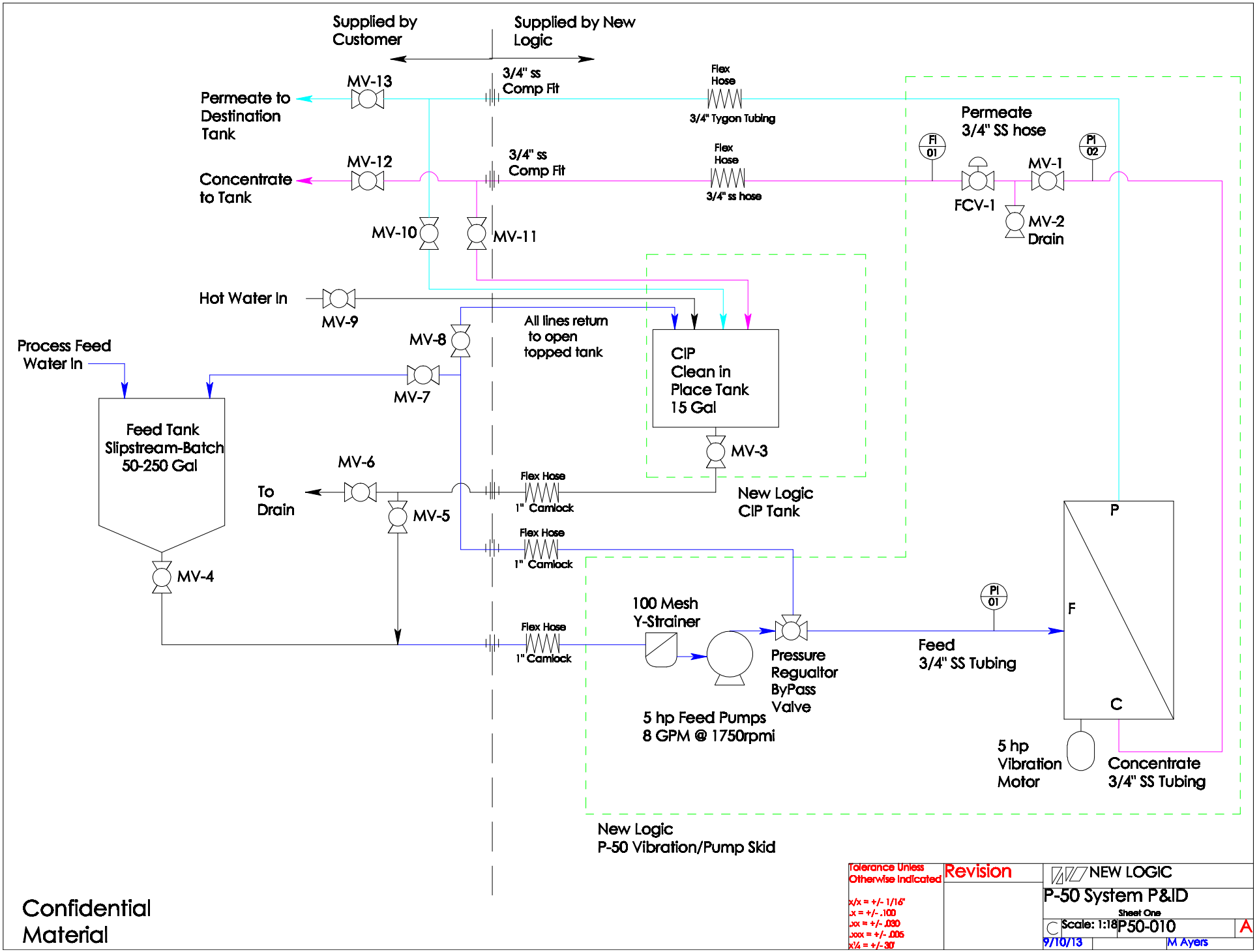
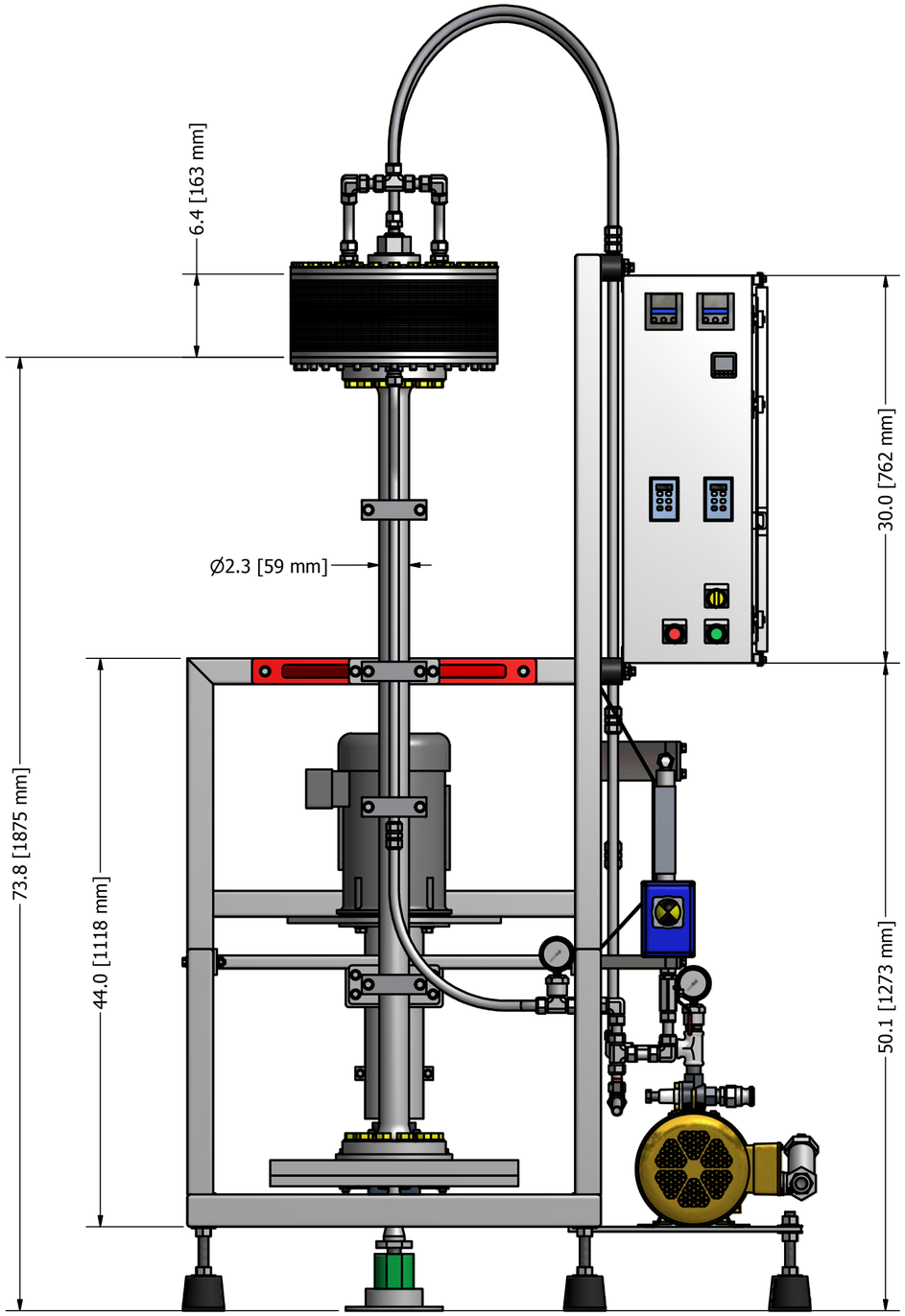


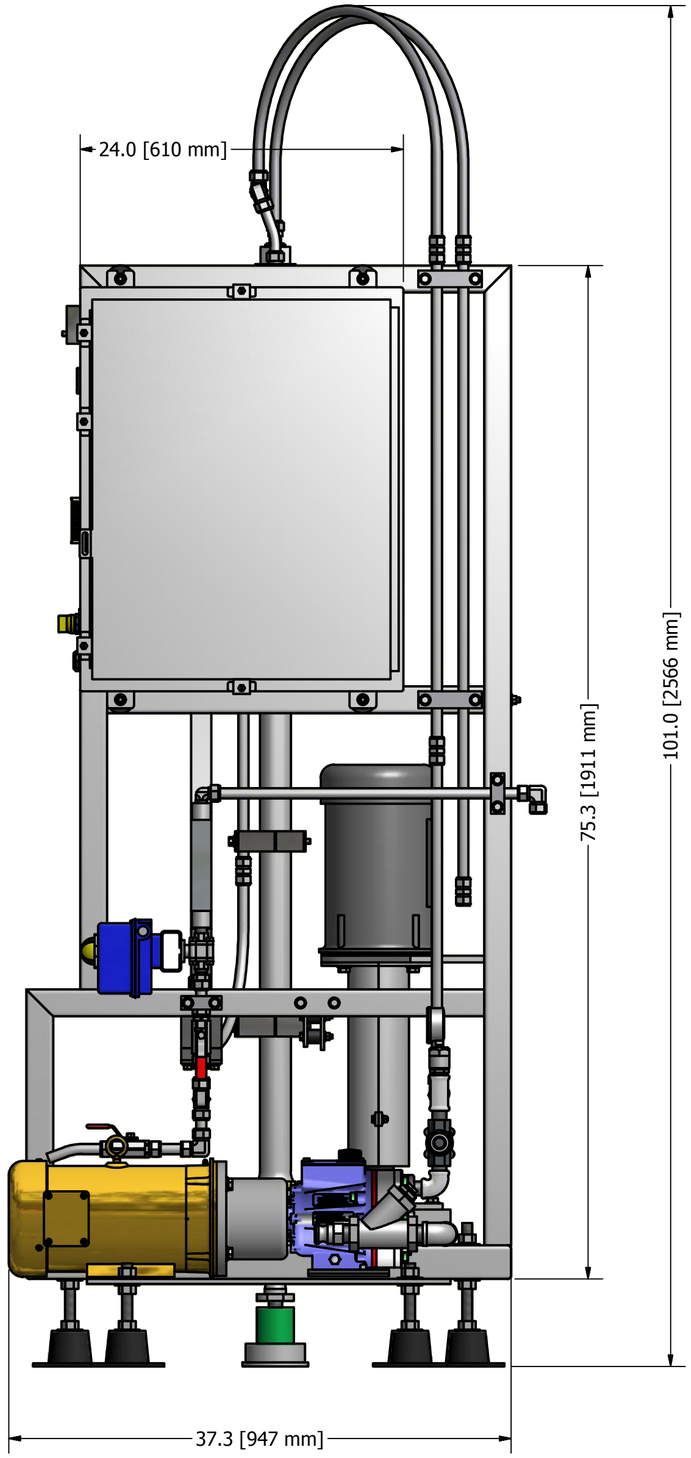
Confidential Material

Tolerance Unless Otherwise Indicated	Revision	NEW LOGIC
x/x = +/- 1/16"		P-50 System P&ID
.x = +/- .100		Sheet One
.xx = +/- .030		Scale: 1:18 P50-010 A
.xxx = +/- .005		9/10/13 M Ayers
x¼ = +/- 30'		

FRONT VIEW



SIDE VIEW



NOTES:
1. New Logic Research confidential material.
2. All dimensions are shown in inches [mm]& for references only.
3. Slight differences between drawings and actual system might be attributed to New Logic Research continuously evolving and improving its technology.

Series P50 VSEP System (60 Hz)

NEW LOGIC RESEARCH, INC.
1295 67th St. Emeryville, CA 94608 510.655.7305 510.655.7307 fax www.vsep.com

Pilot Testing
VSEP P-50 Machine Specifications 12/02/2013

Current operating Manual: P-50 Version 4.0

Operating Conditions:
Equipment Rating: Nema 4, Indoor-Outdoor protected from sunlight and rain.
Operating Ambient Temperature Limits: 0-40ºC
Storage Temperature: 0-40ºC
Relative Humidity: 90% or less, non-condensing
Elevation: 3300 ft. (1006 M), without derating.

Filter Pack:
Membrane Area: 50 sq. ft.
Hold Up Volume: Approx. 2.4 Gallons (9 liters)
Maximum Operating pressure: 600 psi (1000psi option available with system modifications)
Maximum Shear Rate: 150,000 Inverse Seconds
Wetted Materials: 316 Stainless Steel, EPDM or Viton

Vibration System:
Drive Bearings: MORSE SEALMASTER RFB 108TF
Vibration Motor: BALDOR Spec: 36A002S042G3, 5HP 3450RPM/60Hz, 460 VAC 3 phase
Vibration Motor Control: AC Tech (ESV402N02TXB)

Feed System:
Pump: HYDRA-CELL D10EKSGSNHMB: 8 GPM @ 1725 RPM
Motor: BALDOR CEM3615T, 5HP 1750 RPM, 460 VAC 3 phase
Pump Bypass Valve: WANNER C22AABBSSEF (Custom material available upon request)

Instruments:
Pressure Gauges: 1 on Process Outlet and 1 on Process Inlet WIKA 233.54
Flow Meter (Acrylic Tube Indicator): COLE-PARMER Model 32445-58
Timers: ATC Long Range Model 365 Timer
Control Valve at Process Outlet: FloTite 310SSFFFL15- 1/2"
Actuator: Indelac R Series Nema 4 Model R4BF03-2

Electrical Power Requirements: Standard Unit (With a 3HP Feed Pump Motor)
(Note: A 5HP Pump can be used but generally does not operate at more than 3 HP in this System)
Standard Voltage: 480 VAC 3 phase 'wye' Power
Normal Full Load Operating Current: 12.6 amps
Power Cord: 8 Ft long with a NEMA L15-30P plug
Required Receptacle: NEMA L15-30, 30 amp circuit recommended

System Size and Weight:
Overall Dimensions: 48" w x 36" d x 81" h
System Weight: 900lbs. (336 kg) approximate
***Custom systems (CSA, CE, Class I Div II, AS3000, etc…) are available on request**

VSEP... the leader in membrane separation technology

Utility Summary								New Logic Research	
VSEP System									
CLEANING WATER CONSUMPTION									
(Use Hot Water for cleaning water >300 uS/cm)									
	# /Day		Temp degC		Gallons/Day		GPM		M3/hr
VSEP									
Cleanings	1		50-60		80		0.06		0.0126
Intermittent need of additional cleaning or flush of filter pack	0.25		50-60		100		0.07		0.0158
System Water Totals					**System Totals**		**0.13**		**0.0284**
VSEP Supply Water at 50-60degC and ~7gpm									
VSEP Supply water at 20 psi to open CIP tank									
ELECTRICAL CONSUMPTION									
Based on 480VAC, 3 phase, 60hz Input									
FLA = Full Load Amps = Full Load Drive Output x 1.15x									
RLA = Running Load Amps = FLA x .65x									
VSEP 240 VAC Motors									
	# Motors	HP /ea	kW /ea	Amps /ea	FLA /ea	RLA /ea	Total kW	Total FLA	Total RLA
VSEP Drive Motor	1	3	2.3	8.8	10.1	6.6	2.3	10.1	6.6
VSEP Feed Pump	1	5	3.8	15.0	17.3	11.2	3.8	17.3	11.2
Totals	**2**						**6.1**	**27.4**	**17.8**

Note: These are estimates only based on very preliminary data. These calculations are subject to change and do not include equipment offskid of VSEP system