



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

### EQUIPMENT DATA SHEET RO

<b>Description</b>	100 GPM RO
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<b>Asset #:</b>	ROE3100162R
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<b>Owner</b>		<b>Refurb. Yr.</b>
Watersurplus		2018

<b>EQUIPMENT TYPE</b>	<b>OEM</b>
Combo Trailer	Watersurplus (35' OAL x 102" W x 13' H)

NORMAL OPERATING PARAMETERS			
Operating Water Temperature	35-104	°F	
Min. Inlet Water Pressure	30	PSI	
Maximum SDI	≤ 3		
Maximum Turbidity	≤ 1	NTU	
Max. Free Chlorine/chloramines	< 0.02	PPM	
Nominal Operating Pressure	150-300	PSI	
Nominal Recovery	75-80	%	
Nominal TDS	6000	ppm	

UNIT CONFIG			
# Passes	1		
# Stages	3		
Array	3:2:1		
Hsg Size,Mat'l,psi,Mfr	4M, FRP, 450 PSI, WAVE CYBER		
Total # membranes	24	Total	
Pre-Filter Cartridge	(1)2-1/2" x 40", 7Rx40,SOE,MB		

POWER REQUIREMENTS						
GENERAL POWER						
	<b>VAC</b>	<b>PH</b>	<b>HZ</b>	<b>Amps</b>	<b>Src</b>	
High Voltage	460	3	60	60	Ext	
Control Voltage	120	1	60	20	Int	
PUMPS & MOTORS						
	<b>VAC</b>	<b>PH</b>	<b>HZ</b>	<b>HP</b>	<b>Amps</b>	
First Pass	460	3	60	40	27	
CIP						
Inlet Feed/Trans						

FLOW SPECIFICATIONS		
Feed	134	gpm
Product	100	gpm
Concentrate	34	gpm
Flush	134	gpm
Drain	134	gpm
Recycle	10-15	gpm
Instrument Air	80	psi
	5	SCFM

CONTROLS	
Main Controller	AB Compactlogix
HMI	AB Panelview Plus 700
I/O Type	1769-IQ16
Motor Starter	(1) Danfoss VFD
Chem Pumps Qty.	(2) Grundfos DDA
Chm Pmp Ctrl Method	Manual

PHYSICAL SPECIFICATIONS		
Length	79	inches
Width	47	inches
Height	194	inches
Weight (shipping)	4408	lbs.
PV Housing Size	8" x 4M	dia. x length (in.)
Inlet Piping Material	3" Sch 80 PVC	
Outlet Piping Material	3" Sch 80 PVC	

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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PROCESS CONNECTIONS (SIZES & LOCATION SYMBOLS)		
	Size & Type	Location Symbol
Feed Inlet	<i>Same as Filter</i>	
Permeate outlet	3" Camlock male	Bottom Trailer
Concentrate to drain	2" Camlock male	Bottom Trailer
Permeate Inlet	3" Camlock Female	FV-102/Bottom Trailer
CIP Permeate Outlet	2" Camlock Female	AV-207
CIP Concentrate Outlet	1" Camlock Female	HV-204
Instrument Air	1/4" Tubing	n/a



**MISCELLANEOUS INFORMATION**

This is a GE PRO 100 unit operating at 75-80 % recovery and producing 100 GPM of permeate. The unit is controlled with an AB PL Panel view plus 700 HMI screen allowing complete control of operation of the system. The unit is equipped with Danfoss VFD whi running at a constant permeate flow. Instruments included with the unit are conductivity , pH ,flow and pressure transmitters. Th a single power drop of 60A , 3phase , 460VAC. There are (2) chemical feed pumps along with the skid for anti-scalant and SBS do




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**INSTRUMENTATION**

Pressure	Ind.	Sw.	Xmtr	Manufacturer	Part Number
Low Inlet	X			Wika	2-1/2" dial , 0-160 psi, glycerine filled, 1/4" MNPT, centre mounted
High Pump Suction	X		X	IFM	Low pressure transmitter, -14.5-145 psi, pressure switch and transmitter, 316L SST material, 1/4" MNPT process connection, PSI display
High Pump Discharge	X		X	IFM	High pressure transmitter, 0-1450 psi, pressure switch and transmitter, 316L SST material, 1/4" MNPT process connection, PSI display
Interstage	X		X	IFM	High pressure transmitter, 0-1450 psi, pressure switch and transmitter, 316L SST material, 1/4" MNPT process connection, PSI display
Permeate	X	X		IFM	Low pressure switch, 0-145 psi, pressure switch and transmitter, 316L SST material, 1/4" MNPT process connection, PSI display
Reject	X	X		IFM	Low pressure switch, 0-145 psi, pressure switch and transmitter, 316L SST material, 1/4" MNPT process connection, PSI display
<b>Conductivity</b>					
Inlet			X	GF-Signet	Conductivity/resistivity sensor electronics cell, inline single input, 4-20mA output Sensor electronics, +2840 PVDF conductivity electrode, 1.0 cell constant.
Permeate			X	GF-Signet	Conductivity/resistivity sensor electronics cell, inline single input, 4-20mA output Sensor electronics, +2840 PVDF conductivity electrode, 0.1 cell constant.
Concentrate				n/a	
Analyzer				n/a	



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Watersurplus		2018			Combo Trailer		Watersurplus (35' OAL x 102" W x 13' H)	
<b>Flow</b>								
Inlet								
Permeate			X	GF-Signet	3-2536-6C-P0 Paddle wheel , 25' cable , 4-20mA o/p, with a 3" saddle.			
Reject			X	GF-Signet	3-2536-6C-P0 Paddle wheel , 25' cable , 4-20mA o/p, with a 2" saddle.			
Recycle	X			GF-Signet	Flow meter with integral mount paddle wheel assembly , battery operated flowmeter totalizer with display for a 1-1/2" saddle.			
Monitor								
<b>Other</b>								
pH			X	GF-Signet	pH sensor, integral 4-20mA output with easy cal, PT1000 bulb tip, 3/4" NPT thread for use with 2741 sensor electronics			
ORP				n/a				
<b>MAJOR COMPONENTS</b>								
<b>Pumps</b>	<b>Manufacturer</b>			<b>Model</b>		<b>Desc</b>		
First Pass RO	Tonkaflo			SS12512KZE		Multi-stage centrifugal pump, 316SS housing with noryl internals, Buna N seals, 138 gpm @ 280 psi, 40HP motor, 3Ph, 460VAC,60Hz		



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<b>RO Housing</b>							
<b>Manufacturer</b>		<b>Model</b>		<b>Desc</b>			
Housing		Wave Cyber		Wave-450P-8 FRP membrane housings , 8" Dia x 4M, 2" mechanical coupling connection on side ports x 4, 1" SS mechanical coupling permeate port connection, rated at 450 psi			
Elements		n/a		n/a			
<b>Cartridge Filter</b>							
<b>Manufacturer</b>		<b>Model</b>		<b>Desc</b>			
Housing		GE		HX-0740-3.0-V-316 Stainless cartridge filter housing , 7Rx40" dia elements , 3.0 victaulic inlet and outlet connections , 150 psi maximum pressure rating			
Elements		WS		FIL2170013N Single open ended CF elements , Polypropylene construction, 2-1/2" diax40" , 1micron rating , self seal spring on one end, Buna seals			