Final Destination of water treatment Solutions

سيتي كلاس لتقنية المياه

CITY CLASS FOR WATER TECHNOLOGIES

سيتي كلاس لتقنية المياه
CITY CLASS FOR WATER TECHNOLOGIES

CITY CLASS is one of the leading UAE companies specializing in water treatment solution for water purification, and chemical streams.
CITY CLASS is the distributor of "PENTAIR" products and we are providing most advanced water treatment technologies, their equipment & spare parts.

At PENTAIR, we believe the health of our world depends on reliable access to clean water. We deliver a comprehensive range of smart, sustainable water solutions to homes, business and industry around the world. Our industry leading and proven portfolio of solutions enables people, business and industry to access clean, safe water, reduce water consumption, and recover and reuse it.

We specializes in development, design and maintenance of large variety of water treatment, filtration solution & membrane system.
We are committed to provide the highest level of quality and service. Among our customer you can find many reputable multinational corporations, municipalities & government sectors.

Pentair

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CITY CLASS FOR WATER TECHNOLOGIES

Total Solution For Water Treatment

PRESSURE VESSELS

The high quality Codeline pressure vessels are used for reverse osmosis and ultrafiltration processes.

They are built to maximize the performance of water treatment and purification systems. The vessels are used in industrial, commercial and municipal water treatment applications across the world. Our extensive pressure vessel portfolio guarantees the right specification for each application.

The pressure vessels are widely used for diverse water applications, from industrial water treatment to wastewater treatment, from sea water reverse osmosis to water treatment processes in the Oil & Gas sector.

On this page you can find a total overview of our Codeline pressure vessels. To learn more about the features, benefits, parts overview and specifications.

40S SERIES

The Codeline 40S Series of standard 4" diameter, made from filament wound epoxy/glass composites, is applicable for operating pressures of 300 PSI, 450 PSI and 600 PSI.

80E SERIES

The Codeline 80E series of standard 8" diameter and made up of filament wound epoxy/glass composites is applicable for operating pressure of 300 PSI, 450 PSI, 600 PSI, 1000 PSI and 1200 PSI.

80H SERIES

The Codeline OCTA 80H Series of standard 8" diameter is applicable for operating pressure of 150 PSI, 300 PSI, 450 PSI, 600 PSI, 1000 PSI and 1200 PSI in brackish and high brackish and sea water applications

80S SERIES

The Codeline OCTA 80S series of standard 8" diameter and made up of filament wound epoxy/glass composites is applicable for operating pressure of 150 PSI, 300 PSI, 450 PSI, 600 PSI, 1000 PSI and 1200 PSI.

80U SERIES

The Codeline OCTA 80U Series of standard 8" diameter is applicable for operating pressure of 300 PSI, 450 PSI and 600 PSI in brackish and high brackish water applications.

40E SERIES

The Codeline 40E Series of standard 4" diameter and made up of filament wound epoxy/glass composites is applicable for operating pressure of 300 PSI, 600 PSI and 1000 PSI.

AQUALINE

Aqualine offers cost-effective filtration by providing superior flow rates and maximizing the performance of water treatment and purification systems, making it also very suitable as a pre-filtration solution in various industries.

CodeLine™
Pentair Water

Pentair

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Total Solution For Water Treatment

ECOLINE 25-300

The Codeline Ecoline 25-300 membrane housing of 2.5” diameter, made from filament wound epoxy/glass composite, is applicable for operating pressures up to 300 PSI /20 Bar and has a qualification pressure of 1200 PSI/82 Bar

ECOLINE 40L30N

The Codeline Ecoline 40L30N membrane housing of 4” diameter, made from filament wound epoxy/glass composites, is applicable for an operating pressure of 300 PSI/20 Bar and has a qualification pressure of 1200 PSI/82 Bar.

ECOLINE 8 INCH SERIES

The Codeline Ecoline 25-300 membrane housing of 2.5” diameter, made from filament wound epoxy/glass composite, is applicable for operating pressures up to 300 PSI /20 Bar and has a qualification pressure of 1200 PSI/82 Bar

CodeLine™
Pentair Water

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FRP PRESSURE TANK

TECHNICAL DATASHEET

Composite Pressure Tanks

PENTAIR & Structural pressure vessels are made of high performance Composite material with FRP filament winding. All pressure tanks, residential and commercial are 100% corrosion resistant.

Pressure vessels also have special colored liner which is completely opaque to sunlight pass through and provides solution to algae and micro-organism growth inside the tank due to hot and humid weather in most of the tropical and Middle-East Countries.

Applications

A wide application range is covered. The tanks are used when water will be:

- ✓ Filtered
- ✓ Softened
- ✓ Demineralized.
- ✓ Active Carbon Filtration
- ✓ Iron Removal
- ✓ Multimedia Filtration
- ✓ Special Ion Exchange Processes.

Temperature Stability

All pressure vessels can be operated at temperatures up to 50°C.

Chemical Resistance

Pressure vessels design includes an inlier that is reinforced by an exterior epoxy / glass roving matrix. The liners used provide a reliable barrier to chemical corrosion and will have slightly different properties based on the ratings below. All liner material meets FDA standards for potable water. Use these ratings as a guide only. Actual performance will depend on concentrations, temperature and solution chemistry.

Pressure Stability

All pressure tanks are designed and approved for an operating pressure up to 10 bars at a maximum water temperature of 50°C.

The pressure vessels should not be used for hydro-pneumatic applications or vacuum operation. The use of the tanks as storage tank recommended for this application local legal regulations have to be followed. The pressure vessels have a height extension of 2 mm per meter tank height at maximum operating pressure. Flexible connections or height-balancing pipe installation in case of pressure variations or at high pressure operation might be considered for installation.

Beside the height extension also a width extension of about 10 mm per meter tank diameter can occur. This elastic performance is normal and does not limit the application.

PENTAIR

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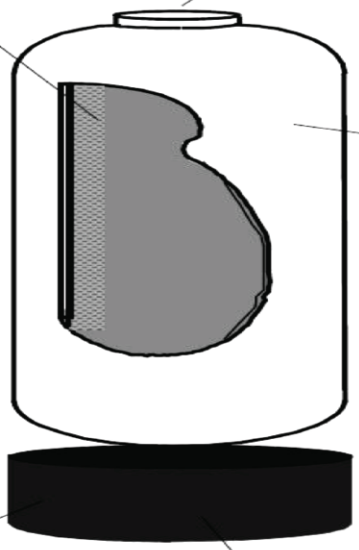
Total Solution For Water Treatment

DESCRIPTION

Pentair

one piece seamless TANK LINER
- blow molded from engineering grade thermoplastic
- smooth, fiber-free inner surface with wide chemical resistance
- liner materials with in compliance FDA under 21CFR -part 177
- not affecting by regenerating chemicals (acid/caustic) or DI - water

precision injection molded THREADS
- for all standard industry valves and fittings



though OUTER LAMINATE
- continuous strands of fiberglass with high strength expoxy resin
- completely rust and corrosion free
- excellent impact and abrasion resistance

TESTING
- testing of PARK pressure tanks is performed to all standards, assuring top field performance

INDUSTRY APPROVED
-approved by NSL, UL and meets the requirement of WQA Standard S - 100
-rated for 10 bars operating pressure at 50 °C

STANDARD BASES
- for tanks 5" through 14" diameter
  ABS - injected molded
- for tanks 16" diameter
  rubber - compression molded
- for tanks 20" and 22" diameter
  fiberglass - compression molded

OPTIONAL BASES
- for tanks 8" - 9" - 10" - 12" - 13" + 14"
  rubber - compression molded
- for tanks 10" - 12" - 14" - 16" - 20" - 22"
  with top and bottom opening
  fiberglass, extended bases

SPECIFICATION

DESCRIPTION	OPENING	OPERATING PRESSURE (PSI/BAR)	HEIGHT W/ BASE (IN/MM) [1]	HEIGHT W/O BASE (IN/MM) [1]	DIAMETER (IN/MM) [2]	CAPACITY (GAL/LITER)	BASE	WEIGHT W/ BASE (LBS/KG) [3]
18 x 65	4"T	15010.34/	66.251682.0/	65.001651.0/	18.65473.8/	64242.0/	SMC	6730.4/
18 x 65	4"TB	15010.34/	73.131857.5/	65.631667.0/	18.65473.8/	64242.0/	SMC EXT	6730.4/
21 x 62	4"T	15010.34/	67.131705.0/	63.501612.9/	22.00558.8/	84318.0/	SMC	9543.1/
21 x 62	4"TB	15010.34/	72.751847.9/	63.501612.9/	21.75552.5/	84318.0/	SMC EXT	9543.1/
24 x 72	4"T	15010.34/	74.661896.3/	70.601793.2/	24.25616.0/	118446.7/	SMC	10949.4/
24 x 72	4"TB	15010.34/	80.422042.7/	70.301785.6/	24.60624.8/	119450.5/	SMC EXT	12456.2/
24 x 72	6"TBF	15010.34/	88.502247.9/	74.501892.3/	24.20614.7/	119450.5/	TRIPOD	13762.1/
30 x 60	6"TF	15010.34/	71.631819.4/	64.341634.2/	30.20767.0/	151571.6/	SMC EXT	18583.9/
30 x 60	6"TBF	15010.34/	82.502095.5/	68.501739.9/	30.20767.0/	151571.6/	TRIPOD	18583.9/
30 x 72	4"TB	15010.34/	78.902004.1	70.401788.2/	30.07763.8/	187707.9/	SMC EXT	19889.8/
30 x 72	6"TBF	15010.34/	88.902258.1	74.901902.5/	30.20/767.1	187707.9/	TRIPOD	21195.7/
36 x 72	4"TB	15010.34/	80.502004.7/	70.501790.7/	36.00914.4/	264999.3/	SMC EXT	285129.3/
36 x 72	6"TBF	15010.34/	90.392295.9/	76.141933.9/	36.12917.4/	264999.3/	TRIPOD	285129.3/
42 x 72	6"TF	15010.34/	72.521842.0/	71.141807.0/	42.251073.2/	3451306.0/	SMC LOW	370168.0/
42 x 72	6"TBF	15010.34/	90.122289.0/	73.001854.2/	42.251073.2/	3451306.0/	TRIPOD	400181.0/
48 x 72	6"TF	15010.34/	81.54207/1.2	75.161909.1/	48.251225.6/	4631753.0/	SMC LOW	494224.0/
48 x 72	6"TBF	15010.34/	92.902359.7/	76.901953.3/	48.251225.6/	4631753.0/	TRIPOD	494224.0/
63 x 67	6"TBF	15010.34/	81.41/2067.8	67.101704.3/	64.001625.7/	6002271.0/	TRIPOD	680308.0/
63 x 67	16"TMY, 6"BF	15010.34/	82.242088.9/	67.801722.1/	64.001625.7/	6002271.0/	TRIPOD	680308.0/
63 x 86	6"TBF	15010.34/	98.542502.9/	84.102136.1	64.001625.7/	9003407.0/	TRIPOD	950431.0/
63 x 86	16"TMY, 6"BF	15010.34/	98.94/2513.1	84.502146.3/	64.001625.7/	900340/7.0	TRIPOD	950431.0/
63 x 116	16"TMY, 6"BF	15010.34/	130.443313.2/	116.002946.4/	64.001625.7/	12504732.0/	TRIPOD	1190540.0/
63 x 144	16"TMY, 6"BF	15010.34/	160.184068.6/	145.503695.7/	64.501638.3/	16006057.0/	TRIPOD	1398634.0/

COMPOSITE VESSEL BENEFITS OVER STEEL TANKS

PENTAIR

Steel Tanks	*STRUCTURAL Composite Vessels*
Very heavy and difficult to handle thus involves higher labor cost to install	60% lighter than steel and easier to handle thus lower installation costs
Corrode and rust over a period of time	Corrosion-resistant both inside and out
Lining has to be periodically treated	Low maintenance
Painting and coating have to be undertaken regularly	Natural fiberglass shell never fades or changes color; colored shells recommended for UV protection

Installation Recommendations

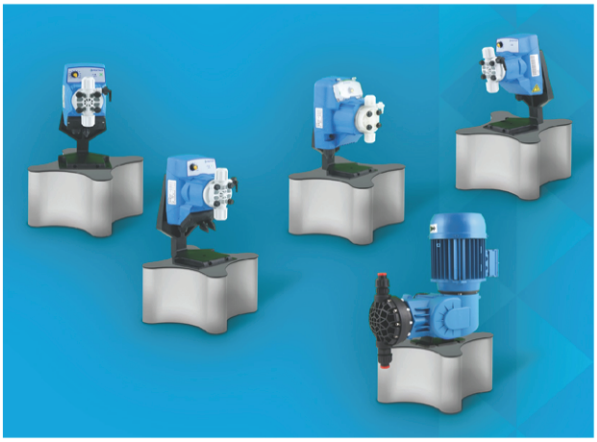
- Residential and light commercial tanks can be installed without ground fixing.
- Always tanks should be installed on horizontal level.
- Valve batteries and piping-systems are to be supported by pipe-frames or other supporting devices.
- The connecting piping should be executed tension free.
- The pressure vessels should not be used for hydro pneumatic applications or vacuum operation.
- The use of the tanks as storage tank is not recommended for this application local legal regulations have to be followed.
- In case that vacuum or water hammer can occur provisions have to be considered to avoid these conditions.

We are prepared to provide other sizes upon request.

DOSING PUMP

Pentair is a global water, fluid, thermal management, and equipment protection partner with industry leading products, services, and solutions. Pentair produces a range of accurate and high performance for use across an entire spectrum of industrial processes and applications.

Model Number	Pressure (bar)	Flow Rate (l/h)	Frequency (Stroke/Minute) Min	Frequency (Stroke/Minute) Max	Stroke Capacity (cc/stroke)	Connections IN/OUT(mm)	Weight(Kgs)
CSL05008SPPF00P	8	5	0	160	0.52	4/6	3.5
	10	3	0	160	0.31		3.5
CCL05008EPPF00P	8	5	0	160	0.52	4/6	3.5
	8	1	0	160	0.52		3.5
	10	3	0	160	0.31		3.5
	10	0.6	0	160	0.31		3.5
PSA05008EPPF00P	8	5	0	160	0.52	4/6	3.5
	10	3	0	160	0.31		3.5
PSD05008EPPF00P	8	5	0	160	0.52	4/6	3.5
	10	3	0	160	0.31		3.5



Model Number	Head	O-Rings	Valve Body	Valve Balls	Diaphragm	Hose Delivery	Hose Suction	Viscosity Max CPS
CSL05008SPPF00P	PVDF	FPM	PVDF	Ceramic	PTFE	PE	PVC	Water
CCL05008EPPF00P	PVDF	FPM	PVDF	Ceramic	PTFE	PE	PVC	Water
PSA05008EPPF00P	PVDF	FPM	PVDF	Ceramic	PTFE	PE	PVC	Water
PSD05008EPPF00P	PVDF	FPM	PVDF	Ceramic	PTFE	PE	PVC	Water

BIG BLUE FILTER HOUSING

Pentair

Big Blue Filter Housings offer the versatility to meet all of your large- capacity filtration needs, including high-flow and heavy-sediment applications. The extra-large housing allows for greater cartridge capacity, reducing the number of vessels required for high flow-rate applications. Sumps are constructed of durable reinforced polypropylene and are available in both 10" and 20" lengths.

The high-flow polypropylene (HFPP) cap is available with 3/4", 1" or 1½" NPT inlet and outlet ports. The 1¼" internal port allows a greater volume of liquid to pass through the HFPP cap more rapidly.

Big Blue housings are compatible with a broad range of chemicals and are available with or without a pressure relief button. They accept a wide variety of 4½" diameter cartridges.

Big Clear Filter Housings offer on-site examination of flow, performance, and cartridge life and are ideal for a variety of applications. The blue polypropylene caps are available with an optional pressure-relief button on the inlet side to relieve pressure inside
the housing when changing filter cartridges.

Materials of Construction	BIG BLUE	BIG CLEAR
Housing	Polypropylene	Lexan (#10), Polycarbonate (#20)
Cap	Polypropylene (HFPP)	Polypropylene (HFPP)
Button Assembly	300-series Stainless Steel, EPDM, and Polypropylene	300-series Stainless Steel, EPDM, and Polypropylene
O-Ring	Buna-N	Buna-N
Maximum Temperature	100ºF (37.8ºC)	100ºF (37.8ºC)
Maximum Pressure	#10 Big Blue® – 100 psi (6.9 bar) #20 Big Blue® – 90 psi (6.2 bar)	#10 Big Clear – 100 psi (6.9 bar) #20 Big Clear – 90 psi (6.2 bar)

FILTER HOUSINGS

- 2.5"x20" Blue Slim Housing
- 3 - Stage Blue Jumbo Housing
- UPVC Filter Housings
- Bag Filter Housings

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CARTRIDGE FILTER

The Cartridge Yarn Filter are made up of 100% polypropylene with different size - 10",20", 30", 40" etc. The Yarn Filter provides optimum particulate, sediment and solids filtering capacity. Low Cost Alternative to name brand filters. Fits any standard filter housing. Large void volume design for low-cost, reliable filtration performance with high contaminant holding capacity. necessary.

SPECIFICATIONS:

(1) Length: 10", 20", 30", 40", 50"
(2) Diameter: 2.5" or 4. 5"
(3) Micron Rating: 1, 5, 10, 20, 30, 50, 75, 100, and 150 Micron
(4) Connection: Drop in
(5) Standard Temp. Range: 40 - 140 F
(6) Pressure Range: 30 - 125 PSI
(7) Initial Pressure Drop: 6 PSID
(8) Material: 100% Polypropylene
(9) Inner diameter: 1.1 inch
(10) Reduces extra fine sand,rust,dirt,silt,scale particles
(11) Filter Life: About 1- 3 months depending on usage and water quality - replace filter when a reduction in flow is noticed

MANUFACTURER OF CHEMICALS

ANTISCALANT

- **RO ANTISCALANT S4000A**
- **RO ANTISCALANT S4000B**

1. Usage

Highly effective antiscalant, specially formulated for highly brackish water (TDS up to 20,000ppm) Reverse Osmosis Desalination Plants. General Antiscalant polyacrylic basis with synergetic mixture adapted for controlling inorganic scales of carbonate and sulfate in Brackish THIS ANTISCALANT series are compatible with all major RO-membranes. In general, it is not affected by chlorine or biocides when they are used as normal disinfectants. However, when Ozone is used, engineers are requested to contact us.

2. Dosage

Conventional methods use simple indices like Langelier, Stiff-Davis, Oddo-Tomson and Ryznar indexes, to predict scale and choose the right antiscalant and dose. These simple indices are driven from the basic concept of saturation under heating in thermal plants or heat exchanger and assume that every ion in the water is available 100% freely as reactant for scale forming. They have two major withdrawals:

• The mechanism of dehydration or dewatering of dissolved salts on membranes surface, differs from the simple thermal saturation modules.

• The interaction between the different ions present in brackish water especially with high salt content leads to sophisticated fouling modules (fouling fractions), which varies in the practice from the simplified assumption, that every ions reacts 100% as it is in the water analysis, using simple indices.

Using these conventional methods leads to errors in projection of scale and in choosing antiscalant and dose. THIS ANTISCALANT formulas for Brackish & sea Water membrane systems takes into consideration the above mentioned points to predict and prevent scale formation at cost effective dosing rate as low as 2 ppm based on water analysis. Solution offers a special service to calculate the exact dosing for operations based on water analysis and system design and operating parameters. If the minimum dosing pumps capacity is over the required dose. THIS ANTISCALANT can be diluted with RO-Permeate water accordingly. THIS ANTISCALANT was tested against major competition products in the market and provides an equivalent or better performance.

Dosing rate 2.0-10.0 ppm depend on water analysis.(for further information kindly contact US.

3. **Physical and Chemical Properties**

3.1 **General Properties**

Form aqueous, liquid Color Colorless to pale yellow clear solution

3.2 **Important Properties to protect health, environment and safety**

pH-value (Concentrate) 3.5-5.0 pH-value in aqueous solution (1% w/w) <5 Flash point (Pensky/Martens) °C >100
Solubility in Water (weight %) completely soluble Eyes Irritation, Rabbits Strong irritant

4. **Handling and Storage**

4.1 **Handling** Avoid skin and eye contact. After work wash hands especially before eating, drinking or smoking.
ANTISCALANT

4.2 **Storage** Keep container hermetically sealed. Store in a cool and good ventilated area.

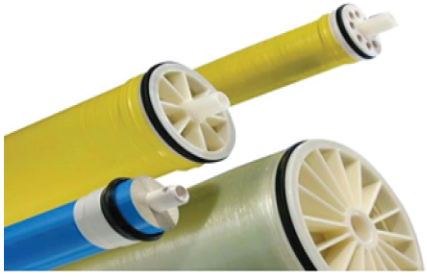
- **HYDROCHLORIC ACID - HCL**
- **SULFURIC ACID**
- **CLEANER FOR REVERSE OSMOSIS PLANTS**

MEMBRANES

We offer a comprehensive product portfolio of water treatment membranes and system packages. Below is a top-level list of products and solutions we can offer.

DUPONT Filmtec Reverse Osmosis Membranes

FILMTEC® reverse osmosis (RO) and Nano filtration (NF) elements are products available from Dow Liquid Separations, the globally recognized leader in separations technologies and solutions for industrial, municipal, commercial and consumer water applications.



Compared to other filtration technologies that rely on a screen or filter to remove particles, reverse osmosis (RO) and Nano filtration (NF) are pressure-driven separation processes that employs a semi-permeable membrane and the principles of cross-flow filtration.
We provide the most widely used RO and NF technologies in the world—trusted by municipalities, manufacturers of all types, small businesses and families wanting clean, healthy water at home

REVERSE OSMOSIS AND NANOFILTRATION TYPES

Driving technology forward is what we do best. With decades of global experience in working with the most difficult problems in purifying water or liquid streams, regional technical support, and industry-leading innovations, our RO and NF technologies bring world-trusted, top-tier technology to your water filtration needs.

1. DUPONT Filmtec Brackish Water 8" Reverse Osmosis membranes
2. DUPONT Filmtec Brackish Water 4" Reverse Osmosis membranes
3. DUPONT Filmtec Brackish Water < 4" Reverse Osmosis membranes
4. DUPONT Filmtec Tap Water Reverse Osmosis membranes
5. DUPONT Filmtec Seawater 8" Reverse Osmosis membranes
6. DUPONT Filmtec Seawater 4" Reverse Osmosis membranes
7. DUPONT Filmtec Seawater < 4" Reverse Osmosis membranes
8. DUPONT Filmtec Nano filtration 8" membranes
9. DUPONT Filmtec Nano filtration 4" membranes
10. DUPONT Filmtec Process Separations 4" membranes
11. DUPONT Filmtec Process Separations 8" membranes
12. DUPONT Filmtec Specialty Membranes
13. DUPONT Filmtec FORTILIFE 8" membranes

For any further details feel free to contact us.

DUPONT™

FILMTEC
MEMBRANE

FITTING & SPARES

TDS Meters

Flow Meters

Chemical Tanks

SAND MEDIA FILTERS (Minerals)

Gravel

Filter Sand

Anthracite

0.5mm	-	0.8mm
0.8mm	-	1.2mm
3mm	-	5mm
5mm	-	8mm
8mm	-	10mm

We are prepared to provide other sizes upon request.

PUMPS & MOTORS

GRUNDFOS

LOWARA
a xylem brand

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COMMERCIAL RO SYSTEM

We offer a water purification system that offers pure water for the entire house. Our customer is always getting water that tastes like bottled water.

- Description: 6 stage RO System with frame and gauge
- Flush Type: Munual-Flush
- Fitting Type: Quick fitting
- Capacity: 50GPD
- Power supply: 220v/110v 50/60Hz
- RO membrane: JICEN 50G
- Housing:10" single "O" ring housing
- Pump: 50G diaphragm booster pump
- Adapter: 24V, 1.2A
- Pressure Tank: 3.0G plastic tank
- pp+GAC+CTO+RO+T33+Mineral
- size:38.5*24*52cm
- working pressure: 0.3-0.7mpa

- Description: 5 stage 50G RO System with BOX WHITE COLOR (BOX materil ABS)
- The disply show the filters time
- Flush Type: AUTO-Flush
- Fitting Type: Quick Fitting
- Capacity: 50GPD
- Power supply: 220v/110v 50/60Hz
- RO membrane: JICEN
- Housing: 10" double "O" ring housing (materil pp)
- Pump: 50G diaphragm booster pump
- Adapter: 24V, 1.2A
- Pressure Tank: 3.0G plastic tank
- PP+GAC+PP+RO+T33+alkaline filter
- size:53*15*39.5cm
- working pressure: 0.3-0.7mpa

- Description: 5 stage RO with frame and pressure gauge
- Flush Type: Auto-Flush
- Fitting Type: Quick fitting
- Capacity: 1000 GPD
- Power supply: 220v/110v 50/60Hz
- RO membrane: JICEN 500G*2
- Housing: 20" single "O" ring housing together
- Pump: 500G Diaphragm booster pump*2
- Adapter: 24V 5A *2
- Pressure Tank: 10.0G pastic tank
- PP+GAC+PP+RO+T33
- size:42*28*78cm
- working pressure: 0.3-0.7mpa

Pentair

CodeLine™ Pentair Water

康泉滤材

GRUNDFOS®

DUPONT™

FILMTEC MEMBRANE

LOWARA a xylem brand

JICEN

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Behind Lulu Hyper Market – Sanaiya – Al Ain - U.A.E

Branches

AL AIN	DUBAI	RAS AL KHAIMAH	AL WAGAN	LIWA