removal efficiency for COD, suspended solids and fat.

IDRAFLOT™ flotation units are protected by three patents. They are intended to assure a perfect mixing of the waste with saturated water and an uniform distribution of the water flow along the entire surface of the unit.

IDRAFLOT™ is a rectangular unit, easily transportable, entirely in stainless steel. It is provided with lamellar packs, to achieve high treatment capacity compared to its compact size, telescopic level adjustment to optimize the sludge extraction with dry matter up to 8%. The saturation system warrants a complete and even saturation free from formation of big bubbles. The reactor allows to sample and optimize the desired parameters through a very simple adjustment of chemicals (coagulant/flocculant).

Typical users

- Dairy, slaughterhouses, meat, salami, fat processing
- Fishing industry, canneries
- Confectionery industry
- Wine industry, soft drink production
- Dye-works, tanneries
- Pulp & paper industry

Typical applications

- Pretreatment upstream of a biological plant to remove biodegradable fats, TSS and fibers
- Clarification plant downstream of a biological plant to remove light sludge particles not captured by secondary decanters
- Tertiary treatment
- Sludge thickening
- For liquid/solid separation in industrial process plants



IDRAFLOT™ IFS80

DISSOLVED AIR FLOTATION

Aquamove
Mobile Water Solutions

Technical characteristics	
Nominal treating capacity	56-160 m ³ /h
Model	IFS 80 BB# ; AISI 304 inox steel
Electrical equipment	400 V ; 50 Hz ; 3F
Construction	4 flotation modules on a skid made of inox steel
Flotation typology	Dissolved air flotation (DAF), preceded by coagulation, flocculation and with sequential phase separation
Phase separation	On laminar packed bed
Sludge discharge pump	Screw pump with manual motor speed variator
Saturation pump	Single stage horizontal centrifugal pump
Air/liquid dissolution system	By means of saturator and air liquid ejector
Control	Automatic, continuous 24/24h 7/7 days by PLC; possibility to make remote the functioning state signal starting and shutdown of machine
Electrical cabinet rating	IP 54
Noise	< 80 dB(A)
In compliance with standards: (CE marking)	Machinery Directive Electromagnetic compatibility Electrical safety
Patent references	Protocol n. TO 2008 A 399, n. TO 2008 A 401, n. TO 2008 A 402 registered at Board of Trade of Torino (Italy)
Nominal performance	
Electrical feed	400 V ; 50 Hz ; 3F
Maximum treated water capacity	160 m ³ /h ± 10%
Absorbed power	12 kW ± 10%
Power factor	[cosφ] 0.9
Specific consumption (electric power per cubic meter of treated fluid)	0.075-0.214 kWh/m ³ ± 10%
Dimensions & Weight	
Length	7300 mm
Width	2400 mm
Height	2800 mm
Weight (empty)	4000 kg
Weight (in operation)	23000 kg

IDRAFLOT™ IFS100

DISSOLVED AIR FLOTATION

Aquamove
Mobile Water Solutions

Mid to long-term temporary solution

- Temporary wastewater treatment
- Solid/liquid separation
- Capacity from 70 to 200 m³/hr
- Modular and compact solution
- Patented solution



Flotation DAF is a process using air dissolved in water in order to achieve solid/liquid separation.

Aquamove™ IDRAFLOT™ IFS100 is a very compact and mobile flotation unit which can attain such high thickening and clarification grades as allow ultra flotation with the highest removal efficiency for COD, suspended solids and fat.

IDRAFLOT™ flotation units are protected by three patents. They are intended to assure a perfect mixing of the waste with saturated water and an uniform distribution of the water flow along the entire surface of the unit.

IDRAFLOT™ is a rectangular unit, easily transportable, entirely in stainless steel. It is provided with lamellar packs, to achieve high treatment capacity compared to its compact size, telescopic level adjustment to optimize the sludge extraction with dry matter up to 8%. The saturation system warrants a complete and even saturation free from formation of big bubbles. The reactor allows to sample and optimize the desired parameters through a very simple adjustment of chemicals (coagulant/flocculant).

Typical users

- Dairy, slaughterhouses, meat, salami, fat processing
- Fishing industry, canneries
- Confectionery industry
- Wine industry, soft drink production
- Dye-works, tanneries
- Pulp & paper industry

Typical applications

- Pretreatment upstream of a biological plant to remove biodegradable fats, TSS and fibers
- Clarification plant downstream of a biological plant to remove light sludge particles not captured by secondary decanters
- Tertiary treatment
- Sludge thickening
- For liquid/solid separation in industrial process plants



IDRAFLOT™ IFS100

DISSOLVED AIR FLOTATION

Aquamove
Mobile Water Solutions

Technical characteristics	
Nominal treating capacity	70-200 m ³ /h
Model	IFS 100 BB# ; AISI 304 inox steel
Electrical equipment	400 V ; 50 Hz ; 3F
Construction	5 flotation modules on a skid made of inox steel
Flotation typology	Dissolved air flotation (DAF), preceded by coagulation, flocculation and with sequential phase separation
Phase separation	On laminar packed bed
Sludge discharge pump	Screw pump with manual motor speed variator
Saturation pump	Single stage horizontal centrifugal pump
Air/liquid dissolution system	By means of saturator and air liquid ejector
Control	Automatic, continuous 24/24h 7/7 days by PLC; possibility to make remote the functioning state signal starting and shutdown of machine
Electrical cabinet rating	IP 54
Noise	< 80 dB(A)
In compliance with standards: (CE marking)	Machinery Directive Electromagnetic compatibility Electrical safety
Patent references	Protocol n. TO 2008 A 399, n. TO 2008 A 401, n. TO 2008 A 402 registered at Board of Trade of Torino (Italy)
Nominal performance	
Electrical feed	400 V ; 50 Hz ; 3F
Maximum treated water capacity	200 m ³ /h ± 10%
Absorbed power	16 kW ± 10%
Power factor	[cosφ] 0.9
Specific consumption (electric power per cubic meter of treated fluid)	0.08-0.229 kWh/m ³ ± 10%
Dimensions & Weight	
Length	8300 mm
Width	2400 mm
Height	2800 mm
Weight (empty)	4500 kg
Weight (in operation)	28300 kg

MBBR-10S

MOVING BED BIOFILM REACTOR

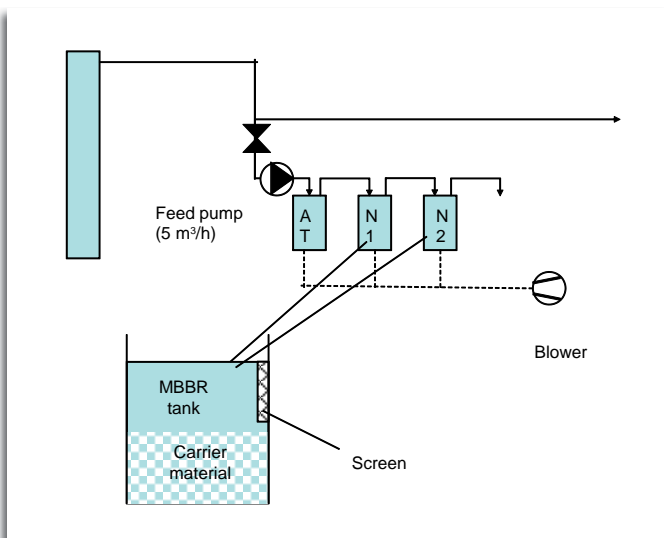
Aquamove
Mobile Water Solutions

Mid to long-term temporary solution

- Mobile skid-mounted system
- Compact solution
- Flow rate 5-10 m³/h
- Simple operation
- Enhances nitrification
- Robust



The MBBR technology is patented by AnoxKaldnes, a Veolia Water Solutions & Technologies company.



The MBBR technology is based on the biofilm principle with an active biofilm growing on small specially designed plastic carriers that are kept suspended in the reactor. The technology utilises the advantages of both activated sludge and other biofilm systems. The carriers are designed to provide a large protected surface area for the biofilm and optimal conditions for the bacteria culture when the carriers are suspended in water.

The solutions based on MBBR technology are efficient for BOD, ammonia and nitrogen removal. They are compact and easy to operate. Specialised micro-organisms in all stages provide maximum rates and allow far reaching nitrogen removal in small volume.

Each Aquamove™ MBBR-10S unit comes with 15/20m of hose for feed, permeate and reject.



Benefits

- Robust biofilm
- Easy to operate and control
- No sludge return needed in most applications
- Low load on particle separation stage



Typical applications

- Pilot plant for biological wastewater treatment
- Organic removal (BOD, COD)
- Nitrification
- Denitrification



MBBR-10S

MOVING BED BIOFILM REACTOR

Aquamove
Mobile Water Solutions

System Dimensions	
Length	6800 mm
Width	2600 mm
Height	3750 mm
Shipping weight	± 4 tons
Process Data	
BOD tank	
Type	Closed
Volume	7 m ³
Diameter incl.level control	1750 mm
Height	3750 mm
Level	Level control (full, start)
N1 tank	
Type	Open
Volume	10 m ³
Diameter	2150 mm
Height (mm)	3750 mm
Level	None
N2 tank	
Type	Open
Volume	3 m ³
Width (mm)	1200 mm
Height (mm)	3750 mm
Level	None
Blower with frequency drive	
Type	Robuschi «Robox» kompaktblower ES 15/1-P
Length	1000 mm
Width	1000 mm
Height	1000 mm
Pump	2950 rpm, IP 55 50 Hz IEC 112 M
Carriers	
Type	AnoxKaldnes™ K2
Connections	
Raw water feed	1 x 63 mm PN 16 PVC
Clarified water discharge	3' PN 16 DIN flange
Power connection Blower	5.5 kW, 400V (L1, L2, L3, N, Earth)
Control System	
Power connection	240 V
Alarms	High level
External connections	None

MOFI-MBR-2C

MEMBRANE BIOREACTOR

Aquamove
Mobile Water Solutions

Mid-term temporary solution

- Flexible and mobile solution
- 40' high cube container
- Nominal permeate capacity 2 m³/hr
- Range between 0.3 and 2 m³/hr (depending on wastewater quality)



Typical applications

- **Pilot tests** to establish design data for a full-scale plant:
- Municipal/industrial wastewater treatment
- Pre-treatment for RO, IX, carbon filters, etc.
- Unrestricted irrigation
- Groundwater recharge
- Irregular water quality – safe water supply
- **Additional capacity** for existing plants

Aquamove™ MOFI-MBR-2C is a containerised submerged membrane bioreactor system and consists of a **biological stage** and an **ultrafiltration unit**.

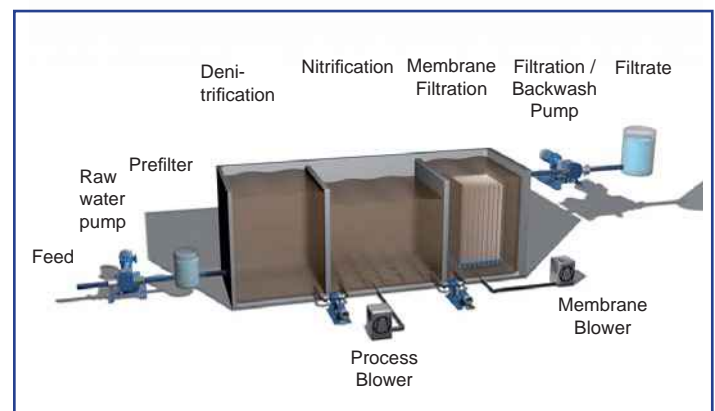
The biological stage consists of two flexible tanks for **nitrification and denitrification** (aerobic and anoxic zones).

The membrane filtration allows the **solid separation** (activated sludge, particle, microorganisms) and presents the final treatment step of MOFI-MBR-2C.

The plant is **fully automatic**, and is supervised by the client. A **remote control via phone line or network connection** facilitates operational support and data acquisition.

Equipment Components

- 1 x submerged feed pump (supplied incoherent - connection to MBR plant by customer)
- 2 x coarse-filter (one stand by)
- 1 x compressor unit
- 1 x denitrification tank incl. mixer
- 1 x nitrification tank incl. pumps and mixer
- 1 x membrane filtration tank incl. pumps
- 3 x aeration unit
- 1 x CIP tank
- 1 x filtrate buffer tank
- 1 x dosing station (cleaner, acid, base, coagulant, nutrients)
- Internal pipings and valves
- Various instrumentations
- Control and PLC cabinet



MOFI-MBR-2C

MEMBRANE BIOREACTOR

Aquamove
Mobile Water Solutions

Typical Process Data	
Permeate Capacity (nominal)	2 m ³ /hr*
Flux (typical)	20 L/m ² *hr
Membrane material	PVDF
Membrane type	Hollow Fiber (Flat Sheet possible)
Membrane area	30 - 100 m ²
Biological volume	8 - 25 m ³
Nominal pore size	0.04 µm
Inner fibre diameter	0.8 mm
Feed wastewater requirements	Prefiltration: 1.5 mm FOG: < 30 mg/L pH 3.0 – 10.0
Feed water pressure requirements	0.5 – 2.5 bar
Feed water temperature requirements	10 – 38 °C
Dimensions & Weight	
Length	12.20 m
Width	2.50 m
Height	3.30 m
Shipping Weight	approx. 12.0 tons
Operation Weight	approx. 42.0 tons
System Connections	
Feed water	PVC connection DN50
Product water (Permeate)	PVC connection DN25
Sludge discharge	PVC connection DN40
Power connection	400 V/50 Hz 3 phases + N + P 64 A CEE-plug, RCD > 300mA
* Range between 0,3 - 2 m ³ /h, depending on wastewater quality	

EVALED™ R-150

EVAPORATION

Aquamove
Mobile Water Solutions

Mid to long-term temporary solution

- Heat pump evaporator
- Mobile skid-mounted system
- Compact solution
- Flow rate 150 L/day
- Natural circulation
- Heat exchanger with scraped heating surfaces
- The boiling chamber inside pat is cleaned by internal scrapers that continuously stir the concentrate

Aquamove™ EVALED™ R-150 is designed to produce a concentrate with a high final concentration and distillate with low conductivity.

Benefits

- ZLD
- Recycling and re-use of the water
- Distillate of the highest quality
- Recycling of the concentrate

Typical users

- Galvanic industry
- Surface treatment
- Mechanical industry
- Landfills and waste disposal
- Food & beverage industry
- Chemical industry
- Power plants



Typical applications

- Treatment of wastewater with a high initial content of dissolved or suspended solids
- Treatment of cooling tower blowdown
- Treatment of already pre-concentrated wastewater



Technical Characteristics	
Nominal production of distillate with water	150 L/24h
Model	R 150v3 FF# ; Superduplex stainless steel
Electrical equipment	R 150v3 --3 (400 [V] 50 [Hz] 3P)
Construction	Pre-assembled single module on a stainless steel frame
Distillate heat exchanger	Internal coil
Primary heat exchanger	Heating jacket
Evaporation type	Vacuum with a scraped system
Evaporation conditions	Absolute pressure 3-7 kPa Temperature 25-40°C
Distillate temperature	25-40°C
Drops separator	Demister, grate type with packing elements
Technology of heating/cooling	Heat pump
Heat pump compressor	Reciprocating hermetic
Refrigeration fluid	R 134a (ozone friendly)
Cooling of refrigeration fluid	Air cooled finned heat exchanger
Vacuum system	Liquid ejector
Control	Electromechanical continuous 24/24h 7/7 days in the version with automatic drainage; possibility to make remote the functioning state signal starting and shutdown of machine
Electrical cabinet rating	IP 54
Noise	< 80 dB(A)
In compliance with standards (CE marking)	Machinery Directive Electromagnetic compatibility Electrical safety
Nominal performance	
Electrical feed	230 V ; 50 Hz ; 1F
Maximum production of distillate with water	170 L/24h ± 10%
Absorbed power	2.3 kW ± 10%
Power factor	[cosφ] 0.94
Specific consumption	0,325 kWh/L ± 10%
Produced heat	2.3 kW ± 10%
Maximum air flow of finned heat exchanger	1000 Nm ³ /h ± 10%
Dimensions	
Length	850 mm
Width	730 mm
Height	1460 mm
Shipping weight	Empty unit 260 Kg Standard packaging 280 Kg Wooden crate 378 Kg

EVALED™ PC-E700

EVAPORATION

Aquamove
Mobile Water Solutions

Mid to long-term temporary solution

- Heat pump evaporator
- Mobile skid-mounted system
- Compact solution
- Flow rate 700 L/day
- Forced circulation, external shell and tube heat exchanger
- Significant reduction of COD in the distillate
- High yield and low quantity of concentrate to be disposed

Aquamove™ EVALED™ PC-E700 is designed to produce the best distillate quality with minimum operating costs.

It operates in high vacuum conditions to recover a large part of the thermal energy produced by the heat pump. It is designed for continuous operation, 24 h/day, and requires just electrical supply and compressed air.

Benefits

- Excellent separation of surfactants
- Control of foaming
- Total separation of metals
- Consistent distillate quality
- Fully automatic operation
- Low maintenance

Typical users

- Galvanic industry and surface treatment
- Mechanical industry
- Aluminium die-casting
- Landfills and waste disposal
- Chemical industry
- Power plants



Typical applications

- Wastewater treatment
- ZLD
- Recycling and re-use
- Treatment of cooling tower blowdown



EVALED™ PC-E700

EVAPORATION

Aquamove
Mobile Water Solutions

Technical Characteristics	
Nominal production of distillate with water	700 L/24h
Model	E 700v2 FF# ; Superduplex stainless steel
Electrical equipment	E 700v2 --3 (400 [V] 50 [Hz] 3P)
Construction	Pre-assembled single module on a stainless steel frame
Distillate heat exchanger	Internal coil
Primary heat exchanger	External shell and tube with forced circulation
Evaporation type	Conveyed vacuum flash
Evaporation conditions	Absolute pressure 3-5 kPa Temperature 30-40 °C
Distillate temperature	30-40°C
Drops separator	Demister, grate type with packing elements
Technology of heating/cooling	Heat pump
Heat pump compressor	Reciprocating hermetic
Refrigeration fluid	R 407c (ozone friendly)
Cooling of refrigeration fluid	Air cooled finned heat exchanger. Optional cold water auxiliary shell and tube heat exchanger
Vacuum system	Liquid ejector
Control	Automatic, continuous 24/24h 7/7 days by Siemens PLC possibility to make remote the functioning state signal starting and shutdown of machine
Electrical cabinet rating	IP 54
Noise	< 80 dB(A)
In compliance with standards (CE marking)	Machinery Directive Electromagnetic compatibility Electrical safety PED Pressure machinery equipment
Nominal Performance	
Electrical feed	400 V ; 50 Hz ; 3F
Maximum production of distillate with water	760 L/24h ± 10%
Absorbed power	6.6 kW ± 10%
Power factor	[cosφ] 0.84
Specific consumption	0.208 kWh/L ± 10%
Produced heat	6.6 kW ± 10%
Maximum air flow of finned heat exchanger	5000 Nm ³ /h ± 10%
Dimensions	
Length x Width x Height	1550 x 800 x 2070 mm
Shipping weight	Empty unit 476 Kg Standard packaging 490 Kg Wooden crate 646 Kg

EVALED™ PC-E1400

EVAPORATION

Aquamove
Mobile Water Solutions

Mid to long-term temporary solution

- Heat pump evaporator
- Mobile skid-mounted system
- Compact solution
- Flow rate 1400 L/day
- Forced circulation, external shell and tube heat exchanger
- Significant reduction of COD in the distillate
- High yield and low quantity of concentrate to be disposed

Aquamove™ EVALED™ PC-E700 is designed to produce the best distillate quality with minimum operating costs.

It operates in high vacuum conditions to recover a large part of the thermal energy produced by the heat pump. It is designed for continuous operation, 24 h/day, and requires just electrical supply and compressed air.

Benefits

- Excellent separation of surfactants
- Control of foaming
- Total separation of metals
- Consistent distillate quality
- Fully automatic operation
- Low maintenance

Typical users

- Galvanic industry and surface treatment
- Mechanical industry
- Aluminium die-casting
- Landfills and waste disposal
- Chemical industry
- Power plants



Typical applications

- Wastewater treatment
- ZLD
- Recycling and re-use
- Treatment of cooling tower blowdown



EVALED™ PC-E1400

EVAPORATION

Aquamove
Mobile Water Solutions

Technical Characteristics	
Nominal production of distillate with water	1400 L/24h
Model	E 1400v3 FF# ; Superduplex stainless steel
Electrical equipment	E 1400v3 --3 (400 [V] 50 [Hz] 3P)
Construction	Pre-assembled single module on a stainless steel frame
Distillate heat exchanger	Internal coil
Primary heat exchanger	External shell and tube with forced circulation
Evaporation type	Conveyed vacuum flash
Evaporation conditions	Absolute pressure 6-7 kPa Temperature 30-40 °C
Distillate temperature	30-40°C
Drops separator	Demister, grate type with packing elements
Technology of heating/cooling	Heat pump
Circulation pump	Centrifugal with fluxed mechanical seal
Heat pump compressor	Reciprocating scroll type
Refrigeration fluid	R 134a (ozone friendly)
Cooling of refrigeration fluid	Air cooled finned heat exchanger. Optional cold water auxiliary shell and tube heat exchanger
Vacuum system	Liquid ejector
Control	Automatic, continuous 24/24h 7/7 days by Siemens PLC possibility to make remote the functioning state signal starting and shutdown of machine
Electrical cabinet rating	IP 54
Noise	< 80 dB(A)
In compliance with standards (CE marking)	Machinery Directive Electromagnetic compatibility Electrical safety PED Pressure machinery equipment
Nominal Performance	
Electrical feed	400 V ; 50 Hz ; 3F
Maximum production of distillate with water	1405 L/24h ± 10%
Absorbed power	9.7 kW ± 10%
Power factor	[cosφ] 0.86
Specific consumption	0,165 kWh/L ± 10%
Produced heat	9.7 kW ± 10%
Maximum air flow of finned heat exchanger	7000 Nm ³ /h ± 10%
Dimensions	
Length x Width x Height	1620 x 1060 x 2250 mm
Shipping weight	Empty unit 640 Kg Standard packaging 650 Kg Wooden crate 820 Kg

EVALED™ PC-E48000

EVAPORATION

Aquamove
Mobile Water Solutions

Mid to long-term temporary solution

- Heat pump evaporator
- Mobile skid-mounted system
- Compact solution
- Flow rate 48000 L/day
- Forced circulation, external shell and tube heat exchanger
- Significant reduction of COD in the distillate
- High yield and low quantity of concentrate to be disposed

Aquamove™ EVALED™ PC-E48000 is designed to produce the best distillate quality with minimum operating costs.

It operates in high vacuum conditions to recover a large part of the thermal energy produced by the heat pump. It is designed for continuous operation, 24 h/day, and requires just electrical supply and compressed air.

Benefits

- Excellent separation of surfactants
- Control of foaming
- Total separation of metals
- Consistent distillate quality
- Fully automatic operation
- Low maintenance

Typical users

- Galvanic industry and surface treatment
- Mechanical industry
- Aluminium die-casting
- Landfills and waste disposal
- Chemical industry
- Power plants



Typical applications

- Wastewater treatment
- ZLD
- Recycling and re-use
- Treatment of cooling tower blowdown



EVALED™ PC-E48000

EVAPORATION

Aquamove
Mobile Water Solutions

Technical Characteristics	
Nominal production of distillate with water	48000 L/24h
Model	E 48000v3 FF# ; Superduplex stainless steel
Electrical equipment	E 48000v3 --3 (400 [V] 50 [Hz] 3P)
Construction	Four pre-assembled modules on a stainless steel frame
Distillate heat exchanger	U tubes
Primary heat exchanger	External shell and tube with forced circulation
Evaporation type	Conveyed vacuum flash
Evaporation conditions	Absolute pressure 6-8 kPa Temperature 30-45 °C
Distillate temperature	30-45°C
Drops separator	Demister, grate type with packing elements
Technology of heating/cooling	Heat pump
Circulation pump	Centrifugal with fluxed mechanical seal
Heat pump compressor	Semi-hermetic compact screws
Refrigeration fluid	R 134a (ozone friendly)
Cooling of refrigeration fluid	Air cooled finned heat exchanger. Optional cold water auxiliary shell and tube heat exchanger
Vacuum system	Air ejector and liquid ring pump
Control	Automatic, continuous 24/24h 7/7 days by Allen Bradley PLC; possibility to make remote the functioning state signal starting and shutdown of machine
Electrical cabinet rating	IP 54
Noise	< 80 dB(A)
In compliance with standards (CE marking)	Machinery Directive; Electromagnetic compatibility; Electrical safety; PED Pressure machinery equipment
Nominal Performance	
Electrical feed	400 V ; 50 Hz ; 3F
Maximum production of distillate with water	48120 L/24h ± 10%
Absorbed power	290 kW ± 10%
Power factor	[cosφ] 0.8
Specific consumption	0.145 kWh/L ± 10%
Produced heat	290 kW ± 10%
Maximum air flow of finned heat exchanger	140000 Nm³/h ± 10%
Dimensions	
Length x Width x Height	7500 x 4400 x 8000 mm
Weight	Empty 15000 Kg

EVALED™ RV-TC15000

EVAPORATION

Aquamove
Mobile Water Solutions

Mid to long-term temporary solution

- Mechanical vapour recompression
- Compact solution
- Flow rate 15 m³/day
- Forced circulation, external shell and tube heat exchanger
- High level of waste concentration
- Reduction of the frequency of cleaning and maintenance operations
- Low running cost

Aquamove™ EVALED™ RV-TC15000 is designed to treat large quantities of waste which may cause fouling, precipitation and crystal formation.

The high liquid recirculation through the tube heat exchanger allows a high heat exchange efficiency and a reduction of deposits or scaling on the heating surface.

Benefits

- Excellent separation of surfactants
- Control of foaming
- Total separation of metals
- Consistent distillate quality
- Fully automatic operation
- Low maintenance

Typical users

- Galvanic industry and surface treatment
- Mechanical industry
- Aluminium die-casting
- Landfills and waste disposal
- Chemical industry
- Power plants



Typical applications

- Wastewater treatment
- ZLD
- Recycling and re-use
- Treatment of cooling tower blowdown



EVALED™ RV-TC15000

EVAPORATION

Aquamove
Mobile Water Solutions

Technical Characteristics	
Nominal production of distillate with water	15000 L/24h
Model	TC 15000 FF# (superduplex stainless steel)
Electrical equipment	TC 15000 —3 (400 [V] 50 [Hz] 3F)
Construction	Single module on a stainless steel frame
Evaporation type	Conveyed vacuum flash
Evaporation conditions	Absolute pressure 70 kPa Temperature 90 °C
Distillate outlet temperature	30-40 °C depending on feeding temperature
Concentrate outlet temperature	90 °C; if the concentrate recovery heat exchanger device is installed, the temperature decrease at 30-60 °C depending on working mode (discharge frequency) and on feeding temperature
Drops separator	Demister, grate type with packing elements
Technology of heating/cooling	MVR (mechanical vapour recompression)
Primary /distillate heat exchanger	External shell and tube with forced circulation (heating through the tubes, condensing through the shell)
Circulation pump	Centrifugal with fluxed mechanical seal
Blower	Positive displacement blower (handled by an inverter)
Vacuum system	Created by the blower
Control	Automatic, continuous 24/24h 7/7 days by PLC possibility to make remote the functioning state signal starting and shutdown of machine
Operator panel	Touch screen
Electrical cabinet rating	IP 54
Noise	< 78 dB(A)
In compliance with standards (CE marking)	Machinery Directive; Electromagnetic compatibility; Electrical safety;
Nominal Performance	
Electrical feed	400 V ; 50 Hz ; 3F
Maximum production of distillate with water	15000 L/24h ± 10%
Absorbed power	31 kW ± 10%
Maximum absorbed current	100 A
Power factor	[cosφ] 0.9
Specific consumption	0.050 kWh/L ± 10%
Dimensions	
Length x Width x Height	5000 x 2100 x 3250 mm
Weight	7750 kg (empty)



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