



WATERITE TECHNOLOGIES, INC.

3-75 Meridian Drive

Winnipeg, MB

Canada R2R 2V9

PHONE: (204) 786-1604

FAX: (204) 783-1599

Email: waterite@waterite.com

Website: www.waterite.com

**WATERITE TECHNOLOGIES, INC.
PRODUCT SPECIFICATION SHEET
RO-SYS-002R5**

**VECTAMAXX™ RSL COMMERCIAL
REVERSE OSMOSIS SYSTEMS**

A. GENERAL SPECIFICATIONS

TYPE: Extra Low pressure RO, spiral wound membrane(s) in series, recirculation loop

VOLTAGE: 230VAC/60hz (other voltages available on request)

SERVICE AMPS:	230VAC
RSL2400	6.4
RSL4800	6.4
RSL7200	8.1
RSL9600	12.0

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: Mild steel 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

SPEC RO-SYS-002R5

September 2010

MEMBRANE:	<i>BLACK MAX®</i> , spiral wound TFC, BME-4040SXL, 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)
INLET SOLENOID:	220VAC/60hz, normally closed, ¾" FNPT, 0 differential, brass
LOW PRESSURE SWITCH:	220VAC/60Hz cut-out @ 15 psi
DRIVE PUMP MOTOR:	230VAC/60hz, type 56J frame, 3450 RPM, threaded shaft, ball bearing
DRIVE PUMP:	Multi-stage 416SS, stainless discharge, housing and bracket, Noryl impellers and stages, SS bearings, wear rings, couplings and pump shaft. RSL2400: 10 USGPM @ 110 psi RSL4800: 10 USGPM @ 110 psi RSL7200: 10 USGPM @ 110 psi RSL9600: 24(1/2) USGPM @ 110 psi <i>(Based on 0 psi inlet pressure)</i>
CONCENTRATE VALVE:	Brass needle valve, internally bypassed, metal seated, o-ring packing
RECIRCULATION VALVE:	Brass needle valve, metal seated, o-ring packing
SYSTEM FITTINGS:	Schedule 40 PVC
LOW PRESSURE FITTINGS:	Jaco standard pressure compression or DMT push-on
LOW PRESSURE TUBING:	Higher pressure 1/2" LDPE, 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 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) 15.1 USGPM (57 LPM)

Shows crossflow by element in series order. Pressure drop 15 psi per element.

RSL4800: (1) 15.1 USGPM (57LPM)
(2) 13.5 USGPM (51.1 LPM)

RSL7200: (1) 7.55 USGPM (28.5LPM)
(2) 7.55 USGPM (28.5 LPM)
(3) 11.9 USGPM (45 LPM)

RSL9600 uses two parallel banks of twin elements in series.

RSL9600: (1) 8.4 USGPM (32.0 LPM)
(2) 6.7 USGPM (25.3 LPM)
(3) 8.4 USGPM (32.0 LPM)
(4) 6.7 USGPM (25.3 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
RSL7200: 13.2 USGPM minimum
RSL9600: 17.6 USGPM minimum

includes 10% safety factor on feed water exceeding 1000 TDS.

F. OPTIONAL EQUIPMENT

Auto flush solenoid and timer
Panel mount Permeate TDS monitor
Panel mount Dual Feed/Permeate TDS monitor
12vdc Control for pre-filter backwash cut out contact
Pre/Post Filter Gauges

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

