

APPLICATION FOR OSHPD SPECIAL SEISMIC	OFFICE USE ONLY
CERTIFICATION PREAPPROVAL (OSP)	APPLICATION #: OSP – 0605
OSHPD Special Seismic Certification Preapproval (OSP)	
Type: 🛛 New 🗌 Renewal	
Manufacturer Information	
Manufacturer: Beacon Medaes (Atlas Copco Compressors, LLC)	
Manufacturer's Technical Representative:Tim Conner, Engineering N	Manager, Medical Gas Products
Mailing Address: 1059 Paragon Way, Rock Hill, SC 29730	
Telephone: 803-817-5600	nner@beaconmedaes.com
Product Information	MD
Product Name: LifeLine Lubricated Rotary Vane and LifeLine "Oil-Les	ss" Claw Medical Vacuum Systems
Product Type: Medical Vacuum Systems OSP-0605	- Cri
Product Model Number: See attached	
(List all unique product identification numbers and/or part numbers) Othy J Pila	nd Market and Andrew
General Description: Medical vacuum systems	
DATE: 10/20/2020	
Mounting Description: <u>Rigid base mounted with internal isolators.</u>	5
Applicant Information	DE.
A BUILDING	
	r
Contact Person: John Giuliano	
Mailing Address: <u>113 Main Street, Bloomingdale, NJ 07403</u>	
Telephone: (973) 838-1780 Email: john.g	iuliano@thevmcgroup.com
I hereby agree to reimburse the Office of Statewide Health I accordance with the California Administrative Code, 2016.	Planning and Development review fees in
$1 \land 0 \land 1$	
Signature of Applicant:	Date: 10/19/2020
Title: President Company Name: The VI	MC Group
	OSHPD
"Access to Safe, Quality Healthcare Environments that Meet California's Diverse and Dynamic Needs" STATE OF CALIFORNIA – HEALTH AND HUMAN SERVICES AGENCY	
OSH-FD-759 (REV 12/16/15)	Page 1 of 3



California Licensed Structural Engineer Responsible for the Engineering and Test Report(s)
Company Name:The VMC Group
Name: Kenneth Tarlow California License Number: SE-2851
Mailing Address:113 Main Street, Bloomingdale, NJ 07403
Telephone: _(973) 838-1780 Email: <u>ken.tarlow@thevmcgroup.com</u>
Supports and Attachments Preapproval
□ Supports and attachments are preapproved under OPM- (Separate application for OSHPD Preapproval of Manufacturer's Certification (OPM) of Supports and attachments is required) □ Supports and attachments are not preapproved Certification Method ICC-ES AC156 □ Other (Please Specify): ■ BY.Timothy J Piland
Testing Laboratory DATE: 10/20/2020
Company Name: DCL Labs
Contact Name:Josh Sailer, Laboratory Manager
Mailing Address:1315 Greg Street, Suite 109, Sparks, NV 89431
Telephone: (775) 358-5085 Email: josh@shaketest.com

"Access to Safe, Quality Healthcare Environments that Meet California's Diverse and Dynamic Needs"



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OFFICE OF STATEWIDE HEALTH PLANNING AND DEVELOPMENT FACILITIES DEVELOPMENT DIVISION

Seismic Parameters		
Design in accordance with ASCE 7-10 Chapter 13: 🖂 Yes 🔲 No		
Design Basis of Equipment or Components $(F_p/W_p) = 3.60$		
S_{DS} (Design spectral response acceleration at short period, g) =	1.60	
a _p (In-structure equipment or component amplification factor) =	2.5	
R _P (Equipment or component response modification factor) =	2.0	
Ω_0 (System overstrength factor) = <u>2.0</u>		
I _p (Importance factor) = 1.5		
z/h (Height factor ratio) = <u>1</u>		
Equipment or Component Natural Frequencies (Hz) = <u>See atta</u>	achment	
Overall dimensions and weight (or range thereof) =See atta	achment	
Equipment or Components @ grade designed in accordance with ASCE	7-10 Chapter 15: Yes	🖂 No
Design Basis of Equipment or Components (V/W) =		_
S_{DS} (Design spectral response acceleration at short period, g) =		
S _{D1} (Design spectral response acceleration at 1 second period,	g) =	
Ω_0 (System overstrength factor) = $\frac{1}{\text{By:Timothy J Pilar}}$	d	
C₄ (Deflection amplification factor) =		
I_p (Importance factor) = 1.5 DATE: 10/20/2020		
Height to Center of Gravit <mark>y above</mark> base =		
Equipment or Component Natural Frequencies (Hz) =	0	
Overall dimensions and weight (or range thereof) =	SE.	
Tank(s) designed in accordance with ASME BPVC, 2015: 🛛 Yes 🚺	No	
List of Attachments Supporting Special Seismic Certification		
Test Report(s) Drawings Calculations] Manufacturer's Catalog	2
Other(s) (Please Specify):		,
····	December 24, 0005	
OSHPD Approval (For Office Use Only) – Approval Expires on	December 31, 2025	
Signature:	Date: October 20, 202	0
Print Name:		
Special Seismic Certification Valid Up to: S _{DS} (g) = <u>1.60</u>		
Condition of Approval (if applicable):		
		OCHDD
"Access to Safe, Quality Healthcare Environments that Meet California's Diverse and Dynamic Needs"	AM_///M_AM	U JIII D
SH-FD-759 (REV 12/16/15)	Lak A. A. A	Page 3 of 3

STATE OF CALIFORNIA - HEALTH AND HUMAN SERVICES AGENCY OSH-FD-759 (REV 12/16/15)

Table 1 - Certified Components - Lubricated Rotary Vane

Manufacturer: Beacon Medaes, LLC

Certified Level: $S_{DS} = 1.60g$, z/h=1.0

Model Number	Description	Max	. Dimension	s (in)	Max. Weight	Mounting	Unit			
woder Number	odel Number Description Depth Width		Height	(lb)	Mounting	Offic				
SPC (Single Point Connection) Base Mount Systems										
VLS05X-XXXV-XXD	5 HP, SPC and Expandable SPC	Varies ¹	62	81 to 96	Varies ¹	Rigid Base Mount	Extrapolated			
VLS07X-XXXV-XXD	7.5 HP, SPC and Expandable SPC	Varies ¹	62	81 to 96	Varies ¹	Rigid Base Mount	Extrapolated			
VLS10T-240V-QCD	10 HP, SPC	66 0	D 67	96	3,480	Rigid Base Mount	UUT 5			
VLS10X-XXXV-XXD	10 HP, SPC and Expandable SPC	Varies ¹	79 to 79	81 to 97	Varies ¹	Rigid Base Mount	Interpolated			
VLS15X-XXXV-XXD	15 HP, SPC and Expandable SPC	Varies ¹	79 to 79	81 to 97	Varies ¹	Rigid Base Mount	Interpolated			
VLS20X-XXXV-XXD	20 HP, SPC and Expandable SPC	Varies ¹	79 to 79	81 to 97	Varies ¹	Rigid Base Mount	Interpolated			
VLS25X-XXXV-XXD	25 HP, SPC and Expandable SPC	Varies ¹	79 to 79	81 to 97	Varies ¹	Rigid Base Mount	Interpolated			
VLS25D-240V-QAD	25 HP, SPC	086 D_	06/79	97	5,710	Rigid Base Mount	UUT 9			
Notes:		- 1001-1	0000							

1. The dimensions and weights vary for the listed units because the number of pumps installed can vary from the number of pumps tested



Table 2 - Nomenclature Chart - Lubricated Vane

Certified Level: S_{DS} =1.60g, z/h=1.0

	Nomencl	ature: A B C D - E F - G	НJ
Variable	Definition	Allowable Value	Allowable Value Description
А	Technology	VL	Scroll Medical Air Compressor
В	System Type	S	Single Point Connection
		01	1.5 HP
		02	2 HP
		03	3 HP
		05	5 HP
С	HP	07	7.5 HP
		10	10 HP
		15	15 HP
		FOR COLE COL	20 HP
	NED	25	25 HP
	L.	OCHOD	Duplex
D	System Size	Y Y Y Y	Triplex
	A	OSP-Q605	Quadruplex
		030	30 Gallon
	BY:	Timoth 960 Pilan	d 60 Gallon
Е	Tank Size	080	80 Gallon
E	DA	TE: 10/202020	120 Gallon
		200	200 Gallon
	P	240	240 Gallon
F	Tank Orientation	H	Horizontal
F		V	Vertical
		BUILDING	Duplex Cotnrol Panel
G	Panel Size	Т	Triplex Control Panel
		Q	Quadruplex
		A	208V / 3 Ph / 60A
Н	Voltage	В	230V / 3 Ph / 60A
		С	460V / 3 Ph / 60A
J	Starting Method	D	Direct on Line

Table 3 - Certified Options - Rotary Vane

Certified Level: S_{DS} =1.60g, z/h=1.0

Allowable Value	Description	Unit
•	Technology	
VL	Lubricated Rotary Vane System	UUT 5, 9
	System Type	
S	Single Point Connection	UUT 5, 9
	HP	
01	1.5 HP	UUT 7
02	2 HP	Interpolated
03	3 HP	Interpolated
05	5 HP	Interpolated
07	7.5 HP	Interpolated
10	10 HP	UUT 5
15	15 HP	Interpolated
20	20 HP	Interpolated
25	COR25HPDE	UUT 9
	System Size	
D	Duplex	UUT 9
Т	Triplex	UUT 5
Q	Quadruplex	Extrapolated ¹
	Tank Size	
030	30 Gallon	UUT 7
060	60 Gallon	Interpolated
080	BY Tim 80 Gallon Piland	Interpolated
120	120 Gallon	Interpolated
200	200 Gallon	Interpolated
240	DATE: 1240 Gallon-UZU	UUT 5,9
	Tank Orientation	
V	Vertical	UUT 5, 9
	Panel Size	
D	Duplex Control Panel	UUT 7
Т	Triplex Control Panel	Interpolated
Q	Quadruplex	UUT 5, 9
	Voltage	
А	208V / 3 PH / 60A	UUT 9
В	230V / 3 PH / 60A	Interpolated
С	460V / 3 PH / 60A	UUT 5
	Starting Method	
D	Direct on Line	UUT 5, 9

Notes:

1. Within the confines of the tested options. Quadruplex consists of two duplex modeules.

Table 4 - Certified Subcomponents

Certified Level: S_{DS} =1.60g, z/h=1.0

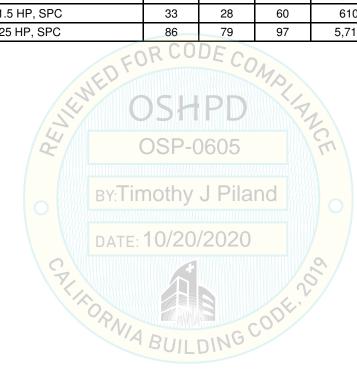
Subcomponent (Manufacturer)	Model Number	Description	Material	Unit
	RC0025	1.5 HP	Carbon Steel and Copper	UUT 7
	RC0040	2 HP	Carbon Steel and Copper	Interpolated
	RC0063	3 HP	Carbon Steel and Copper	Interpolated
	RC0101	5 HP	Carbon Steel and Copper	Interpolated
	RC0155	5 HP	Carbon Steel and Copper	Interpolated
Vacuum Pump (Busch)	RC0205	0 C (7/5 HP	Carbon Steel and Copper	Interpolated
	RC0305	10 HP COL	Carbon Steel and Copper	UUT 5
	RC0400	15 HP	Carbon Steel and Copper	Interpolated
	RC0502		Carbon Steel and Copper	Interpolated
	RC0630	25 HP		UUT 9
	4107653152	30 Gallon Vertical	Carbon Steel	UUT 7
	4107651105	S120 Gallon Vertical	Carbon Steel	Interpolated
Vertical Tank (MPV)	4107651104	200 Gallon Vertical	Carbon Steel and CopperCarbon SteelCarbon SteelPCBPCBPCBPCBPCBPCBPCBLCDLCD	Interpolated
	4107651100	240 Gallon Vertical		UUT 5, 9
	CSD362008	By Timoth NEMA Piland	Carbon Steel	UUT 7
	CSD423010	NEMA 4	Carbon Steel and Copper Carbon Steel PCB PC	Interpolated
Enclosure (Hoffman)	CSD483010	NEMA 4		Interpolated
	CSD522408	DATE: 10/20 _{NEMA4} 20	Carbon Steel	UUT 5
Power Supply (Lutze)	WRA/DRAN120	Power Supply	Copper	UUT 5
	4107651184	Pump Dryer 10 I/O	PCB	UUT 5
	4107651183	Pump Dryer 16 I/O	PCB	Interpolated
	4107651191	Master 19 I/O	PCB	UUT 5
Circuit Boards (Atlas Copco)	4107651180	Circuit Board 5.7 Display	PCB	UUT 5
	4107651181	Circuit Board 3.5 Display	PCB	UUT 5
	4107651542	5.7 Display	LCD	UUT 5
	4107651543	3.5 Display	LCD	UUT 5
Ethernet Switch (Phoenix)	SFN 5TX	Ethernet Switch	Copper	UUT 5

Table 5 - Tested Units

Manufacturer: Beacon Medaes, LLC

Certified Level: S_{DS} =1.60g, z/h=1.0

	Description	Max. Dimensions (in)			Max. Weight		11
Model Number	Description	Depth	Depth Width		h Width Height (Ib) Mounting	Unit	
VLS10T-240V-QCD	10 HP, SPC	66	67	96	3,480	Rigid Base Mount	UUT 5
VLV01D-030V-DCD	1.5 HP, SPC	33	28	60	610	Rigid Base Mount	UUT 7
VLS25D-240V-QAD	25 HP, SPC	86	79	97	5,710	Rigid Base Mount	UUT 9



UUT5

Unit Under Test Summary Sheet



Manufacturer: Atlas Copco Compressors LLC (Beacon Medaes)

Product Line: LifeLine Lubricated Rotary Vane and LifeLine "Oil-Less" Claw Medical Vacuum Systems

Model Number: VLS10T-240V-QCD

Product Construction Summary:

Powder-coated carbon steel frame

Options / Component Summary:

LifeLine Lubricated Rotary Vane Medical Vacuum Single Point Connection (SPC) Triplex System, 10 HP, 240 gallon receiver tank, vertical tank orientation, quadruplex control panel, 460V, direct on line starting method.

Note: The UUT was operational before and after shaking and was full of operating content during the tests. The structural integrity of the component attachment system and force-resisting systems was maintained.

			UUT F	roperties					
Operating Weight		Dim	ensions (inches	COD		Lowest N	Lowest Natural Frequency (H		
(lb)	Length	Wi	dth FOR	Height		Front-Back	Side-Side	Vertical	
3,480	66	6	57	9	96	6.5	7.3	13.5	
		L.S.	Seismic Te	st Paramet	ers	4			
Building Code	Test Criteria	Sds (g)	z/h	Ip	Aflx-H (g)	Arig-H (g)	Aflx-V (g)	Arig-V (g)	
CBC 2016	ICC-ES AC156	2.50	1.0 05	P1.5)6()5 4.00	3.00	1.67	0.67	
Unit Mounting Des	cription:		BY:Timo	thy J F	Piland	000			

Unit base-mounted to the DCL steel shake table interface plate with eight 1/2-inch diameter Grade 5 bolts. Bolts were spaced at approximately 33", 2", and 30" on center in length and 65" in width.

UUT7

Unit Under Test Summary Sheet



Manufacturer: Atlas Copco Compressors LLC (Beacon Medaes)

Product Line: LifeLine Lubricated Rotary Vane and LifeLine "Oil-Less" Claw Medical Vacuum Systems

Model Number: VLV01D-030V-DCD

Product Construction Summary:

Powder-coated carbon steel frame

Options / Component Summary:

LifeLine Lubricated Rotary Vane Medical Vacuum Vertical Duplex System, 1.5 HP, 30 gallon receiver tank, vertical tank orientation, duplex control panel, 460V, direct on line starting method.

Note: The UUT was operational before and after shaking and was full of operating content during the tests. The structural integrity of the component attachment system and force-resisting systems was maintained.

(lb)LengthWidthHeightFront-BackSide-SideVertica61033286026.526.029.5Seismic Test Parameters					roperties				
610 33 28 60 26.5 26.0 29.5 Seismic Test Parameters Building Code Test Criteria Sds (g) 2/h Ip Afix-H (g) Afix-V (g) Afig-V (g) CBC 2016 ICC-ES AC156 2.50 1.0 SPL5 5.4.00 3.00 1.67 0.67	Operating Weight		Dim	Lowest N	ency (Hz)				
Seismic Test Parameters Building Code Test Criteria Sds (g) 2/h Ip Afix-H (g) Afix-H (g) Afix-V (g) Arig-V (g) CBC 2016 ICC-ES AC156 2.50 1.0 PL5 5 4.00 3.00 1.67 0.67 Juit Mounting Description: DATE OF	(lb)	Length	Wi	idth FOR	He	eight	Front-Back	Side-Side	Vertical
Building Code Test Criteria Sds (g) z/h Ip Afix-H (g) Afix-H (g) Afix-V (g) Arig-V (g) CBC 2016 ICC-ES AC156 2.50 1.0 C P1.50 5 4.00 3.00 1.67 0.67 Unit Mounting Description: DATE OF	610	33		28		60	26.5	26.0	29.5
CBC 2016 ICC-ES AC156 2.50 1.0 SP1506 5.4.0 3.00 1.67 0.67 Unit Mounting Description: BY.Timothy J Piland Image: Comparison of the second of the bolt second of th				Seismic Tes	t Paramet	ers	1		
Unit Mounting Description:	Building Code	Test Criteria	Sds (g)	z/h	lp	Aflx-H (g)	Arig-H (g)	Aflx-V (g)	Arig-V (g
Unit base-mounted to the DCL steel shake table interface plate with four 1/2-inch diameter Grade 5 bolts spaced approximately 5	CBC 2016	ICC-ES AC156	2.50	1.0 OS	P1.5)6(95 4.00	3.00	1.67	0.67
Unit base-mounted to the DCL steel shake table interface plate with four 1/2-inch diameter Grade 5 bolts spaced approximately 5									
Unit base-mounted to the DCL steel shake table interface plate with four 1/2-inch diameter Grade 5 bolts spaced approximately 5	Unit Mounting Des	scription:		BY:Timot	hy J l	Piland			
Unit base-mounted to the DCL steel shake table interface plate with four 1/2-inch diameter Grade 5 bolts spaced approximately 5									
Unit base-mounted to the DCL steel shake table interface plate with four 1/2-inch diameter Grade 5 bolts spaced approximately 5			- WM		20/20	20			
Unit base-mounted to the DCL steel shake table interface plate with four 1/2-inch diameter Grade 5 bolts spaced approximately 5				DATA					
Unit base-mounted to the DCL steel shake table interface plate with four 1/2-inch diameter Grade 5 bolts spaced approximately 5			C T			· ·	5		
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Unit base-mounted to the DCL steel shake table interface plate with four 1/2-inch diameter Grade 5 bolts spaced approximately 3					1200				
Unit base-mounted to the DCL steel shake table interface plate with four 1/2-inch diameter Grade 5 bolts spaced approximately 3				BEACONMEDIC		12-2019-			
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	Unit hace mounter	d to the DCL stop	l chake table	interface plate	ith four 1	12 inch diamat	or Grada E halt	c chacad anar	ovimatoly 2
in leght and 27 in width on center.	unit base-mounted	u to the DCL stee						s spaced appr	oximately 3
				in leght and 27"	iii wiath o	n center.			

UUT9

Unit Under Test Summary Sheet



Manufacturer: Atlas Copco Compressors LLC (Beacon Medaes)

Product Line: LifeLine Lubricated Rotary Vane and LifeLine "Oil-Less" Claw Medical Vacuum Systems

Model Number: VLS25D-240V-QAD

Product Construction Summary:

Powder-coated carbon steel frame

Options / Component Summary:

LifeLine Lubricated Rotary Vane Medical Vacuum Single Point Connection (SPC) Duplex System, 25 HP, 240 gallon receiver tank, vertical tank orientation, quadruplex control panel, 208V, direct on line starting method.

Note: The UUT was operational before and after shaking and was full of operating content during the tests. The structural integrity of the component attachment system and force-resisting systems was maintained.

			UUI	Properties				
Operating Weight		Dim	ensions (inche	es)		Lowest N	latural Freque	ency (Hz)
(lb)	Length	Wi	dth FOI	K U U UHe	eight	Front-Back	Side-Side	Vertical
5,710	86	7	'9		97 0	5.5	4.8	12.5
		L.S	Seismic T	Test Paramet	ters	4		
Building Code	Test Criteria	Sds (g)	z/h		Aflx-H (g)	Arig-H (g)	Aflx-V (g)	Arig-V (g)
CBC 2016	ICC-ES AC156	1.60	1.0	SP1.5)6()5 2.56	1.92	1.07	0.43
Unit Mounting Des	crintion		BY:Time	othv J I	Piland			
Shirt Wouldting Des	scription.							
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		V/A	DATEOU	JZUZ	140			
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Unit base-mounted to the DCL steel shake table interface plate with eight 1/2-inch diameter Grade 5 bolts. Bolts were spaced at approximately 33", 8", and 42" on center in length and 77" in width.