



726 Beacon St, Loves Park, IL 61111 | 815-636-8833 | 800-919-0888 | 815-636-8844 fx | www.watersurplus.com

EQUIPMENT DATA SHEET RO

Description	200 gpm RO 48 Ft Trailer
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Asset #:	ROE3100231R
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Owner		Mfg. Yr.
Watersurplus		2014

EQUIPMENT TYPE	OEM
Brackish RO	Siemens RO / Yardney Filter

NORMAL OPERATING PARAMETERS			
Operating Water Temperature:	50 to 77	°F	
Normal Permeate Flow Rate:	200	GPM	
Min. Inlet Water Pressure:	30	PSI	
Normal Operating Pressure:	160 to 216	PSI	
Maximum SDI:	3		
Maximum Turbidity:	1	NTU	
Max. Free Chlorine/chloramines:	<.02	PPM	
Maximum Recovery:	75	%	
Nominal Rejection:	98 to 99	%	

UNIT CONFIGURATION			
# Passes	1		
# Stages	3		
Array	6:4:2		
Vessel Size & Type	4M,8",300psi,FRP,Protec		
# Hsgs / Membranes	12	48	
Pre-Filter Cartridge	(44) 1 um 2"x40"SpxOE		

POWER REQUIREMENTS						
GENERAL POWER	VAC	PH	HZ	Amps	Src	
High Voltage	460	3	60	100	Ext	
Control Voltage	120	1	60	10	Int	
PUMPS & MOTORS						
	VAC	PH	HZ	HP	Amps	
Primary/First Pass	230/460	3	60	50	55	
Redund/Second Pass						
CIP						
Inlet Feed/Trans	230/460	3	60	20	45	

FLOW SPECIFICATIONS			
Stream	67 Deg F	41 Deg F	Units
Feed	267	200	gpm
Product	200	150	gpm
Reject	67	50	gpm
Recycle	n/a	n/a	gpm
Flush	250	200	gpm
Drain	67	50	gpm
Instrument Air Press	80		psi
Air Volume Required	2-4		SCFM

CONTROLS	
Main Controller	AB Compactlogix
HMI	EZ Durapanel
I/O Type	AB 1769
Motor Starter	Siemens VFD RO / ?? VFD Filtr
Chem Pumps Qty.	(2) Alldos 0.95gph @ 145 psig
Chm Pmp Ctrl Method	Manual

PHYSICAL SPECIFICATIONS			
Length	636	inches	
Width	104	inches	
Height	156	inches	
Weight (shipping)	50000	lbs.	
PV Housing Size	n/a	dia. x length (in.)	

AVAILABLE DOCUMENTATION					
Description	AVAIL		Description	AVAIL	
Process & Instrumentation Diagram - P&ID	Y		Electrical Schematics	Y	
Piping layout/General Arrangement	Y		Program Logic	Y	
Major Component List - MC List	Y		Operations/Maintenance Manuals	Y	

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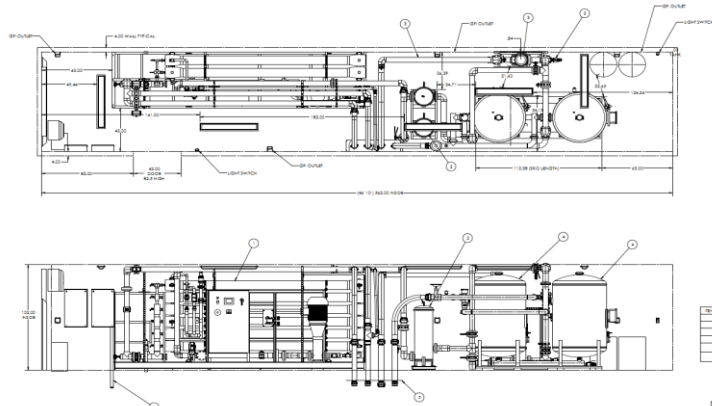
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PROCESS CONNECTIONS (SIZES & LOCATION SYMBOLS)		
	Size & Type	Location Symbol
Feed Inlet	4" Female Camlock	Bottom Side Trailer
Permeate Outlet	4" Male Camlock	Bottom Side Trailer
Filter BW Outlet	4" Male Camlock	Bottom Side Trailer
RO Conc & Flush Outlet	4" Male Camlock	Bottom Side Trailer
CIP Inlet	3" Flanged	RO skid PVC Inlet Pipe
CIP Outlet	3" Victaulic Male Conn	RO skid SST Conc Pipe
Instrument Air	1/2" NPT	Front Inside Wall



REV	DATE	DESCRIPTION	BY
1	01/15/14	REVISION TO 001-001-001-001	W.S.
2	01/15/14	REVISION TO 001-001-001-001	W.S.
3	01/15/14	REVISION TO 001-001-001-001	W.S.
4	01/15/14	REVISION TO 001-001-001-001	W.S.
5	01/15/14	REVISION TO 001-001-001-001	W.S.



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MISCELLANEOUS INFORMATION

Brackish water NF / RO system. Designed for 200 gpm permeate flow at 75% recovery. This RO is mounted inside of a 48 foot mobile trailer with insulation and heater system. Convenient Victaulic connections are centralized at the center of the trailer on the bottom side for easy hose connections. Power distribution panels are ready for easy customer wiring to a single 230/460 VAC power connection. A transformer to 120 VAC is included in the trailer. This system includes chemical dosing pumps & tanks for antiscalant or bisulfite chemical feed. Also included is a feed water booster pump and two media filter tanks designed for 300 gpm service as pre-filtration of customer feed water.

A portable air compressor is included for backup air supply to run the automatic valves when needed.

INSTRUMENTATION

Pressure	Ind.	Sw.	Xmtr	Manufacturer	Part Number
Low Inlet	x	x			
Pre-filter Inlet	x				
Pre-Filter Outlet	x				
High Pump Discharge	x	x			
Inter-stage	x				
Membrane feed	x				
Reject	x				
Conductivity					
Inlet	x		x		
Permeate	x		x		
Concentrate					
Monitor	x				
Flow					
Inlet					
Permeate	x		x		
Reject	x		x		
Recycle					
Monitor			x		
Other					
pH	x		x		
ORP	x		x		



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MAJOR COMPONENTS

Pumps	Manufacturer	Model	Desc
First Pass / RO Feed	Grundfos	CRN-64-4	Vertical Boost Pump 316SST, 50 Hp
Inlet Feed Pump	Grundfos	CRN-64-2-2	Vertical Boost Pump 316SST, 20 Hp
CIP			n/a
Cartridge Filter	Manufacturer	Model	Desc
Housing	Shelco	22FOS4-P-GB-V	18"dia x 40" SS, 22 Round
Elements	Global Filter	GCTB1A40-9	(44) 2"x40" long Spring x SOE MeltBlown PP, 1 um
Auto Valving	Misc	Crane	4" Butterfly Inlet / 1/2" Ball Flush & Drain
Pressure Filters	Manufacturer	Model	Desc
Tanks	Yardney	MM4860-AS	(2) 48"dia x 60" Side Sheet, 80 psi Non Code
Piping			4" Sch 40 Carbon Steel with Vic Conn's
Multi Port Valve	Yardney	454-D Series	(3) 4" Yardney BW Valves
BW Control Valve	Yardney		(1) 4" Brass Manual Gate Valve
Media Outlet Valve	Bray	Series 31-169	(2) 3" Butterfly Valve Manual Actuator
Inlet Distributor	Yardney		4" CS Pipe with Upturned Elbow Open End
Outlet Distributor	Yardney		316 SST Well Screen Lateral Hub Radial
Filter Media	Next Sand	0.4 to 1.4 mm size	(38) Ft3
Media Support #1		Quartz Gravel	(7) Ft3 1/2" x 1/4"
Media Support #2		Quartz Gravel	(6) Ft3 1/4" x 1/8"
RO Skid	Manufacturer	Model	Desc
Pressure Housings	ProTek	Pro-8-300-SP-4	(12) FRP 8" Dia x 4M Long RO Housing
Piping			1" to 4" Sch 80 PVC & 316 SST
Auto Valves	Bray	Series 31-169	1/2" to 4" Butterfly & Ball Valves - Misc Actuators
RO Membranes	Various	Various	(48) 8" x 40" NF / RO Membranes
Controls	AB	Compactlogix	HMI is a Durapanel
Feed Booster Pump	Grundfos	CRN-64	Noted Above in Pumps
Cartridge Filter	Shelco	GCTB	Noted Above in Cartridge Filters
Chemical Feed	Manufacturer	Model	Desc
Bisulfite	Allidos	Primus Plus	(1) Allidos 0.95gph @ 145 psig, 25 Gal PE Day Tank
Antiscalant	Allidos	Primus Plus	(1) Allidos 0.95gph @ 145 psig, 25 Gal PE Day Tank