



WATERITE, INC.
Winnipeg, MB
Canada
PHONE (204) 786-1604
FAX (204) 783-1599
www.waterite.com

**WATERITE, INC.
PRODUCT SPECIFICATION SHEET
RO-SYS-002 R6**

**VECTAMAXX™ RSL COMMERCIAL
REVERSE OSMOSIS SYSTEMS**

A. GENERAL SPECIFICATIONS

TYPE: Extra low-pressure RO, spiral wound membrane(s) in series, recirculation loop, auto- flush
VOLTAGE: 230/208VAC/60hz (other voltages available on request)

SERVICE AMPS:	230/208VAC
RSL2400	6.4/7.1
RSL4800	6.4/7.1
RSL7200	10.3/11.3
RSL9600	10.3/11.3

CERTIFICATIONS Certified by INTERTEK to CSA22.2
Conforms to ANSI/UL standard 979
for INDOOR USE ONLY

FEED WATER PRESSURE: 40 PSI minimum, 65 PSI maximum
FEED WATER TEMP: 35° C maximum

B. MATERIAL SPECIFICATIONS:

FRAME COLOUR: White powder coat
FRAME MATERIAL: Aluminum square tubular, c/w leveling feet
FRAME DIMENSIONS:

Height	50" (127cm)
Width	31" (79cm)
Depth	24.0" (62cm)



OPERATING PRESSURE:	130 PSI (9.1 bar) for RSL 2400, 4800 and 9600, 140 PSI (9.9 bar) for RSL 7200
MEMBRANE:	<i>BLACK MAX®</i> , spiral wound TFC, BME4040SXL, 2400 USGPD permeate @ 500 mg/l NaCl, 100 PSI, 25°C feed
UNIT DRY WEIGHT:	RSL2400: 127 lbs. (57.6 kg) RSL4800: 145 lbs. (65.7 kg) RSL7200: 163 lbs. (74 kg) RSL9600: 181 lbs. (82.1 kg)
SYSTEM SOLENOIDS:	220VAC/60hz, normally closed, 3/4" FNPT, .5-230 PSI differential, 316 SS
LOW PRESSURE SWITCH:	220VAC/60Hz cut-out @ 15 PSI (Adjustable)
DRIVE PUMP MOTOR:	230VAC/60hz, type 56J frame, 3450 RPM, threaded shaft, ball bearing
DRIVE PUMP:	Multi-stage 416 SS, stainless discharge, housing and bracket, Noryl impellers and stages, SS bearings, wear rings, couplings and pump shaft. RSL2400: 10 USGPM (37.8 LPM) @ 110 PSI RSL4800: 10 USGPM (37.8 LPM) @ 110 PSI RSL7200: 20 USGPM (52.9 LPM) @ 110 PSI RSL9600: 20(1/2) USGPM (83.2 LPM) @ 110 PSI <i>(Based on 0 PSI inlet pressure)</i>
CONCENTRATE VALVE:	Automatic flow regulating orifice plate, NSF 61
RECIRCULATION VALVE:	SS needle valve, metal seated, o-ring packing
SYSTEM FITTINGS:	High pressure: 304 SS corrugated connectors with NPT tailpieces, burst pressure 600 PSI. Class 150-304 SS cast NPT fittings, burst pressure 450 PSI
LOW PRESSURE FITTINGS:	SS push-on or standard pressure push-on
LOW PRESSURE TUBING:	1/2" HDPE, clear
PRE-FILTRATION HOUSING:	1 X polypropylene, 20", 125 PSI rated, o-ring seated with threaded cap, pressure release, 1" inlet/outlet, full flow, 20 USGPM maximum
FILTER CARTRIDGE:	Polypropylene, 5-micron



MEMBRANE HOUSING: 304 SS body, polyethylene caps, band clamp closure, 3/4" FNPT concentrate ports, 1/2" permeate port, 300 PSI rating (*optional*)

PRESSURE GAUGES: Glycerin filled, stainless body, 2 1/2". 0-100 PSI pre-filter pressure pre/post, 0-200 PSI system pressure

FLOW METERS: Acrylic panel mounted, 0.5-5.0 USGPM or 1.0 - 10.0 USGPM, dependent on model

HIGH PRESSURE RELIEF VALVE: Watts model 3L, bronze body, set at 150 PSI for 2400-7200, set at 165 PSI for 9600

C. PERFORMANCE SPECIFICATIONS

PERMEATE PRODUCTION

RATE:	RSL2400	1.6 USGPM (6.0 LPM)
	RSL4800	3.2 USGPM (12.0 LPM)
	RSL7200	4.8 USGPM (18.0 LPM)
	RSL9600	6.4 USGPM (24.0 LPM)

Calculated production rate @ feed water of 500 mg/l NaCl, 25°C, average system pressure @ 130PSI, 60 % recovery, inlet pressure of 50 PSI.

WASTE PRODUCTION RATE:

Recovery Rate @ 60%

Feed Water <1000 TDS	RSL2400	1.06 USGPM (4.0 LPM)
	RSL4800	2.12 USGPM (8.0 LPM)
	RSL7200	3.18 USGPM (12.1 LPM)
	RSL9600	4.24 USGPM (16.1 LPM)

Recovery Rate @ 40%

Feed Water >1000 TDS	RSL2400	2.4 USGPM (9.0 LPM)
	RSL4800	4.8 USGPM (18.0 LPM)
	RSL7200	7.2 USGPM (27.0 LPM)
	RSL9600	9.6 USGPM (36.0 LPM)

MEMBRANE CROSSFLOW: RSL2400: (1) 10.0 USGPM (37.8 LPM)

Shows crossflow by element in series order. Pressure drop 15 PSI per element. RSL4800: (1) 10.0 USGPM (37.8 LPM)
(2) 8.4 USGPM (31.8 LPM)

RSL7200: (1) 7.0 USGPM (26.5 LPM)
(2) 7.0 USGPM (26.5 LPM)
(3) 10.8 USGPM (40.9 LPM)



RSL9600 uses two parallel banks of twin elements in series.

- RSL9600: (1) 11.0 USGPM (41.6 LPM)
(2) 11.0 USGPM (41.6 LPM)
(3) 9.4 USGPM (35.6 LPM)
(4) 9.4 USGPM (35.6 LPM)

D. RECOMMENDED FEED WATER PRETREATMENT SPECIFICATIONS:

TDS:	< 2000 TDS
HARDNESS:	< 6 GPG (103 mg/l)
TOTAL IRON:	< .05 PPM
TANNIN:	< .5 PPM
CHLORINE:	< .1 PPM
pH:	5.5 – 9.5
ORGANIC/MICROBIOLOGICAL ACTIVITY:	0
MANGANESE:	<.05 PPM
HYDROGEN SULPHIDE:	0
TURBIDITY:	SDI < 5.0

E. FEED WATER REQUIREMENTS:

RSL2400:	4.4 USGPM minimum	
RSL4800:	8.8 USGPM minimum	<i>includes 10% safety factor</i>
RSL7200:	13.2 USGPM minimum	<i>on feed water exceeding 1000 TDS.</i>
RSL9600:	17.6 USGPM minimum	

F. OPTIONAL EQUIPMENT

Panel mount permeate TDS monitor
Panel mount dual feed/permeate TDS monitor

All materials and components used to fabricate RSL Series systems meet or exceed requirements specified by NSF Standard 61.

