

# R2-Series Reverse Osmosis Systems

Models	R2-1140	R2-2140	R2-3140	R2-4140	R2-5140	R2-6140
<b>Design</b>						
Configuration	Single Pass	Single Pass	Single Pass	Single Pass	Single Pass	Single Pass
Feed Water Source ***	TDS<10,000 ppm	TDS<10,000 ppm	TDS<10,000 ppm	TDS<10,000 ppm	TDS<10,000 ppm	TDS<10,000 ppm
Standard Recovery Rate	15 – 25%	30 – 40%	40 – 50%	40 – 55%	40 – 60%	40 – 65%
<b>Rejection and Flow Rates</b>						
Nominal Salt Rejection %	99.2%	99.2%	99.2%	99.2%	99.2%	99.2%
Permeate Flow* gpm (lpm)	1.04 (3.94)	2.08 (7.89)	3.13 (11.83)	4.17 (15.77)	5.21 (19.72)	6.25 (23.66)
Minimum Feed Flow gpm (lpm)	4.04 (15.3)	5.08 (19.2)	6.13 (23.2)	7.17 (27.1)	8.21 (31.1)	9.25 (35.0)
Maximum Feed Flow gpm (lpm)	14.00 (53.0)	14.00 (53.0)	14.00 (53.0)	14.00 (53.0)	14.00 (53.0)	14.00 (53.0)
Minimum Concentrate Flow gpm (lpm)	3.00 (11.36)	3.00 (11.36)	3.00 (11.36)	3.00 (11.36)	3.00 (11.36)	3.00 (11.36)
<b>Connections</b>						
Feed inch	1 FNPT	1 FNPT	1 FNPT	1 FNPT	1 FNPT	1 FNPT
Permeate inch	¾ FNPT	¾ FNPT	¾ FNPT	1 FNPT	1 FNPT	1 FNPT
Concentrate inch	¾ FNPT	¾ FNPT	¾ FNPT	1 FNPT	¾ FNPT	1 FNPT
CIP inch	¾ FNPT	¾ FNPT	¾ FNPT	¾ FNPT	¾ FNPT	¾ FNPT
<b>Membranes</b>						
Membrane Per Vessel	1	1	1	1	1	1
Membrane Quantity	1	2	3	4	5	6
Membrane Size	4040	4040	4040	4040	4040	4040
<b>Vessels</b>						
Vessel Array	1	1:1	1:1:1	1:1:1:1	1:1:1:1:1	1:1:1:1:1:1
Vessel Quantity	1	2	3	4	5	6
<b>Pumps</b>						
Pump Type	Multi-Stage	Multi-Stage	Multi-Stage	Multi-Stage	Multi-Stage	Multi-Stage
Motor HP (kw)	3	3	3	5	5	5
RPM @ 60/50 Hz	3450	3450	3450	3450	3450	3450
<b>Electrical</b>						
Standard Voltage	220V, 60Hz, 1Ph, 14.6A	220V, 60Hz, 1Ph, 14.6A	220V, 60Hz, 1Ph, 14.6A	220V, 60Hz, 3Ph, 13.6A	220V, 60Hz, 3Ph, 13.6A	220V, 60Hz, 3Ph, 13.6A
Voltage Options	220V, 50Hz, 1Ph, 17.4A 220V, 50Hz, 3Ph, 10.6A 220V, 60Hz, 3Ph, 9A 460V, 60Hz, 3Ph, 5A	220V, 50Hz, 1Ph, 17.4A 220V, 50Hz, 3Ph, 10.6A 220V, 60Hz, 3Ph, 9A 460V, 60Hz, 3Ph, 5A	220V, 50Hz, 1Ph, 17.4A 220V, 50Hz, 3Ph, 10.6A 220V, 60Hz, 3Ph, 9A 460V, 60Hz, 3Ph, 5A	220V, 50Hz, 3Ph, 16.1A 460V, 60Hz, 3Ph, 7A	220V, 50Hz, 3Ph, 16.1A 460V, 60Hz, 3Ph, 7A	220V, 50Hz, 3Ph, 16.1A 460V, 60Hz, 3Ph, 7A
<b>Systems Dimensions **</b>						
L x W x H inch (cm)	27 x 26 x 61 (69 x 66 x 155)	27 x 26 x 61 (69 x 66 x 155)	30 x 26 x 61 (75 x 66 x 155)	32 x 26 x 61 (80 x 66 x 155)	32 x 26 x 61 (80 x 66 x 155)	37 x 26 x 61 (94 x 66 x 155)
Weight lb. (kg)	560 (250)	590 (270)	620 (280)	650 (300)	680 (310)	700 (320)

\* Product flow and recovery rates are based on equipment test parameters.

\*\* Does not include operating space requirements.

\*\*\* Treatment ability of the RO system is dependent on feed water quality. Performance projections must be run for each installation.

## Operating Limits

Maximum Feed Temperature °F (°C)	85 (29)	Maximum Free Chlorine ppm	0
Minimum Feed Temperature °F (°C)	40 (4.4)	Maximum TDS ppm	10,000
Maximum Ambient Temperature °F (°C)	120 (48.9)	Maximum Hardness gpg	0
Minimum Ambient Temperature °F (°C)	40 (4.4)	Maximum pH (Continuous)	11
Maximum Feed Pressure psi (bar)	85 (5.9)	Minimum pH (Continuous)	5
Minimum Feed Pressure psi (bar)	45 (3.1)	Maximum pH (Cleaning 30 Min.)	12
Maximum Operating Pressure psi (bar)	400 (27.6)	Minimum pH (Cleaning 30 Min.)	2
Maximum SDI Rating SDI	<3	Maximum Turbidity NTU	1

**Test Parameters:** 10,000 TDS Filtered (5 Micron), De-Chlorinated, Feed Water, 65 psi (4.5 bar) Feed Pressure, 350 psi (24.13 bar) Operating Pressure, 77 Degree F (25 Degrees C), Recovery as stated, 7.0 pH. Data taken after 60 minutes of operation.

Low temperatures and high feed water TDS levels will significantly affect the system's production capabilities. Computer projections should be run for individual applications which do not meet or exceed minimum and maximum operating limits.

Scale prevention measures must be taken to prolong membrane life.