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EQUIPMENT DATA SHEET MEDIA FILTRATION SKID

Description	54x60 - Triplex Filter Skid
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Asset #:	FIT2400270-2R
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Owner		Refurb. Yr.
Watersurplus		2019

EQUIPMENT TYPE	OEM
Filter Skid	Yardney

NORMAL OPERATING PARAMETERS			
Operating Temperature	40-80	°F	
Nominal Operating Press	50	PSI	
Min. Inlet Operating Pressure	40	PSI	
Maximum Inlet TSS Allowed	TBD	mg/L	
pH Range Allowed	4-9	pH	
Maximum Inlet Feed	n/a	mg/L	
Nominal Flow Rate Range	240-716	GPM	
Backwash Flow rate per tank	239	GPM	
Control Operating Air Volume	2	SCFM	
Control Operating Air Volume	80	PSI	

UNIT CONFIGURATION	
Number of Tanks	3
Tank Size	54" Dia x 60" Side sheet
Tank Press Rating	80 psi
Tank Design Temp	60 Deg F
ASME Code Stamped	No
Process Inlet:	6" Sch 40 CS/PVC
Process Outlet:	6" Sch 40 CS/PVC
Backwash Outlet:	4" Sch 40 CS/PVC
Tank Drain Outlet:	3/4" Ball valve
Internal Piping	304 SST/ PVC Bolt and CS Top
Main Valves	Yardney 3-way valve
Backwash Control	4" Brass gate valve

POWER REQUIREMENTS					
GENERAL POWER	VAC	PH	HZ	Amps	Src
High Voltage					
Control Voltage	120	1	60	5	Ext

INSTRUMENTS	
Flow	Paddle wheel flow meter
Pressure	n/a
pH/Cond	n/a
Pressure Gauge	0-100 psi liquid filled
Sample Ports	1/4" PVC ball valve
Isolation Valves	6" Bray Butterfly valve

SUGGESTED MEDIA VOLUMES (TOTAL)		
Filter media 1	144	cu. Ft.
Filter media 2	n/a	cu. Ft.
Filter media 3	n/a	cu. Ft.
1/8 x 1/16 Gravel Support	16	cu. Ft.
1/4 x 1/8 Gravel Support	16	cu. Ft.
1/2 x 1/4 Gravel Support	24	cu. Ft.

CONTROLS	
Main Controller	Micrologix 1100 Controller (NEMA 4X)
HMI	Automation Direct EA9-T6CL
Other Type Of Control	n/a
Ethernet	n/a

PHYSICAL SPECIFICATIONS		
Length	183	inches
Width	66	inches
Height	119	inches
Skid Weight	4080	lbs. (empty)
Gravel Support Weight	n/a	lbs. (3 tanks)
Total Ship Weight	21446	lbs. (skid)
Total Oper Weight	34250	lbs. (skid)

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

PROCESS CONNECTIONS (SIZES & LOCATION SYMBOLS)		
	Size & Type	Location
Feed Inlet	6" Flange Class 150#, PVC	HV-0101
Product Outlet	6" Flange Class 150#, PVC	FCV-0101
Backwash Outlet	4" Flange Class 150#, PVC	FCV-0102
Drain Outlet	3/4" Stainless steel valve	HV-0102
Vent	3/4" Galvanized ball valve	HV-1101,1201,1301



MISCELLANEOUS INFORMATION

Automated 54" x 60" Triplex filter skid with (3) CS filter tanks. Removable PVC hub and 304 stainless steel hub and lateral design is compatible with a variety of filter medias, including OXIPLUS ⁷⁵ ™ , Nextsand, Greensand plus/Anthracite and Sand anthracite. System is rated for 80 psi, non-code ,and the flow rates are based on chemistry of water. Three way air actuated valves control forward flow vs backwash flow utilizing the same water for backwashing of the filters. Two non code elliptical design 12" x 16" manway provides access to the undertrain system and allows for ease of media loading. Vent valves are provided to purge air from the unit at start-up.

MAJOR COMPONENTS

Instruments	Ind.	Sw.	Xmtr	Manufacturer	Part Number
Pressure Gauges	X			Wika or Equivalent	2-1/2" Dia,SST dial , 0-100 psig scale , 316SST wetter parts , 1/4" NPT lower connection
Inlet flow meter	X			GF-Signet	Model 3-8150-P1 Battery operated flow meter/totalizer with internally mounted 515 paddle wheel with PPL body and PVDF rotor with titanium pin
Differential pressure		X		Yardney	20psid range , 1000 psig rating , SST wetted parts, Buna N seals , SPST switch , 6-18 psid adjustable range , 1/4" FNPT connection , 240VAC/VDC, 60 watts , 3.0 amps
Controls	Size	Type		Manufacturer	Part Number
Control Panel	11x13x6	Panel		Watersurplus	14"H x 12"W x 6" D , FRP , NEMA 4 enclosure, with a Automation direct 6" screen and micrologix 1100 controller
Solenoid	24VDC	Solenoid		Festo	24VDC, 2.8Watt Solenoid, Zinc die casting coated body, M7 connection port

Valves	Size	Type	Manufacturer	Description
Process Valves	454D	Automatic	Yardney	Cast iron body , SST wetted parts , 3M scotchkote 134 fusion bonded Epoxy interior, polyurethane valve seal
Vent	3/4"	Ball	Apollo	One piece 316 SST ball valve , TFE seat and seal , manual lever handle, NPT ends
Low point drain	3/4"	Ball	Apollo	One piece 316 SST ball valve , TFE seat and seal , manual lever handle, NPT ends
Sample	1/4"	Needle	SMC	1/4" needle valve , PVC body , NPT x Hose barb connection
Effluent block valve	6"	Butterfly	Bray	6" series 31-375~175psi, lug style butterfly valve with polyester coated ductile iron body, 316SST disc, 416SST stem, EPDM seat. Valve complete with spring return pneumatic actuator sized for 80 psi (Fail Open)
Effluent Control valve	6"	Butterfly	Bray	6" series 31-375, lug style butterfly valve with polyester coated ductile iron body, 316SST disc, 416SST stem, EPDM seat. Valve complete with a manual gear operator
Influent Isolation valve	6"	Butterfly	Bray	6" series 31-375, lug style butterfly valve with polyester coated ductile iron body, 316SST disc, 416SST stem, EPDM seat. Valve complete with a manual lever handle
Backwash	4"	Gate	Yardney	Brass NPT gate valve , Manual handle wheel operator
Piping	Size	Material	Manufacturer	Description
Inlet	6"	PVC & Painted CS	WS	Sch 80 PVC and Sch 40 carbon steel, flanged connections, 3M scotchkote 134 epoxy coated liner, epoxy coated exterior
Outlet	6"	Painted CS /PVC	WS	Sch 80 PVC and Sch 40 carbon steel, flanged connections, 3M scotchkote 134 epoxy coated liner, epoxy coated exterior
Backwash	4"	Painted CS /PVC	WS	Sch 80 PVC and Sch 40 carbon steel, flanged connections, non-lined interiors
Tanks	Size	Material	Description	
Tanks	54" x 60"	Painted CS	54" Dia x 60" side shell, Standard lap joint heads , welded construction , 3M scotchkote 134 epoxy liner, Epoxy coated liner, 80 psi rated	
Manways	12" x 16"	Painted CS	Elliptical style manway, One flat flush mount cover, EPDM gasket , 3M scotchkote 134 epoxy lined , Epoxy coated exterior	
Skids and Tank supports	4" Angle and 6" Channel	Painted CS	(4) Structural angle legs per tank designed to seismic conditions , tanks premounted to single structural steel channel base , epoxy coated exterior	