

New Logic  
P-50 Vibration/Pump Skid

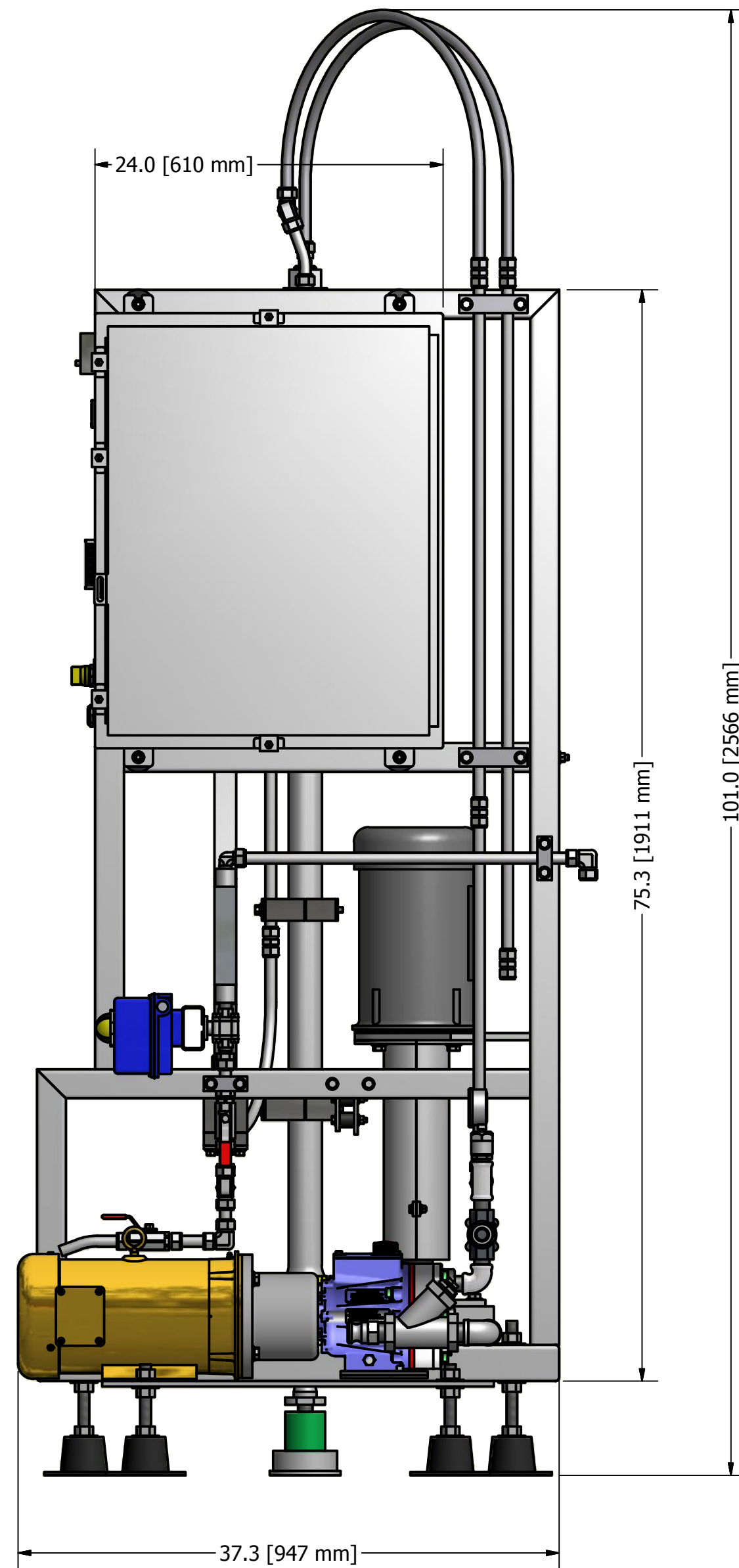
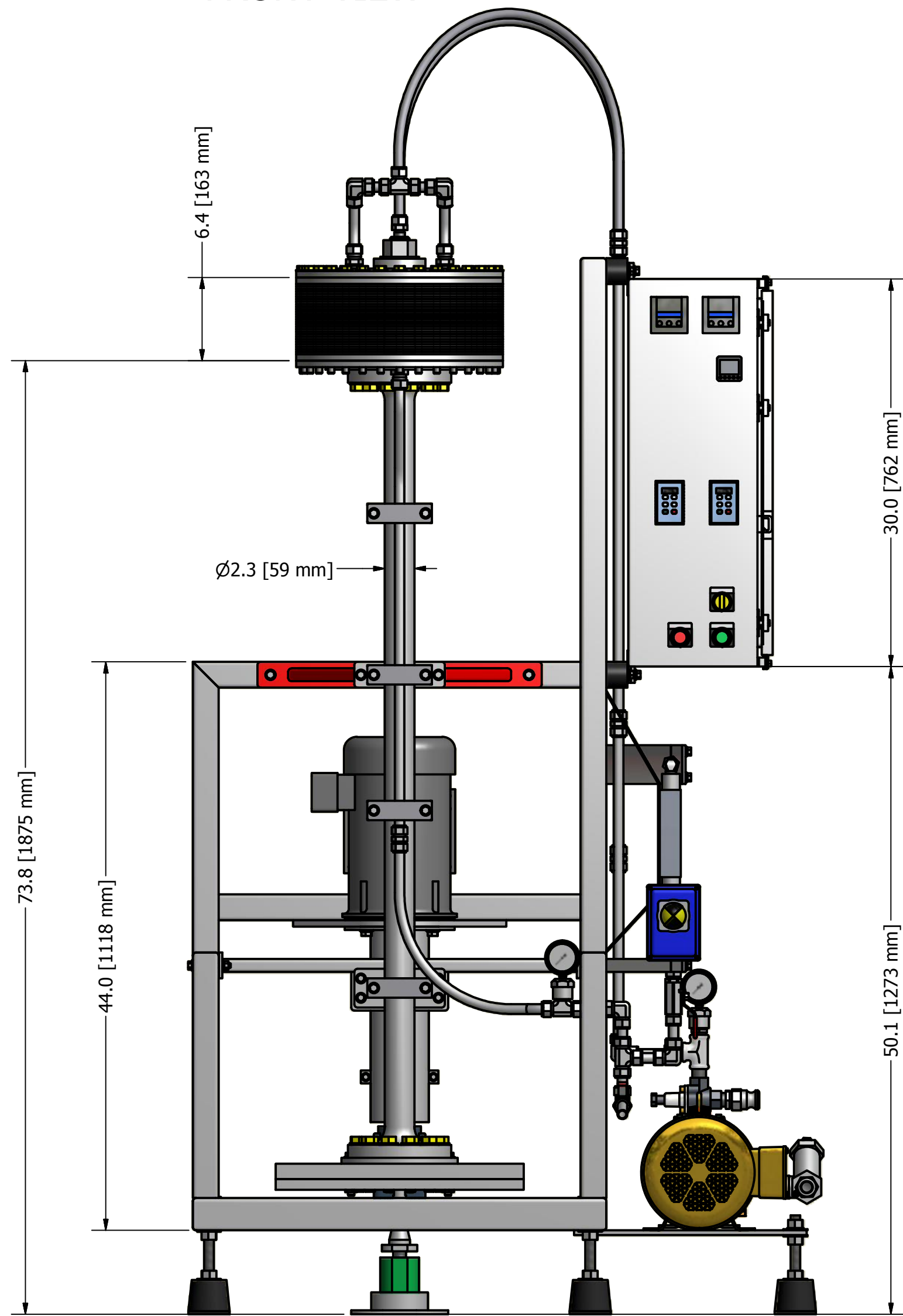
Confidential  
Material

Tolerance Unless Otherwise Indicated $x/x = +/- 1/16"$ $.x = +/- .100$ $.xx = +/- .030$ $.xxx = +/- .005$ $x/4 = +/- .30$	<b>Revision</b>	NEW LOGIC <b>P-50 System P&amp;ID</b> Sheet One Scale: 1:18 <b>P50-010</b>	<b>A</b>
		9/10/13 M Ayers	



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)



*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: 0-40°C  
Storage Temperature: 0-40°C  
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**

Utility Summary							New Logic Research			
VSEP System										
<b>CLEANING WATER CONSUMPTION</b>										
<b>(Use Hot Water for cleaning water &gt;300 uS/cm)</b>										
	# /Day		Temp degC		Gallons/Day		GPM		M3/hr	
<b>VSEP</b>										
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	
<b>System Water Totals</b>							<b>System Totals</b>		<b>0.13</b>	<b>0.0284</b>
VSEP Supply Water at 50-60degC and ~7gpm										
VSEP Supply water at 20 psi to open CIP tank										
<b>ELECTRICAL CONSUMPTION</b>										
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										
<b>VSEP 240 VAC Motors</b>										
	# 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	
<b>Totals</b>	<b>2</b>						<b>6.1</b>	<b>27.4</b>	<b>17.8</b>	
<p>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</p>										