

## MANUAL SPIRAL SYSTEM SPECIFICATIONS: (S-850 Unit)

Updated: 11/29/08

### 1] Filter Pack

<b>Membrane:</b>	ESPA1-4040
<b>Membrane Surface Area:</b>	850sf (119m <sup>2</sup> ) (10ea 4"Dia x 40"L)
<b>Estimated Production:</b>	3-6gpm (at 5-10GFD)
<b>Maximum Operating Temperature:</b>	120 °F (49°C) (Options for up to 80°C)
<b>Allowable Feed Slurry pH Range:</b>	2-11 (Options for 1-14)
<b>O-ring Material:</b>	Ethylene Propylene
<b>Filter Pack Housing:</b>	Polyurethane Coated, Filament Wound, Epoxy FRP
<b>Wetted Ports:</b>	316L Stainless Steel
<b>Wetted Plastic End Plates:</b>	PVC Thermoplastic

### 2] Piping

<b>Maximum Pressure:</b>	450 psi (3100 kPa) (Options for up to 600psi)
<b>Pressure Piping:</b>	316L Stainless Steel Schedule 80
<b>Atmospheric Piping:</b>	CPVC Schedule 80
<b>Pipe Clamps:</b>	<i>Victaulic</i> Zero-Flex Style 07 EPDM
<b>Manual Valves:</b>	<i>Hayward</i> CPVC 3-Piece Ball Valves w/ Viton seats
<b>Manual Gate Valves:</b>	<i>JFW Valves GT-200</i> ASTM SW 1-Piece Valves w/ Teflon seats
<b>Ball Check Valves:</b>	<i>Hayward</i> CPVC Ball Check Valve
<b>Pneumatic Actuators:</b>	None
<b>Skid Piping Terminations:</b>	150lb 1 1/2" CPVC Flange EPDM
<b>Clean in Place Tank:</b>	20 Gallon Polypropylene w/ Base (19" ø x 28")

### 3] Electrical Specifications:

<b>Programmable Controller Type:</b>	None (Start/Stop signal from VSEP PLC)
<b>Touch Screen Display Type:</b>	None
<b>Enclosures:</b>	<i>Hoffman</i> NEMA 4 Powdercoat Finish 24x20x8
<b>Transformer:</b>	<i>Square D</i> 208/230/460:115 150VA
<b>Power Supply:</b>	<i>IDEC</i> 24VDC 7.5W
<b>Start, Stop, HOA Switches:</b>	<i>Allen Bradley</i> 220/120VAC
<b>Relays, &amp; Fuses:</b>	<i>Potter Brumfield</i> 15A 24VDC
<b>Pressure Indicators:</b>	<i>Ashcroft</i> Dial Gauge 0-30psi, 0-600psi
<b>Flow Indicator:</b>	<i>EZ View</i> Spring Loaded Rotameter 0-20gpm
<b>Temperature Indicator:</b>	<i>Ashcroft</i> Dial Gauge 0-150 degF

### 4] Pump Specifications:

<b>Feed Pump Type:</b>	<i>Grundfos</i> 316SS 22gpm Vertical Multi-stage Centrifugal
<b>Feed Pump Motor:</b>	<i>Grundfos</i> 10 HP 3500 rpm TEFC 460VAC, 30A, 3 Phase 60Hz
<b>Motor Speed Controller:</b>	<i>AC Tech</i> 30HP NEMA 4 (or Equal)

### 5] Pre-Screen Basket Strainer:

<b>Filter Housing Type:</b>	<i>Keystone</i> Water Filter
<b>Filter Cartridge:</b>	Polyester 50micron
<b>Capacity:</b>	25 GPM
<b>Filter Housing Material:</b>	Clear Styrene
<b>Elastomers (Seals):</b>	EPDM

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**6] Operating Site Conditions:**

<b>Equipment Rating:</b>	NEMA 4, Indoor/Outdoor protect from sunlight & rain.
<b>Ambient Temperature:</b>	5 - 37°C
<b>Storage Temperature:</b>	2 - 70°C (Protect Membranes from Freezing)
<b>Max Relative Humidity:</b>	<95%, non-condensing
<b>Elevation:</b>	3300 ft maximum without derating