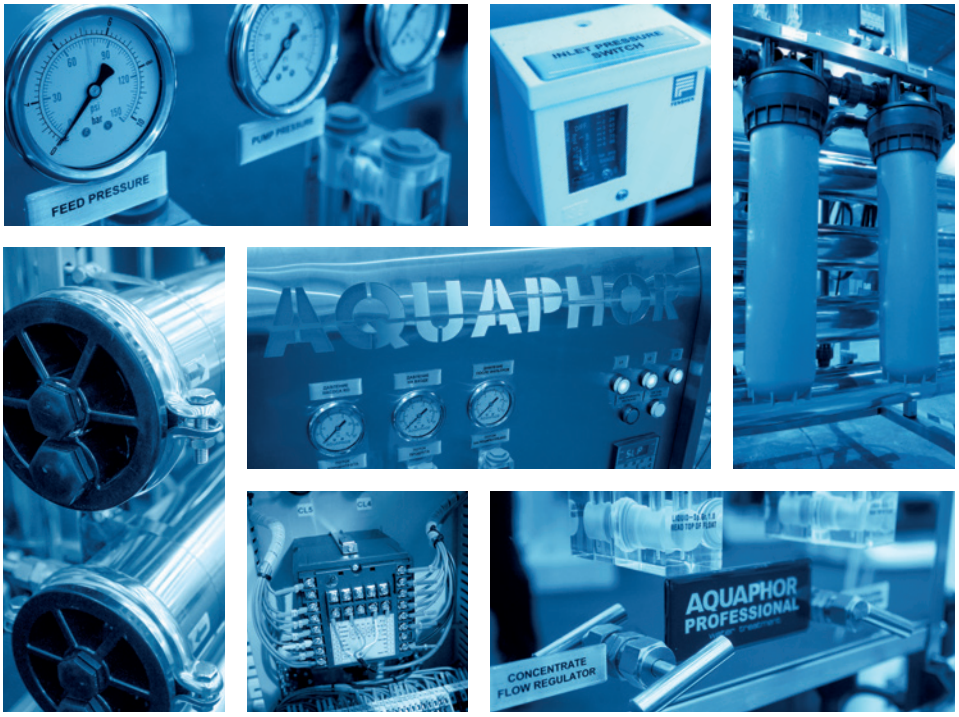
CATALOGUE



AQUAPHOR
PROFESSIONAL
water treatment

Reverse Osmosis

TABLE ON CONTENTS

Innovation & Mass Production

AQUAPHOR PROFESSIONAL DESIGNS AND MASS MANUFACTURES HIGH PURITY RO BASED WATER PURIFICATION SYSTEMS.

RO SYSTEMS ARE MANUFACTURED IN THE STATE OF THE ART PRODUCTION FACILITIES.

New state of the art RO assembly lines (2500 m^2) were added to the RO production facilities in September, 2017.

AQUAPHOR GROUP

1990	Electrophor Inc. (NY, USA)
1992	Aquaphor (Russia)
2005	Winter Engineering/Aquaphor Professional (Israel)
2006	Zibo Aquaphor (China)
2007	Westaqua-Invest (Estonia)
2013	Aquaphor Poland (Poland)
2016	Aqua Biosan (Romania)

LIST OF CLIENTS

Apple · Intel · Nestle · RD Energy · Iskar · Israel (30 largest hospitals; whole hospital water purification dialysis system; resuscitation department) · Rosneft · Gazprom · KFC · Siemens FM Logistic · KAMAZ · ORIMI trade Ltd.

TECHNOLOGY

Patents issued: 10 – USA, 10 – China, 75 – Russia, 10 – EU and more

PATENTED

High frequency flushing

- Maximum permeate recovery and high efficiency operated are achieved by using patented high frequency flushing technology.
- High efficiency RO membranes are operated at their respective maximum capacities through their multi-year expected life cycles.
- Pretreatment
- High capacity

Mineralization

- Mg mineralization systems using magnesium corralite and MgO

UF/RO

- Winter Engineering/Aquaphor Professional manufactures UF/RO systems since inception in 2006. There are more than 200 industrial UF/RO systems operated in Israel alone.

High efficiency softeners manufactured by Aquaboss USA (JV Electrophor and Hague, Ohio)

Post & Pre filtration selective fibrous absorber

AP.RO-FA systems

THE UNIQUE FEATURES OF OUR AP.RO-FA SYSTEMS ALLOW A CONSISTENTLY PRODUCTION OF HIGH QUALITY WATER WITH FULLY A AUTOMATIC REMOTE CONTROL

We introduce AP.RO-FA — fully automatic RO product line with Integrated ABB PLC with color touch screen display and remote control kit

Fully automatic system allows to set all the required operating parameters of the reverse osmosis system, including the ratio of permeate to drain. The system automatically starts and operates at the required parameters. After reaching the operating mode, the operating system decides the need of regeneration, and other parameters required for trouble free continuous operation. It is an artificial intelligence control reverse osmosis system.

- Built and assembled in EU

reverse osmosis system AP.RO-FA-1000

BENEFITS

- Fully automatic operation
- Trouble free operation
- Equipped with an interface that allows remote access
- Automatically maintains the flow, pressure drop
- Auto cleaning
- Improved water quality
- Extended membrane life
- Space saving design
- Quiet operation
- Reduced operational costs

SYSTEM EQUIPMENT

- High rejection TFC *GE* Membranes
- Multi Stage Stainless steel *Grundfos* pump
- Stainless steel 316 needle regulation valve, feed valve and connectors
- Stainless steel 316 seamless pressure vessels
- Stainless steel Frame and equipment panel
- Actuated automatic regulation valve (made in Switzerland)
- Fully equipped electric board with pump protection
- Quality monitoring with Stainless conductivity steel probe
- Turbine flow transmitters
- High Pressure Stainless steel 316 seamless piping
- Low Pressure Shutoff
- Double BB Pre-filter

OPTIONAL FEATURES

- *Grundfos* DDE antiscalant dosing pumps
- Supply pumps and storage vessels
- UF pre-treatment
- DI systems
- *Nalco* antiscalant
- Remote control kit

NALCO GRUNDFOS GE

Standart features AP.RO-FA 250–2000 LPH

MODEL	AP.RO FA 250	AP.RO FA 500	AP.RO FA 750	AP.RO FA 1000	AP.RO FA 1500	AP.RO FA 2000
Permeate Flow, LPH	250	500	750	1000	1500	2000
Membrane Quantity	1	2	3	4	6	8
Max inlet TDS, ppm	4000	4000	4000	4000	4000	4000
Flush Valve	Yes	Yes	Yes	Yes	Yes	Yes

Specification AP.RO-FA 250–2000 LPH

MODEL	AP.RO FA 250	AP.RO FA 500	AP.RO FA 750	AP.RO FA 1000	AP.RO FA 1500	AP.RO FA 2000
Production of clean water LPH	250	500	750	1000	1 500	2 000
Reduction of salt content, %	Up to 99,7%					
System recovery, %	45-85%					
Membrane's type	2 x 4021/ 1 x 4040	2 x 4040	3 x 4040	4 x 4040	6 x 4040	8 x 4040
Power consumption, kWt/h	0.7- 1 kWt/h per 1 m^3 permeat					
Power supply	220 V, 50 Hz 380 V,50 Hz	380V , 50Hz				
Dimensions, mm	580/740/1400 590/800/1400	1775 / 1210 / 915			1200 / 860 / 1510	
Net weight, kg	134	210	215	220	225	240
Sizing (inlet, outlet, concentrate)	¾"/¾"/¾" NPT(PB)	1" / ¾" / ¾" NPT (PB)				

GENERAL INFORMATION

The **reverse osmosis system of Aquaphor** (RO system) manufactured by "Westaqua-Invest OÜ" (Estonia, EU). The RO system is designed to **reduce the total salt content** by reverse osmosis (**desalination, demineralization, reduction of conductivity**) water from municipal and local water supply systems (brackish water) under the correspondence of the requirements established by the demands.

Materials of RO systems are **safety, non-toxic** and do not release to the water any dangerous substances to health or the environment.

The RO system is the most efficient and safe installation of desalination.

NOTE The RO system is not designed to solve all problems related to water treatment. For proper operation it requires pretreatment.

AP.RO-M systems

THE UNIQUE FEATURES OF OUR AP.RO-M SYSTEMS
ALLOW A CONSISTENTLY PRODUCTION OF HIGH QUALITY WATER
WITH LOW ENERGY CONSUMPTION AND SPACE SAVING

We introduce AP.RO-M Low energy Brackish Water RO product line

- Equipped with the highest quality components
- Robust construction and easy maintenance
- Modern design and quiet operation
- Built and assembled in EU

BUILT & ASSEMBLED IN EU

reverse osmosis system AP.RO-M-300

BENEFITS

- Improved water quality
- Extended membrane life
- Low maintenance operation
- Space saving design
- Quiet operation
- Reduced operational costs

SYSTEM EQUIPMENT

- Various Product Sizes 150 - 1000 LPH
- Stainless steel Frame and equipment panel
- Multi Stage Stainless steel *Grundfos* pump
- Low Pressure membranes
- Stainless steel needle regulation valve
- Stainless steel pressure vessels
- Fully equipped electric board with pump protection
- MP controller for quality monitoring with Stainless steel probe
- Stainless steel panel mounted with Glycerin-filled Gauges
- Low Pressure Shutoff
- BB Pre-filter

OPTIONAL FEATURES

- *Grundfos* DDE antiscalant dosing pumps
- Supply pumps and storage vessels
- *Nalco* antiscalant

NALCO GRUNDFOS

Standart features
AP.RO-M 150–1000 LPH




MODEL	AP.RO M 150	AP.RO M 300	AP.RO M 750	AP.RO M 1000
Permeate Flow, LPH	150	300	750	1 000
Membrane Quantity	1	2	3	4
Membrane Size, inch	4 x 21	4 x 21	4 x 40	4 x 40
Max inlet TDS, ppm	4 000	4 000	4 000	4 000

Specification AP.RO-M 150–1000 LPH

MODEL	AP.RO M 150	AP.RO M 300	AP.RO M 750	AP.RO M 1000
Production of clean water LPH	150	300	750	1 000
Reduction of salt content, %	Up to 90			
System recovery, %	50 - 85			
Membrane's type	4 x 4 021	4 x 4 021	4 x 4 040	4 x 4 040
Input flow of water at a pressure of 3 bar	0,4 – 0,6	0,8 – 1,1	1,2 – 1,65	1,6 – 2,2
Power consumption, Wt	500		1 100	
Power supply	220V, 50 Hz			
Dimensions, mm	700 x 450 x 900		720 x 595 x 1 270	
Net weight, kg	57	70	91	98
Sizing (inlet, outlet, concentrate)	½"/½"/½" NPTF		1"/½"/½" NPTF	

GENERAL INFORMATION

The **reverse osmosis system of Aquaphor** (RO system) manufactured by "Westaqua-Invest OÜ" (Estonia, EU). The RO system is designed to **reduce the total salt content** by reverse osmosis (**desalination, demineralization, reduction of conductivity**) water from municipal and local water supply systems (brackish water) under the correspondence of the requirements established by the demands.

Materials of RO systems are **safety, non-toxic** and do not release to the water any dangerous substances to health or the environment.

The RO system is the most efficient and safe installation of desalination.

NOTE The RO system is not designed to solve all problems related to water treatment. For proper operation it requires pretreatment.

AP.RO-LP systems

THE UNIQUE FEATURES OF OUR AP.RO-LP SYSTEMS ALLOW A CONSISTENTLY PRODUCTION OF HIGH QUALITY WATER WITH LOW ENERGY CONSUMPTION

We introduce AP.RO-LP Extreme Low energy Brackish Water RO product line

- Equipped with the highest quality components
- Robust construction and easy maintenance
- Modern design and quiet operation
- Built and assembled in EU

reverse osmosis system AP.RO-LP-1000

BENEFITS

- Improved water quality
- Extended membrane life
- Low maintenance operation
- Space saving design
- Quiet operation
- Reduced operational costs

SYSTEM EQUIPMENT

- Various Product Sizes 250 - 2,000 LPH
- Stainless steel Frame and equipment panel
- Multi Stage Stainless steel *Grundfos* pump
- Extreme Low Pressure *GE* membranes
- Stainless steel needle regulation valve
- Stainless steel pressure vessels
- *Belimo* actuated flush valve
- Fully equipped electric board with pump protection
- MP controller for quality monitoring with Stainless steel probe
- Stainless steel panel mounted with Glycerin-filled Gauges
- Low Pressure Shutoff
- Double BB Pre-filter

OPTIONAL FEATURES

- *Grundfos* DDE antiscalant dosing pumps
- Supply pumps and storage vessels
- Integrated ABB PLC and color touch screen display with remote control kit
- UF pre-treatment
- *Nalco* antiscalant

NALCO GRUNDFOS GE

Standart features
AP.RO-LP 250–2000 LPH

MODEL	AP.RO LP 250	AP.RO LP 500	AP.RO LP 750	AP.RO LP 1000	AP.RO LP 1500	AP.RO LP 2000
Permeate Flow, LPH	250	500	750	1 000	1 500	2 000
Membrane Quantity	1	2	3	4	6	8
Membrane Size, inch	4 x 40	4 x 40	4 x 40	4 x 40	4 x 40	4 x 40
Max inlet TDS, ppm	4 000	4 000	4 000	4 000	4 000	4 000
Flush Valve	Yes	Yes	Yes	Yes	Yes	Yes

Specification APRO-LP 250–2000 LPH

MODEL	AP.RO LP 250	AP.RO LP 500	AP.RO LP 750	AP.RO LP 1000	AP.RO LP 1500	AP.RO LP 2000
Production of clean water LPH	250	500	750	1 000	1 500	2 000
Reduction of salt content, %	Up to 90					
System recovery, %	50 - 85					
Membrane's type	1 x 4040	2 x 4040	3 x 4040	4 x 4040	6 x 4040	8 x 4040
Input flow of water at a pressure of 3 bar	0,4 – 0,6	0,8 – 1,1	1,2 – 1,65	1,6 – 2,2	2,4 – 3,3	3,2 – 4,4
Power consumption, Wt	500		670		1200	
Power supply	220V, 50 Hz				380V, 50 Hz	
Dimensions, mm	685 x 1 375 x 520		1 260 x 1 390 x 780		2 315 x 1 770 x 830	
Net weight, kg	57	70	91	101	153	160
Sizing (inlet, outlet, concentrate)	¾"/¾"/¾" NPTF		1" ¾"/¾" NPTF			

GENERAL INFORMATION

The **reverse osmosis system of Aquaphor** (RO system) manufactured by "Westaqua-Invest OÜ" (Estonia, EU). The RO system is designed to **reduce the total salt content** by reverse osmosis (**desalination, demineralization, reduction of conductivity**) water from municipal and local water supply systems (brackish water) under the correspondence of the requirements established by the demands.

Materials of RO systems are **safety, non-toxic** and do not release to the water any dangerous substances to health or the environment.

The RO system is the most efficient and safe installation of desalination.

NOTE The RO system is not designed to solve all problems related to water treatment. For proper operation it requires pretreatment.

AP.RO-HP systems

THE UNIQUE FEATURES OF OUR AP.RO-HP SYSTEMS ALLOW A CONSISTENTLY PRODUCTION OF HIGH QUALITY WATER

We introduce AP.RO-HP Reverse Osmosis product line

- Equipped with the highest quality components
- Robust construction and easy maintenance
- Modern design and quiet operation
- Built and assembled in EU

reverse osmosis system AP.RO-HP-1000

BENEFITS

- Improved water quality
- Extended membrane life
- Low maintenance operation
- Space saving design
- Quiet operation
- Reduced operational costs

SYSTEM EQUIPMENT

- Various Product Sizes 250 – 2000 LPH
- Stainless steel Frame
- Multi Stage Stainless steel *Grundfos* pump
- MP controller for quality monitoring
- High rejection TFC Membranes
- Panel mounted Glycerin-filled Gauges
- Low Pressure Shutoff
- Double Pre-filter
- High Pressure Stainless steel piping
- Low Pressure PVC piping
- *Belimo* actuated flush valve

OPTIONAL FEATURES

- Antiscalant dosing pumps
- Supply pumps and storage vessels
- UF pre-treatment
- Polish DI tanks
- Integrated *ABB* PLC and color touch screen display with remote control kit

NALCO GRUNDFOS

Standart features
AP.RO-HP 250–2000 LPH

MODEL	AP.RO HP 250	AP.RO HP 375	AP.RO HP 500	AP.RO HP 750	AP.RO HP 1000	AP.RO HP 1500	AP.RO HP 2000
Permeate Flow, LPH	250	375	500	750	1 000	1 500	2 000
Membrane Quantity	2	3	2	3	4	6	8
Max inlet TDS, ppm	4,000	4,000	4,000	4,000	4,000	4,000	4,000
Flush Valve	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Specification AP.RO-HP 250–2000 LPH

MODEL	AP.RO HP 250	AP.RO HP 375	AP.RO HP 500	AP.RO HP 750	AP.RO HP 1000	AP.RO HP 1500	AP.RO HP 2000
Production of clean water LPH	250	375	500	750	1 000	1 500	2 000
Reduction of salt content, %	Up to 99,7%						
System recovery, %	45-85%						
Membrane's type	2 x 4021/ 1 x 4040	3 x 4021	2 x 4040	3 x 4040	4 x 4040	6 x 4040	8 x 4040
Power consumption, kWt/h	0.7- 1 kWt/h per 1 m^3 permeat						
Power supply	220V, 50 Hz/ 380V,50 Hz		380V , 50Hz				
Dimensions, mm	580/740/1400, 590/800/1400		1775 / 1210 / 915			1200 / 860 / 1510	
Net weight, kg	134	153	210	215	220	225	240
Sizing (inlet, outlet, concentrate)	¾"/¾"/¾" NPT(PB)		1" / ¾" / ¾" NPT (PB)				

GENERAL INFORMATION

The **reverse osmosis system of Aquaphor** (RO system) manufactured by "Westaqua-Invest OÜ" (Estonia, EU). The RO system is designed to **reduce the total salt content** by reverse osmosis (**desalination, demineralization, reduction of conductivity**) water from municipal and local water supply systems (brackish water) under the correspondence of the requirements established by the demands.

Materials of RO systems are **safety, non-toxic** and do not release to the water any dangerous substances to health or the environment.

The RO system is the most efficient and safe installation of desalination.

NOTE The RO system is not designed to solve all problems related to water treatment. For proper operation it requires pretreatment.

AP.RO-HS systems

THE UNIQUE FEATURES OF OUR AP.RO-HS SYSTEMS ALLOW A CONSISTENTLY PRODUCTION OF HIGH QUALITY WATER, SUITABLE FOR HIGH SALINITY WATER SOURCES

We introduce AP.RO-HS Reverse Osmosis product line also suitable for Baltic Sea water purification

- Equipped with the highest quality components
- Robust construction and easy maintenance
- Modern design and quiet operation
- Built and assembled in EU

reverse osmosis system AP.RO-HS-1000

BENEFITS

- Improved water quality
- Extended membrane life
- Low maintenance operation
- Space saving design
- Quiet operation
- Reduced operational costs

SYSTEM EQUIPMENT

- Various Product Sizes 300 – 1500 LPH
- Stainless steel Frame
- Multi Stage Stainless steel 316 *Grundfos* pump
- MP controller for quality monitoring
- High rejection TFC Membranes
- Panel mounted Glycerin-filled Gauges
- Low Pressure Shutoff
- Double Pre-filter
- High Pressure Stainless steel 316 piping
- Low Pressure PVC piping
- *Belimo* actuated flush valve
- Stainless steel 316 membrane housings

OPTIONAL FEATURES

- Antiscalant dosing pumps
- Supply pumps and storage vessels
- UF pre-treatment
- Polish DI tanks
- Integrated *ABB* PLC and color touch screen display with remote control kit
- *Nalco* antiscalant

NALCO GRUNDFOS

Standart features AP.RO-HS

MODEL	AP.RO HS 500	AP.RO HS 1000	AP.RO HS 1500	AP.RO HS 2000
Permeate Flow, LPH	300	600	1000	1500
Membrane Quantity	2	4	6	8
Max inlet TDS, ppm	10 000	10 000	10 000	10 000
Flush Valve	Yes	Yes	Yes	Yes

Specification AP.RO-HS

MODEL	AP.RO HS 500	AP.RO HS 1000	AP.RO HS 1500	AP.RO HS 2000
Production of clean water LPH	300	500	1000	1500
Reduction of salt content, %	95 - 99			
System recovery, %	25 - 85			
Membrane's type	2 x 4040	4 x 4040	6 x 4040	8 x 4040
Power consumption, Wt	0.7-1.5 kWt/h per 1 m^3 permeat			
Power supply	380 V, 50 Hz			
Dimensions, mm	1775 x 1210 x 915		1200 x 860 x 1510	
Net weight, kg	210	220	225	240
Sizing (inlet, outlet, concentrate)	1" / ¾" / ¾" NPT (PB)			

GENERAL INFORMATION

The **reverse osmosis system of Aquaphor** (RO system) manufactured by "Westaqua-Invest OÜ" (Estonia, EU). The RO system is designed to **reduce the total salt content** by reverse osmosis (**desalination, demineralization, reduction of conductivity**) water from municipal and local water supply systems (brackish water) under the correspondence of the requirements established by the demands.

Materials of RO systems are **safety, non-toxic** and do not release to the water any dangerous substances to health or the environment.

The RO system is the most efficient and safe installation of desalination.

NOTE The RO system is not designed to solve all problems related to water treatment. For proper operation it requires pretreatment.

AP.RO-HC systems

THE UNIQUE FEATURES OF AP.RO-HC SERIES SYSTEMS ALLOW A CONSISTENTLY PRODUCTION OF LARGE CAPACITY OF HIGH QUALITY WATER FOR YOUR SPECIFIC APPLICATION

We introduce AP.RO-HC Reverse Osmosis product line for consumers with big pure water consumption

- Equipped with the highest quality components
- Robust construction and easy maintenance
- Modern design and quiet operation
- Built and assembled in EU

BENEFITS

- Improved water quality
- Extended membrane life
- Low maintenance operation
- Space saving design
- Quiet operation
- Reduced operational costs

OPTIONAL FEATURES

- Supply pumps and storage vessels
- Integrated *ABB* PLC and color touch screen display with remote control kit
- UF pre-treatment
- *Nalco* antiscalant

reverse osmosis system AP.RO-HC-12000

SYSTEM EQUIPMENT

- Various Product Sizes 3000-20000 LPH
- Stainless steel frame and equipment panel
- Stainless steel 316 high pressure piping
- 5 micron pre filtration
- Energy saving *GE* AK-series brackish water high rejection membranes
- Multi-stage centrifugal stainless steel 316 pump
- Fully equipped electric board with pump protection and soft starter
- Clean-in-Place integrated system
- *Grundfos* DDE antiscalant dosing pumps
- 100 liter PE antiscalant tank
- FRP side port membrane housings
- Motorized feed valve, product drain valve and flush valve
- Stainless steel 316 regulation valves
- MP controller for quality monitoring
- High pressure shutoff
- Double low pressure shutoff
- Permeate conductivity SS 316 sensor
- RAW-water pump control relay
- Permeate tank level monitoring
- Alarms: low inlet pressure, low feed pressure, high permeate conductivity, motor fault, high concentrate pressure

NALCO GRUNDFOS GE

Standard features – AP.RO HC 3000-20000

MODEL	AP.RO HC 3000	AP.RO HC 6000	AP.RO HC 9000	AP.RO HC 12000	AP.RO HC 15000	AP.RO HC 20000
Membrane Size, inch	8 x 40					
Salt rejection, %	98-99,5					
Recovery rate, %	50-95					
Membrane Quantity	3	6	9	12	15	20
Permeate Flow, LPH	3000	6000	9000	12000	15000	20000
Max inlet TDS, ppm	6000					
Power supply	380V, 50Hz					
Flush Valve	Yes					
Pre-Filter Quantity	3 X LD0520	4 X LD0520	7 X RO.Z 0540	14 X RO.Z 0540	14 X RO.Z 0540	14 X RO.Z 0540
Dimensions, mm	3705 x 2115 x 1200	3705 x 2115 x 1200	3840 x 1830 x 1400	3920 x 1870 x 1400	5730 x 1870 x 1400	5730 x 1870 x 1400

reverse osmosis system AP.RO-HC-9000

reverse osmosis system AP.RO-HC-6000

GENERAL INFORMATION

The **reverse osmosis system of Aquaphor** (RO system) manufactured by "Westaqua-Invest OÜ" (Estonia, EU). The RO system is designed to **reduce the total salt content** by reverse osmosis (**desalination, demineralization, reduction of conductivity**) water from municipal and local water supply systems (brackish water) under the correspondence of the requirements established by the demands.

Materials of RO systems are **safety, non-toxic** and do not release to the water any dangerous substances to health or the environment.

The RO system is the most efficient and safe installation of desalination.

NOTE The RO system is not designed to solve all problems related to water treatment. For proper operation it requires pretreatment.

AP.RO-CT systems

THE UNIQUE FEATURES OF AP.RO-CT SERIES SYSTEMS ALLOW A CONSISTENTLY PRODUCTION OF LARGE CAPACITY OF HIGH QUALITY WATER FOR YOUR SPECIFIC APPLICATION

We introduce AP.RO-CT Reverse Osmosis product line for consumers with big pure water consumption

- Equipped with the highest quality components
- Robust construction and easy maintenance
- Modern design and quiet operation
- Built and assembled in EU

BENEFITS

- Improved water quality
- Extended membrane life
- Low maintenance operation
- Space saving design
- Quiet operation
- Reduced operational costs

OPTIONAL FEATURES

- Supply pumps and storage vessels
- Integrated *ABB* PLC and color touch screen display with remote control kit
- UF pre-treatment
- *Nalco* antiscalant

reverse osmosis system AP.RO-CT 4000

SYSTEM EQUIPMENT

- Various Product Sizes 3000-6000 LPH
- Stainless steel frame and equipment panel
- Stainless steel 316 high pressure piping
- 5 micron pre filtration
- Energy saving *GE* AK-series brackish water high rejection membranes
- Multi-stage centrifugal stainless steel 316 pump
- Fully equipped electric board with pump protection and soft starter
- Clean-in-Place integrated valves
- *Grundfos* DDE antiscalant dosing pumps
- FRP side port membrane housings
- Motorized feed valve and flush valve
- Stainless steel 316 regulation valves
- MP controller for quality monitoring
- High pressure shutoff
- Double low pressure shutoff
- Permeate conductivity SS 316 sensor
- RAW-water pump control relay
- Permeate tank level monitoring
- Alarms: low inlet pressure, low feed pressure, high permeate conductivity, motor fault, high concentrate pressure

NALCO GRUNDFOS GE

Standard features – AP.RO-CT 3000-6000

MODEL	AP.RO-CT 3000	AP.RO-CT 4000	AP.RO-CT 6000
Membrane Size, inch	8 x 40		
Salt rejection, %	98-99,5		
Recovery rate, %	50-95		
Membrane Quantity	3	4	6
Permeate Flow, LPH	3000	4000	6000
Max inlet TDS, ppm	6000		
Power supply	380V, 50Hz		
Flush Valve	Yes		
Pre-Filter Quantity	4 X LD0520	4 X LD0520	4 X LD0520
Dimensions, mm	3640 (L) x 1465 (H) x 805 (W)	2650 (L) x 1465 (H) x 805 (W)	3640 (L) x 1465 (H) x 805 (W)

reverse osmosis system AP.RO-CT 3000

reverse osmosis system AP.RO-CT 6000

GENERAL INFORMATION

The **reverse osmosis system of Aquaphor** (RO system) manufactured by "Westaqua-Invest OÜ" (Estonia, EU). The RO system is designed to **reduce the total salt content** by reverse osmosis (**desalination, demineralization, reduction of conductivity**) water from municipal and local water supply systems (brackish water) under the correspondence of the requirements established by the demands.

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AP.RO-PAP systems

COMPACT ALL-IN-ONE 500 L PER HOUR INCLUDING PREFILTRATION, REVERSE OSMOSIS SYSTEM, POST FILTRATION WITH MINERALIZATION, UV AND BUILT-IN 80 L PERMEATE STORAGE TANK

We introduce AP.RO-PAP fully automatic Low energy Brackish Water RO system

- Equipped with the highest quality components
- Robust construction and easy maintenance
- Modern design and quiet operation
- Built and assembled in EU

reverse osmosis system AP.RO-PAP-500

BENEFITS

- Patented fully automatic
- Computer controlled with Wi-Fi
- Improved water quality
- Extended membrane life
- Low maintenance operation
- Space saving design
- Quiet operation
- Reduced operational costs
- Permeate flush

SYSTEM EQUIPMENT

- Stainless Steel UV system
- Stainless steel Frame and equipment panel
- Multi Stage Stainless steel *Grundfos* pump
- Low Pressure membranes
- Stainless steel needle regulation valve
- Stainless steel pressure vessels
- Fully equipped electric board with pump protection
- MP controller for quality monitoring with Stainless steel probe
- Stainless steel panel mounted with Glycerin-filled Gauges
- Low Pressure Shutoff
- BB Pre-filters

OPTIONAL FEATURES

- *Nalco* antiscalant
- Additional storage tank

NALCO GRUNDFOS

Standart features AP.RO-PAP 500 LPH

MODEL	AP.RO P&P 500 LPH
Permeate Flow, LPH	500
Membrane Quantity	2
Membrane Size, inch	4 x 40
Max inlet TDS, ppm	4 000

Specification AP.RO-PAP 500 LPH

MODEL	AP.RO P&P 500 LPH
Production of clean water LPH	500
Reduction of salt content, %	Up to 90
System recovery, %	50 - 85
Membrane's type	2 x 4040
Input flow of water at a pressure of 3 bar	0,8 – 1,1
Power consumption, Wt	550
Power supply	220V, 50Hz
Dimensions, mm	800 x 800 1300
Net weight, kg	107
Sizing (inlet, outlet, concentrate)	½"/½"/½" NPTF

GENERAL INFORMATION

The **reverse osmosis system of Aquaphor** (RO system) manufactured by "Westaqua-Invest OÜ" (Estonia, EU). The RO system is designed to **reduce the total salt content** by reverse osmosis (**desalination, demineralization, reduction of conductivity**) water from municipal and local water supply systems (brackish water) under the correspondence of the requirements established by the demands.

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The RO system is the most efficient and safe installation of desalination.

NOTE The RO system is not designed to solve all problems related to water treatment. For proper operation it requires pretreatment.

AP.RO-MCR systems

THE UNIQUE FEATURES OF OUR AP.RO-MCR SYSTEMS ALLOW A PRODUCTION OF HIGH QUALITY WATER WITH LOW ENERGY CONSUMPTION AND SPACE SAVING

We introduce AP.RO-MCR Low energy space saving RO product line

- Equipped with the highest quality components
- Robust construction and easy maintenance
- Modern design and quiet operation
- Built and assembled in EU

BUILT & ASSEMBLED IN EU

reverse osmosis system AP.RO-MCR 80

BENEFITS

- Improved water quality
- Extended membrane life
- Low maintenance operation
- Space saving design
- Quiet operation
- Reduced operational costs
- Plug & Play

SYSTEM EQUIPMENT

- Stainless steel Frame and equipment panel
- Low Pressure membranes
- Fully equipped electric board
- Stainless steel panel mounted with Glycerin-filled Gauges
- Low Pressure Shutoff
- BB Pre-filters
- Build-in storage tank

NALCO GRUNDFOS

Standart features
AP.RO-MCR 80 LPH

MODEL	AP.RO MCR 80
Permeate Flow, LPH	80
Membrane Quantity	2
Membrane Size, inch	2 x 3012
Max inlet TDS, ppm	1 500

Specification AP.RO-MCR 80 LPH

MODEL	AP.RO MCR 80
Production of clean water LPH	80
Reduction of salt content, %	Up to 85
System recovery, %	45 - 58
Input flow of water at a pressure of 3 bar	0,1 – 0,2
Power consumption, Wt	100
Power supply	24VDC (AC/DC adapter is installed)
Dimensions, mm	530 x 430 x 650
Net weight, kg	35,5
Sizing (inlet, outlet, concentrate)	⅜”/¼”/¼” 3G

GENERAL INFORMATION

The **reverse osmosis system of Aquaphor** (RO system) manufactured by “Westaqua-Invest OÜ“ (Estonia, EU). The RO system is designed to **reduce the total salt content** by reverse osmosis (**desalination, demineralization, reduction of conductivity**) water from municipal and local water supply systems (brackish water) under the correspondence of the requirements established by the demands.

Materials of RO systems are **safety, non-toxic** and do not release to the water any dangerous substances to health or the environment.

The RO system is the most efficient and safe installation of desalination.

NOTE The RO system is not designed to solve all problems related to water treatment. For proper operation it requires pretreatment.

AQUAPHOR PROFESSIONAL water treatment

Crystal DI PRO

DESIGNED FOR WATER PURIFICATION TO ACHIEVE DEMINERALIZED WATER QUALITY

We introduce our demineralization water purifier Crystal Di Pro

- Equipped with the highest quality components
- Including UF for bacteria removal
- Robust construction and easy maintenance
- Online TDS controll
- Modern design
- Built and assembled in EU

BUILT & ASSEMBLED IN EU

Crystal demineralization water purifier

BENEFITS

- Quick change of the filtration cartridges
- Designed for deionizing water up to 16 megohms
- Uses Cation and Anion resins (H+ and OH-) to remove Total Dissolved Solids (TDS).
- Ultrafiltration membrane removes the particles larger then 0,1 µm.

TYPICAL APPLICATION

- Circuit board printing
- Pharmaceutical use
- Steam and humidification
- Cosmetics
- Steam processors
- Humidification systems
- Recirculating/cooling towers
- Power generating equipment
- Medical/laboratory use
- Lasers
- Jet water sprayers
- Boiler make-up water

ISO

MODEL	CRYSTAL DI PRO
Filter Media	Mixed bed DI resins and hollow fiber membrane
Replacement filter cartridges	Deionization Cartridge (DDC), Deionization Cartridge (DDC), Deionization & microfiltration Cartridge (DMC)
The size of the filtered out particles (DMC)	0,1 µm
The service life (resource) of the replacement cartridges	100 L* but not more that 1,5 years
Recommended filtration rate	2,0 L/min (0,5 gal/min)
Dimensions: no more than	260 x 90 x 340 мм
The maximum working pressure	0,63 MPa / 6,5 bar / 95,5 psi
Weight: no more than	3 kg / 6,61 lbs
Water temperature	+5...+38°C / +41 ... +100°F

** Tested on standardized test solution with initial conductivity 864 µS/sm.*

WARNING: For drinking water applications, do not use with water that is microbiologically unsafe or of unknown quality without adequate disinfection before or after the unit.

CAUTION: Do not use cartridges on equipment that has an electric conductivity water level indicator.

		
OPERATING PARAMETERS	**DEIONIZATION CARTRIDGE (DDC)**	**DEIONIZATION & MICROFILTRATION CARTRIDGE (DMC)**
Operating Temperature	+5...+38°C / +41 ... +100°F	
The maximum working pressure	0,63 MPa / 6,5 bar / 95,5 psi	
Cartridge Dimensions	80 x 310 мм	
Recommended filtration rate	2,0 L/min / 0,5 gal/min	
The size of the filtered out particles	200 µm	0,1 µm
Weight: no more than	1 kg / 2,2 lbs	
External Cartridge Material	Polypropylene	
Cartridge Top Seals	Rubber O-Ring 11,26 mm OD / Rubber O-Ring 25,02 mm OD	

AQUAPHOR PROFESSIONAL water treatment

Aquaphor ULTRA

THE AQUAPHOR ULTRAFILTRATION SYSTEM ULTRA IS DESIGNED TO REMOVE MECHANICAL IMPURITIES (BIGGER THAN 0.01 MICRON) SUCH AS: COLLOIDAL PARTICLES: BACTERIA; VIRUSES; ORGANIC MACROMOLECULES FROM MUNICIPAL AND LOCAL WATER SUPPLY SYSTEMS (ARTESIAN WELLS, ETC) PROVIDED THEY MEET THE ESTABLISHED REQUIREMENTS.

Water filtration system Aquaphor Ultra is manufactured by JSC Aquaboss (St. Petersburg, Russia) by the order of Aquaphor Corp. (St. Petersburg, Russia).

Filtration system utilizes economically beneficial, environmentally friendly and efficient purification technology to remove submicron impurities from water by ultra filtration. This technology implements the so called hollow fiber as the basic working element. It is technologically possible to produce fiber with pores up to 0.005 micron.

Aquaphor ULTRA 3.2

SYSTEM

The Aquaphor Ultra filtration system based on hollow fiber membranes can ensure Dead-end ultra filtration process, i.e. filtration through fiber with alternate direct and back flushing cycles that substantially reduces water consumption. Water is filtered perpendicularly to the hollow fiber surface and this reduces a risk to clog the hollow fiber.

TECHNIQUE

Ulta filtration technique ensures a physical barrier against microbes and suspended particles to get pure drinking water. In additional, ultra filtration is utilized in pretreatment of water from bare sources, of sea water as well as of water that underwent biological treatment before RO systems and other membrane water purifiers (for instance, electro dialysis plants).

APPLICATION

- Water pre-filtration before desalting unit.
- Ultrafiltration system can replace coagulation and mechanical filtration, this improves the quality of the treated water, reduce membranes and ion-exchange resin pollution, and significantly increase their lifetime.
- Final ultra-clean municipal water filtration in the cottages, apartments, manufacturing, restaurants, hotels
- Reagent – free disinfection with simultaneous removal of turbidity and color of borehole, wells, river and lake water and water containing high molecular organics.
- Cleaning of water in swimming pools without chemicals.
- It eliminates the costly and cumbersome purification filters.
- Bleaching and disinfection of drinking water while preserving the natural mineral background. This is so essential for the production of bottled water.

Technical specifications

MODEL	ULTRA 1.6	ULTRA 3.2
Total membrane area, m2	10	20
Initial capacity (0.1 Mpa, 25°C), m3/hour	1.6	3.2
Number of units	2	4
Rated capacity (0.1 Mpa, 25°C), m3/hour	0.6 - 1.0	1.2 - 2.0
Port sizes (inlet/ outlet/ drain)	G 3/4"	G 3/4"
Overall dimensions	1300 x 430 x 410	1300 x 430 x 410
Weight, kg	12	31
Max. working temperatue, °C	45	
Membrane material	PS	
Material of the membrane unit housing and pipelines	PVC	
Membrane pore sizes, kDa (micron) PVC	67 (less than 0.01)	
Max. size of particles that can be contained in water fed to the ultra filtration system (for models with 0X index (microns)	200	
Membrane unit size, mm	90 x 1000 (DN20)	
Power supply, VAC, VDC	220; 12	
Power consumption, Wt	6	

AQUAPHOR PROFESSIONAL water treatment

Aquaphor A800 and A1000

THE WHOLE-HOUSE WATER TREATMENT SYSTEM

Aquaphor Models 800 and 1000 have fully automatic processor control and demonstrate exceptional salt efficiency and high iron removal. Systems employ innovative Dual Core Valves that increase regeneration. Efficient and durable softener tank contain extra fine mesh, tightly compacted, chlorine resistant ion-exchange resin.

water softeners Aquaphor Models A800 and A1000

- Aquaphor 1000 contains 28 liters of ion-exchange resin
- Aquaphor 800 contains 23 liters of ion-exchange resin

BENEFITS

- Innovative two-cylinder head valve regulates water flow in and out of the softener tank. It has fewer parts, shorter and wider fluid pathways, selflocking/self- pressurising mechanism.
- Removal of high concentration of Fe (up to 15 ppm).
- 10-year warranty.
- Made in the USA.
- NSF certification pending.
- Very low salt consumption.
- Fast IER regeneration.
- Easy installation and set-up. Minimum maintenance requirements.

ADVANTAGES

- Simultaneous removal of iron, manganese and hardness.
- Reliable fittings of stainless steel and the drain hose in the set.
- Reliability and durability of all over the pressure range from 1.5 to 7 atm.

Water Conditioner Performance & Specifications

SPECIFICATION		A800	A1000
Maximum Capacity, grains		24 000	31 800
Maximum Compensated Hardness, gpg (mg/L)		70 (1 200)	90 (1 540)
Maximum Ferrous Iron Reduction, ppm[1]		10	10
Minimum pH, standard units		7	7
Water & Ambient Temperature Minimum-Maximum, °F (°C)		40°-120° (4°-49°)	40°-120° (4°-49°)
Water Pressure Minimum - Maximum, psi (bar)		20 (1,4) - 100 (7)	20 (1,4) - 100 (7)
Maximum Flow Rate to Drain During Regeneration[2]	gpm (L/min)	2,0 (7,6)	2,0 (7,6)
Service Flow Rate (@15 psi (1.0 bar)) drop, gpm (L/min)[3]		5,5 (20,8)	5,5 (20,8)
Pressure Drop @ 5.5 gpm (22.7 L/min), psi (bar)		15 (1)	15 (1)
Salt Used lb (kg)	Water Used Gallons (Liters)	A800 Grains (Grams) removed	A1000 Grains (Grams) removed
1.6 (0.7)	14 (53)	6,651 (431)	6,891 (446)
8 (3.6)	23.5 (89)	22,552 (1461)	24,620 (1595)
15 (16.8)	35 (132)	25,076 (1625)	31,807 (2061)
Controller Type		Metered	Metered
Electrical Rating		12VAC, 50/60 Hz, 0.015 kW-hr	12VAC, 50/60 Hz, 0.015 kW-hr
Plumbing Connections (NPT)		1 inch male (MNPT)	1 inch male (MNPT)
Minimum Drain Line ID, inch (cm)		5/8 inch (1.6)	5/8 inch (1.6)
Media Tank Size - (ID x Height), inch (cm)		10.5 x 23 (26.7 x 58.4)	10.5 x 26 (26.7 x 66)
Height, inches (cm)		27.8 (70.6)	31.3 (79.5)
Footprint, inches (cm)		15.9 x 19.1 (40.4 x 48.5)	15.9 x 19.1 (40.4 x 48.5)
Shipping Weight - approx., lb (kg)		95 (43)	105 (48)
Media Type / Amount			
Fine Mesh Resin		0.8 cu.ft. (23L)	1.0 cu.ft. (28L)

For All Models:

Use clean white pellet, cube-style, or solar salt.
Drain Line (Minimum I.D.) 5/8 inch (1.6 cm)
Brine & Rinse total - 0.75 gpm (2.8 L/min)
Brine Draw - 0.25 gpm (0.9 L/min)
Rinse - 0.5 gpm (1.9 L/min)

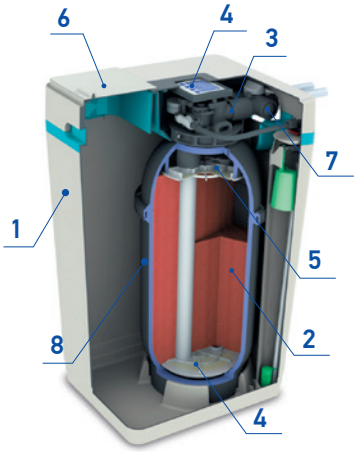
[1] Iron reduction to 0.3 ppm or less. Iron reduction claims limited to 5 ppm in the state of Wisconsin.

[2] Rate of flow must be verified at the end of the drain line.

[3] For the purposes of plumbing appliance sizing, only the rated service flow rate and corresponding pressure loss may be used. Prolonged operation of a water softener at flow rates exceeding the tested service flow rate of 5.5 gpm (20.8 L/min) may compromise performance. Intermittent flow rate must not exceed 9.3 gpm (35.2 L/min).

System conforms to NSF/ANSI 44 for the specific performance claims as verified and substantiated by test data.

1. The compact housing type “Cabinet”.
2. Highly dispersed high-capacity sorbent provides high performance and total removal of iron, manganese and hardness.
3. The patented proprietary valve provides an uninterrupted filter operations during its lifetime.
4. Controller with a big informative screen.



5. The patented reticulated flow distributor dispatches the flow of treated water throughout the sorbent volume.
6. The cover slider for easy access to the salt tank and filter ensure compactness.
7. The bypass valve in the set.
8. Extremely reliable tank from strong glass-filled plastic.

AQUAPHOR PROFESSIONAL water treatment

Pre-filters Aquaphor GROSS

AQUAPHOR PRE-FILTERS ARE THE CORNERSTONE OF ALL WATER PURIFICATION. BEFORE AQUAPHOR FILTERS CAN PROTECT YOU, YOU MUST PROTECT THEM.

GROSS is a pre-filter housing for cold water. Effectively removing sand, rust, silt and other impurities, GROSS simplifies the work of the drinking water filter, protects appliances from damage, and makes showering and bathing more enjoyable.

Made of glass-fiber reinforced plastic, GROSS has high pressure resistance and a convenient swivel bracket. It can be equipped with Big Blue 20" (508 mm) replacement module. Filter module replacement process is greatly simplified by the quick release mount.

pre-filters Aquaphor GROSS 10" and 20"

FUNCTION

Made from high-quality Noryl plastic, AQUAPHOR pre-filters can work in a wide range of temperatures and withstand enormous pressure. Despite all this power, they are very compact in size.

Pre-filters remove large insoluble impurities from tap water, including sand, rust and silt. They extend the life cycle of AQUAPHOR filters as well as of your appliances, plumbing, and pipes for cold and hot water by protecting them from dirt and mechanical damage.

ADVANTAGES

- Heavy-duty glass fiber filled polymer housing
- Resistance to high temperatures
- Excellent resistance to water hammers
- The quick-release "American" mount does not require tools for module replacement
- Set of ¾-inch metal fittings for easy connection
- The convenient bracket allows changing the direction of water entry and exit with a single motion
- Easy to changeable filter cartriges

BENEFITS

- High hydrophilicity resulting in high flow and low pressure drop in the filter
- High dirt holding capacity due to 100% usage of the filter volume
- AQUALEN fibers significantly decrease level of heavy metals and iron

Specification and Performance

MODEL	SIZE	NOMINAL PARTICLE RATING	DP & FLOW RATE	CHLORINE TASTE & ODOR REDUCTION	VOC REDUCION	LEAD REDUCION
B510-12 DFS AQ CFB	100 mm x 254 mm	5 microns	0,2 bar & 7,5 Lpm	24 000 L	NA	NA
B520-12 DFS AQ CFB	100 mm x 508 mm	5 microns	0,2 bar & 15 Lpm	48 000 L	NA	NA

Replacement Filters

B510-12 GROSS 10"	B520-12GROSS 20"
	
Gross 10 replacement filter for cold water purification in the entire home. Its unique structure and design allow the module to remove sediments, chlorine, heavy metals and other impurities from the water.	Gross 20 replacement filter for cold water purification in the entire home. Its unique structure and design allow the module to remove sediments, chlorine, heavy metals and other impurities from the water.
Filter life: 30,000 L Capacity: 10 L per min	Filter life: 60,000 L Capacity: 20 L per min

DFS

Dynamic Fixation of Silver

DFS technology is the original method of applying silver in its most active ionic form to Aqualen fibers.

AQ

Aqualen ™

Aqualen is a unique fibrous chelating ion-exchange sorbent. Aqualen irreversibly binds heavy metal ions. It has superior adsorption capacity. Aqualen sorption surface area is 33 times larger than that of the conventional ion-exchange sorbents. It is equally effective in water of any hardness.

CFB

CarbFiber Block

CarbFiber Block (CFB) is a manufacturing technology of water filtration media with different degrees of porosity and is designed for water of any pollution level.

AQUAPHOR PROFESSIONAL water treatment

Containerized water purification system

FULL CONTAINERIZED WATER TREATMENT SYSTEMS FOR VARIOUS APPLICATIONS

High-end technology, Full redundancy, Water and Electricity economical design, High purity permeate, easy to install and operate — Plug and Play.

KEY FEATURES

- Intelligent automatic operation.
- Automatic Cleaning In Place program.
- The containerized systems can be suited to almost any water inlet quality , with many permeate quality options.
- The containerized systems allow a complete unit for water production at almost any required capacities.

THE CONTAINER INCLUDES:

- Full dosing stations
- Ultra Filtration pre-treatment systems
- Reverse Osmosis systems — Double pass
- Fully analytical controllers and process
- EDI polisher units
- Mixed bed resin tanks
- Main control and power cabinets

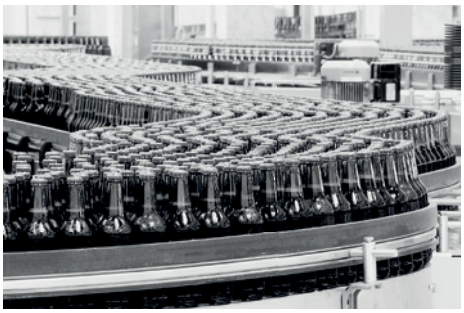
NALCO GRUNDFOS GE

Aquaphor Corp. • L. Tolstoi 2A, 40231, Sillamäe, Estonia
pro.sales@aquaphor.com / pro.aquaphor.com

AQUAPHOR PROFESSIONAL water treatment

Reliable UF-RO systems for efficient industries and agriculture

SOPHISTICATED PROCESS DESIGN INCORPORATES
AN ULTRAFILTRATION PRETREATMENT STAGE
WITH A RO SYSTEM AS A SINGLE SKID "PLUG & PLAY" UNIT

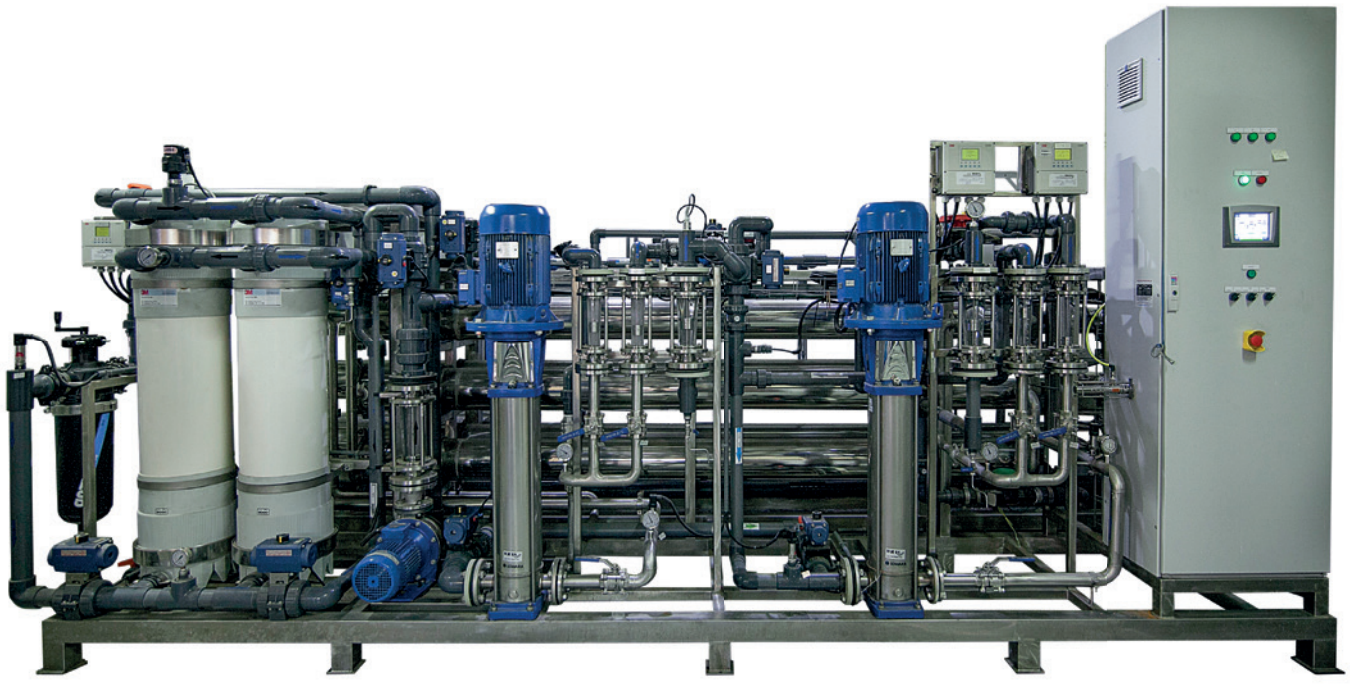


The ultrafiltration pretreatment stage increases the RO system efficiency and permeate water quality in terms of microbiological contaminant removal ensuring constant high-quality product water supply to the client.

The UF microbiological removal capabilities ensure that the RO feed water is sanitized and that fact reduce the possibility of contamination formation on the RO membrane surface.

KEY FEATURES

- Improved water quality
- Extended membrane life
- Low maintenance operation
- Space saving design
- Quiet operation
- Reduced operational costs



UF-RO system

AQUAPHOR PROFESSIONAL water treatment

PROFESSIONAL WATER PURIFYING TECHNOLOGY FOR THE PROFESSIONAL-GRADE KITCHEN

There are many ingredients that make a great restaurant — excellent food, quality kitchen equipment, good drinks, quick and pleasant service and spotless glassware, just to name a few. Surprising as it may sound, many of these things are largely influenced by the quality of the water used in your professional kitchen.

OUR WATER TREATMENT SYSTEMS WILL ALLOW YOU TO ACHIEVE THE BEST RESULTS WHILE CUTTING DOWN ON MANY UNNECESSARY EXPENSES

reverse osmosis system AP.RO-M-300

We proudly present our AP.RO systems — the heart-and-soul of quality water purification in your professional kitchen

- Manufactured using the highest quality components
- A design that blends perfectly into any professional kitchen interior
- Very compact
- Low noise level
- Made and engineered in Estonia

A cost-effective solution for professional kitchens

Complex approach

Most manufacturers of professional kitchen equipment can provide you with some water-treatment options for their appliances. We, on the other hand, offer you an **all-in-one** water filtration solution that can be connected to all of your kitchen and bar equipment including:

- Coffee-machines
- Convection ovens
- Dishwashing machines
- Bar glass washers
- Ice machines
- Boilers and water heaters
- And many more

Central water treatment technology allows you to avoid dealing with numerous service contracts and cartridges replacements for different water purifying products. In addition to that, you will no longer have to worry about using third-party solutions, in case a manufacturer insists on using “recommended” water treatment filters with their kitchen equipment (the ones usually specified in the warranty).

This will extend the life expectancy of all of your water-using kitchen appliances.

AQUAPHOR PROFESSIONAL water treatment

WHOLE HOME RO

WHOLE HOME RO IS A KEY FOR CLEANLINESS, COMFORT AND ENVIRONMENTAL FRIENDLINESS

reverse osmosis system AP.RO-PAP:
plug-&-play RO-system with integrated UV and storage tank

KEY FEATURES

- Patented, fully automatic
- Compact all in one system including prefiltration, post-filtration with the mineralization and UV
- High water recovery
- Built-in high efficiency prefiltration and auto-clean
- Inlet water concentration: iron up to 20 mg/L, hardness up to 25 mg-eqv/L
- Novel automatic antiscalant dosing
- 500 (optionally up to 2000 L) per hour
- Built-in 80 L (up to 150 L) permeate storage tank

NALCO GRUNDFOS GE

AQUAPHOR PROFESSIONAL water treatment

Aquaphor Professional LP21-4021

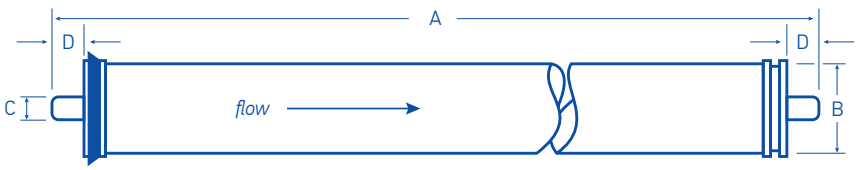
Membrane Element

BRIEF INTRODUCTION

The LP (low pressure) series of aromatic polyamide compound membrane element has the properties of low-pressure operation, high permeate flow and excellent desalination and is applicable to desalination of brackish water. Besides, it is particularly applicable to fabrication of high-purity water for electronic industry and electric power industry owing to its excellent performance in removing soluble salts, TOC, SiO2, etc.

Being suitable for desalting such water sources as surface water (NaCl ≤10000ppm), underground water, tap water and municipal water, etc., LP series is mainly applicable to treatment of various industrial water such as industrial-purpose pure water, boiler water replenishment in power plants, and can be also applied to such brackish water applications, such as treatment of high-concentration saline waste water and production of beverage-purpose water.

Size of Membrane Element: *1,0 inch = 25,4 mm*



A	B	C	D
mm (inch)	mm (inch)	mm (inch)	mm (inch)
533,4 (40)	99,7 (3,9)	19,1 (0,75)	26,7 (1,05)

MODEL	ACTIVE MEMBRANE Area ft²(m²)	AVERAGE PERMEATE GPD (m³/d)	STABLE REJECTION Rate %	MIN. REJECTION Rate %
LP21-4021	36 (3,3)	950 (3,6)	99,5	99,3

Testing Conditions

Testing Pressure	225 psi (1,55 MPa)
Testing Solution Temperature	25 °C
Concentration of Testing Solution (NaCl)	2 000 ppm
pH value of Testing Solution	7,5
Recovery Rate of Single Element	8%

Operation Limits & Conditions

Max. Working Pressure	600 psi (4,14 MPa)
Max. Volume of Feed water	16 gpm (3,6 m³/h)
Max. Temperature of Feed water	45°C
Max. Feed water SDI_{15}	5
pH Range of Feed water during Continuous Operation	2 ≈ 11
pH Range of Feed Water during Chemical Cleaning	1 ≈ 13
Residual Chlorine Concentration of Feed Water	< 0,1 ppm
Max. Pressure Drop of Single Membrane Element	15 psi (0,1 MPa)
Max. Pressure Drop of Single Pressure Vessel with Six RO Membranes	50 psi (0,34 MPa)

NOTICE

1. All data and information provided in this manual have been obtained from long-term experiment by mnaufacturer. We confirm the effective and accuracy of the data. Manufacturer assumes no liability for any aftermath caused by user's failure in abiding by the conditions specified in this manual in use or maintenance of membrane products. It is strongly recommended that the user shall strictly abide the designed use and maintenance requirements and keep relevant records.
2. The permeate value listed in the table is the average value. The permeate flow of single membrane element is tolerance not exceeding ±15% of the nominal value.
3. All wet-type membrane elements have been strictly tested before leaving the factory, and have been treated with 1.0% sodium hydrogen sulfite (10% glycerin antifreeze required in winter) for storage purpose, then sealed with plastic bag in vacuum, and further packed in carton boxes.
4. The membrane used should remain wet after being used; In long term suspension, to prevent the breeding of microbes, soak the membrane elements with protective solution is highly recommended, the solution (prepared with RO filtered water) containing 1.0% sodium hydrogen sulfite (foodstuff-purpose).
5. Operate low pressure flushing for 15-25 minutes of first use, high pressure flushing for 60-90 minutes when first use (Permeate volume no less than 50% of designed volume). Discard all the permeate and condensed water produced during the first one hour after system start-up.
6. During storage time and operation period, it is strictly prohibited to added any chemical medicament that may be harmful to membrane elements. In case of any violation in adding chemical medicament, manufacturer assumes no liability for any damages incurred.
7. Along with technical development and product renovation, all information will be subject to modification without prior notification.

AQUAPHOR PROFESSIONAL water treatment

Aquaphor Professional LP21-4040

Membrane Element

BRIEF INTRODUCTION

The LP (low pressure) series of aromatic polyamide compound membrane element has the properties of low-pressure operation, high permeate flow and excellent desalination and is applicable to desalination of brackish water. Besides, it is particularly applicable to fabrication of high-purity water for electronic industry and electric power industry owing to its excellent performance in removing soluble salts, TOC, SiO2, etc.

Being suitable for desalting such water sources as surface water (NaCl ≤10000ppm), underground water, tap water and municipal water, etc., LP series is mainly applicable to treatment of various industrial water such as industrial-purpose pure water, boiler water replenishment in power plants, and can be also applied to such brackish water applications, such as treatment of high-concentration saline waste water and production of beverage-purpose water.

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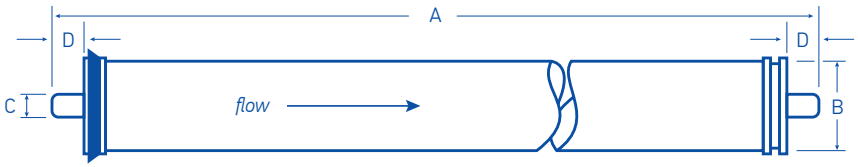

A	B	C	D
mm (inch)	*mm (inch)*	*mm (inch)*	*mm (inch)*
1016,0 (40)	*99,7 (3,9)*	*19,1 (0,75)*	*26,7 (1,05)*

MODEL	ACTIVE MEMBRANE Area $ft^2(m^2)$	AVERAGE PERMEATE GPD (m^3/d)	STABLE REJECTION Rate %	MIN. REJECTION Rate %
LP21-4040	90 (8,4)	2 400 (9,1)	99,5	99,3

Testing Conditions

Testing Pressure	225 psi (1,55 MPa)
Testing Solution Temperature	25 °C
Concentration of Testing Solution (NaCl)	2 000 ppm
pH value of Testing Solution	7,5
Recovery Rate of Single Element	15%

Operation Limits & Conditions

Max. Working Pressure	600 psi (4,14 MPa)
Max. Volume of Feed water	16 gpm (3,6 m^3/h)
Max. Temperature of Feed water	45°C
Max. Feed water SDI_{15}	5
pH Range of Feed water during Continuous Operation	2 ≈ 11
pH Range of Feed Water during Chemical Cleaning	1 ≈ 13
Residual Chlorine Concentration of Feed Water	< 0,1 ppm
Max. Pressure Drop of Single Membrane Element	15 psi (0,1 MPa)
Max. Pressure Drop of Single Pressure Vessel with Six RO Membranes	50 psi (0,34 MPa)

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5. Operate low pressure flushing for 15-25 minutes of first use, high pressure flushing for 60-90 minutes when first use (Permeate volume no less than 50% of designed volume). Discard all the permeate and condensed water produced during the first one hour after system start-up.
6. During storage time and operation period, it is strictly prohibited to added any chemical medicament that may be harmful to membrane elements. In case of any violation in adding chemical medicament, manufacturer assumes no liability for any damages incurred.
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AQUAPHOR PROFESSIONAL water treatment

Aquaphor Professional LP22-8040

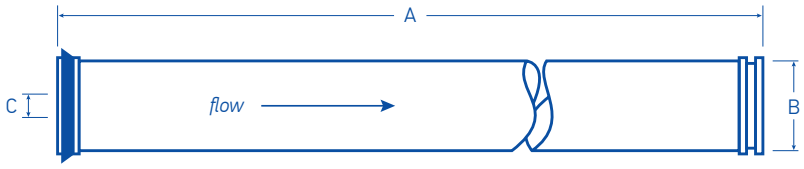
Membrane Element

BRIEF INTRODUCTION

The LP (low pressure) series of aromatic polyamide compound membrane element has the properties of low-pressure operation, high permeate flow and excellent desalination and is applicable to desalination of brackish water. Besides, it is particularly applicable to fabrication of high-purity water for electronic industry and electric power industry owing to its excellent performance in removing soluble salts, TOC, SiO2, etc.

Being suitable for desalting such water sources as surface water (NaCl ≤10000ppm), underground water, tap water and municipal water, etc., LP series is mainly applicable to treatment of various industrial water such as industrial-purpose pure water, boiler water replenishment in power plants, and can be also applied to such brackish water applications, such as treatment of high-concentration saline waste water and production of beverage-purpose water.

Size of Membrane Element: *1,0 inch = 25,4 mm*



A	B	C
mm (inch)	*mm (inch)*	*mm (inch)*
1016,0 (40)	*201,9 (7,95)*	*28,6 (1,125)*

MODEL	ACTIVE MEMBRANE Area $ft^2(m^2)$	AVERAGE PERMEATE GPD (m^3/d)	STABLE REJECTION Rate %	MIN. REJECTION Rate %
LP22-8040	400 (37,2)	10 500 (39,7)	99,5	99,3

Testing Conditions

Testing Pressure	225 psi (1,55 MPa)
Testing Solution Temperature	25 °C
Concentration of Testing Solution (NaCl)	2 000 ppm
pH value of Testing Solution	7,5
Recovery Rate of Single Element	15%

Operation Limits & Conditions

Max. Working Pressure	600 psi (4,14 MPa)
Max. Volume of Feed water	75 gpm (17 m^3/h)
Max. Temperature of Feed water	45°C
Max. Feed water SDI_{15}	5
pH Range of Feed water during Continuous Operation	2 ≈ 11
pH Range of Feed Water during Chemical Cleaning	1 ≈ 13
Residual Chlorine Concentration of Feed Water	< 0,1 ppm
Max. Pressure Drop of Single Membrane Element	15 psi (0,1 MPa)
Max. Pressure Drop of Single Pressure Vessel with Six RO Membranes	50 psi (0,34 MPa)

NOTICE

1. All data and information provided in this manual have been obtained from long-term experiment by manufacturer. We confirm the effective and accuracy of the data. Manufacturer assumes no liability for any aftermath caused by user's failure in abiding by the conditions specified in this manual in use or maintenance of membrane products. It is strongly recommended that the user shall strictly abide the designed use and maintenance requirements and keep relevant records.
2. The permeate value listed in the table is the average value. The permeate flow of single membrane element is tolerance not exceeding ±15% of the nominal value.
3. All wet-type membrane elements have been strictly tested before leaving the factory, and have been treated with 1.0% sodium hydrogen sulfite (10% glycerin antifreeze required in winter) for storage purpose, then sealed with plastic bag in vacuum, and further packed in carton boxes.
4. The membrane used should remain wet after being used; In long term suspension, to prevent the breeding of microbes, soak the membrane elements with protective solution is highly recommended, the solution (prepared with RO filtered water) containing 1.0% sodium hydrogen sulfite (foodstuff-purpose).
5. Operate low pressure flushing for 15-25 minutes of first use, high pressure flushing for 60-90 minutes when first use (Permeate volume no less than 50% of designed volume). Discard all the permeate and condensed water produced during the first one hour after system start-up.
6. During storage time and operation period, it is strictly prohibited to added any chemical medicament that may be harmful to membrane elements. In case of any violation in adding chemical medicament, manufacturer assumes no liability for any damages incurred.
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AQUAPHOR PROFESSIONAL water treatment

Aquaphor Professional ULP22-8040

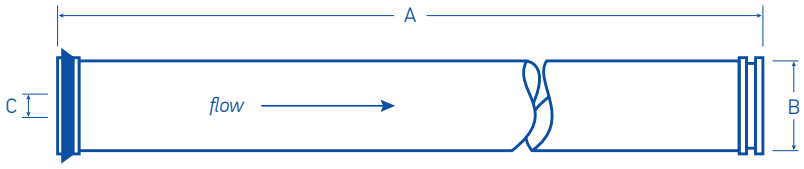
Membrane Element

BRIEF INTRODUCTION

ULP series of ultra-low pressure aromatic polyamide compound membrane element can work under ultra low pressure to reach as high permeate flow and rejection same as regular low-pressure membrane element, and is applicable to desalination of surface water and underground water. It operates under approximately two thirds of the operating pressure of regular low-pressure composite membranes, which can decrease the investment costs for such relevant facilities as pumps, pipelines, and containers, etc. and the operating cost for the RO system, thus increasing the economic efficiency.

Applicable to desalination treatment of those water sources with NaCl lower than 2000 ppm, such as surface water, underground water, tap water and municipal water, ULP series membrane elements are mainly applicable to such as pure water, boiler water replenishment, foodstuff processing, and pharmaceutical production.

Size of Membrane Element: *1,0 inch = 25,4 mm*



A	B	C
mm (inch)	*mm (inch)*	*mm (inch)*
1016,0 (40)	*201,9 (7,95)*	*28,6 (1,125)*

MODEL	ACTIVE MEMBRANE Area $ft^2(m^2)$	AVERAGE PERMEATE GPD (m^3/d)	STABLE REJECTION Rate %	MIN. REJECTION Rate %
ULP22-8040	400 (37,2)	12 100 (45,7)	99,0	98,5

Testing Conditions

Testing Pressure	150 psi (1,03 MPa)
Testing Solution Temperature	25 °C
Concentration of Testing Solution (NaCl)	1 500 ppm
pH value of Testing Solution	7,5
Recovery Rate of Single Element	15%

Operation Limits & Conditions

Max. Working Pressure	600 psi (4,14 MPa)
Max. Volume of Feed water	75 gpm (17 m^3/h)
Max. Temperature of Feed water	45°C
Max. Feed water SDI_{15}	5
pH Range of Feed water during Continuous Operation	3 ≈ 10
pH Range of Feed Water during Chemical Cleaning	2 ≈ 12
Residual Chlorine Concentration of Feed Water	< 0,1 ppm
Max. Pressure Drop of Single Membrane Element	15 psi (0,1 MPa)
Max. Pressure Drop of Single Pressure Vessel with Six RO Membranes	50 psi (0,34 MPa)

NOTICE

1. All data and information provided in this manual have been obtained from long-term experiment by mnaufacturer. We confirm the effective and accuracy of the data. Manufacturer assumes no liability for any aftermath caused by user's failure in abiding by the conditions specified in this manual in use or maintenance of membrane products. It is strongly recommended that the user shall strictly abide the designed use and maintenance requirements and keep relevant records.
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4. The membrane used should remain wet after being used; In long term suspension, to prevent the breeding of microbes, soak the membrane elements with protective solution is highly recommended, the solution (prepared with RO filtered water) containing 1.0% sodium hydrogen sulfite (foodstuff-purpose).
5. Operate low pressure flushing for 15-25 minutes of first use, high pressure flushing for 60-90 minutes when first use (Permeate volume no less than 50% of designed volume). Discard all the permeate and condensed water produced during the first one hour after system start-up.
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AQUAPHOR PROFESSIONAL water treatment

Aquaphor Professional XLP11-4021

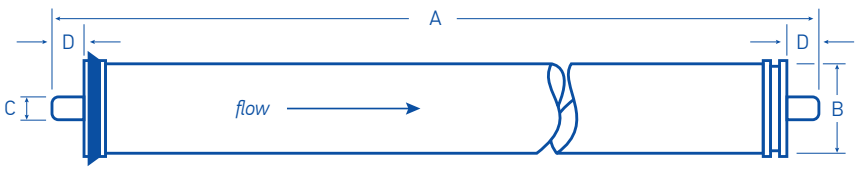
Membrane Element

BRIEF INTRODUCTION

XLP series of extremely low pressure aromatic polyamide compound membrane element can work under ultra low pressure to reach as high permeate flow and salt rejection as regular low-pressure membrane element can, and is applicable to desalination of surface water and underground water. It operates under approximately half the operating pressure of regular low-pressure composite membrane, and achieves a salt rejection rate of up to 99.0%, which can decrease the investment costs for such relevant facilities as pump, piping, and container, etc. and the operating cost for the RO system, thus increasing the economic efficiency.

Being suitable for the desalination treatment of those water sources with low salinity not requiring high salt rejection such as surface water, underground water, tap water and municipal water, which have a salt concentration lower than 1000 ppm, XLP series of membrane element is particularly applicable to the second-pass desalination with two-pass RO system, and is mainly applied to numerous applications of various scales, such as pure water production, boiler water replenishment, foodstuff processing and pharmaceutical production.

Size of Membrane Element: *1,0 inch = 25,4 mm*



A	B	C	D
mm (inch)	mm (inch)	mm (inch)	mm (inch)
533,4 (40)	99,7 (3,9)	19,1 (0,75)	26,7 (1,05)

MODEL	ACTIVE MEMBRANE Area $ft^2(m^2)$	AVERAGE PERMEATE GPD (m^3/d)	STABLE REJECTION Rate %	MIN. REJECTION Rate %
XLP11-4021	36 (3,3)	1 000 (3,78)	98,0	97,5

Testing Conditions

Testing Pressure	100 psi (0,69 MPa)
Testing Solution Temperature	25 °C
Concentration of Testing Solution (NaCl)	500 ppm
pH value of Testing Solution	7,5
Recovery Rate of Single Element	8%

Operation Limits & Conditions

Max. Working Pressure	600 psi (4,14 MPa)
Max. Volume of Feed water	16 gpm (3,6 m^3/h)
Max. Temperature of Feed water	45°C
Max. Feed water SDI_{15}	5
pH Range of Feed water during Continuous Operation	3 ≈ 10
pH Range of Feed Water during Chemical Cleaning	2 ≈ 12
Residual Chlorine Concentration of Feed Water	< 0,1 ppm
Max. Pressure Drop of Single Membrane Element	15 psi (0,1 MPa)
Max. Pressure Drop of Single Pressure Vessel with Six RO Membranes	50 psi (0,34 MPa)

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AQUAPHOR PROFESSIONAL water treatment

Aquaphor Professional XLP11-4040

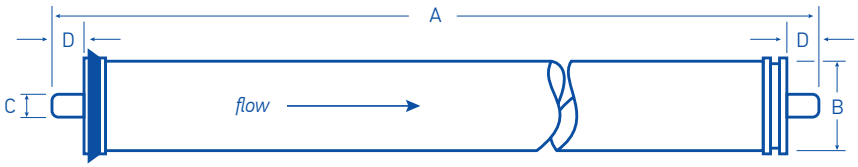
Membrane Element

BRIEF INTRODUCTION

XLP series of extremely low pressure aromatic polyamide compound membrane element can work under ultra low pressure to reach as high permeate flow and salt rejection as regular low-pressure membrane element can, and is applicable to desalination of surface water and underground water. It operates under approximately half the operating pressure of regular low-pressure composite membrane, and achieves a salt rejection rate of up to 99.0%, which can decrease the investment costs for such relevant facilities as pump, piping, and container, etc. and the operating cost for the RO system, thus increasing the economic efficiency.

Being suitable for the desalination treatment of those water sources with low salinity not requiring high salt rejection such as surface water, underground water, tap water and municipal water, which have a salt concentration lower than 1000 ppm, XLP series of membrane element is particularly applicable to the second-pass desalination with two-pass RO system, and is mainly applied to numerous applications of various scales, such as pure water production, boiler water replenishment, foodstuff processing and pharmaceutical production.

Size of Membrane Element: *1,0 inch = 25,4 mm*



A	B	C	D
mm (inch)	*mm (inch)*	*mm (inch)*	*mm (inch)*
1016,0 (40)	*99,7 (3,9)*	*19,1 (0,75)*	*26,7 (1,05)*

MODEL	ACTIVE MEMBRANE Area $ft^2(m^2)$	AVERAGE PERMEATE GPD (m^3/d)	STABLE REJECTION Rate %	MIN. REJECTION Rate %
XLP11-4040	90 (8,4)	2 000 (7,6)	98,0	97,5

Testing Conditions

Testing Pressure	100 psi (0,69 MPa)
Testing Solution Temperature	25 °C
Concentration of Testing Solution (NaCl)	500 ppm
pH value of Testing Solution	7,5
Recovery Rate of Single Element	15%

Operation Limits & Conditions

Max. Working Pressure	600 psi (4,14 MPa)
Max. Volume of Feed water	16 gpm (3,6 m^3/h)
Max. Temperature of Feed water	45°C
Max. Feed water SDI_{15}	5
pH Range of Feed water during Continuous Operation	3 ≈ 10
pH Range of Feed Water during Chemical Cleaning	2 ≈ 12
Residual Chlorine Concentration of Feed Water	< 0,1 ppm
Max. Pressure Drop of Single Membrane Element	15 psi (0,1 MPa)
Max. Pressure Drop of Single Pressure Vessel with Six RO Membranes	50 psi (0,34 MPa)

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Aquaphor Profesional offers a wide range of solutions for com-mercial water treatment applications. As a Joint Venture of Winter Engineering Ltd (Israel) and Aquaphor Corporation (Estonia), it combines expertise in the production of high quality RO systems of the former with technology and mass manufacturing capabilities of the latter.

We provide expertise and solutions for medical, pharmaceutical, electronics, food and other commercial applications. Aquaphor Professional's product lines include RO systems. Ultrafiltration, and Water Softeners.

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