

High Temperature VSEP Component Specifications

Updated: 5/22/09

1] Filter Pack

Membrane:	MF (Exact membrane to be determined upon testing)
Maximum Operating Temperature:	248 °F (120°C)
Allowable Feed Slurry pH Range:	2-11 (Options for 1-14)
O-ring Material:	Viton
Filter Pack Housing:	Vinyl Ester 8084 Derekane Fiberglass
Wetted Steel Trays:	304 Stainless Steel .018 Gauge (Option for 316SS)
Wetted Plastic End Plates:	Aluminum

2] Piping

Maximum Pressure:	150 psi (10 bar)
Pressure Piping:	316 Stainless Steel Schedule 80
Atmospheric Piping:	316 Stainless Steel Schedule 40
Special VSEP Concentrate Pipe:	1-1/4" Alloy 20 Stainless Steel .065 wall
Flexible Hoses:	Neoprene Lined Reinforced Eastman Flex Hose
Pipe Clamps:	<i>Victaulic</i> Zero-Flex Style 07 Viton
Manual Valves:	<i>FloTite</i> Series-300 316SS
Flow Control Valve:	<i>FloTite</i> Series-300 316SS 60 degree V-Ball <i>BLX</i> V100E positioner
Ball Check Valves:	JFL Swing Check 316ss
Pneumatic Actuators:	<i>Habonim</i> Compact2 Pneumatic Spring Return
Skid Piping Terminations:	150lb 1.5"/2" 316ss RF, Viton gaskets
Pneumatic Air Supply:	90lb Instrument Grade Air (3/8" connection)
Clean in Place Tank:	220 gal Carbon Steel Epoxy Coated

3] Vibration System

Motor:	<i>Baldor</i> CM7059T 460VAC, 3phase, 20HP, 3525 RPM
Motor Speed Controller:	<i>AC Tech</i> 20HP Aluminum Housing (or Equal)
Vibration Amplitude:	3/4 inch (peak to peak measured at the Filter Pack)
Frequency Range:	49.0 hz to 55.0 hz (Approximate)
Maximum Decibels:	<85
Bearing RPM:	2800 to 3100
Bearing Oil:	<i>Sullube</i> ~750 ml Compressor Oil
Bearing O-rings:	2-263 & 2-270 Buna

4] Electrical Specifications:

Controls Voltage:	220/120VAC, 1phase, 15A, 50/60Hz
Programmable Controller Type:	<i>Allen-Bradley</i> CompactLogix 1769
Touch Screen Display Type:	<i>Allen-Bradley</i> PanelView+ 1000
Enclosures:	<i>Hoffman</i> NEMA 7 Powdercoat Finish 48x30x10, 24x30x8
Pressure Sensors:	<i>Foxboro</i> IGP10-A22D1D1F
Pressure Seals:	<i>Foxboro</i> PSTAD-D33USSK2SAC1
Flow Tube:	<i>GPI</i> GFT-100-2HT 316ss Flanged Paddlewheel
Flow Transmitter:	<i>GPI</i> GX500-M A2 Transmitter
Flow Magnetic Pickup:	<i>GPI</i> 81002000 Pickup and Cable
Temperature Sensor:	<i>Foxboro</i> RTT15-T1EGQTXF-S3
Temperature Thermowell:	<i>Foxboro</i> TT-2CA202030
Level Sensor:	<i>Foxboro</i> IGP10-A22D1C1F
Pressure Seals:	<i>Foxboro</i> PSTAD-B33USSK2SAC1
Solenoid Valve:	<i>SMC</i> VV5Q21-20/VQ2101N 20 Port 24VDC
Enclosure Air Purge:	<i>Bebco</i> 1003-LPS-CI-YZ-VMR Z-type

Enclosure Air Vent:

Bebco EPV-2-SA-90

5] Pump Specifications:

Feed Pump Type:
Feed Pump Motor:
Motor Speed Controller:

Viking Gear Pump 316ss Teflon 10gpm
5HP Sew EuroDrive 1750 rpm TEFC 460VAC 3ph 18A
AC Tech 5 HP Aluminum Housing (or Equal)

6] Pre-Screen Basket Strainer:

Filter Housing Type (or equal):
Basket Strainer:
Capacity:
Filter Housing Material:
Elastomers (Seals):

NLR Custom Made
60 Mesh 316 SS
220 GPM
316L Stainless Steel
Viton

7] Operating Site Conditions:

Equipment Rating:
Ambient Temperature:
Storage Temperature:
Max Relative Humidity:
Elevation:

NEMA 7, Indoor/Outdoor protect from sunlight & rain.
5 - 37°C
2 - 70°C (Protect Filter Pack from Freezing)
<95%, non-condensing
3300 ft maximum without derating