









WATER TREATMENT SYSTEMS

SURFACE	REVERSE	SEA WATER	ULTRAVIOLET
PIPING	OSMOSIS	REVERSE OSMOSIS	DISINFECTION
SYSTEMS	SYSTEMS	SYSTEMS	SYSTEMS
FILTERS	DOSING	ULTRAFILTRATION	E D I
	SYSTEMS	SYSTEMS	SYSTEMS

PMC Surface Piping systems operate based on the principles of occlusion and adsorption.

Occlusion is a process that removes suspended solids based on their size. In this process, particles are held back because they cannot pass through the pores of a barrier, such as a packed bed of sand, a fiber mat, or a membrane surface. Adsorption is a process by which an impurity in a liquid is removed and adheres to the surface of a solid. When adsorption occurs, a suspended particle in water attaches to a solid surface.

The biggest advantage of these systems is that the processes take place on the surface of the filtering media, and the entire thickness of the media layer is utilized, rather than just the surface of the media bed. As particles accumulate on the surface, they create a layer of occluded particles, which increases the performance of filtration compared to other filtration methods.

Vessels are cleaned using a backwash flow. During a backwash cycle, the filter bed is lifted and fluidized to remove the accumulated particles.

Various purposes and processes are achieved via different systems using different minerals and chemicals such as; Surface Piping Systems

Decrease suspended solids in water and to remove turbidity and all particulates from water up to 5-10 microns. Remove color, taste, odor, residual chlorine and organic substances from water. Remove calcium, magnesium, strontium and barium, causing hardness in water, for softening water.



- 6 bar maximum working pressure
- Time controlled backwash
- Electric actuated butterfly valves
- Bottom collection structure lateral diffuser
- PVC-U material surface piping (On epoxy painted skid)
- Sample taps and manometers on the surface piping
- Electronic card control panel
- Electricity 220V / 50 Hz / 1 pH
- Dry-pressured air required for the operation of pneumatic valves belongs to the customer.
 Recommended minimum compressor capacity is 100 Lt / min @ 8 bar.



ELECTRIC ACTUATED SAND FILTER SYSTEM

MODEL	TANK DIMENSIONS (mm)	CONNECTIONS (DN) SERVICE	SERVICE CAPA	CITY (M3/HOUR)	MIN	IERALS
	(DxH Total)	DRAIN	Filtration Velocity 20m, hour	Filtration Velocity 30m/hour	ANTHRACITE (It)	QUARTZ (kg)
3072	775 x 2050	50 - 50	9	14	140	475
3672	975 x 2150	50 - 50	13	20	175	650
4272	1075 x 2400	65 - 65	18	27	210	775
4872	1225 x 2400	65 - 65	23	35	315	1125
6386	1600 x 2500	80 - 80	4	6	560	2025



- Epoxy painted carbon steel tank
- . 6 bar maximum working pressure
- . Time controlled backwash
- Electric actuated butterfly valves
- PVC-U material surface piping (Optional galvanized surface piping)
- . Sample taps and manometers on the surface piping
- Electronic card control panel
- Electricity 220V / 50 Hz / 1 pH
- Dry-pressured air required for the operation of pneumatic valves belongs to the customer. Recommended compressor capacity 100 Lt / min @ 8 bar minimum.



ELECTRIC ACTUATED SAND FILTER SYSTEM

				SERVICE CAPACITY (M3/HOUR)		MINERALS	
MODEL	TANK DIMENSIONS (mm)	CONNECTIONS (DN) SERVICE			КИМ Fİ	LTRE	
	(DxH Total)	DRAIN	Filtration Velocity 20m/hour	Filtration Velocity 30m/hour	ANTHRACITE (It)	QUARTZ (kg)	
1220	1250 x 2790	65 - 65	25	37	350	1375	
1630	1600 x 3020	80 - 80	40	60	595	2375	
2030	2000 x 3250	100 - 100	63	94	805	3150	
2434	2400 x 3400	125 - 125	91	136	1155	4525	
2835	2800 x 3750	150 - 150	123	185	1575	6200	

SURFACE PIPING TURBIDEX FILTER SYSTEMS (FRP TANK)

				/ICF CAPACITY (M3/H	MINERALS		
MODEL	TANK DIMENSIONS (mm)	CONNECTIONS (DN) SERVICE			KUM FILTRE		
	(DxH Total) DRAIN Filtration Velocity Filt 10m/hour		Filtration Velocity 15m,hour	Filtration Velocity 20m/hour	TURBIDEZ (kg)	QUARTZ (kg)	
3072	775 x 2050	50 - 50	4,5	7	9	272	150
3672	975 x 2150	50 - 50	6,5	10	13	385	250
4272	1075 x 2400	65 - 65	9	13,5	18	521	300
4872	1225 x 2400	65 - 65	11,5	17	23	680	500
6386	1600 x 2500	80 - 80	20	30	40	1202	800

SURFACE PIPING TURBIDEX FILTER SYSTEMS (ST-37 EPOXY PAINTED CARBON STEEL TANK)

MODEL	TANK DIMENSIONS (mm)	CONNECTIONS (DN) SERVICE	SERVICE CAPACITY (M3/HOUR)			MINERALS	
	(DxH Total)	DRAIN	Filtration Velocity = 10m/hour	Filtration Velocity 15m/hour	Filtration Velocity 20m/hour	TURBIDEZ (kg)	QUARTZ (kg)
1220	1250 x 2790	65 - 65	12,5	18,5	25	725	500
1630	1600 x 3020	80 - 80	20	30	40	1202	800
2030	2000 x 3250	100 - 100	31,5	47	63	1905	500
2434	2400 x 3400	125 - 125	45	68	90	2744	700

STANDARD FEATURES

- Turbidex mineral
- 6 bar maximum working pressure
- Time controlled backwash
- Electric actuated butterfly valves
- · Bottom collection structure lateral diffuser
- PVC-U material surface piping (On epoxy painted skid)
- Sample taps and manometers on the surface piping
- Electronic card control panel
- Electricity 220V / 50 Hz / 1 pH
- Dry-pressured air required for the operation of pneumatic valves belongs to the customer. Recommended minimum compressor capacity is 100 Lt / min @ 8 bar.

SURFACE PIPING AS-FE-MN FILTER SYSTEMS (FRP TANK)

MODEL	TANK DIMENSIONS (mm)	CONNECTIONS (DN) SERVICE	SERVICE CAPA	CITY (M3/HOUR)	MIN	IERALS
	(DxH Total) (DRAIN	Filtration Velocity 10m, hour	Filtration Velocity 15m, hour	AR-FE-MN (kg)	QUARTZ (kg)	
3072	775 x 2050	50 - 50	4,5	7	483	150
3672	975 x 2150	50 - 50	6,5	10	693	250
4272	1075 x 2400	65 - 65	9	13,5	924	300
4872	1225 x 2400	65 - 65	11,5	17	1218	500
6386	1600 x 2500	80 - 80	20	30	2100	800

SURFACE PIPING AS-FE-MN FILTER SYSTEMS (ST-37 EPOXY PAINTED CARBON (STEEL TANK)

MODEL	TANK DIMENSIONS CONNECTION (mm) (DN) SERVIQ	TANK DIMENSIONS (mm)	CONNECTIONS (DN) SERVICE	SERVICE CAPA	CITY (M3/HOUR)	MIN	ERALS
	(DxH Total)	DRAIN	Filtration Velocity 10m/hour	Filtration Velocity = 15m/̈hour	AR-FE-MN (kg)	QUARTZ (kg)	
1215	1250 x 2790	65 - 65	12,5	18,5	1281	500	
1615	1600 x 3020	80 - 80	20	30	2100	800	
2015	2000 x 3250	100 - 100	31,5	47	3297	500	
2415	2000 x 3250	125 - 125	45	68	4746	700	

STANDARD FEATURES

- AS-FE-MN mineral
- 6 bar maximum working pressure
- Time controlled backwash
- · Electric actuated butterfly valves
- · Bottom collection structure lateral diffuser
- PVC-U material surface piping (On epoxy painted skid)
- · Sample taps and manometers on the surface piping
- Electronic card control panel
- Electricity 220V / 50 Hz / 1 pH
- Dry-pressured air required for the operation of pneumatic valves belongs to the customer. Recommended minimum compressor capacity is 100 Lt / min @ 8 bar.

OPTIONAL FEATURES

30-50 times as much iron as arsenic in raw water for arsenic removal ion must be found. (Add FeCI3 dosage pump to the filter inlet.) As-Fe-Mn mineral 1 mg / It chlorine in backwash water must be found. (Add chlorine dosage pump for backwash.)

TECHNICIAL SPECIFICATIONS

For Iron Removal In Recommended Filt	Raw Water ration Rates	Manganeseese Removal in Raw Water Recommended Filtration Rates for			
0,3ppm – 1ppm	: 15 - 20 m/h	0.5 ppm - 1 ppm : 8 - 10 m/h			
1 ppm – 5 ppm	: 0 - 15 m/h	1 ppm – 2 ppm : 5 - 7 m/h			
5 ppm – 10 ppm	: 10 m/h	pH should be ≥ 8			
10 ppm - 15 ppm	: 7 – 9 m/h				
> 15ppm	:5 – 7 m/h				
Water is below 5 NTU t and pH is within the no range of 6.8-7.2 should	urbidity ormal d be close.				
Recommended Filt	ration Rates for Ars	senic Removal from Raw Water			
Iron 2 ppm - Manga	anese 1 ppm	: 8 - 9 m/h (pH 7,5-8,0)			
Iron > 2 ppm - Man	ganese 1 ppm	: 7-8 m/h (pH 7,5-8,0)			
Iron 2 ppm - Manga	anese >1 ppm	: 5- 7 m/h (pH≥8)			
Recommended Eiltration Dates for Arconic Demovel from Dow Water					
Recommended Fild	ation hates for Ar				
Arseni c 0-50 ppm		: ≤10 m/h (pH 7,5-8,0)			

SURFACE PIPING BIRM FILTER SYSTEMS (FRP TANK)

MODEL	MODEL TANK DIMENSIONS CONNECTIONS (mm) (DN) SERVICE (DxH Total) DRAIN	CONNECTIONS (DN) SERVICE	SERVICE CAPA	CITY (M3/HOUR)	MIN	IERALS
		DRAIN	Filtration Velocity 10m, hour	Filtration Velocity 15m, hour	BIRM (It)	QUARTZ (kg)
3072	775 x 2050	50 - 50	4	6	340	150
3672	975 x 2150	50 - 50	6	8,5	510	250
4272	1075 x 2400	65 - 65	8	11	680	300
4872	1225 x 2400	65 - 65	10,5	14,5	878	500
6386	1600 x 2500	80 - 80	18	25	1528	800

SURFACE PIPING BIRM FILTER SYSTEMS (ST-37 EPOXY PAINTED CARBON STEEL TANK)

MODEL	TANK DIMENSIONS (mm)	CONNECTIONS (DN) SERVICE	SERVICE CAPA	CITY (M3/HOUR)	MIN	IERALS
	(DxH Total) DRAIN	Filtration Velocity 9m/hour	Filtration Velocity = 12,5m/hour	BIRM (It)	QUARTZ (kg)	
1220	1250 x 2790	65 - 65	11	15,5	934	500
1630	1600 x 3020	80 - 80	18	25	1528	800
2030	2000 x 3250	100 - 100	28,5	39,5	2405	500
2434	2400 x 3400	125 - 125	41	56,5	3425	700

TECHNICIAL SPECIFICATIONS

- Raw water pH value should be between 6.8 and 9.
- Alkalinity ions, must be greater than 2 times the sum of sulphate and chloride ions together in raw water.
- The dissolved oxygen content in raw water should be at least 15% of iron or iron + manganese content.
- Free chlorine concentration in raw water should be less than 0.5 ppm.
- Raw water should not contain hydrogen sulphide, oil or polyphosphate.

Recommended Filtration Rates for Iron Removal from Raw Water					
Iron 0 - 0,5 ppm : 12,5 m/h					
Iron 0,5 - 1,0 ppm	: 9 m/h				

STANDARD FEATURES

- Birm mineral
- 6 bar maximum working pressure
- Time controlled backwash
- Electric actuated butterfly valves
- · Bottom collection structure lateral diffuser
- PVC-U material surface piping (On epoxy painted skid)
- Sample taps and manometers on the surface piping
- Electronic card control panel
- Electricity 220V / 50 Hz / 1 pH
- Dry-pressured air required for the operation of pneumatic valves belongs to the customer. Recommended minimum compressor capacity is 100 Lt / min @ 8 bar.

MODEL	MODEL TANK DIMENSIONS CONNECTIONS (mm) (DN) SERVICE (DxH Total) DRAIN	SERVICE CAPACITY (M3/HOUR)		MINERALS		
		Filtration Velocity 10m/hour	Filtration Velocity 15m/̈́hour	DOLOMITE (It)	QUARTZ (kg)	
3072-S	775 x 2050	50 - 50	9	11,5	650	150
3072-M	775 x 2050	50	9	11,5	650	150
3672-S	975 x 2150	50 - 50	13	16,5	975	250
3672-M	975 x 2150	50	13	16,5	975	250
4272-S	1075 x 2400	65 - 65	18	22,5	1150	300
4272-M	1075 x 2400	50	18	18	1150	300
4872-S	1225 x 2400	65 - 65	23	29	1550	500
6386-S	1600 x 2500	80 - 80	40	50	2450	800

(Manual Valve)

- Dolomite mineral
- 6 bar maximum working pressure
- 2 "Manual Valve
- Bottom collection structure lateral diffuser

STANDARD FEATURES

(Surface Piping)

- Dolomite mineral
- · 6 bar maximum working pressure
- Manual butterfly or ball valves
- Bottom collection structure lateral diffuser
- PVC-U material surface piping
- (On epoxy painted skid)
- Sample taps and manometers on the surface
 piping

Dolomite is a type of calcium carbonate content mineral in granule form. It is used for increasing the pH of acidic waters and for filtering the iron in limited amounts. During the contact of water with the mineral, free carbon dioxide is removed and dissolved calcium may cause the hardness to increase. It acts as a filter. After a certain time, the mineral runs out and more mineral needs to be added. 50% of the mineral amount required by the system must be reserved in the system for 6 or 12 months. Bottom and top connection for easy filling of the tank are preferable.

MINERAL FEATURES					
GRANULE SIZE	Available 1.0 - 2.0 mm 1.2 - 1.8 mm Standard 1.8 - 2.5 mm 2.5 - 4.0 mm				
BULK DENSITY	1,5 kg/L				
PRODUCT CONSUMPTION	max. 2,5 g Juraperle per f of CO_2 For Example: 15 ppm CO_2 1kg JP/25m ³ Water				
EXPECTED pH INCREASE	2°Fr per 10 ppm CO ₂				
pH INCREASE	~ pH 7,5				
EXPANSION	max 3%				
SPECIFIC WEIGHT	2,25 g/cm ³				



- 6 bar maximum working pressure
- Time controlled backwash
- Electric actuated butterfly valves
- Bottom collection structure lateral diffuser
- PVC-U material surface piping (On epoxy painted skid)
- Sample taps and manometers on the surface piping
- Electronic card control panel
- Electricity 220V / 50 Hz / 1 pH
- Dry-pressured air required for the operation of pneumatic valves belongs to the customer. Recommended minimum compressor capacity is 100 Lt / min @ 8 bar.



ELECTRIC ACTUATED ACTIVATED CARBON FILTER SYSTEM

TANK DIMENSIO Model (mm)		CONNECTIONS (DN) SERVICE	SERVICE CAPACITY (M3/HOUR)		MINERALS	
	(DxH Total)	DRAIN	Filtration Velocity 20m/hour	Filtration Velocity 15m/hour	CARBON (lt)	QUARTZ (kg)
3072	775 x 2050	50 - 50	9	14	150	225
3672	975 x 2150	50 - 50	13	20	225	325
4272	1075 x 2400	65 - 65	18	27	275	400
4872	1225 x 2400	65 - 65	23	35	400	550
6386	1600 x 2500	80 - 80	40	60	700	1000



- · Epoxy painted carbon steel tank
- 6 bar maximum working pressure
- Time controlled backwash
- Electric actuated butterfly valves
- PVC-U material surface piping (Optional galvanized surface piping option)
- · Sample taps and manometers on the surface piping
- Electronic card control panel
- Electricity 220V / 50 Hz / 1 pH
- Dry-pressured air required for the operation of pneumatic valves belongs to the customer. Recommended minimum compressor capacity is 100 Lt / min @ 8 bar.



ELECTRIC ACTUATED ACTIVATED CARBON FILTER SYSTEM

MODEL	TANK DIMENSIONS MODEL (mm) (DxH Total)	CONNECTIONS (DN) SERVICE DRAIN	SERVICE CAPACITY (M3/HOUR)		MINERALS	
			Filtration Velocity 20m/hour	Filtration Velocity = 30m/̈hour	CARBON (kg)	QUARTZ (kg)
1220	1250 x 2790	65 - 65	25	37	475	700
1630	1600 x 3020	80 - 80	40	60	850	1150
2030	2000 x 3250	100 - 100	63	94	1325	500
2434	2400 x 3400	125 - 125	91	136	1900	725
2835	2800 x 3750	150 - 150	123	185	2600	975



- 6 bar maximum working pressure
- Electric actuated butterfly valves
- · Bottom collection structure lateral diffuser
- PVC-U material surface piping (on epoxy painted skid)
- · Sample taps and manometers on the surface piping
- Electronic card control panel
- Electricity 220V / 50 Hz / 1 pH
- Resin capacity 6000 Fr / liter resin has been accepted.
- Dry-pressured air required for the operation of pneumatic valves belongs to the customer.
 Recommended minimum compressor capacity is 100 Lt / min @ 8 bar.



ELECTRIC ACTUATED SINGLE SOFTENER SYSTEM

MODEL	TANK DIMENSIONS (mm)	CONNECTIONS (DN) SERVICE			MINERALS	
	(DxH Total)	DRAIN	CAPACITY (m3/h)	BRINE CONS. (kg)	RESIN (It)	QUARTZ (kg)
3072	775 x 2050	50 - 50 - 25	20	80	500	125
3672	975 x 2150	65 - 50 - 25	30	120	750	200
4272	1075 x 2400	65 - 50 - 25	36	144	900	225
4872	1225 x 2400	80 - 50 -40	48	182	1200	350
6386	1600 x 2500	80 - 50 - 40	55	224	1400	750
6386-L	1600 x 2500	100 - 50 -40	70	455	1750	900



- Epoxy painted carbon steel tank
- 6 bar maximum working pressure
- · System is flow controlled
- · Electric actuated butterfly valves
- PVC-U material surface piping (Optional galvanized surface piping option)
- · Sample taps and manometers on the surface piping
- Electronic card control panel
- Electricity 220V / 50 Hz / 1 pH
- 160 gr salt consumption for 1 lt of resin is accepted.
- Resin capacity 6000 Fr / liter resin has been accepted.
- Dry-pressured air required for the operation of pneumatic valves belongs to the customer. Recommended minimum compressor capacity is 100 Lt / min @ 8 bar.
- In softening systems, it is recommended that the inner surfaces of the tanks are GRP coated.



ELECTRIC ACTUATED SINGLE SOFTENER SYSTEM

MODEL	TANK DIMENSIONS (mm)	CONNECTIONS (DN) SERVICE			MIN	IERALS
	(DxH Total)	DRAIN	CAPACITY (m3/h)	BRINE CONS. (kg)	RESIN (It)	QUARTZ (kg)
1220	1250 x 2650	80 - 50 -40	50	200	1250	600
1620	1600 x 2850	100 - 50 - 40	70	455	1750	900
1630	1600 x 3350	100 - 80 - 50	100	400	2500	300
2030	2000 x 3050	125 - 80 - 50	125	504	3150	500
2035	2400 x 3550	125 - 80 - 50	150	608	3800	500
2430	2400 x 3250	150 - 80 -50	180	720	4500	700



- 6 bar maximum working pressure
- Electric actuated butterfly valves
- Bottom collection structure lateral diffuser
- PVC-U material surface piping (on epoxy painted skid)
- Sample taps and manometers on the surface piping
- Electronic card control panel
- Electricity 220V / 50 Hz / 1 pH
- 150 g salt consumption is accepted for 1 liter of resin.
- Resin capacity 6000 Fr / liter resin has been accepted.
- Dry-pressured air required for the operation of pneumatic valves belongs to the customer. Recommended minimum compressor capacity is 100 Lt / min @ 8 bar.



ELECTRIC ACTUATED TANDEM SOFTENER SYSTEM

TANK DIMENSIONS		CONNECTIONS (DN) SERVICE			MINERALS	
	(DxH Total) DRAIN		CAPACITY (m3/h)	BRINE CONS. (kg)	RESIN (It)	QUARTZ (kg)
3072	775 x 2050	50 - 50 - 25	20	70	500x2	125x2
3672	975 x 2150	65 - 50 - 25	30	113	750x2	200x2
4272	1075 x 2400	65 - 50 - 25	36	135	900x2	225x2
4872	1225 x 2400	80 - 50 -40	48	180	1200x2	350x2
6386	1600 x 2500	80 - 50 - 40	55	270	1400x2	750x2
6386-L	1600 x 2500	100 - 50 -40	70	455	1750x2	900x2

SURFACE PIPING TANDEM SOFTENER SYSTEMS (DY-37 EPOXY PAINTED CARBON STEEL TANK)

STANDARD FEATURES

- · Epoxy painted carbon steel tank
- 6 bar maximum working pressure
- Electric actuated butterfly valves
- PVC-U material surface piping (on epoxy painted skid)
- Sample taps and manometers on the surface piping
- Electronic card control panel
- Electricity 220V / 50 Hz / 1 pH
- 160 g salt consumption is accepted for 1 liter of resin.
- Resin capacity 6000 Fr / liter resin has been accepted.
- Dry-pressured air required for the operation of pneumatic valves belongs to the customer. Recommended minimum compressor capacity is 100 Lt / min @ 8 bar.
- In softening systems, it is recommended that the inner surfaces of the tanks are GRP coated.



ELECTRIC ACTUATED TANDEM SOFTENER SYSTEM

MODEL TANK DIMENSIONS CONNECTIONS (mm) (DN) SERVICE (DxH Total) DRAIN		CONNECTIONS (DN) SERVICE			MINERALS	
		CAPACITY (m3/h)	BRINE CONS. (kg)	RESIN (It)	QUARTZ (kg)	
1220	1250 x 2650	80 - 50 -40	50	200	1250x2	600x2
1620	1600 x 2850	100 - 50 - 40	70	455	1750x2	900x2
1630	1600 x 3350	100 - 80 - 50	100	400	2500x2	300x2
2030	2000 x 3050	125 - 80 - 50	125	504	3150x2	500x2
2035	2400 x 3550	125 - 80 - 50	150	608	3800x2	500x2
2430	2400 x 3250	150 - 80 -50	180	720	4500x2	700x2



PMC filter elements are designed to filter and treat he influent water from particles up to 1 micron. The working principle of the filters are such that the influent water enters the housings of the filters and must pass through the filter elements inside in order to exit the housing. There must be a sufficient number of filter elements in the housing to be able to handle the flow rate. The material and method of construction of the filter elements are selected based on the size and type of particles that must be removed from the influent.

Fiters

SEPERATOR FILTERS		

ST-37 CARBON STEEL (EPOXY COATED)

MODEL	INLET/ OUTLET	CAPACITY (m3/h)	DIMENSIONS (mm)	WEIGHT (kg)
100	1/2"(DN15)	1 - 1,5	780 x 176 140	6
150	3/4"(DN20)	2 - 7,5	780 x 176 140	6
175	1"(DN25)	6,5 - 11	775 x 208 x 168	7,7
200	11/4"(DN32)	10 - 16	775 x 208 x 168	9
250	11/2"(DN40)	14,5 - 18	1185 x 450 x 410	10
350	2"(DN50)	17 - 24,5	1185 x 450 x 410	18,5
450	2 1/2" (DN65)	22 -35	1185 x 450 x 410	19
600	3"(DN80)	33,5-66	1430 x 520 x 470	29,3
800	4"(DN100)	64-110	1720 x 540 x 485	50,5

SS304 STAINLESS STEEL

MODEL	INLET/ OUTLET	CAPACITY (m3/h)	DIMENSIONS (mm)	WEIGHT (kg)
100	1/2"(DN15)	1 - 1,5	780 x 176 140	6
150	3/4"(DN20)	2 - 7,5	780 x 176 140	6
175	1"(DN25)	6,5 - 11	775 x 208 x 168	7,7
200	11/4"(DN32)	10 - 16	775 x 208 x 168	9
250	11/2"(DN40)	14,5 - 18	1185 x 450 x 410	10
350	2"(DN50)	17 - 24,5	1185 x 450 x 410	18,5
450	2 1/2" (DN65)	22 -35	1185 x 450 x 410	19
600	3"(DN80)	33,5-66	1430 x 520 x 470	29,3
800	4"(DN100)	64-110	1720 x 540 x 485	50,5

Honeywell Automatic Discharge (Blowdown) System

Model 600 and lower models have an Inlet and outlet threaded connection. Model 800 has an inlet and outlet flange connection.



STANDARD FEATURES

Working Pressure	: 10 Bar max.
Drain Line	: 1" for all models
Filtration Range	: 70 -110 µ



SS316 STAINLESS STEEL

MODEL	INLET/ OUTLET	CAPACITY (m3/h)	DIMENSIONS (mm)	WEIGHT (kg)
SP 100	1/2"(DN15)	1 - 1,5	780 x 176 140	6
SP 150	3/4"(DN20)	2 - 7,5	780 x 176 140	6
SP 175	1"(DN25)	6,5 - 11	775 x 208 x 168	7,7
SP 200	11/4"(DN32)	10 - 16	775 x 208 x 168	9
SP 250	11/2"(DN40)	14,5 - 18	1185 x 450 x 410	10
SP 350	2"(DN50)	17 - 24,5	1185 x 450 x 410	18,5
SP 450	2 1/2" (DN65)	22 -35	1185 x 450 x 410	19
SP 600	3"(DN80)	33,5-66	1430 x 520 x 470	29,3
SP 800	4"(DN100)	64-110	1720 x 540 x 485	50,5

Honeywell Automatic Discharge (Blowdown) System

Model 600 and lower models have an Inlet and outlet threaded connection. Model 800 has an inlet and outlet flange connection.

STANDARD FEATURES

Working Pressure	: 10 Bar max.
Drain Line	: 1" for all models
Filtration Range	: 70 -110 µ



SEPERATOR FILTERS



MODEL	CONNECTION	CARTRIDGE CARTRIDGE	CARTRIDGE	DIMENSIONS WEIGHT		SERVICI	EFLOWRATE (m	3/hour)		
MODEL	CONNECTION	QTY	SIZE	(mm)	(kg)	1µ	5μ	10µ	25µ	50µ
320	2" (DN50)	3	20"	375 x 426 x 954	19	3	6	9	12	18
330	2" (DN50)	3	30"	375 x 426 x 1200	22	5	9	14	20	24
340	2" (DN50)	3	40"	375 x 426 x 1250	24	6	12	19	24	24
520	2" (DN50)	5	20"	425 x 470 x 973	23	5	10	15	20	24
530	2" (DN50)	5	30"	425 x 470 x 1223	27	8	15	24	24	24
540	2" (DN50)	5	40"	425 x 470 x 1473	32	10	20	24	24	24
830	3" (DN80)	8	30"	435 x 440 1235	37	12	24	36	48	54
840	3"(DN80)	8	40"	435 x 440 x 1485	44	16	32	48	54	54
1230	3" (DN80)	12	30"	490 x 485 1238	49	18	36	54	54	54
1240	3" (DN80)	12	40"	490 x 485 x 1538	58	24	48	54	54	54
1640	4"(DN100)	16	40"	595 x 600 x 1550	82	32	64	92	92	92
2740	5"(DN125)	27	40"	790 x 790 x 1574	115	54	108	140	140	140

It is threaded between 320 and 540. It is flanged between 830 and 2740. Multiple filter models with 3 and 27 cartridges are not suitable with end-cap and washable cartridges.

STANDARD FEATURES

Working Pressure	: 10 Bar max.
Drain Line	: AISI 304 stainless steel body.
Filtration Range	: 1-25 µ



SS304 MULTI CARTRIDGE FILTERS



MODEL	CONNECTION	CARTRIDGE	CARTRIDGE	DIMENSIONS	WEIGHT		SERVIC	E FLOWRATE (m	3/hour)	
MODEL	CONNECTION	QTY	SIZE	(mm)	(kg)	1µ	5µ	10µ	25µ	50µ
320	2" (DN50)	3	20"	375 x 426 x 954	19	3	6	9	12	18
330	2" (DN50)	3	30"	375 x 426 x 1200	22	5	9	14	20	24
340	2" (DN50)	3	40"	375 x 426 x 1250	24	6	12	19	24	24
520	2" (DN50)	5	20"	425 x 470 x 973	23	5	10	15	20	24
530	2" (DN50)	5	30"	425 x 470 x 1223	27	8	15	24	24	24
540	2" (DN50)	5	40"	425 x 470 x 1473	32	10	20	24	24	24
830	3" (DN80)	8	30"	435 x 440 1235	37	12	24	36	48	54
840	3"(DN80)	8	40"	435 x 440 x 1485	44	16	32	48	54	54
1230	3" (DN80)	12	30"	490 x 485 1238	49	18	36	54	54	54
1240	3" (DN80)	12	40"	490 x 485 x 1538	58	24	48	54	54	54
1640	4"(DN100)	16	40"	595 x 600 x 1550	82	32	64	92	92	92
2730	5"(DN125)	27	30"	790 x 790 x 1274	105	40	81	121	140	140
2740	5"(DN125)	27	40"	790 x 790 x 1574	115	54	108	140	140	140

It is threaded connection between 320 and 1240. It is flanged between 1640 and 2740. Service flow rates are limited according to the maximum flow at the connection diameters can pass. Multiple filter models with 3 and 27 cartridges are not suitable with end-cap and washable cartridges.

STANDARD FEATURES

Working Pressure	: 10 Bar max.
Drain Line	: AISI 316 stainless steel body.
Filtration Range	: 1-25 µ



SS316 MULTI CARTRIDGE FILTERS



PVC MULTIPLE CARTRIDGE FILTERS

MODEL		CARTRIDGE CARTRIDGE	DIMENSIONS W	WEIGHT	SERVICE FLOWRATE (m3/hour)					
	UCHNEOTION	QTY	SIZE	(mm)	(kg)	1μ	5μ	10µ	25µ	50µ
PVC 520	(DN50)	5	20"	30 x 30 x 72	13	5	10	15	20	24
PVC 530	(DN50)	5	30"	30 x 30 x 100	14,5	7,5	15	22,5	23	24
PVC 540	(DN50)	5	40"	30 x 30 x 120	16,5	10	20	23	23	24
PVC 930	(DN80)	5	30"	40 x 40 x 100	26	13,5	27	40,5	54	54
PVC 940	(DN80)	9	40"	40 x 40 x 120	31	18	36	54	55	54

Operating Pressure: 5 Bar (Max) / Body: PVC Material / Filtration Range: 1 - 25 Micron

PENTAIR FILTERS

MODEL	CONNECTION
PVC 520	Pentair 60 "Filter Case
PVC 530	5 Micron Filter Cartridge (35 - 50 m3 / hour)
PVC 540	1 Micron Filter Cartridge (35 - 50 m3 / hour)
PVC 930	10 Micron Absolute Filter Cartridge





SS304 BAG FILTER DEVICES

MODEL	INLET/ OUTLET	CAPACITY (m3/h)	DIMENSIONS (mm)	WEIGHT (kg)
732	2" (DN50) Threaded	10	430 x 440 x 1075	32
732	3" (DN80) Flanged	30	625 x 660 x 1180	100

Max. Working Pressure: 10 Bar / Filtration Range: 1-200 Micron. Bag filter flow rates are written for 5-10 micron filters

SS316 BAG FILTER DEVICES

MODEL	INLET/ OUTLET	CAPACITY (m3/h)	DIMENSIONS (mm)	WEIGHT (kg)
732	2" (DN50) Threaded	10	430 x 440 x 1075	32
732	3" (DN80) Flanged	30	625 x 660 x 1180	100

Max. Working Pressure: 10 Bar / Filtration Range: 1-200 Micron. Bag filter flow rates are written for 5-10 micron filters

PVC BAG FILTER DEVICES

MODEL	INLET/ OUTLET	CAPACITY (m3/h)	DIMENSIONS (mm)	WEIGHT (kg)	
PVC732	2" (DN50)	10	400 x 420 x 1180	18	

Max. Working Pressure: 10 Bar / Filtration Range: 1-200 Micron. Bag filter flow rates are written for 5-10 micron filters

SPARE BAG FILTERS

MODEL	DIMENSIONS (mm)	FILTRATION SENSITIVITY
7"- 32"	170 x 820	5 - 10 - 25 - 50 - 100 - 200 Micron





SS304 BAG FILTER



BAG FILTER

PMC Reverse Osmosis systems obtain pure water by 90-99% of treatment from the chemical salts in

highly concentrated water. Osmosis is equalization of ion concentrations of two solutions with different ion concentrations which are situated between a semi-permeable membrane. When an additional pressure of a pump is added to the osmotic pressure which the process already involves naturally, it is called reverse osmosis. Thus, only the small water molecules through the membrane becomes purified or permeate water because semi-permeable membrane only lets pure water to pass leaving organic and inorganic substances dissolved in the water, salts, heavy metals, viruses, and bacteria are removed from the water.

In PMC Reverse osmosis processes the surface of the membrane is always kept clean and unplugged by 'Cross Flow' operation that happens inside membrane element meaning that while some liquids (element water) pass through membrane, some liquid (intensive water) move parallel to membrane surface to protect others

to stick to the membrane. This process enables much more qualified water compared with other filtration systems.

PMC Reverse Osmosis systems can be built inside movable containers or plants as requested.

Reverse Osmosis Systems





MODEL	CAPACITY @20 degC (m3/hour)	MEMBRANE VESSEL QTY (pcs)	8" MEMBRANE QTY (pcs)	SYSTEM RECOVERY (%)
180	1	1	1	50
280	2	2	2	50
380	3	1	3	60
480	4	2	4	60
680	6	2	6	70
880	8	2	8	70
1080	10	2	10	75
1280	12	2	12	75
1580	15	3	15	75
1880	18	3	18	75
2480	24	4	24	75
3080	30	5	30	75
3680	36	6	36	75
4280	42	7	42	75
4880	48	8	48	75
5480	50	9	54	75
6080	60	10	60	75
7280	72	12	72	75
9680	96	16	96	75

Maximum working pressure is 12 Bar. Ozmosis system product water flow rates are calculated based on the raw water TDS value of 2000 ppm. If the raw water TDS value is below 2000 ppm, up to 10% of the written product water flows can be taken.







INLET WATER LIMITS

- Inlet water TDS: 0 2,000 ppm
- Inlet water pressure: between 2 and 5 bar
- Inlet water pH range: 6 8
- Silica (SiO2) Tolerance: Maximum 25 ppm
- Minimum and maximum inlet water temperature (10°C 30°C)
- Maximum Iron (Fe) tolerance: 0.05 ppm, if ASC is dosed 0.2 ppm
- No Hydrogen Sulfide.
- No turbidity (NTU <1)
- No oil no grease
- SDI <5
- There should be no microbiological contamination

STANDARD FEATURES

- Membrane Vessels FRP
- TFC Spiral wound membranes 8" diameter
- AISI304 stainless steel vertical centrifugal high pressure pump
- ST-37 Epoxy painted carbon steel skid
- PVC cartridge housing between 180 380
- PVC cartridge filter between 480 2480
- Stainless steel cartridge filter for 3080 and bigger models
- Low and high pressure line U-PVC PN16

(For 180 - 3080 Systems)

- Low pressure line U-PVC PN16, High pressure line AISI304
- Stainless steel (3680 9680 Systems)

- Automatic valves with electric actuation
- · Pressure adjustment valves in pump outlet and drain water line
- Low and high pressure switch
- · Product water and drain water inline flowmeters
- Glycerine type manometers
- Product water conductivity indicator (0-2000 μ S / cm)
- Autoflush System
- CIP/Rising systems with a capacity of suitable tank and pump (Optional)
- Card or PLC controlled panel option
- Antiscalant dosing system not included
- HPP: High pressure pump

PMC Sea Water Reverse Osmosis systems are designed for sea water treatment which has over 50.000 mg/L TDS value. It is possible to design tailored models starting from flow rate 1 m³/day to higher rates. Full chemical analysis of the water and design of pretreatment systems are crucial for these systems. The whole system is controlled by a single control panel. PMC Sea Water Reverse Osmosis systems can also be built and installed in a movable container or plants of a client as requested.

For capacities up to 100 m3/day, PMC offers systems without energy recovery systems. However, for systems larger than.120 m3/day, an energy recovery system is included in the system .

Usage areas:

Osmosis Systems





Hotels, Apartments, Houses









Military Applications Or Naval Forces

UF SISTEM



MODEL	CAPACITY @20 degC (m3/hour)	MEMBRANE VESSEL QTY (pcs)	8" MEMBRANE QTY (pcs)	SYSTEM RECOVERY (%)
3	40 x 40	1	13 - 16	18 - 35
6	40 x 40	2	13 - 16	18 - 35
9	40 x 40	3	13 - 16	18 - 35
12	40 x 40	4	13 - 16	18 - 35
30	80 x 40	2	13 - 16	20 - 40
45	80 x 40	3	13 - 16	20 - 40
60	80 x 40	4	13 - 16	20 - 40
90	80 x 40	5	13 - 16	20 - 40
120	80 x 40	8	14 - 17	35 - 45
180	80 x 40	12	14 - 17	35 - 45
225	80 x 40	15	14 - 17	35 - 45
270	80 x 40	18	14 - 17	35 - 45
360	80 x 40	24	14 - 17	35 - 45
450	80 x 40	30	14 - 17	35 - 45
540	80 x 40	36	14 - 17	35 - 45
630	80 x 40	42	14 - 17	35 - 45
720	80 x 40	48	14 - 17	35 - 45
900	80 x 40	60	14 - 17	35 - 45
1200	80 x 40	78	14 - 17	35 - 45
1500	80 x 40	96	14 - 17	35 - 45



CONTAINERIZED REVERSE OSMOSIS SYSTEMS









PMC Dosing Systems are used to dose various chemicals in the influent water according to the system design for the chosen processes such as dewatering of sludge, neutralization of water, oxidizing elements like nitrite, iron, manganese or disinfecting bacteria and viruses. PMC dosing systems can be controlled at determined intervals and desired levels via designated choice of flow controlled, ORP controlled or redox controlled pumps available in ranging capacities. Tank design, material and size are designed according to design parameters as well as engineering of the additional equipment such as mixers and lamella plates depending on the necessities of the chosen dosing process.





PMC's UF modules are ideal for preparation of seawater for osmosis systems, recycling of wastewater, and facilitating the use of conventional biological and chemical treatments for feeding reverse osmosis systems. They are also effective in treating seawater, producing beverages and food, creating natural drinking water, removing bacteria, and disinfecting water in various processes thanks to the pore diameter of the UF membranes that are smaller than that of microorganisms making them highly safe for water treatment. Ultrafiltration processes designed by PMC can eliminate the risk of organic substances that react with chlorine compounds in water to create toxic THMs that can cause diseases in humans because it does not add any substances to the water, produce waste, or generate unwanted oxidative substances.

MODUL QTY	TOTAL MEMBRANE AREA (M2)	INLET FLOW M3 / HOUR @ 2,5 BAR	NET PERMEATE FLOW M3/HOUR	MIN. CEB/BW VOLUME (M3)
UF SYSTEMS				
1	60	5	4,5	1
2	120	10	9	2
3	180	15	13,5	3
4	320	27	24	4
6	480	40	36	6
8	640	53,5	48	8
10	800	67	60	10
12	960	80	72	12
14	1120	93,5	84	14
16	1280	107	96	16
18	1440	120	108	18
GREY WATER UF SYS	TEMS			
1	6	0,28	0,25	*
2	12	0,55	0,5	*





PMC's EDI process allows chemical free, continuous and uninterrupted production of high purity water up to 18 megohm-cm, without the need for regeneration chemicals or deionization tanks for both CDI Low and High designs. Flow rates from 1.7 to 180 gpm (0.39 to 40.88 m3/hr) use CDI-Low design whereas flow rates ranging from 100 gpm to 600 gpm nominal (22.7 to 136.3 m3/hr) use CDI - High design both combining single or multiple electrodionization modules on a frame with power supplies, controllers, piping, sample valves, cleaning connections, and flow and quality monitoring instrumentation. Hot water sanitization at up to 185°F (85° C) is also available upon request for some systems.

DESIGN PARAMETERS		
SYSTEM RECOVERY	90% - 95%	
INLET PRESSURE	45 psig (3.1 bar)	
INLET TEMPERATURE	60 °F (15.56 °C)	
PRODUCT PRESSURE	20 psig (1.37 bar)	

FEED WATER REQUIREMENTS

FEED WATER SOURCE	RO PERMEATE
FEED WATER CONDUCTIVITY EQUIVALENT INCLUDING CO2 AND SILICA	<40 µ\$/cm
SILICA (SiO2)*	<1 ppm
IRON, Mn, H2S, S	< 0.01 ppm
TOTAL CHLORINE (as CI2)	< 0.02 ppm
HARDNESS (as CACO3)	< 1.0 ppm
DISSOLVED ORGANICS (TOC as C)	< 0.5 ppm
OPERATING pH RANGE	4 - 11

OPERATING LIMITS		
MAX. FEED TEMPERATURE	90% - 95%	
MIN. FEED TEMPERATURE	45 psig (3.1 bar)	
MAX. FEED PRESSURE	60 °F (15.56 °C)	
MIN. FEED PRESSURE	20 psig (1.37 bar)	
PRESSURE DROP AT MIN. FLOW RATE	10 - 15 psig (0.69 - 1.03 bar)	
PRESSURE DROP AT NOMINAL Flow Rate	25 - 35 psig (1.72 - 2.41 bar)	
PRESSURE DROP AT MAX. Flow rate	40 - 50 psig (2.76 - 3.45 bar)	





PMC's Ultraviolet "UV" disinfection devices inactivate microorganisms in water without the addition of any chemical or oxidant. Low-pressure mercury lamp in a glass case gives UV rays to water. Thus, structures of DNA and RNA of microorganisms alters, becoming ineffective. Chemical composition and flavor of the water does not change. PMC UV devices are manufactured in AISI304 body as case for the top-notch imported lamps that can operate up to 8 bar working pressure for 9000 hours of service. PMC UV devices come in two series that perform in different capacities as standard and amalgam depending on the type of lamp being used. Additional features such as digital panels, audible fault signals, electronic hour meters are available on request.

POWER (WATT)	LAMP QUANTITY
315	1
630	2
945	3
1260	4
1890	6
2520	8
3780	12
7560	24
	POWER (WATT) 315 630 945 1260 1890 2520 3780 7560

CAPACİTY-M3/HR (300J/M2)	POWER (WATT)	LAMP QUANTITY
0,4	14	1
1,5	21	1
3	41	1
5	65	1
10	130	2
15	195	3
20	260	4
25	325	5
30	390	6
40	520	8
50	650	10
60	780	12
80	1040	16
100	1040	20





Vision



Water and wastewater treatment is a vital and meaningful operation. PMC team wholeheartedly takes reducing the level of contaminated water as a responsibility. With respect to such responsibility, profit losses importance. PMC's vision is to serve to earth's water by abandoning a profit centric business approach.

Mission



PMC 's mission is and always will be delivering the highest quality of product and equipment and maintaining the confidence our clients have on us through establishment of 100% transparency, communication and diligence.

Our Values



At PMC, there are no promises unkept. We operate based on a culture built on values that secure reliability and confidence on one another. What makes our family bondage strong also makes our business relations invincible: Looking after each other. We keep into account our client's best interest because we believe that the most rewarding feeling is to see our clients lean on us



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