

## 8400C Series RO

### 8400C Reverse Osmosis System 60 Hz 72,000 to 648,000 GPD

The 8400C Series Reverse Osmosis Systems are designed to produce up to 450 USgpm (1703 lpm) of pure water. This Series of RO provides high quality product water, user-friendly controls, durable construction, and easy installation.



## Parameters & Materials

### Operating Parameters

- Operating Pressure: < 300 psig (2068 KPA)
- Maximum Recovery: 60% - 75%
- Nominal Rejection: 95-99%
- Operating Temperature: 2-35° C (35-95° F)
- Minimum Inlet Pressure: 30 psig (210 KPA)
- Design Temperature: 15.6° C (60° F)

### Materials of Construction

- Frame: Powder coated steel
- Membrane Elements: TF Polyamide
- ASME Membrane Housing: FRP
- Low Pressure Pipe: PVC
- High Pressure Pipe: Stainless Steel
- Control Enclosure: NEMA 4/12
- Pump: Stainless Steel

## Applications & Features

### Typical Applications

- Boiler Feed Water
- Humidification systems
- Power Plant / Co-Generation
- Automotive & Parts Washing
- Ion Exchange Pre-Treatment

### Standard Features

- 1.0 - micron FiberFlo microfiber pre-filter
- Automatic inlet shut-off valve
- Multi-stage centrifugal pump, TEFC with Recycle
- Three flow rotameters or flowmeters
- Adjustable reject recirculation (On 4 long units)
- Programmable auto-flush feature
- PLC system control
- Clean-In-Place ports

# Technical Data

Product Specifications									
Model Number	Stock Number	Permeate gpm (lpm)	Concentrate gpm (lpm)	Motor hp	Elements (array)	Inlet in (mm)	Permeate in (mm)	Concentrate in (mm)	Operating Weight lbs
8400C-72K	3VC828B-3A	50 (189)	17 (64)	20	12 (2:1)	2 (50.8)	1.5 (38.1)	1.5 (38.1)	3,500
8400C-144K	6VC828B-3A	100 (379)	34 (129)	30	24 (4:2)	3 (76.2)	3 (76.2)	2 (50.8)	5,500
8400C-216K	6YC828B-3A	150 (568)	50 (189)	50	36 (4:2)	4 (101.6)	3 (76.2)	3 (76.2)	7,550
8400C-288K	8YC828B-3A	200 (757)	67 (254)	60	48 (5:3)	4 (101.6)	3 (76.2)	3 (76.2)	9,000
8400C-432K	12YC828B-3A	300 (1,135)	100 (379)	40x2	72 (8:4)	6 (152.4)	4 (101.6)	4 (101.6)	13,600
8400C-648K	18YC828B-3A	450 (1,703)	150 (568)	60x2	108 (12:6)	8 (203.2)	6 (152.4)	4 (101.6)	18,200
8400C-864K	24YC828B-3A	600 (2,271)	200 (2,271)	50x4	144 (18:8)	8 (203.2)	6 (152.4)	5 (127)	26,200

Notes: All weights and dimensions are approximate. Other custom designs are available upon request

## Feed Requirements\*

	Common Specifications
Feed Water Source .....	Potable Tap
Maximum Silt Density Index .....	< 3
Maximum Free Chlorine .....	< 0.1 ppm
Operating Temperature Range .....	2-35° C
.....	(35-95° F)
Operating pH Range .....	2-11
Total Dissolved Solids .....	< 1,000 ppm
Softened or Langelier Index .....	< 0.5
Iron / Manganese .....	< 0.1 ppm

\*If any of the feed water requirements are not within the limits given, consult one of our application specialists for assistance.

## Modules

72K - 144K	206" L x 61" W x 75" H
216K - 288K	286" L x 61" W x 89" H
432K - 864K	286" L x 96" W x 89" H
864K Pump Skid	90" L x 96" W x 72" H

## Dimensions

## Standard Product Ordering Information

Biolab 8400C RO Part Number Matrix

18	Y	C	8	8	B	-	3	A
<b>Number of RO Housings</b>								
3 <sup>1</sup> , 6 <sup>1</sup> , 8, 12, 18, 24								
<b>Number of Elements per Housing</b>								
V - 4 <sup>1</sup> Y - 6								
<b>Application Type</b>								
C - Commercial / Industrial								
<b>Element Type</b>								
8 - Standard								
<b>Electrical Requirements<sup>2</sup></b>								
3 - 380/3/50 <sup>3</sup>			4 - 420/3/50 <sup>3</sup>			6 - 208/3/60		
7 - 230/3/60			8 - 460/3/60			9 - 575/3/60		
<b>Pump Type</b>								
B - 316SS								
<b>Panel Options</b>								
3 - PLC controller								
<b>Additional Options</b>								
A - None					B - VFD (Variable Speed Drive) <sup>4</sup>			

<sup>1</sup> 4 elements per housing is only available in the 3 and 6 housing configurations. All other configurations have 6 elements per housing.

<sup>2</sup> Depends on RO size source voltages (may not be available)

<sup>3</sup> Pump HP will differ from standard design.

<sup>4</sup> A VFD can make your system much more efficient. Energy savings up to 50% can be achieved, lowering impact on the environment and saving money.

## Installation Considerations

- For proper serviceability, there should be 48" of end clearance and 18" for the front and back.
- The system should be installed on a firm, level surface and have a drain with suitable capability to handle concentrate.
- Minimum dynamic operating pressure of 30 psig is required for proper system operation. The max pressure is 90 psig.



Mar Cor Purification  
4450 Township Line Road  
Skipack, PA 19474-1429  
Tel: (484) 991-0220  
Toll Free: (800) 346-0365  
Fax: (484) 991-0230

Mar Cor Purification  
14550 28th Avenue North  
Plymouth, MN 55447  
Tel: (484) 991-0220  
Toll Free: (800) 633-3080  
Fax: (763) 210-3868

Mar Cor Purification  
3250 Harvester Road - Unit 6  
Burlington, ON L7N 3W9  
Tel: (905) 639-7025  
Toll Free: (800) 268-5035  
Fax: (905) 639-0425

Mar Cor Purification  
Sourethweg 11  
6422 PC Heerlen  
The Netherlands  
Tel: (+31) 45 5471 471  
Fax: (+31) 45 5429 695

Mar Cor Purification  
1A International  
Business Park, #05-01  
Singapore 609933  
Tel: (+65) 6227 9698  
Fax: (+65) 6225 6848