



## REVERSE OSMOSIS SYSTEMS



GIVING VALUE A NEW MEANING

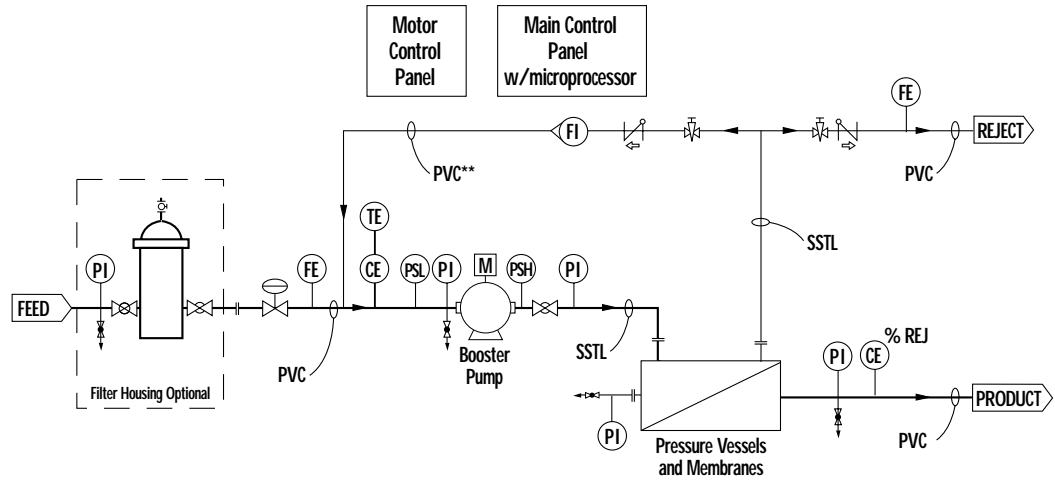
*ValueMAX™ are standard pre-packaged reverse osmosis (RO) systems specifically designed and engineered for commercial and industrial applications requiring low-cost solutions. As part of the MAX™ Membrane product family, ValueMAX systems offer you the greatest flexibility possible from a standard system. They provide a range of features at a competitive price with quick delivery. We work with you to build the ValueMAX system that fits your requirements. It's easy — just choose from the variety of options available. With eleven different systems and product flow rates between 35 and 165 gpm, we'll find the right solution for you.*

***Custom solutions through  
advanced standardization***

*ValueMAX features give you more for your money*

- ◆ Choice of Brackish water or Low pressure TFC membranes
- ◆ Microprocessor-based controller that is simple to set up and operate
- ◆ 8-inch FRP side port pressure vessels
- ◆ 316 stainless steel multi-stage booster pump
- ◆ PVC feed and product piping and 316L sanitary stainless steel high-pressure piping
- ◆ Simple and dependable rotameters for flow rate measurements
- ◆ Integral conductivity and percent rejection monitor
- ◆ Comprehensive testing performed in our ISO9001 certified factory and shipped to you as one integral unit

ValueMAX™ Process Flow Diagram



ValueMax™ PREPACKAGED SYSTEMS		Feed Piping	Product Piping	Pump Type		Membrane Type		Controls Type
Model	Flow Rate Range (at default flux rate)	PVC	PVC	Vert. Multi-Stage	Horiz. Multi-Stage	Brackish Water TFC	Low Pressure TFC	Microprocessor
VM Series	35-165 gpm	■	■	■	■	■	■	■
VL Series	45-140 gpm	■	■	■	■	■	■	■

DESIGN PARAMETERS

Configuration . . . . .	Multi-Stage, Single Pass
Inlet Pressure Requirements . . . . .	25 – 60 psig
Feed Water Temperature* . . . . .	60°F (15°C)
Feed Water Source . . . . .	Well or Softened
Prefiltration Requirements . . . . .	5 micron nominal
Feed Water Fouling Index . . . . .	SDI < 3
System Recovery (Nominal) . . . . .	75%
Product Pressure Available . . . . .	25 psig

Common Specifications

Configuration . . . . .	Multi-Stage, Single Pass
Inlet Pressure Requirements . . . . .	25 – 60 psig
Feed Water Temperature* . . . . .	60°F (15°C)
Feed Water Source . . . . .	Well or Softened
Prefiltration Requirements . . . . .	5 micron nominal
Feed Water Fouling Index . . . . .	SDI < 3
System Recovery (Nominal) . . . . .	75%
Product Pressure Available . . . . .	25 psig

GENERAL SPECIFICATIONS

Pressure vessels . . . . .	Fiberglass reinforced plastic (FRP)
Conductivity monitor . . . . .	Integral to microprocessor
Flow sensor (feed and reject) . . . . .	Rotameter
Flow indicator (reject recycle)** . . . . .	PVC acrylic construction
Control System . . . . .	NEMA 4

OPERATING LIMITS

Maximum Feed Temperature . . . . .	113°F (45°C)
Minimum Feed Temperature . . . . .	33°F (0.5°C)
Maximum Feed Pressure . . . . .	90 psig
Minimum Feed Pressure . . . . .	25 psig
Maximum Feed Free Chlorine . . . . .	0 ppm

Maximum Feed Temperature . . . . .	113°F (45°C)
Minimum Feed Temperature . . . . .	33°F (0.5°C)
Maximum Feed Pressure . . . . .	90 psig
Minimum Feed Pressure . . . . .	25 psig
Maximum Feed Free Chlorine . . . . .	0 ppm

FEEDWATER REQUIREMENTS

Maximum Silt Density Index . . . . .	< 5
Max Langelier Saturation Index . . . . .	< 0
Operating pH Range . . . . .	2 – 11
Prefiltration . . . . .	5 micron
Total Dissolved Solids . . . . .	< 1500 ppm

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Operating pH Range . . . . .	2 – 11
Prefiltration . . . . .	5 micron
Total Dissolved Solids . . . . .	< 1500 ppm

\*Lower temperature may require larger booster pump  
 Due to different feed flow requirements and membrane type,  
 the cartridge filter housings must be sized and ordered separately.  
 \*\*3 membrane vessels only.

**SYSTEM SPECIFICATIONS**

Model Number	VM3-09	VM3-12	VM3-1	VM4-24	VM4-28	VM4-40	VL3-09	VL3-12	VL3-18	VL4-24	VL4-28
Product Flow**	35 gpm	50 gpm	75 gpm	100 gpm	115 gpm	165 gpm	45 gpm	60 gpm	90 gpm	120 gpm	140 gpm
Feed Flow	47 gpm	67 gpm	100 gpm	133 gpm	153 gpm	220 gpm	60 gpm	80 gpm	120 gpm	160 gpm	187 gpm
Reject Flow	12 gpm	17 gpm	25 gpm	33 gpm	38 gpm	55 gpm	15 gpm	20 gpm	30 gpm	40 gpm	47 gpm
Reject Recycle Flow	5 gpm	5 gpm	5 gpm	—	—	—	5 gpm	5 gpm	5 gpm	—	—
Nominal Recovery	75%	75%	75%	75%	75%	75%	75%	75%	75%	75%	75%
<b>Membranes</b>											
Type	TFC/Brackish Water						TFC/Low Pressure				
Membranes/Vessel	3	3	3	4	4	4	3	3	3	4	4
Membrane Quantity	9	12	18	24	28	40	9	12	18	24	28
<b>Vessels</b>											
Vessel Array	1:1:1	2:1:1	3:2:1	3:2:1	4:2:1	5:3:2	1:1:1	2:1:1	3:2:1	3:2:1	4:2:1
Vessel Quantity	3	4	6	6	7	10	3	4	6	6	7
<b>Pump</b>											
Type	Horizontal Multi-Stage						Vertical Multi-Stage				
Motor HP	15	20	30	30	40	50	15	20	20	40	40
<b>Piping</b>											
	PVC										
<b>Controller</b>											
	Microprocessor										
<b>System Dimensions</b>											
HxWxD	85x44x150	85x44x150	85x44x150	81x55x190	81x55x190	81x55x190	85x44x150	85x44x150	85x44x150	81x55x190	81x55x190
	216x112x381	216x112x381	216x112x381	206x140x483	206x140x483	206x140x483	216x112x381	216x112x381	216x112x381	206x140x483	206x140x483
Shipping Weight											
Ib (kg)	2500 (1134)	2700 (1225)	3100 (1406)	3600 (1633)	3800 (1724)	4400 (1996)	2500 (1134)	2700 (1225)	3100 (1406)	3600 (1633)	3800
<b>Electrical Req.</b>											
Controls Service	120 VAC	120 VAC	120 VAC	120 VAC	120 VAC	120 VAC	120 VAC	120 VAC	120 VAC	120 VAC	120 VAC
Motor Service	480 VAC	480 VAC	480 VAC	480 VAC	480 VAC	480 VAC	480 VAC	480 VAC	480 VAC	480 VAC	480 VAC
Amp Draw	21	27	40	40	52	65	21	27	27	52	52

\*Product flow rates are based on 16-17 GFD flux rates for well water feed. These product flow rates may not be appropriate for other feed waters.  
 An Applications Specialist can de-rate the units for other feed water conditions.  
 Lower temperature may require larger booster pump.  
 Due to different feed flow requirements and membrane type, the cartridge filter housings must be sized and ordered separately.

**OPTIONS AVAILABLE**

A member of the MAX Product family, ValueMAX systems offer a wide variety of options. Contact USFilter if you have alternative requirements.

- ◆ pH Monitor
- ◆ NEMA 4X Control Panels
- ◆ ASME Vessels
- ◆ Prefilter Housings
- ◆ Electropolished SSTL Piping

**ORDERING INFORMATION**

Catalog Number: <sup>1</sup>	V	X	X	XX
Pre-packaged MAX System . . .	V=ValueMAX			09=09
Membrane Type . . . . .		M=TFC membrane L=Low pressure TFC membrane	3=3 Membranes/Vessel 4=4 Membranes/Vessel	12=12
Vessel Length . . . . .				18=18
				24=24
				28=28
Membrane Quantity . . . . .				40=40

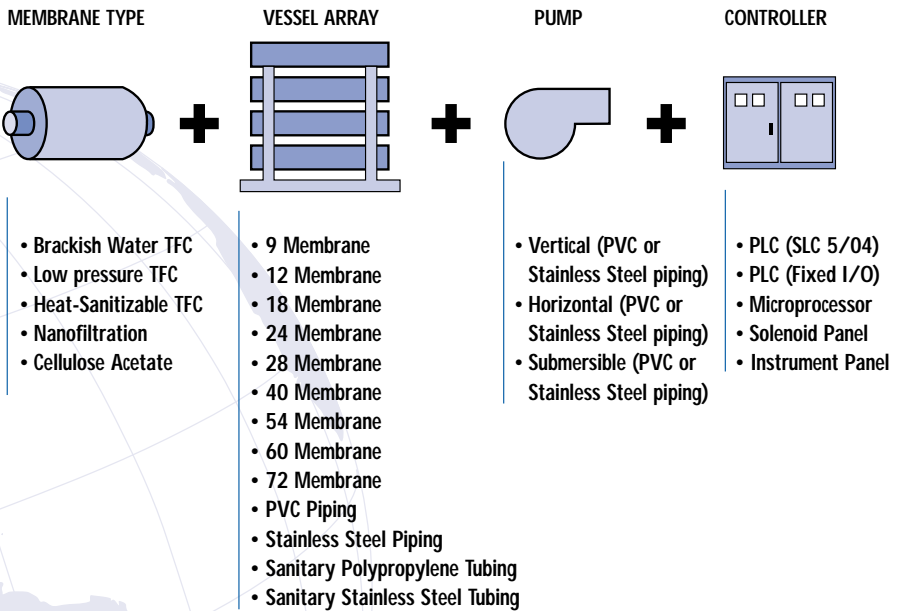
To figure your order number, replace the X with one of the numbered options below it.

<sup>1</sup>Not all combinations are available as a standard system. Please refer to system specifications for available configuration.

### Custom Solutions through Advanced Standardization

MAX Membrane Reverse Osmosis Systems were designed with flexibility in mind. They have more standard options and configurations than any other standard RO system on the market today. With 6 membrane types, 40 vessel array choices, 3 different pumps, 4 pipe styles and 6 controllers — there are literally

thousands of standard solutions. Though we have various easy to order pre-packaged MAX systems — FlowMAX, PharmMAX and BevMAX to name just a few — by picking and choosing from our wide array of options, you can easily create a custom solution from standard products, fast and economically.



### Service and Technical Support

USFilter Service Centers provide easy access to professional, quality service. Our support network of over 1,500 technically trained field personnel ensures that you receive immediate and reliable service. Technical support is available weekdays from 8:00 am to 7:00 pm, EST.

The quality of our product is reflected in the quality of our service professionals. We take pride in providing our customers with the best maintenance and service in the industry.

***For information on USFilter products or services call now! 800.875.7873.***

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