



**DEPARTMENT OF HEALTH CARE ACCESS AND INFORMATION
FACILITIES DEVELOPMENT DIVISION**

**APPLICATION FOR HCAI SPECIAL SEISMIC
CERTIFICATION PREAPPROVAL (OSP)**

OFFICE USE ONLY

APPLICATION #: OSP-0447

HCAI Special Seismic Certification Preapproval (OSP)

Type: New Renewal

Manufacturer Information

Manufacturer: Amico Source

Manufacturer's Technical Representative: James Lewis

Mailing Address: 600 Prime Place, Hauppauge, NY 11788

Telephone: (631) 940-8559

Email: JLewis@amico.com

Product Information

Product Name: Medical Gas and Vacuum Systems

Product Type: Medical Air and Vacuum Systems

Product Model Number: See attachments

General Description: Painted carbon steel skids. Units contain air pumps, vacuum pumps, receiver tanks, controllers, dryers, filters and sensors. Control panel enclosures are painted carbon steel, NEMA 1/12.

Mounting Description: See Certified Product Tables, -

Tested Seismic Enhancements: Seismic enhancements made to the test units and/or modifications required to address anomalies during the tests shall be incorporated into the production units.

Applicant Information

Applicant Company Name: Dynamic Certification Laboratories

Contact Person: Kelly Laplace

Mailing Address: 1315 Greg Parkway #109, Sparks, NV 89431

Telephone: (775) 358-5085

Email: kelly@shaketest.com

Title: Business Manager





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California Licensed Structural Engineer Responsible for the Engineering and Test Report(s)

Company Name: THE VMC GROUP

Name: Kenneth Tarlow California License Number: S2851

Mailing Address: 980 9th Street, 16th Floor, Sacramento, CA 95814

Telephone: (832) 627-2214 Email: ken.tarlow@thevmcgroup.com

Certification Method

GR-63-Core ICC-ES AC156 IEEE 344 IEEE 693 NEBS 3

Other (Please Specify): _____

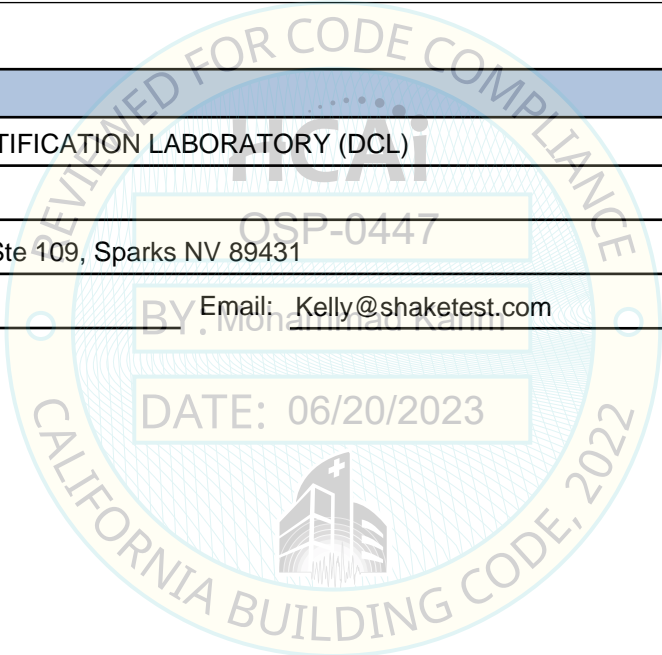
Testing Laboratory

Company Name: DYNAMIC CERTIFICATION LABORATORY (DCL)

Contact Person: Kelly Laplace

Mailing Address: 1315 Greg St., Ste 109, Sparks NV 89431

Telephone: (775) 358-5085 Email: Kelly@shaketest.com





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Seismic Parameters

Design Basis of Equipment or Components (F_p/W_p) = 1.5 (rigidly mounted control panels), 4.5 (all other units)

SDS (Design spectral response acceleration at short period, g) = 2.0

a_p (Amplification factor) = 2.5

R_p (Response modification factor) = 6.0 (standalone control panels, rigidly mounted); 2.0 (all other units)

Ω_0 (System overstrength factor) = 2.0

I_p (Importance factor) = 1.5

z/h (Height ratio factor) = 1

Natural frequencies (Hz) = See Attachment

Overall dimensions and weight = See Attachment

HCAI Approval (For Office Use Only) - Approval Expires on 06/20/2029

Date: 6/20/2023

Name: Mohammad Karim Title: Supervisor, Health Facilities

Special Seismic Certification Valid Up to: SDS (g) = 2.00 z/h = 1

Condition of Approval (if applicable): DATE: 06/20/2023

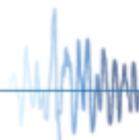
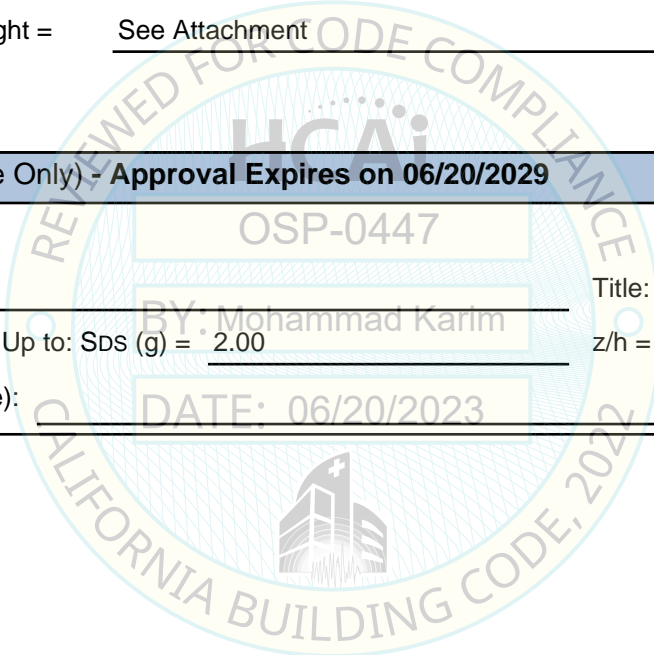


Table 1 - Special Seismic Certification

Certified Components - Modular Skid Mounted Scroll Air Compressors



DCL Project: 73815-2201

Manufacturer: Amico Source

Product Line: Medical Air and Vacuum Systems; Modular Skid Mounted Scroll Air Compressors

Certified Product Construction: Painted carbon steel frame. Control panel is painted carbon steel, NEMA 1/12.

Mounting Description: Units are flexible base mounted with neoprene pads. Standalone control panel UUT2D is rigid base mounted to manufacturer provided stand.

Certified Seismic Level: $S_{DS}=2.00g$, $z/h=1.0$

Model	HP	System	Total Number of Compressor Skids	Total Number of Compressors	Maximum Number of Vertically Stacked Compressors per Skid	Max. Dimensions (inches) ⁵			Max. Operating Weight (lb) ⁵	Unit
						Height	Width ⁶	Depth		
A-xxx-D-080P-SS-N-020-46063-TS	2	Duplex	1	2	2	73.0	67.0	74.0	1,370	UUT1 ¹
A-SCD-x-080P-SS-N-xxx-xxxxx-xx	2, 3, 5, 7.5, 10, 15, 20	Duplex - Hexaplex	1 - 3	2 - 6	2	73.0 - 99.0	67.0 - 230.0	74.0 - 109.5	1,370 - 8,279	Interpolated ^{3,4}
A-SCD-x-120P-SS-N-xxx-xxxxx-xx										
A-SCD-x-200P-SS-N-xxx-xxxxx-xx										
A-SCD-x-240P-SS-N-xxx-xxxxx-xx										
A-xxx-D-240P-SS-N-200-20863-TS	20	Duplex	1	2	2	99.0	138.0	109.5	4,960	UUT2A,B,C,D ^{2,3}

Notes:

- UUT1 tested with a 2 hp scroll pump in the top position, and a 1 hp reciprocating pump in the bottom position.
- UUT2 tested with a 20 hp scroll pump in the bottom position, and a 20 hp reciprocating pump in the top position.
- Hexaplex control panel, filters and largest HP pumps tested in duplex unit UUT2. Units are modular in nature, and UUT2 is representative of subcomponents in the largest hexaplex unit. Dimensions and operating weight listed are for UUT2A,B,C,D combined.
- Duplex systems consist of (1) two-high compressor skid, Triplex systems have (1) one-high and (1) two-high compressor skids, Quadruplex systems have (2) two-high compressor skids, Pentaplex systems have (1) one-high and (2) two-high compressor skids, and Hexaplex systems have (3) two-high compressor skids. All skids are structurally independent and flexibly connected.
- The max. dimensions and weights reflect the complete system as it would be installed in the field. The max. weight and dimension ranges start from the maximum weight and dimensions of the smallest or lightest skids of a duplex system to the heaviest and largest skids of a hexaplex system combined for the interpolated models.
- The width of extrapolated units expands beyond the largest tested unit width due to the arrangement of extra skids in the width direction.

Table 2 - Special Seismic Certification
Certified Components -
Modular Skid Mounted Reciprocating Air Compressors



DCL Project: 73815-2201

Manufacturer: Amico Source

Product Line: Medical Air and Vacuum Systems; Modular Skid Mounted Reciprocating Air Compressors

Certified Product Construction: Painted carbon steel frame. Control panel is painted carbon steel, NEMA 1/12.

Mounting Description: Units are flexible base mounted with neoprene pads. Standalone control panel UUT2D is rigid base mounted on manufacturer provided stand.

Certified Seismic Level: $S_{DS}=2.00g$, $z/h=1.0$

Model	HP	System	Total Number of Compressor Skids	Total Number of Compressors	Maximum Number of Vertically Stacked Compressors per Skid	Max. Dimensions (inches) ⁵			Max. Operating Weight (lb) ⁵	Unit
						Height	Width ⁶	Depth		
A-xxx-D-080P-SS-N-010-46063-TS	1	Duplex	1	2	2	73.0	67.0	74.0	1,370	UUT1 ¹
A-RED-D-080P-SS-N-xxx-xxxx-xx	1, 2, 3, 5, 7.5, 10, 15, 20	Duplex - Hexaplex	1 - 3	2 - 6	2	73.0 - 99.0	67.0 - 230.0	74.0 - 109.5	1,370 - 8,317	Interpolated ^{3,4}
A-RED-D-120P-SS-N-xxx-xxxx-xx										
A-RED-D-200P-SS-N-xxx-xxxx-xx										
A-RED-x-240P-SS-N-xxx-xxxx-xx										
A-xxx-D-240P-SS-N-200-20863-TS	20	Duplex	1	2	2	99.0	138.0	109.5	4,960	UUT2A,B,C,D ^{2,3}

Notes:

1. UUT1 tested with a 2 hp scroll pump in the top position, and a 1 hp reciprocating pump in the bottom position.
2. UUT2 tested with a 20 hp scroll pump in the bottom position, and a 20 hp reciprocating pump in the top position.
3. Hexaplex control panel, filters and largest HP pumps tested in duplex unit UUT2. Units are modular in nature, and UUT2 is representative of subcomponents in the largest hexaplex unit. Dimensions and operating weight listed are for UUT2A,B,C,D combined.
4. Duplex systems consist of (1) two-high compressor skid, Triplex systems have (1) one-high and (1) two-high compressor skids, Quadruplex systems have (2) two-high compressor skids, Pentaplex systems have (1) one-high and (2) two-high compressor skids, and Hexaplex systems have (3) two-high compressor skids. All skids are structurally independent and flexibly connected.
5. The max. dimensions and weights reflect the complete system as it would be installed in the field. The max. weight and dimension ranges start from the maximum weight and dimensions of the smallest or lightest skids of a duplex system to the heaviest and largest skids of a hexaplex system combined for the interpolated models.
6. The width of extrapolated units expands beyond the largest tested unit width due to the arrangement of extra skids in the width direction.

Table 3 - Special Seismic Certification

Certified Options - Air Systems



DCL Project: 73815-2201

Manufacturer: Amico Source

Product Line: Medical Air and Vacuum Systems; Air Compressors

Product Construction: Painted carbon steel frames, painted carbon steel enclosures, NEMA 1/12

Mounting Description: Units are flexible base mounted with neoprene pads. Standalone control panels are rigidly mounted to wall or manufacturer-provided stand.

Amico Source Air System Model Chart

A-B-C-D-E-F-G-H-I-J

Variable	Definition	Allowable Value	Allowable Value Description	Unit
A	Air Compressor or Vacuum	A	Air	UUT1,2
B	Technology	SCD	Scroll Medical Air Compressor	UUT1,2
		RED	Reciprocating Medical Air Compressor	UUT1,2
C	System Size	D	Duplex	UUT1,2
		T	Triplex	Extrapolated ¹
		Q	Quadruplex	Extrapolated ¹
		P	Pentaplex	Extrapolated ¹
		H	Hexaplex	Extrapolated ¹
D	Tank Size	080P	80 Gallon	UUT1
		120P	120 Gallon	Interpolated
		200P	200 Gallon	Interpolated
		240P	240 Gallon	UUT2
E	Configuration	SS	Modular Skid Mounted	UUT1,2
F	Standard	N	NFPA	UUT1,2
G ²	HP	010	1 HP	UUT1
		011	1 HP	Same as UUT1
		020	2 HP	UUT1
		021	2 HP	Interpolated
		030	3 HP	Interpolated
		031	3 HP	Interpolated
		050	5HP	Interpolated
		051	5 HP	Interpolated
		075	7.5HP	Interpolated
		076	7.5 HP	Interpolated
		100	10 HP	Interpolated
		101	10 HP	Interpolated
		150	15 HP	Interpolated
		151	15 HP	Interpolated
		200	20 HP	UUT2
201	20 HP	Same as UUT2		
H	Power	20863	208/3/60	UUT2
		23063	230/3/60	Interpolated
		46063	460/3/60	UUT1
I	Component	T	Hitachi	UUT1,2
		S	Touch Screen	UUT1,2

Notes:

- Hexaplex control panel, filters and largest HP pumps tested in duplex unit UUT2. Units are modular in nature, and UUT2 subcomponents are representative of subcomponents in the largest hexaplex units.
- Allowable values for the "G" variable ending in 1 or 6 are high-pressure models. The only difference between the high-pressure and standard-pressure models is the coupling size. The unit construction, weight, dimensions, and subcomponents remain identical to the tested standard-pressure systems.

**Table 4 - Special Seismic Certification
Certified Components -
Vertical Tank Mounted Vacuum Pumps**



DCL Project: 73815-2201

Manufacturer: Amico Source

Product Line: Medical Air and Vacuum Systems; Vertical Tank Mounted Vacuum Pumps

Certified Product Construction: Painted carbon steel frame. Control panel is painted carbon steel, NEMA 1/12.

Mounting Description: Units are flexible base mounted with neoprene pads.

Certified Seismic Level: $S_{DS}=2.00g$, $z/h=1.0$

Model	HP	System	Max. Dimensions (inches)			Max. Operating Weight (lb)	Unit
			Height	Width	Depth		
Vacuum System - Claw							
V-CCD-D-030P-TS-N-xxx-xxxx-xxMxxx	2	Duplex	89.0	49.0	47.0	1,040	Extrapolated
V-xxx-D-060P-TS-N-xxx-46063-xxMxSx	2		89.0	49.0	47.0	1,040	UUT3 ¹
V-CCD-D-060P-TS-N-xxx-xxxx-xxMxxx	2, 3, 4, 5.4		85.0 - 89.0	50.0	48.5	1,040 - 1,110	Interpolated
V-CCD-D-120P-TS-N-xxx-xxxx-xxMxxx			85.0	50.0	48.5		
V-xxx-D-120P-TS-N-xxx-20863-xxMxSx			5.4	85.0	50.0		
Vacuum System - Rotary Lubricated							
V-RVL-D-030P-TS-N-xxx-xxxx-xxMxxx	1	Duplex	89.0	49.0	47.0	1,040	Extrapolated
V-xxx-D-060P-TS-N-xxx-46063-xxMxSx	1		89.0	49.0	47.0	1,040	UUT3 ¹
V-RVL-D-060P-TS-N-xxx-xxxx-xxMxxx	1, 1.5, 2, 3, 5, 7.5		85.0 - 89.0	47.0 - 49.0	47.0 - 64.0	1,430	Interpolated
V-RVL-D-080P-TS-N-xxx-xxxx-xxMxxx			Interpolated				
V-xxx-D-120P-TS-N-xxx-20863-xxMxSx			7.5	85.0	47.0		64.0
Vacuum System - Rotary Dry							
V-xxx-D-120P-TS-N-xxx-20863-xxMxSx	0.5	Duplex	85.0	50.0	48.5	1,110	UUT5 ³
V-RVD-D-030P-TS-N-xxx-xxxx-xxMxxx	0.5, 0.75, 1.2, 1.7, 3, 4, 5.4, 7.4		85.0	47.0 - 50.0	48.5 - 64.0	1,430	Extrapolated ⁴
V-RVD-D-060P-TS-N-xxx-xxxx-xxMxxx							
V-RVD-D-080P-TS-N-xxx-xxxx-xxMxxx							
V-RVD-D-120P-TS-N-xxx-xxxx-xxMxxx							
V-xxx-D-120P-TS-N-xxx-20863-xxMxSx	7.4	85.0	47.0	64.0	1,430	UUT4 ²	

1. UUT3 tested with 1 hp rotary lubricated pump and 2 hp claw pump.
2. UUT4 tested with 7.5 hp rotary lubricated pump and 7.4 hp rotary dry pump.
3. UUT5 tested with 5.4 hp claw pump and 0.5 hp rotary dry pump.
4. 60 gallon receiver tank tested in UUT3.

**Table 5 - Special Seismic Certification
Certified Components -
Horizontal Tank Mounted Vacuum Pumps**



DCL Project: 73815-2201

Manufacturer: Amico Source

Product Line: Medical Air and Vacuum Systems; Horizontal Tank Mounted Vacuum Pumps

Certified Product Construction: Painted carbon steel frame. Control panel is painted carbon steel, NEMA 1/12.

Mounting Description: Units are flexible base mounted with neoprene pads.

Certified Seismic Level: $S_{ps}=2.00g$, $z/h=1.0$

Vacuum System - Claw							
Model	HP	System	Max. Dimensions (inches)			Max. Operating Weight (lb)	Unit
			Height	Width	Depth		
V-xxx-D-060P-TH-N-xxx-46063-xxMxSx	2	Duplex	62.0	39.0	70.0	960	UUT6 ¹
V-CCD-D-060P-TH-N-xxx-xxxxx-xxMxxx	2, 3, 4, 5.4, 6.4, 7.5		62.0 - 75.0	39.0 - 46.5	70.0 - 97.0	960 - 2,040	Interpolated
V-CCD-D-080P-TH-N-xxx-xxxxx-xxMxxx							
V-CCD-D-120P-TH-N-xxx-xxxxx-xxMxxx							
V-CCD-D-200P-TH-N-xxx-xxxxx-xxMxxx							
V-CCD-D-240P-TH-N-xxx-xxxxx-xxMxxx	7.5		75.0	46.5	97.0	2,040	UUT7 ²
V-xxx-D-240P-TH-N-xxx-20863-xxMxSx	7.5	75.0	46.5	97.0	2,040	UUT7 ²	
Vacuum System - Rotary Lubricated							
V-xxx-D-060P-TH-N-xxx-46063-xxMxSx	1	Duplex	62.0	39.0	70.0	960	UUT6 ¹
V-RVL-D-060P-TH-N-xxx-xxxxx-xxMxxx	1, 1.5, 2, 3, 5, 7.5, 10		62.0 - 75.0	39.0 - 46.5	70.0 - 97.0	960 - 2,040	Interpolated
V-RVL-D-080P-TH-N-xxx-xxxxx-xxMxxx							
V-RVL-D-120P-TH-N-xxx-xxxxx-xxMxxx							
V-RVL-D-200P-TH-N-xxx-xxxxx-xxMxxx							
V-RVL-D-240P-TH-N-xxx-xxxxx-xxMxxx	10		75.0	46.5	97.0	2,040	UUT7 ²
V-xxx-D-240P-TH-N-xxx-20863-xxMxSx	10	75.0	46.5	97.0	2,040	UUT7 ²	
Vacuum System - Rotary Dry							
V-xxx-D-120P-TH-N-xxx-46063-xxxxSx	0.5, 7.5	Duplex	63.0	50.0	86.0	1,270	UUT8 ³
V-RVD-D-060P-TH-N-xxx-xxxxx-xxxxxx	0.5, 0.75, 1.2, 1.7, 3, 4, 5.4, 7.4, 7.5, 8.9, 10.7, 12.1		63.0 - 77.0	50.0 - 55.0	86.0 - 100.0	1,270 - 2,250	Extrapolated ⁵
V-RVD-D-080P-TH-N-xxx-xxxxx-xxxxxx							
V-RVD-D-120P-TH-N-xxx-xxxxx-xxxxxx							
V-RVD-D-200P-TH-N-xxx-xxxxx-xxxxxx	0.5, 0.75, 1.2, 1.7, 3, 4, 5.4, 7.4, 7.5, 8.9, 10.7, 12.1		77.0	55.0	100.0	2,250	Interpolated
V-RVD-D-240P-TH-N-xxx-xxxxx-xxxxxx			7.4, 12.1	77.0	55.0	100.0	2,250
V-xxx-D-240P-TH-N-xxx-20863-xxxxSx	7.4, 12.1		77.0	55.0	100.0	2,250	UUT9 ⁴
V-RVD-D-240P-TH-N-xxx-xxxxx-xxxxxx	12.1	77.0	55.0	100.0	2,475	Extrapolated	

Notes:

1. UUT6 tested with 2 hp claw pump and 1 hp rotary lubricated pump.
2. UUT7 tested with 7.5 hp claw pump and 10 hp rotary lubricated pump.
3. UUT8 tested with one 0.5 hp rotary dry Busch pump and one 7.5 hp rotary dry Becker pump.
4. UUT9 tested with one 7.4 hp rotary dry Busch pump and one 12.1 hp rotary dry Becker pump.
5. 60 gallon receiver tank tested in UUT6.

**Table 6 - Special Seismic Certification
Certified Components -
Modular Skid Mounted Claw Vacuum Pumps**



DCL Project: 73815-2201

Manufacturer: Amico Source

Product Line: Medical Air and Vacuum Systems; Modular Skid Mounted Claw Vacuum Pumps

Certified Product Construction: Painted carbon steel frame. Control panel is painted carbon steel, NEMA 1/12.

Mounting Description: Units are flexible base mounted with neoprene pads.

Certified Seismic Level: $S_{DS}=2.00g$, $z/h=1.0$

Model	HP	System	Total Number of Pump Skids	Total Number of Pumps	Maximum Number of Vertically Stacked Pumps per Skid	Max. Dimensions (inches) ⁵			Max. Operating Weight (lb) ⁵	Unit
						Height	Width ⁶	Depth		
V-CCD-x-080P-SS-N-xxx-xxxx-xxMxxW	2, 3, 4, 5.4, 6.4, 7.5	Duplex - Hexaplex	1 - 2	2 - 6	3	99.0	67.0 - 149.0	70.5	1,686 - 5,672	Extrapolated ³
V-CCD-x-120P-SS-N-xxx-xxxx-xxMxxW										
V-CCD-x-200P-SS-N-xxx-xxxx-xxMxxW										
V-CCD-x-240P-SS-N-xxx-xxxx-xxMxxW										
V-CCD-T-080P-SS-N-xxx-46063-xxMVxW	2, 15	Triplex	1	3	3	99.0	73.0	70.5	3,670	UUT11 ²
V-CCD-x-080P-SS-N-xxx-xxxx-xxMxxW	10, 15	Duplex - Hexaplex	1 - 3	2 - 6	2	96.0 - 99.0	71.0 - 149.0	85.0	2,307 - 7,148	Extrapolated ⁴
V-CCD-x-120P-SS-N-xxx-xxxx-xxMxxW										
V-CCD-x-200P-SS-N-xxx-xxxx-xxMxxW										
V-CCD-x-240P-SS-N-xxx-xxxx-xxMxxW										
V-CCD-D-240P-SS-N-150-20863-xxMVxW	15	Duplex	1	2	2	96.0 ¹	73.0	85.0	3,920 ¹	UUT10 ¹

- Notes:
- Units are modular in nature, and UUT10 is representative of subcomponents in the largest hexaplex unit. Hexaplex control panel is standalone and was tested in UUT16. Maximum dimensions and weight for UUT10 listed above includes standalone hexaplex control panel tested in UUT16.
 - UUT11 tested with a 15 hp claw pump in the top and center positions, and a 2 hp claw pump in the bottom position.
 - Duplex systems consist of (1) two-high pump skid, Triplex systems have (1) three-high pump skid, Quadruplex systems have (1) one-high and (1) three-high pump skids, Pentaplex systems have (1) two-high and (1) three-high pump skids, and Hexaplex systems have (2) three-high pump skids if the hp rating of the pumps is less than or equal to 7.5 hp. All skids are structurally independent and flexibly connected.
 - Duplex systems consist of (1) two-high pump skid, Triplex systems have (1) two-high and (1) one-high pump skid, Quadruplex systems have (2) two-high pump skids, Pentaplex systems have (1) one-high and (2) two-high pump skids, and Hexaplex systems have (3) two-high pump skids if the pump hp rating is 10 hp or greater. All skids are structurally independent and flexibly connected.
 - The max. dimensions and weights reflect the complete system as it would be installed in the field. The max. weight and dimension ranges start from the maximum weight and dimensions of the smallest or lightest skids of a duplex system to the heaviest and largest skids of a hexaplex system combined for the extrapolated models.
 - The width of extrapolated units expands beyond the largest tested unit width due to the arrangement of extra modular skids in the width direction.

Table 7 - Special Seismic Certification

**Certified Components -
Modular Skid Mounted Lubricated Rotary Vane Vacuum Pumps**



DCL Project: 73815-2201

Manufacturer: Amico Source

Product Line: Medical Air and Vacuum Systems; Modular Skid Mounted Lubricated Rotary Vane Vacuum Pumps

Certified Product Construction: Painted carbon steel frame. Control panel is painted carbon steel, NEMA 1/12.

Mounting Description: Units are flexible base mounted with neoprene pads.

Certified Seismic Level: $S_{DS}=2.00g$, $z/h=1.0$

Model	HP	System	Total Number of Pump Skids	Total Number of Pumps	Maximum Number of Vertically Stacked Pumps per Skid	Max. Dimensions (inches) ⁵			Max. Operating Weight (lb) ⁵	Unit
						Height	Width ⁸	Depth		
V-RVL-x-060P-SS-N-xxx-xxxx-xxxxSx	1, 1.5, 2, 3, 5, 7.5, 10	Duplex - Hexaplex	1 - 2	2 - 6	3	93.0	67.0 - 149.0	55.0	767 - 5,966	Extrapolated ³
V-RVL-x-080P-SS-N-xxx-xxxx-xxxxSx										
V-RVL-x-120P-SS-N-xxx-xxxx-xxxxSx										
V-RVL-x-200P-SS-N-xxx-xxxx-xxxxSx										
V-RVL-x-240P-SS-N-xxx-xxxx-xxxxSx										
V-xxx-T-060P-SS-N-xxx-46063-xxxxSx	10	Triplex	1	3	3	93.0	67.0	55.0	3,194 ⁷	UUT14 ²
V-RVL-x-060P-SS-N-xxx-xxxx-xxxxSx	10, 15, 20, 25	Duplex - Hexaplex	1 - 3	2 - 6	2	99.0	67.0 - 184.0	79.5	1,904 - 12,056	Extrapolated ⁴
V-RVL-x-080P-SS-N-xxx-xxxx-xxxxSx										
V-RVL-x-120P-SS-N-xxx-xxxx-xxxxSx										
V-RVL-x-200P-SS-N-xxx-xxxx-xxxxSx										
V-RVL-x-240P-SS-N-xxx-xxxx-xxxxSx										
V-xxx-D-240P-SS-N-xxx-20863-xxxxSW	25	Duplex	1	2	2	99.0	94.3	79.5	4,637 ⁷	UUT12 ^{1,6}

Notes:

- UUT12 tested with a 25 hp rotary lubricated Busch pump in the top position, and a 25 hp rotary dry Becker pump in the bottom position.
- UUT14 tested with a 10 hp rotary lubricated Busch pump in the top position, a 7.5 hp rotary dry Becker pump in the middle position and a 7.4 hp rotary dry Busch pump in the bottom position.
- Duplex systems consist of (1) two-high pump skid, Triplex systems have (1) three-high pump skid, Quadruplex systems have (1) one-high and (1) three-high pump skids, Pentaplex systems have (1) two-high and (1) three-high pump skids, and Hexaplex systems have (2) three-high pump skids if the hp rating of the pumps is less than or equal to 10 hp. All skids are structurally independent and flexibly connected.
- Duplex systems consist of (1) two-high pump skid, Triplex systems have (1) two-high and (1) one-high pump skid, Quadruplex systems have (2) two-high pump skids, Pentaplex systems have (1) one-high and (2) two-high pump skids, and Hexaplex systems have (3) two-high pump skids if the pump hp rating is 10 hp or greater. All skids are structurally independent and flexibly connected.
- The max. dimensions and weights reflect the complete system as it would be installed in the field. The max. weight and dimension ranges start from the maximum weight and dimensions of the smallest or lightest skids of a duplex system to the heaviest and largest skids of a hexaplex system combined for the extrapolated models.
- Hexaplex control panel, filters and largest HP pumps tested in duplex unit UUT12. Units are modular in nature, and UUT12 is representative of subcomponents in the largest hexaplex unit.
- Maximum operating weight listed for UUT12 and UUT14 are for heaviest pumps (weight for UUT12 includes separate skid-mounted control panel, as tested in UUT16).
- The width of extrapolated units expands beyond the largest tested unit width due to the arrangement of extra modular skids in the width direction.

Table 8 - Special Seismic Certification
Certified Components -
Modular Skid Mounted Dry Rotary Vane Vacuum Pumps



DCL Project: 73815-2201

Manufacturer: Amico Source

Product Line: Medical Air and Vacuum Systems; Modular Skid Mounted Dry Rotary Vane Vacuum Pumps

Certified Product Construction: Painted carbon steel frame. Control panel is painted carbon steel, NEMA 1/12.

Mounting Description: Units are flexible base mounted with neoprene pads.

Certified Seismic Level: $S_{Ds}=2.00g$, $z/h=1.0$

Model	HP	System	Total Number of Pump Skids	Total Number of Pumps	Maximum Number of Vertically Stacked Pumps per Skid	Max. Dimensions (inches) ⁶			Max. Operating Weight (lb) ⁶	Unit
						Height	Width ⁹	Depth		
V-RVD-x-060P-SS-N-xxx-xxxxx-xxxxxx	0.5, 0.75, 1.2, 1.7, 3, 4, 5.4, 7.4, 7.5	Duplex - Hexaplex	1 - 2	2 - 6	3	93.0	67.0 - 146.0	55.0	771 - 3,936	Extrapolated ⁴
V-RVD-x-080P-SS-N-xxx-xxxxx-xxxxxx										
V-RVD-x-120P-SS-N-xxx-xxxxx-xxxxxx										
V-RVD-x-200P-SS-N-xxx-xxxxx-xxxxxx										
V-RVD-x-240P-SS-N-xxx-xxxxx-xxxxxx										
V-xxx-T-060P-SS-N-xxx-46063-xxxxSx	7.4, 7.5	Triplex	1	3	3	93.0	67.0	55.0	2,626 ⁸	UUT14 ³
V-xxx-D-240P-SS-N-xxx-20863-xxMxSW	0.5, 7.4	Duplex	1	2	2	103.0	67.0	55.0	1,460	UUT13 ²
V-RVD-x-060P-SS-N-xxx-xxxxx-xxxxxW	8.9, 10.7, 12.1, 17.7, 25	Duplex - Hexaplex	1 - 3	2 - 6	2	93.0 - 103.0	67.0 - 149.0	79.5	1,584 - 8,486	Extrapolated ^{1,5}
V-RVD-x-080P-SS-N-xxx-xxxxx-xxxxxW										
V-RVD-x-120P-SS-N-xxx-xxxxx-xxxxxW										
V-RVD-x-200P-SS-N-xxx-xxxxx-xxxxxW										
V-RVD-x-240P-SS-N-xxx-xxxxx-xxxxxW										
V-xxx-D-240P-SS-N-xxx-20863-xxxxSW	25	Duplex	1	2	2	99.0	94.3	79.5	4,200 ⁸	UUT12 ^{1,7}

- Notes:
- UUT12 tested with a 25 hp rotary lubricated Busch pump in the top position, and a 25 hp rotary dry Becker pump in the bottom position.
 - UUT13 tested with a 0.5 hp rotary dry Busch pump in the bottom position, and a 7.4 hp rotary dry Busch pump in the top position.
 - UUT14 tested with a 10 hp rotary lubricated Busch pump in the top position, a 7.5 hp rotary dry Becker pump in the middle position and a 7.4 hp rotary dry Busch pump in the bottom position.
 - Duplex systems consist of (1) two-high pump skid, Triplex systems have (1) three-high pump skid, Quadruplex systems have (1) one-high and (1) three-high pump skids, Pentaplex systems have (1) two-high and (1) three-high pump skids, and Hexaplex systems have (2) three-high pump skids if the hp rating is less than or equal to 7.5 hp. All skids are structurally independent and flexibly connected.
 - Duplex systems consist of (1) two-high pump skid, Triplex systems have (1) three-high pump skid, Quadruplex systems have (1) one-high and (1) three-high pump skids, Pentaplex systems have (1) two-high and (1) three-high pump skids, and Hexaplex systems have (2) three-high pump skids if the pump hp rating is greater than or equal to 8.9 hp. All skids are structurally independent and flexibly connected.
 - The max. dimensions and weights reflect the complete system as it would be installed in the field. The max. weight and dimension ranges start from the maximum weight and dimensions of the smallest or lightest skids of a duplex system to the heaviest and largest skids of a hexaplex system combined for the extrapolated models.
 - Largest HP pumps tested in duplex unit UUT12. Units are modular in nature, and UUT12 is representative of subcomponents in the largest hexaplex unit.
 - Maximum operating weight listed for UUT12 and UUT14 are for heaviest pumps.
 - The width of extrapolated units expands beyond the largest tested unit width due to the arrangement of extra modular skids in the width direction.

Table 9 - Special Seismic Certification

Certified Options - Vacuum Systems



DCL Project: 73815-2201

Manufacturer: Amico Source

Product Line: Medical Air and Vacuum Systems; Vacuum Pumps

Product Construction: Painted carbon steel frames, painted carbon steel enclosures, NEMA 1/12

Mounting Description: Units are flexible base mounted with neoprene pads. Standalone control panels are rigidly mounted to wall or manufacturer-provided stand.

Amico Source Vacuum System Model Chart

A-B-C-D-E-F-G-H-I-J

Variable	Definition	Allowable Value	Allowable Value Description	Unit
A	Air Compressor or Vacuum	V	Vacuum	UUT3-14
B	Technology	RVL	Rotary Vane Lubricated	UUT3,4,6,7,12-14
		CCD	Dry Contactless Claw	UUT3,5,6,7,10,11
		RVD	Rotary Vane Dry	UUT4,5,8,9,12-14
C	System Size	D	Duplex	UUT3-10,12,13
		T	Triplex	UUT11,14
		Q	Quadruplex	Extrapolated*
		P	Pentaplex	Extrapolated*
		H	Hexaplex	Extrapolated*
		030P	30 Gallon	Extrapolated
D	Tank Size	060P	60 Gallon	UUT3,6,14
		080P	80 Gallon	UUT11
		120P	120 Gallon	UUT4,5,8
		200P	200 Gallon	Interpolated
		240P	240 Gallon	UUT7,9,10,12,13
		E	Configuration	SS
TS	Vertical Tank Mounted			UUT3-5
TH	Horizontal Tank Mounted			UUT6-9
F	Standard	N	NFPA	UUT3-14
G	HP	005	0.5 hp	UUT5,8,13
		010	1 hp	UUT3,6
		012	1.2 hp	Interpolated
		015	1.5 hp	Interpolated
		017	1.7 hp	Interpolated
		020	2 hp	UUT3,6,11
		030	3 hp	Interpolated
		050	5 hp	Interpolated
		054	5.4 hp	UUT5
		064	6.4 hp	Interpolated
		074	7.4 hp	UUT4,9,13,14
		075	7.5 hp	UUT4,7,8,14
		100	10 hp	UUT7,11,14
		121	12.1 hp	UUT9
		150	15 hp	UUT10
		177	17.7 hp	Interpolated
		200	20 hp	Interpolated
H	Power	20863	208/3/60	UUT4,5,7,9,10,12,13
		23063	230/3/60	Interpolated
		46063	460/3/60	UUT3,6,8,11,14
I	Component	E()	Expandable (To System Size)	Extrapolated*
		M	Busch	UUT3-14
		N	Becker	UUT8,9,12,14
		V	VFD	UUT10,11
		S	Touch Screen	UUT6-9,12
		W	Welded Base	UUT10,12

*Hexaplex control panel, filters and largest HP pumps tested in duplex unit UUT9,13 and 14. Units are modular in nature, and tested units are representative of subcomponents in the largest hexaplex units.

**Table 10 - Special Seismic Certification
 Certified Components -
 Rigid Base Mounted Controllers on Panel Stand without Seismic Bracing**



DCL Project: 73815-2201

Manufacturer: Axecon for Amico

Product Line: Medical Air and Vacuum System; Standalone Controllers

Certified Product Construction: Painted carbon steel frame. Control panel is painted carbon steel, NEMA 1/12.

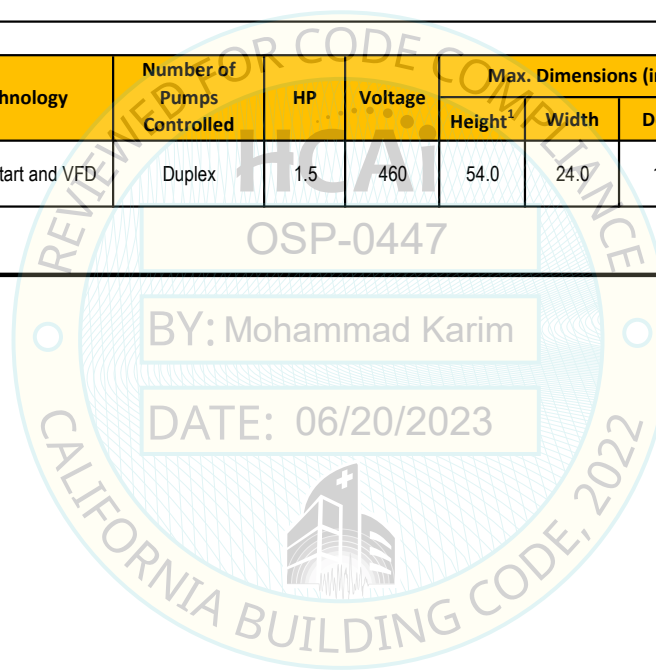
Mounting Description: Rigid base mounted

Certified Seismic Level: $S_{DS}=2.00g$, $z/h=1.0$

Model	MFR	Technology	Number of Pumps Controlled	HP	Voltage	Max. Dimensions (in)			Panel Stand Model Number	Max. Operating Weight ¹ (lb)	Unit
						Height ¹	Width	Depth			
MA/MV 7/8 204-015-460	Axecon for Amico	Direct start and VFD	Duplex	1.5	460	54.0	24.0	11.5	STEEL-PDL-APANEL	158	UUT15

Notes:

1. Height and weight include manufacturer-provided stand.



**Table 11 - Special Seismic Certification
Certified Options -
Rigid Base Mounted Controllers on
Panel Stand Without Seismic Bracing**



DCL
DYNAMIC
CERTIFICATION
LABORATORIES, LLC

DCL Project: 73815-2201

Manufacturer: Axecon for Amico

Product Line: Medical Air and Vacuum Systems; Standalone Controllers

Product Construction: Painted carbon steel enclosures, NEMA 1/12

Mounting Description: Rigid base mounted

Standalone Control Panel Model Chart

A-B-C-D-E-F-G

Variable	Definition	Allowable Value	Allowable Value Description	Unit
A	Medical Air or Vacuum	MA	Medical air control panel	UUT15
		MV	Medical vacuum control panel	UUT15
B	Technology	7	7000 unit (direct start)	UUT15
		8	8000 unit (VFD)	UUT15
C	Number of Pumps Controlled	2	Duplex	UUT15
D	Temperature Sensor Allowance	0	Temperature Switch only	UUT15
		1	1 RTD Sensor per pump	UUT15
E	Screen	4	5.7" Color Touch Screen	UUT15
F	HP	015	1.5 hp	UUT15
G	Voltage	460	460V	UUT15

**Table 12 - Special Seismic Certification
Certified Components -
Rigid Base Mounted Controllers on Panel Stand Without Seismic Bracing**



DCL Project: 73815-2201

Manufacturer: Axecon for Amico

Product Line: Medical Air and Vacuum System; Standalone Controllers

Certified Product Construction: Painted carbon steel frame. Control panel is painted carbon steel, NEMA 1/12.

Mounting Description: Rigid base mounted

Certified Seismic Level: $S_{D5}=2.00g$, $z/h=1.0$

Model	MFR	Technology	Number of Pumps Controlled	HP	Voltage	Max. Dimensions (in)			Panel Stand Model Number	Max. Operating Weight (lb)	Unit
						Height ¹	Width	Depth			
MA/MV 7 604-200-208-BAC-WM ² (A-XXX-D-240P-SS-N-200-20863-TS Control Panel Skid)	Axecon for Amico	Direct start	Hexaplex	20	208	71.0	51.5	29.5	STEEL-PDL-WELDED-1	750	UUT2D
MA 7 4XX-XXX-XXX (-BAC-WM)	Axecon for Amico	Direct start and VFD	Quadruplex	1 - 20	208 - 460	71.0 - 93.0	51.5 - 53.5	29.5 - 31.8	STEEL-PDL-WELDED	750 - 960	Interpolated
MV 7 4XX-XXX-XXX (-BAC-WM)											
MA 8 4XX-XXX-XXX (-BAC-WM)											
MV 8 4XX-XXX-XXX (-BAC-WM)											
MA 7 5XX-XXX-XXX (-BAC-WM)											
MV 7 5XX-XXX-XXX (-BAC-WM)											
MA 8 5XX-XXX-XXX (-BAC-WM)											
MV 8 5XX-XXX-XXX (-BAC-WM)											
MA 7 6XX-XXX-XXX (-BAC-WM)											
MV 7 6XX-XXX-XXX (-BAC-WM)											
MA 8 6XX-XXX-XXX (-BAC-WM)											
MV 8 6XX-XXX-XXX (-BAC-WM)											
MA/MV 7/8 605-200-208-BAC-WM	Axecon for Amico	Direct start and VFD	Hexaplex	20	208	93.0	53.5	31.8	STEEL-PDL-WELDED	960	UUT16

Notes:

1. Height includes manufacturer-provided stand.
2. Model Number using nomenclature on Table 12.

Table 13 - Special Seismic Certification
Certified Options -
Rigid Base Mounted Controllers on
Panel Stand Without Seismic Bracing



DCL Project: 73815-2201

Manufacturer: Axecon for Amico

Product Line: Medical Air and Vacuum Systems; Standalone Controllers

Product Construction: Painted carbon steel enclosures, NEMA 1/12

Mounting Description: Rigid base mounted

Standalone Control Panel Model Chart

A-B-C-D-E-F-G-H

Variable	Definition	Allowable Value	Allowable Value Description	Unit
A	Medical Air or Vacuum	MA	Medical air control panel	UUT2D, UUT16
		MV	Medical vacuum control panel	UUT2D, UUT16
B	Technology	7	7000 unit (direct start)	UUT2D, UUT16
		8	8000 unit (VFD)	UUT16
C	Number of Pumps Controlled	6	Hexaplex	UUT2D, UUT16
		0	Temperature Switch only	UUT2D, UUT16
D	Temperature Sensor Allowance	1	1 RTD Sensor per pump	Extrapolated
		2	2 RTD Sensor per pump	Extrapolated
		3	3 RTD Sensor per pump	Extrapolated
		4	4 RTD Sensor per pump	UUT16
E	Screen	4	5.7" Color Touch Screen	UUT2D
		5	7.5" Color Touch Screen	UUT16
F	HP	200	20 hp	UUT2D, UUT16
		250	25 hp	Extrapolated
G	Voltage	200	200V	Extrapolated
		208	208V	UUT2D, UUT16
		220	220V	Extrapolated
		230	230V	Extrapolated
		240	240V	Extrapolated
		480	480V	Extrapolated
H	Add on	BAC	BacNet Protocol	UUT2D, UUT16
		WM	Wireless Modem	UUT2D, UUT16

**Table 14 - Special Seismic Certification
Certified Components -
Rigid/Flexible Wall Mounted Controllers**



DCL Project: 73815-2201

Manufacturer: Axecon for Amico

Product Line: Medical Air and Vacuum System; Standalone Controllers

Certified Product Construction: Painted carbon steel frame. Control panel is painted carbon steel, NEMA 1/12.

Mounting Description: Rigid mounted to rigid/flexible wall

Certified Seismic Level: $S_{DS}=2.00g$, $z/h=1.0$

Model ¹	MFR	Technology	Number of Pumps Controlled	HP	Voltage	Max. Dimensions (in)			Max. Operating Weight (lb)	Unit
						Height	Width	Depth		
Standalone Control Panels - Rigid mounted to rigid/flexible wall										
MV2202-30	Axecon for Amico	Direct Start	Duplex	1	460	24	24	8	72	UUT17A,B
MA2202-XX	Axecon for Amico	Direct Start	Duplex	1-20	200-480	24-40	24-32	8-10	72-181	Interpolated
MV3203-XX										
MA3203-XX										
MV2302-XX										
MA2302-XX										
MV3303-XX										
MA3303-XX										
MV2402-XX										
MA2402-XX										
MV3403-XX										
MA3403-65	Axecon for Amico	Direct Start	Quadruplex	20	208	40	32	10	181	UUT18A,B

Notes:

1. XX indicates the available amperage: 30, 50, 65

Table 15 - Special Seismic Certification
Certified Options -
Rigid and Flexible Wall Mounted Controllers



DCL Project: 73815-2201

Manufacturer: Axecon for Amico

Product Line: Medical Air and Vacuum Systems; Standalone Controllers

Product Construction: Painted carbon steel enclosures, NEMA 1/12

Mounting Description: Rigid mounted to rigid/flexible wall

Standalone Control Panel Model Chart

A-B-C-D-E-F

Variable	Definition	Allowable Value	Allowable Value Description	Unit
A	Medical Vacuum	MV	Medical vacuum control panel	UUT17A,17B,18A,18B
B	Technology	2	2000 unit (ECO,direct start)	UUT17A,17B
		3	3000 unit (Premium, direct start)	UUT18A,18B
C	Control Panel Size	2	Duplex	UUT17A,17B
		3	Triplex	Interpolated
		4	Quadruplex	UUT18A,18B
D	Temperature Sensor Allowance	0	Temperature Switch only	UUT17A,17B,18A,18B
E	Screen	2	2.5" Monochromic Touch Screen	UUT17A,17B
		3	3.5" Color Touch Screen	UUT18A,18B
F	Amp Rating	30	30 Amperage	UUT17A,17B
		50	50 Amperage	Interpolated
		65	65 Amperage	UUT18A,18B

**Table 16 - Special Seismic Certification
 Certified Components -
 Rigid/Flexible Base Mounted Standalone Controllers on Panel Stand and Braced at Top**



DCL Project: 73815-2201

Manufacturer: Axecon for Amico

Product Line: Medical Air and Vacuum System; Standalone Controllers

Certified Product Construction: Painted carbon steel frame. Control panel is painted carbon steel, NEMA 1/12.

Mounting Description: Rigid/Flexible base mounted

Certified Seismic Level: S_{D5}=2.00g, z/h=1.0

Model ²	MFR	Technology	Number of Pumps Controlled	HP	Voltage	Max. Dimensions ¹ (in)			Panel Stand Model Number	Max. Operating Weight ¹ (lb)	Unit		
						Height	Width	Depth					
Standalone Control Panels - Base Mounted (Rigid or Flexible)													
MV2202-30	Axecon for Amico	Direct Start	Duplex	1	460	48	24	23	STEEL-PDL-APANEL Braced at Top	152	UUT19A,B		
MA2202-XX													
MV3203-XX													
MA3203-XX					Triplex	1-20	208-480	48-64	24-32	23-30	STEEL-PDL-APANEL Braced at Top	152-268	Interpolated
MV2302-XX													
MA2302-XX													
MV3303-XX					Quadruplex								
MA3303-XX													
MV2402-XX													
MA2402-XX													
MV3403-XX													
MA3403-65				20	208	64	32	30	STEEL-PDL-APANEL Braced at Top	268	UUT20A,B		

Notes:

1. Dimensions and weight include manufacturer-provided stand.
2. XX indicates the available amperage: 30, 50, 65

Table 17 - Special Seismic Certification
Certified Options -
Rigid and Flexible Base Mounted Controllers



DCL Project: 73815-2201

Manufacturer: Axecon for Amico

Product Line: Medical Air and Vacuum Systems; Standalone Controllers

Product Construction: Painted carbon steel enclosures, NEMA 1/12

Mounting Description: Rigid and flexible base mounted

Standalone Control Panel Model Chart				
A-B-C-D-E-F				
Variable	Definition	Allowable Value	Allowable Value Description	Unit
A	Medical Vacuum	MV	Medical vacuum control panel	UUT19A,19B,20A,20b
B	Technology	2	2000 unit (ECO,direct start)	UUT19A,19B
		3	3000 unit (Premium, direct start)	UUT20A,20B
C	Control Panel Size	2	Duplex	UUT19A,B
		3	Triplex	Interpolated
		4	Quadplex	UUT20A,B
D	Temperature Sensor Allowance	0	Temperature Switch only	UUT19A,19B,20A,20B
E	Screen	2	2.5" Monochromic Touch Screen	UUT19A,19B
		3	3.5" Color Touch Screen	UUT20A,20B
F	Amp Rating	30	30 Amperage	UUT19A,19B
		50	50 Amperage	Interpolated
		65	65 Amperage	UUT20A,20B

**Table 18 - Special Seismic Certification
Certified Subcomponents -
Modular Skid Mounted Air Systems**



DCL Project: 73815-2201

Manufacturer: Amico Source

Product Line: Medical Air and Vacuum Systems; Modular Skid Mounted Air Compressors

Mounting Configuration: Flexible Base (Neoprene)

Certified Seismic Level: $S_{DS}=2.00g$, $z/h=1.0$

Medical Air System Compressors						
Model Number	Manufacturer	Technology	HP	Configuration	Material	Unit
SRL-2.2CUM	Hitachi	Scroll Pump	2	Modular skid mounted (stacking configuration)	Aluminum	UUT1
SRL-2.2CUM			3			Interpolated
SRL-5.5CUM			5			Interpolated
SRL-5.5CUM			7.5			Interpolated
SRL-7.5CUM			10			Interpolated
SRL-5.5CUM			15			Interpolated
SRL-7.5CUM			20			UUT2A
0.75OU			1			Reciprocating Pump
1.5OU		2	Interpolated			
2.2OU		3	Interpolated			
3.7OU		5	Interpolated			
5.5OU		7.5	Interpolated			
7.5OU		10	Interpolated			
11.0OU		15	Interpolated			
15.0OU		20	UUT2A			
Tank						
Model Number	Manufacturer	Type	Capacity	Material	Unit	
302414	Manchester	Vertical Tank	80	Carbon Steel	UUT1	
302421			120		Interpolated	
302426			200		Interpolated	
302428			240		UUT2B	
Dryer						
Model Number	Manufacturer	Description	Material	Weight (lb.)	Unit	
Dryspell Plus 10	Trident	10 CFM	Aluminum	46	UUT1	
Dryspell Plus 20		20 CFM		64	Interpolated	
Dryspell Plus 30		30 CFM		86	Interpolated	
Dryspell Plus 45		45 CFM		108	Interpolated	
Dryspell Plus 60		60 CFM		134	Interpolated	
Dryspell Plus 100		100 CFM		234	Interpolated	
Dryspell Plus 125		125 CFM		262	Interpolated	
Dryspell Plus 200		200 CFM		472	Interpolated	
Dryspell Plus 250		250 CFM		525	Interpolated	
Dryspell Plus 300		300 CFM		564	UUT2C	

**Table 18 - Special Seismic Certification
Certified Subcomponents -
Modular Skid Mounted Air Systems (Continued)**



DCL Project: 73815-2201

Manufacturer: Amico Source

Product Line: Medical Air and Vacuum Systems; Modular Skid Mounted Air Compressors

Mounting Configuration: Flexible Base (Neoprene)

Certified Seismic Level: $S_{DS}=2.00g$, $z/h=1.0$

Filters/ Moisture Separator							
Model Number	Manufacturer	Description	Material	Weight (lb.)	Unit		
CSL-842-050HC	Solberg	1/2" Inlet Filter	Carbon Steel	3	Extrapolated		
CSL-842-075HC		3/4" Inlet Filter		3	UUT1		
CSL-842-100HC		1" Inlet Filter		3	Interpolated		
CSL-848-125HC		1 1/4" Inlet Filter		5	Interpolated		
CSL-848-150HC		1 1/2" Inlet Filter		5	UUT2C		
F901D-04G	Numatics	1/2" Pre Filter	Aluminum	3	UUT1		
F901H-04G		1/2" After Filter		3	UUT1		
F901D-06G		3/4" Pre Filter		7	Interpolated		
F901H-06G		3/4" After Filter		7	Interpolated		
F901D-08G		1" Pre Filter		7	Interpolated		
F901H-08G		1" After Filter		7	Interpolated		
F901D-10G		1 1/4" Pre Filter		9	Interpolated		
F901H-10G		1 1/4" After Filter		9	Interpolated		
F901D-12G		1 1/2" Pre Filter		9	Interpolated		
F901H-12G		1 1/2" After Filter		9	Interpolated		
F901D-16G		2" Pre Filter		23	UUT2C		
F901H-16G		2" After Filter		23	UUT2C		
Sensor							
Model Number		Manufacturer		Description	Material	Unit	
EA2-TX		Michell		Dew Point Sensor	Stainless Steel	UUT1,2C	
4035-RF	GFG	CO Transmitter (RF Version)	Carbon Steel	UUT1,2C			

**Table 19 - Special Seismic Certification
Certified Subcomponents -
Vertical Tank Mounted Vacuum Systems**



DCL Project: 73815-2201

Manufacturer: Amico Source

Product Line: Medical Air and Vacuum Systems; Vertical Tank Mounted Vacuum Pumps

Mounting Configuration: Flexible Base (Neoprene)

Certified Seismic Level: $S_{DS}=2.00g$, $z/h=1.0$

Vacuum System Pumps								
Model Number	Manufacturer	Technology	HP	Voltage Tested	Voltage Certified	Material	Unit	
RC0021	Busch	Rotary Vane Lubricated	1.0	208	208 or 460	Cast Iron	UUT3	
RC0025			1.5	Interpolated				
RC0040			2.0					
RC0063			3.0					
RC0100			5.0					
RC0101			5.0					
RC0155			5.0					
RC0205			7.5				460	UUT4
MM1104			2.0				208	UUT3
MM1144		3.0	208 or 460	Cast Iron	Interpolated			
MM1102		4.0			Interpolated			
MM1142		5.4			208	UUT5		
SV 1010C		0.5	208	UUT5				
SV 1016C		0.75	208 or 460	Cast Iron	Interpolated			
SV 1025C		1.2			Interpolated			
SV 1040C		1.7			Interpolated			
SV 1063B		3.0			Interpolated			
SV 1080B		4.0			Interpolated			
SV 1100C		5.4			Interpolated			
SV 1140C	7.4	460			UUT4			
Tank								
Model Number	Manufacturer	Type	Capacity	Material		Unit		
302408	Manchester	Vertical Tank with Top Plate	30	Carbon Steel		Extrapolated		
302412			60			UUT3		
302419			80			Interpolated		
302424			120			UUT4, UUT5		

**Table 20 - Special Seismic Certification
Certified Subcomponents -
Horizontal Tank Mounted Vacuum Systems**



DCL Project: 73815-2201

Manufacturer: Amico Source

Product Line: Medical Air and Vacuum Systems; Horizontal Tank Mounted Vacuum Pumps

Mounting Configuration: Flexible Base (Neoprene)

Certified Seismic Level: $S_{DS}=2.00g$, $z/h=1.0$

Vacuum System Pumps

Model Number	Manufacturer	Technology	HP	Voltage Tested	Voltage Certified	Material	Unit	
RC0021	Amico Source	Rotary Vane Lubricated	1.0	460	208 or 460	Cast Iron	UUT6	
RC0025			1.5				Interpolated	
RC0040			2.0				Interpolated	
RC0063			3.0				Interpolated	
RC0100			5.0				Interpolated	
RC0101			5.0				Interpolated	
RC0155			5.0				Interpolated	
RC0205			7.5				Interpolated	
RC0255			10.0				Interpolated	
RC0305			10.0				208	UUT7
MM1104	Busch	Contactless Claw	2.0	460	208 or 460	Cast Iron	UUT6	
MM1144			3.0				Interpolated	
MM1102			4.0				Interpolated	
MM1142			5.4				Interpolated	
MM1202			6.4				Interpolated	
MM1252			7.5				208	UUT7
SV 1010C			0.5				460	UUT8
SV 1016C			0.75				208 or 460	Interpolated
SV 1025C			1.2					Interpolated
SV 1040C			1.7					Interpolated
SV 1063B	3.0	Interpolated						
SV 1080B	4.0	Interpolated						
SV 1100C	5.4	Interpolated						
SV 1140C	7.4	208	UUT9					
VTLF2.200	Becker	Rotary Vane Dry	7.5	460	UUT8			
VTLF2.250			8.9	208	Interpolated			
VTLF2.250SK			10.7		Interpolated			
VTLF 2.400			12.1		UUT9			

Tank

Model Number	Manufacturer	Type	Capacity	Material	Unit
302693	Manchester	Horizontal Tank with Top Plate	60	Carbon Steel	UUT6
303977			80		Interpolated
302700			120		Interpolated
302701			200		UUT8
303181			240		UUT7,9

**Table 21 - Special Seismic Certification
Certified Subcomponents -
Modular Skid Mounted Vacuum Systems**



DCL Project: 73815-2201

Manufacturer: Amico Source

Product Line: Medical Air and Vacuum Systems; Modular Skid Mounted Vacuum Pumps

Mounting Configuration: Flexible Base (Neoprene)

Certified Seismic Level: $S_{DS}=2.00g$, $z/h=1.0$

Vacuum System Pumps									
Model Number	Manufacturer	Technology	HP	Voltage Tested	Voltage Certified	Material	Unit		
RC0021	Busch	Rotary Vane Lubricated	1.0	N/A	208 or 460	Cast Iron	Extrapolated		
RC0025			1.5				Extrapolated		
RC0040			2.0				Extrapolated		
RC0063			3.0				Extrapolated		
RC0100			5.0				Extrapolated		
RC0101			5.0				Extrapolated		
RC0155			5.0				Extrapolated		
RC0205			7.5				Extrapolated		
RC0255			10.0				Extrapolated		
RC0305			10.0				460	UUT14	
RC0400			15.0	N/A	Interpolated				
RC0502			20.0	N/A	Interpolated				
RC0630			25.0	208	UUT12				
MM1104			Busch	Contactless Claw	2.0	N/A	208 or 460	Cast Iron	UUT11
MM1144					3.0				Interpolated
MM1102	4.0	Interpolated							
MM1142	5.4	Interpolated							
MM1202	6.4	Interpolated							
MM1252	7.5	Interpolated							
MM1322	10.0	Interpolated							
MM1402	10.0	Interpolated							
MM1502	15.0	208, 460			UUT10, 11				
SV 1010C	Busch	Rotary Vane Dry	0.5	N/A	208 or 460	Cast Iron	UUT13		
SV 1016C			0.75				Interpolated		
SV 1025C			1.2				Interpolated		
SV 1040C			1.7				Interpolated		
SV 1063B			3.0				Interpolated		
SV 1080B			4.0				Interpolated		
SV 1100C			5.4				Interpolated		
SV 1140C			7.4				208, 460	UUT13	
VTLF2.200	Becker	Rotary Vane Dry	7.5	N/A	208		UUT14		
VTLF2.250			8.9				Interpolated		
VTLF2.250SK			10.7				Interpolated		
VTLF 2.400			12.1				Interpolated		
VTLF 2.500			17.7 / 25				208	UUT12	

Table 22 - Special Seismic Certification
Certified Subcomponents -
Modular Skid Mounted Vacuum Systems (Continued)



DCL Project: 73815-2201

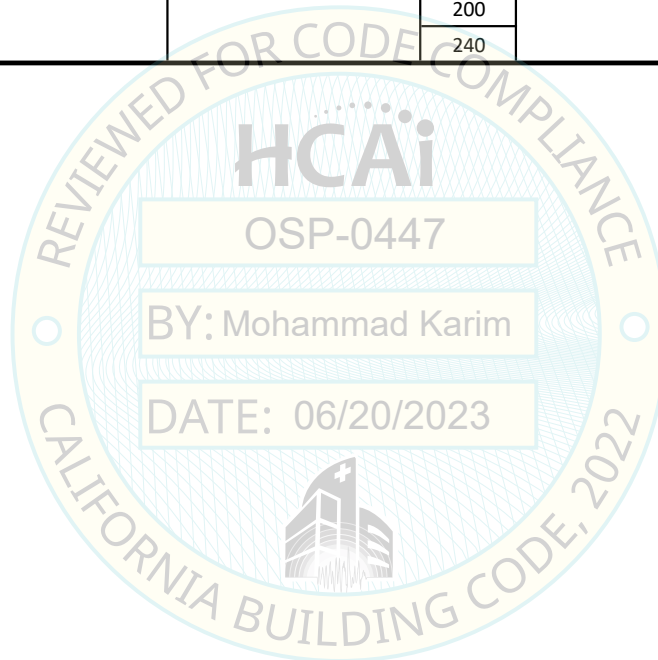
Manufacturer: Amico Source

Product Line: Medical Air and Vacuum Systems; Modular Skid Mounted Vacuum Pumps

Mounting Configuration: Flexible Base (Neoprene)

Certified Seismic Level: $S_{DS}=2.00g$, $z/h=1.0$

Tank					
Model Number	Manufacturer	Type	Capacity	Material	Unit
302410	Manchester	Vertical Tank	60	Carbon Steel	UUT14
302414			80		UUT11
302421			120		Interpolated
302426			200		Interpolated
302428			240		UUT10,12,13



**Table 23 - Special Seismic Certification
Certified Subcomponents -
Rigid Base Mounted Controllers on STEEL-PDL-
APANEL Stand without Seismic Bracing**



DCL Project: 73815-2201

Manufacturer: Axecon for Amico

Product Line: Medical Air and Vacuum Systems; Standalone Controllers

Mounting Configuration: Rigid Base

Certified Seismic Level: $S_{DS}=2.00g$, $z/h=1.0$

Controller Subcomponents								
Model Number	Manufacturer	Description	Material	Weight (lb.)	Unit			
LC1D12F7	Schneider Electric	Contactor	Plastic Cover	1	UUT15			
LC1D32F7				1	Same as UUT15			
LRD06	Schneider Electric	Overload relay	Plastic Cover	<1	Same as UUT15			
LRD07				<1	UUT15			
LRD08				<1	Same as UUT15			
LRD10				<1	Same as UUT15			
LRD12				<1	Same as UUT15			
LRD14				<1	Same as UUT15			
LRD16				<1	Same as UUT15			
LRD21				<1	Same as UUT15			
LRD22				<1	Same as UUT15			
LRD32				<1	Same as UUT15			
LRD35				<1	Same as UUT15			
ATV312HU11M3X				Schneider Electric	Variable frequency drive	Plastic Cover	4	Same as UUT15
ATV312HU11N4							4	UUT15
ATV312HU15M3X	4	Same as UUT15						
ATV312HU15N4	4	Same as UUT15						
ATV312HU22M3X	4	Same as UUT15						
HJL36015	Schneider Electric	Molded case circuit breaker	Plastic	5	UUT15			
HJL36020				5	Same as UUT15			
HJL36030				5	Same as UUT15			
HJL36040				5	Same as UUT15			
HJL36060				5	Same as UUT15			
HJL36080				5	Same as UUT15			
HJL36100				5	Same as UUT15			
9421LJ3	Schneider Electric	Operating mechanism for circuit breaker	Carbon Steel	6	UUT15			
LBA361104	Schneider Electric	Class 9080 power distribution block	Plastic	<1	UUT15			
TF250D1	Schneider Electric	Class 9070 control transformer	Carbon Steel	9	Same as UUT15			
TF150D50				9	UUT15			
MG24426	Schneider Electric	Control circuit breaker, 2A	Plastic Cover	<1	UUT15			
MG24425	Schneider Electric	Control circuit breaker, 1A	Plastic Cover	<1	UUT15			
TM221C24R	Schneider Electric	PLC base controller	Plastic Cover	1	UUT15			

**Table 24 - Special Seismic Certification
Certified Subcomponents -
Rigid Base Mounted Controllers on STEEL-PDL-
APANEL Stand without Seismic Bracing (Continued)**



DCL Project: 73815-2201

Manufacturer: Axecon for Amico

Product Line: Medical Air and Vacuum Systems; Standalone Controllers

Mounting Configuration: Rigid Base

Certified Seismic Level: $S_{DS}=2.00g$, $z/h=1.0$

Controller Subcomponents					
Model Number	Manufacturer	Description	Material	Weight (lb.)	Unit
TM3TI4	Schneider Electric	Analog expansion card, 4 universal inputs	Plastic Cover	<1	UUT15
TM3AM6	Schneider Electric	Analog expansion card, 4 inputs, 2 outputs	Plastic Cover	<1	UUT15
TM2ARI8LT	Schneider Electric	Analog expansion card, 8 PT100/PT1000 inputs	Plastic Cover	<1	UUT15
TM3DI16	Schneider Electric	Digital expansion module, 16 inputs	Plastic Cover	<1	UUT15
TM3DQ16R	Schneider Electric	Digital expansion module, 16 outputs	Plastic Cover	<1	UUT15
TMC2SL1	Schneider Electric	Serial communication module	Plastic Cover	<1	UUT15
TM168D23CS	Schneider Electric	Bacnet bridge PLC base	Plastic Cover	2	UUT15
TM168BACS	Schneider Electric	Bacnet module MS/TP	Plastic Cover	<1	UUT15
HMISTU855	Schneider Electric	5.7" HMI	Plastic Cover	2	UUT15
ZB4BK1333	Schneider Electric	Illuminated 3-pos. switch, maintained	Plastic	<1	UUT15
ZB4BK1733	Schneider Electric	Illuminated 3-pos. switch, spring return from left	Plastic	<1	UUT15
NSYCCOTHIF	Schneider Electric	Thermostat	Plastic Cover	<1	UUT15
7F.05.0.000.2000	Finder	Exhaust filter	Plastic	2	UUT15
7F.05.0.000.3000				2	Same as UUT15
7F.05.0.000.4000				2	Same as UUT15
7F.05.0.000.5000				2	Same as UUT15
7F.50.8.120.2055				5	UUT15
7F.50.8.120.3100				5	Same as UUT15
7F.50.8.120.4370				5	Same as UUT15
7F.50.8.120.5500				5	Same as UUT15
MS2-H50				Keyence Corp.	24VDC 2A power supply
TMB-86-531	Floyd Bell, Inc.	Audible alarm annunciator	Plastic Cover	1	UUT15
KLDR1/2	Littelfuse	Fuses	Melamine	<1	Same as UUT15
KLDR1				<1	UUT15
KLDR2				<1	Same as UUT15
KLDR3				<1	Same as UUT15
KLDR4				<1	Same as UUT15
FLM2				<1	Same as UUT15
FLM3				<1	Same as UUT15
FLM4				<1	Same as UUT15
FLM5				<1	Same as UUT15
FLM10				<1	Same as UUT15
WM302408NC	Rittal	Enclosure, NEMA 1/12	Carbon Steel	68	UUT15

**Table 25 - Special Seismic Certification
 Certified Subcomponents -
 Rigid Base Mounted Controllers on STEEL-PDL-
 WELDED or STEEL-PDL-WELDED-1 Stand**



DCL Project: 73815-2201

Manufacturer: Axecon for Amico

Product Line: Medical Air and Vacuum Systems; Standalone Controllers

Mounting Configuration: Rigid Base

Certified Seismic Level: $S_{DS}=2.00g$, $z/h=1.0$

Controller Subcomponents					
Model Number	Manufacturer	Description	Material	Weight (lb.)	Unit
LC1D12F7	Schneider Electric	Contactor	Plastic cover	1	Extrapolated ¹
LC1D32F7				1	Extrapolated ¹
LC1D50AF7				2	Interpolated
LC1D65AF7				2	UUT2D
LC1D80F7				4	Interpolated
LC1D115F7				6	UUT16
LRD06	Schneider Electric	Overload relay	Plastic Cover	<1	Extrapolated ¹
LRD07				<1	Extrapolated ¹
LRD08				<1	Extrapolated ¹
LRD10				<1	Extrapolated ¹
LRD12				<1	Extrapolated ¹
LRD14				<1	Extrapolated ¹
LRD16				<1	Extrapolated ¹
LRD21				<1	Extrapolated ¹
LRD22				<1	Extrapolated ¹
LRD32				<1	Extrapolated ¹
LRD35				<1	Extrapolated ¹
LRD340				1	Interpolated
LRD350				1	Interpolated
LRD365				1	UUT2D
LRD3363				1	Interpolated
LRD4865				2	Interpolated
LRD5367				2	UUT16
ATV312HD11M3X	Schneider Electric	Variable frequency drive	Plastic Cover	24	Same as UUT16
ATV312HD11N4				24	Same as UUT16
ATV312HD15M3X				24	UUT16
ATV312HD15N4				24	Same as UUT16
9421LJ3	Schneider Electric	Operating mechanism for circuit breaker	Carbon Steel	6	UUT2D,16
LBA363106	Schneider Electric	Class 9080 power distribution block	Plastic	2	UUT2D,16
MG24426	Schneider Electric	Control circuit breaker, 2A	Plastic Cover	<1	UUT2D,16
MG24425	Schneider Electric	Control circuit breaker, 1A	Plastic Cover	<1	UUT2D,16
TM221CE40R	Schneider Electric	PLC base controller	Plastic Cover	1	UUT2D,16
TF500D50	Schneider Electric	Class 9070 control transformer	Carbon Steel	17	UUT2D
TF750D1				18	Interpolated
TF750D50				21	UUT16

Note:

1. Extrapolated subcomponents are equivalent in function, mounting, and construction to the tested subcomponents.

Table 26 - Special Seismic Certification
Certified Subcomponents -
Rigid Base Mounted Controllers on STEEL-PDL-
WELDED or STEEL-PDL-WELDED-1 Stand (Continued)



DCL Project: 73815-2201

Manufacturer: Axecon for Amico

Product Line: Medical Air and Vacuum Systems; Standalone Controllers

Mounting Configuration: Rigid Base

Certified Seismic Level: $S_{DS}=2.00g$, $z/h=1.0$

Controller Subcomponents					
Model Number	Manufacturer	Description	Material	Weight (lb.)	Unit
HJL36015	Schneider Electric	Molded case circuit breaker	Plastic	5	Same as UUT2D,16
HJL36020				5	Same as UUT2D,16
HJL36030				5	Same as UUT2D,16
HJL36040				5	Same as UUT2D,16
HJL36060				5	Same as UUT2D,16
HJL36080				5	Same as UUT2D,16
HJL36100				5	UUT2D,16
FAL34015				5	Same as UUT2D,16
FAL34020				5	Same as UUT2D,16
FAL34030				5	Same as UUT2D,16
FAL34040				5	Same as UUT2D,16
FAL34060				5	Same as UUT2D,16
FAL34080				5	Same as UUT2D,16
FAL34100				5	Same as UUT2D,16
TM3T14				Schneider Electric	Analog expansion card, 4 universal inputs
TM3AM6	Schneider Electric	Analog expansion card, 4 inputs, 2 outputs	Plastic Cover	<1	UUT16
TM2ARI8LT	Schneider Electric	Analog expansion card, 8 PT100/PT1000 inputs	Plastic Cover	<1	UUT2D,16
TM3DI16	Schneider Electric	Digital expansion module, 16 inputs	Plastic Cover	<1	UUT16
TM3DQ16R	Schneider Electric	Digital expansion module, 16 outputs	Plastic Cover	<1	UUT2D,16
TMC2SL1	Schneider Electric	Serial communication module	Plastic Cover	<1	UUT16
TM168D23CS	Schneider Electric	Bacnet bridge PLC base	Plastic Cover	2	UUT16
TM168BACS	Schneider Electric	Bacnet module MS/TP	Plastic Cover	<1	UUT16
HMISTU855	Schneider Electric	5.7" HMI	Plastic Cover	2	UUT2D
HMIGTO4310	Schneider Electric	7.5" HMI	Plastic Cover	4	UUT16
ZB4BK1333	Schneider Electric	Illuminated 3-pos. switch, maintained	Plastic	<1	UUT16
ZB4BK1733	Schneider Electric	Illuminated 3-pos. switch, spring return from left	Plastic	<1	UUT2D,16
NSYCCOTHIF	Schneider Electric	Thermostat	Plastic Cover	<1	UUT16

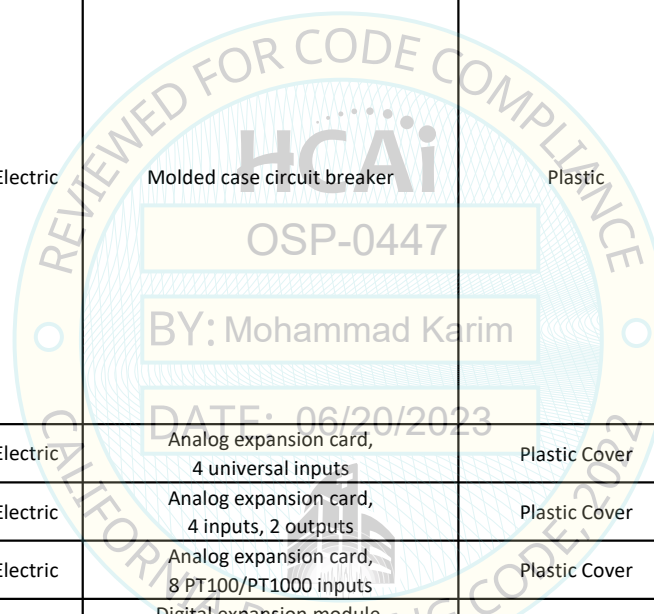


Table 27 - Special Seismic Certification
Certified Subcomponents -
Rigid Base Mounted Controllers on STEEL-PDL-
WELDED or STEEL-PDL-WELDED-1 Stand (Continued)



DCL Project: 73815-2201

Manufacturer: Axecon for Amico

Product Line: Medical Air and Vacuum Systems; Standalone Controllers

Mounting Configuration: Rigid Base

Certified Seismic Level: $S_{DS}=2.00g$, $z/h=1.0$

Controller Subcomponents					
Model Number	Manufacturer	Description	Material	Weight (lb.)	Unit
7F.05.0.000.2000	Finder	Exhaust filter	Plastic	2	Same as UUT16
7F.05.0.000.3000				2	Same as UUT16
7F.05.0.000.4000				2	Same as UUT16
7F.05.0.000.5000				2	UUT16
7F.50.8.120.2055		Exhaust fan	Plastic	5	Same as UUT16
7F.50.8.120.3100				5	Same as UUT16
7F.50.8.120.4370				5	Same as UUT16
7F.50.8.120.5500				5	UUT16
MS2-H50	Keyence Corp.	24VDC 2A power supply	Plastic Cover	1	UUT2D,16
TMB-86-531	Floyd Bell, Inc.	Audible alarm annunciator	Plastic Cover	1	UUT2D,16
KLDR1/2	Littelfuse	Fuses	Melamine	<1	Same as UUT2D,16
KLDR1				<1	Same as UUT2D,16
KLDR2				<1	Same as UUT2D,16
KLDR3				<1	UUT2D
KLDR4				<1	UUT16
FLM2				<1	Same as UUT2D,16
FLM3				<1	Same as UUT2D,16
FLM4				<1	Same as UUT2D,16
FLM5				<1	UUT2D
FLM10				<1	UUT16
TS8245.500 + TS8145.235	Rittal	Enclosure, NEMA 1/12	Carbon Steel	403	UUT2D
TS8265.500 + TS8165.235				395	UUT16

**Table 28 - Special Seismic Certification
Certified Subcomponents -
Rigid and Flexible Wall Mounted Controllers**



DCL Project: 73815-2201

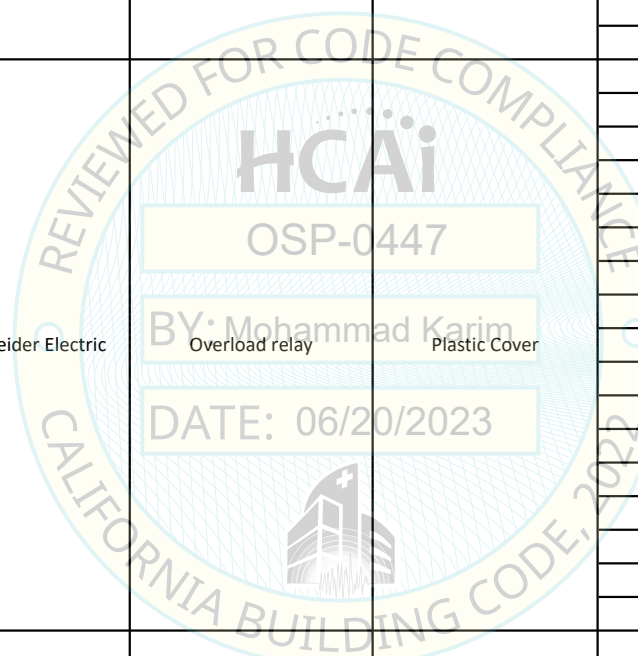
Manufacturer: Axecon for Amico

Product Line: Medical Air and Vacuum Systems; Standalone Controllers

Mounting Configuration: Rigid and Flexible Wall

Certified Seismic Level: $S_{DS}=2.00g$, $z/h=1.0$

Controller Subcomponents					
Model Number	Manufacturer	Description	Material	Weight (lb.)	Unit
LC1D12F7	Schneider Electric	Contactor	Plastic Cover	1	UUT17A,B
LC1D32F7				1	Interpolated
LC1D50AF7				2	Interpolated
LC1D65AF7				2	Interpolated
LC1D80F7				4	UUT18A,18B
LRD06	Schneider Electric	Overload relay	Plastic Cover	<1	UUT17A,B
LRD07				<1	Interpolated
LRD08				<1	Interpolated
LRD10				<1	Interpolated
LRD12				<1	Interpolated
LRD14				<1	Interpolated
LRD16				<1	Interpolated
LRD21				<1	Interpolated
LRD22				<1	Interpolated
LRD32				<1	Interpolated
LRD35				<1	Interpolated
LRD340				1	Interpolated
LRD350				1	Interpolated
LRD365				1	Interpolated
LRD3363				1	Interpolated
LRD4865				2	UUT18A,B
LRD5367				2	Same as UUT18A,B
HJL36015	Schneider Electric	Molded case circuit breaker	Plastic	5	Same as UUT17A,B, UUT18A,B
HJL36020				5	Same as UUT17A,B, UUT18A,B
HJL36030				5	Same as UUT17A,B, UUT18A,B
HJL36040				5	Same as UUT17A,B, UUT18A,B
HJL36060				5	Same as UUT17A,B, UUT18A,B
HJL36080				5	Same as UUT17A,B, UUT18A,B
HJL36100				5	Same as UUT17A,B, UUT18A,B
FAL34015				5	UUT17A,B
FAL34020				5	Interpolated
FAL34030				5	Interpolated
FAL34040				5	Interpolated
FAL34060				5	Interpolated
FAL34080				5	Interpolated
FAL34100				5	UUT18A,B



**Table 29 - Special Seismic Certification
Certified Subcomponents -
Rigid and Flexible Wall Mounted Controllers
(Continued)**



DCL Project: 73815-2201

Manufacturer: Axecon for Amico

Product Line: Medical Air and Vacuum Systems; Standalone Controllers

Mounting Configuration: Rigid and Flexible Wall

Certified Seismic Level: $S_{DS}=2.00g$, $z/h=1.0$

Controller Subcomponents					
Model Number	Manufacturer	Description	Material	Weight (lb.)	Unit
TF250D1	Schneider Electric	Class 9070 control transformer	Carbon Steel	8	Extrapolated ¹
TF150N12				10	UUT17A,17B
TF500D1				13	Interpolated
TF750D1				18	UUT18A,18B
TWDLCAA24DRF	Schneider Electric	PLC base controller	Plastic Cover	1	UUT17A,17B
TWDLCAA40DRF	Schneider Electric	PLC base controller	Plastic Cover	1	UUT18A,18B
TM2AMI4LT	Schneider Electric	Analog expansion card, 4 universal inputs	Plastic Cover	<1	UUT17A,B, UUT18A,B
TM2DRA16RT	Schneider Electric	Digital expansion module, 16 outputs	Plastic Cover	<1	UUT18A,B
TWDNAC485T	Schneider Electric	Serial communication module	Plastic Cover	<1	UUT18A,B
TM172PDG428	Schneider Electric	Bacnet PLC base module	Plastic Cover	2	UUT18A,B
HMISTO512	Schneider Electric	2.5" HMI	Plastic Cover	1	UUT17A,B
HMISTU655	Schneider Electric	3.5" HMI	Plastic Cover	1	UUT18A,B
ZB4BA6	Schneider Electric	Push button, blue	Plastic Cover	<1	UUT17A,B, UUT18A,B
ABL8REM24030	Schneider Electric	24VDC 3A power supply	Plastic Cover	1	UUT18A,B
KLDR1/2	Littelfuse	Fuses	Melamine	<1	UUT17A,B
KLDR1				<1	Interpolated
KLDR2				<1	Interpolated
KLDR3				<1	Interpolated
KLDR4				<1	UUT18A,B
FLM2				<1	UUT17A,B
FLM3				<1	Same as UUT17A,B
FLM4				<1	Same as UUT17A,B
FLM5				<1	Same as UUT17A,B
FLM10				<1	Same as UUT17A,B
NSYS3DC6620	Schneider Electric	Enclosure, NEMA 1/12	Carbon Steel	31	UUT17A,B
NSYS3DC8620				45	Interpolated
NSYS3DC10825				72	UUT18A,B

Note:

1. Extrapolated subcomponent is equivalent in function, mounting, and construction to the tested subcomponents.

Table 30 - Special Seismic Certification
Certified Subcomponents -
Rigid and Flexible Base Mounted Controllers on STEEL-PDL-
APANEL Stand Braced at Top



DCL Project: 73815-2201

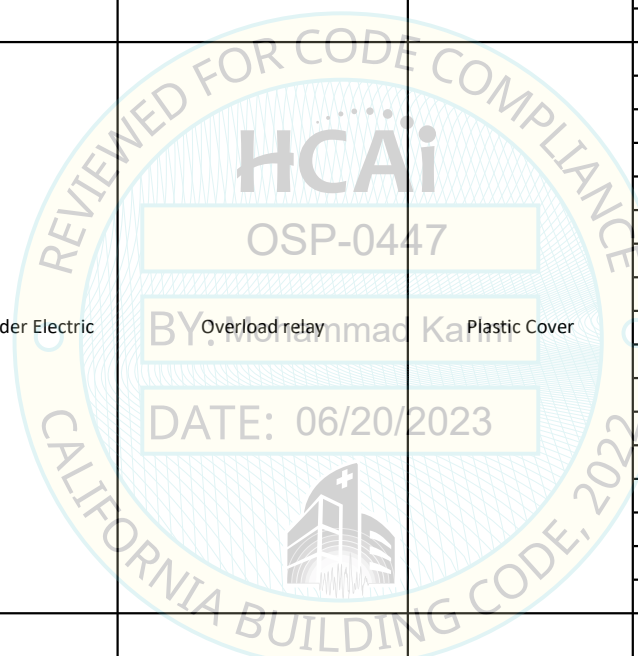
Manufacturer: Aexcon for Amico

Product Line: Medical Air and Vacuum Systems; Standalone Controllers

Mounting Configuration: Rigid and Flexible Base

Certified Seismic Level: $S_{DS}=2.00g$, $z/h=1.0$

Controller Subcomponents								
Model Number	Manufacturer	Description	Material	Weight (lb.)	Unit			
LC1D12F7	Schneider Electric	Contactor	Plastic Cover	1	UUT19A,B			
LC1D32F7				1	Interpolated			
LC1D50AF7				2	Interpolated			
LC1D65AF7				2	Interpolated			
LC1D80F7				4	UUT20A,B			
LRD06	Schneider Electric	Overload relay	Plastic Cover	<1	UUT19A,B			
LRD07				<1	Interpolated			
LRD08				<1	Interpolated			
LRD10				<1	Interpolated			
LRD12				<1	Interpolated			
LRD14				<1	Interpolated			
LRD16				<1	Interpolated			
LRD21				<1	Interpolated			
LRD22				<1	Interpolated			
LRD32				<1	Interpolated			
LRD35				<1	Interpolated			
LRD340				1	Interpolated			
LRD350				1	Interpolated			
LRD365				1	Interpolated			
LRD3363				1	Interpolated			
LRD4865				2	UUT20A,B			
LRD5367				2	Same as UUT20A,B			
HJL36015				Schneider Electric	Molded case circuit breaker	Plastic	5	Same as UUT19A,B, UUT20A,B
HJL36020							5	Same as UUT19A,B, UUT20A,B
HJL36030							5	Same as UUT19A,B, UUT20A,B
HJL36040	5	Same as UUT19A,B, UUT20A,B						
HJL36060	5	Same as UUT19A,B, UUT20A,B						
HJL36080	5	Same as UUT19A,B, UUT20A,B						
HJL36100	5	Same as UUT19A,B, UUT20A,B						
FAL34015	5	UUT19A,B						
FAL34020	5	Interpolated						
FAL34030	5	Interpolated						
FAL34040	5	Interpolated						
FAL34060	5	Interpolated						
FAL34080	5	Interpolated						
FAL34100	5	UUT20A,B						



**Table 31 - Special Seismic Certification
 Certified Subcomponents -
 Rigid and Flexible Base Mounted Controllers on Panel Stand and
 Braced at Top (Continued)**



DCL Project: 73815-2201

Manufacturer: Axecon for Amico

Product Line: Medical Air and Vacuum Systems; Standalone Controllers

Mounting Configuration: Rigid and Flexible Base

Certified Seismic Level: Sds=2.0g, z/h=1.0

Controller Subcomponents					
Model Number	Manufacturer	Description	Material	Weight (lb.)	Unit
TF250D1	Schneider Electric	Class 9070 control transformer	Carbon Steel	8	Extrapolated ¹
TF150N12				10	UUT19A,B
TF500D1				13	Interpolated
TF750D1				18	UUT20A,B
TWDLCAA24DRF	Schneider Electric	PLC base controller	Plastic Cover	1	UUT19A,B
TWDLCAA40DRF	Schneider Electric	PLC base controller	Plastic Cover	1	UUT20A,B
TM2AMI4LT	Schneider Electric	Analog expansion card, 4 universal inputs	Plastic Cover	<1	UUT19A,B, UUT20A,B
TM2DRA16RT	Schneider Electric	Digital expansion module, 16 outputs	Plastic Cover	<1	UUT20A,B
TWDNAC485T	Schneider Electric	Serial communication module	Plastic Cover	<1	UUT20A,B
TM172PDG428	Schneider Electric	Bacnet PLC base module	Plastic Cover	2	UUT20A,B
HMISTO512	Schneider Electric	2.5" HMI	Plastic Cover	1	UUT19A,B
HMISTU655	Schneider Electric	3.5" HMI	Plastic Cover	1	UUT20A,B
ZB4BA6	Schneider Electric	Push button, blue	Plastic Cover	<1	UUT19A,B, UUT20A,B
ABL8REM24030	Schneider Electric	24VDC 3A power supply	Plastic Cover	1	UUT20A,B
KLDR1/2	Littelfuse	Fuses	Melamine	<1	UUT19A,B
KLDR1				<1	Interpolated
KLDR2				<1	Interpolated
KLDR3				<1	Interpolated
KLDR4				<1	UUT20A,20B
FLM2				<1	UUT19A,B
FLM3				<1	Same as UUT19A,B
FLM4				<1	Same as UUT19A,B
FLM5				<1	Same as UUT19A,B
FLM10				<1	Same as UUT19A,B
NSYS3DC6620	Schneider Electric	Enclosure, NEMA 1/12	Carbon Steel	31	UUT19A,B
NSYS3DC8620				45	Interpolated
NSYS3DC10825				72	UUT20A,B

Note:

1. Extrapolated subcomponents are equivalent in function, mounting, and construction to the tested subcomponents.

Table 32 - Special Seismic Certification
Tested Components - Medical Air and Vacuum Systems



DCL Project: 73815-2201

Manufacturer: Amico Source

Product Line: Medical Air and Vacuum Systems

Tested Product Construction: Painted carbon steel frames, painted carbon steel enclosures, NEMA 1/12

Mounting Description: Units are flexible base mounted with neoprene pads. Standalone control panels are rigidly mounted to a wall or manufacturer-provided stand.

Certified Seismic Level: $S_{DS}=2.00g, z/h=1.0$

Model Number	System	Manufacturer	Technology	Configuration	Pump HP	Voltage	System Size	Control Panel Size	Dimensions (inches)			Weight (lb)	Mounting	DCL Test Report Number	Unit
									Height	Width	Depth				
A-XXX-D-080P-SS-N-020-46063-TS	Air	Amico	Scroll / Reciprocating Air	Modular Skid Mounted	1 hp (reciprocating) 2 hp (scroll)	460	Duplex	Duplex	73.0	67.0	74.0	1,370	Flexible base (neoprene)	71743-1501	UUT1
A-XXX-D-240P-SS-N-200-20863-TS (Pump skid)	Air	Amico	Scroll / Reciprocating Air	Modular Skid Mounted	20 hp (scroll) 20 hp (reciprocating)	208	Duplex	Hexaplex	96.0	46.0	80.0	1,940		71743-1501	UUT2A
A-XXX-D-240P-SS-N-200-20863-TS (Receiver tank skid)	Air	Amico	Scroll / Reciprocating Air	Modular Skid Mounted	20 hp (scroll) 20 hp (reciprocating)	208	Duplex	Hexaplex	99.0	46.0	80.0	710		71743-1501	UUT2B
A-XXX-D-240P-SS-N-200-20863-TS (Dryer skid)	Air	Amico	Scroll / Reciprocating Air	Modular Skid Mounted	20 hp (scroll) 20 hp (reciprocating)	208	Duplex	Hexaplex	70.0	46.0	79.0	1,560		71743-1501	UUT2C
MA/MV 7 604-200-208-BAC-WM (A-XXX-D-240P-SS-N-200-20863-TS Control panel skid)	Air	Axecon for Amico	Scroll / Reciprocating Air	Modular Skid Mounted	20 hp (scroll) 20 hp (reciprocating)	208	Duplex	Hexaplex	71.0	51.5	29.5	750	Rigid base on STEEL-PDL-WELDED-1 Stand	71743-1501	UUT2D
V-xxx-D-060P-TS-N-xxx-46063-xxMxSx	Vacuum	Amico	Claw / Rotary Lubricated	Vertical Tank Mounted	1 hp (rotary lubricated) 2 hp (claw)	208	Duplex	Duplex	89.0	49.0	47.0	1,040	Flexible base (neoprene)	71743-1501	UUT3
V-xxx-D-120P-TS-N-xxx-20863-xxMxSx	Vacuum	Amico	Rotary Lubricated / Rotary Dry	Vertical Tank Mounted	7.4 hp (rotary dry) 7.5 hp (rotary lubricated)	460	Duplex	Duplex	85.0	47.0	64.0	1,430		71743-1501	UUT4
V-xxx-D-120P-TS-N-xxx-20863-xxMxSx	Vacuum	Amico	Claw / Rotary Dry	Vertical Tank Mounted	0.5 hp (rotary dry) 5.4 hp (claw)	208	Duplex	Duplex	85.0	50.0	48.5	1,110		71743-1501	UUT5
V-xxx-D-060P-TH-N-xxx-46063-xxMxSx	Vacuum	Amico	Claw / Rotary Lubricated	Horizontal Tank Mounted	1 hp (rotary lubricated) 2 hp (claw)	460	Duplex	Duplex	62.0	39.0	70.0	960		71743-1501	UUT6
V-xxx-D-240P-TH-N-xxx-20863-xxMxSx	Vacuum	Amico	Claw / Rotary Lubricated	Horizontal Tank Mounted	7.5 hp (claw) 10 hp (rotary lubricated)	208	Duplex	Duplex	75.0	46.5	97.0	2,040		71743-1501	UUT7
V-xxx-D-120P-TH-N-xxx-46063-xxxxSx	Vacuum	Amico	Rotary Dry	Horizontal Tank Mounted	0.5 hp (rotary dry) 7.5 hp (rotary dry)	460	Duplex	Duplex	63.0	50.0	86.0	1,270		71743-1501	UUT8
V-xxx-D-240P-TH-N-xxx-20863-xxxxSx	Vacuum	Amico	Rotary Dry	Horizontal Tank Mounted	7.4 hp (rotary dry) 12.1 hp (rotary dry)	208	Duplex	Duplex	77.0	55.0	100.0	2,250		71743-1501	UUT9
V-CCD-D-240P-SS-N-150-20863-xxMVxW	Vacuum	Amico	Claw	Modular Skid Mounted	15 hp (claw)	208	Duplex	Hexaplex*	96.0	73.0	55.0	2,960		71743-1501	UUT10
V-CCD-T-080P-SS-N-xxx-46063-xxMVxW	Vacuum	Amico	Claw	Modular Skid Mounted	2 hp (claw) 15 hp (claw)	460	Triplex	Triplex	99.0	73.0	70.5	3,670		71743-1501	UUT11
V-xxx-D-240P-SS-N-xxx-20863-xxxxSW	Vacuum	Amico	Rotary Lubricated / Rotary Dry	Modular Skid Mounted	25 hp (rotary dry) 25 hp (rotary lubricated)	208	Duplex	Hexaplex*	99.0	94.3	79.5	4,200		73815-2301	UUT12
V-xxx-D-240P-SS-N-xxx-20863-xxMxSW	Vacuum	Amico	Rotary Lubricated / Rotary Dry	Modular Skid Mounted	0.5 hp (rotary dry) 7.4 hp (rotary dry)	208	Duplex	Duplex	103.0	67.0	55.0	1,460		71743-1501	UUT13
V-xxx-T-060P-SS-N-xxx-46063-xxxxSx	Vacuum	Amico	Rotary Lubricated / Rotary Dry	Modular Skid Mounted	7.4 hp (rotary dry) 7.5 hp (rotary dry) 10 hp (rotary lubricated)	460	Triplex	Triplex	93.0	67.0	55.0	2,390		71743-1501	UUT14

*UUT10 and UUT12 hexaplex control panel is standalone and was shake tested in UUT16

**Table 33 - Special Seismic Certification
Tested Components - Standalone Controllers**



DCL Project: 73815-2201

Manufacturer: Axecon for Amico

Product Line: Medical Air and Vacuum Systems; Standalone Controllers

Tested Product Construction: Painted carbon steel frames, painted carbon steel enclosures, NEMA 1/12

Mounting Description: Units are flexible base mounted with neoprene pads. Standalone control panels are rigid base mounted.

Certified Seismic Level: $S_{DS}=2.00g$, $z/h=1.0$

Model Number	System	Manufacturer	Technology	Configuration	Pump HP	Voltage	Panel Stand Model Number	Control Panel Size	Dimensions (inches)			Weight (lb)	Mounting	DCL Test Report Number	Unit
									Height	Width	Depth				
MA/MV 7/8 204-015-460 (standalone control panel)	Air or Vacuum	Axecon for Amico	N/A	N/A	N/A	460	STEEL-PDL-APANEL	Duplex	54.0	24.0	11.5	158	Rigid base on STEEL-PDL-APANEL Stand	71743-1501	UUT15
MA/MV 7/8 605-200-208-BAC-WM (standalone control panel)	Air or Vacuum	Axecon for Amico	N/A	N/A	N/A	208	STEEL-PDL-WELDED	Hexaplex	93.0	53.5	31.8	960	Rigid base on STEEL-PDL-WELDED Stand	71743-1501	UUT16
MV2202-30 (standalone control panel)	Air or Vacuum	Axecon for Amico	N/A	N/A	N/A	460	N/A	Duplex	24	24	12	72	Rigid wall	72076-1601	UUT17A
MV2202-30 (standalone control panel)	Air or Vacuum	Axecon for Amico	N/A	N/A	N/A	460	N/A	Duplex	24	24	12	72	Flexible wall	72076-1601	UUT17B
MV3403-65 (standalone control panel)	Air or Vacuum	Axecon for Amico	N/A	N/A	N/A	208	N/A	Quadraplex	40	32	10	181	Rigid wall	72076-1601	UUT18A
MV3403-65 (standalone control panel)	Air or Vacuum	Axecon for Amico	N/A	N/A	N/A	208	N/A	Quadraplex	40	32	10	181	Flexible wall	72076-1601	UUT18B
MV2202-30 (standalone control panel)	Air or Vacuum	Axecon for Amico	N/A	N/A	N/A	460	STEEL-PDL-APANEL	Duplex	48	24	23	152	Rigid base on STEEL-PDL-APANEL Stand, Braced at Top	72076-1601	UUT19A
MV2202-30 (standalone control panel)	Air or Vacuum	Axecon for Amico	N/A	N/A	N/A	460	STEEL-PDL-APANEL	Duplex	48	24	23	152	Flexible base on STEEL-PDL-APANEL Stand, Braced at Top	72076-1601	UUT19B
MV3403-65 (standalone control panel)	Air or Vacuum	Axecon for Amico	N/A	N/A	N/A	208	STEEL-PDL-APANEL	Quadraplex	64	32	30	268	Rigid base on STEEL-PDL-APANEL Stand, Braced at Top	72076-1601	UUT20A
MV3403-65 (standalone control panel)	Air or Vacuum	Axecon for Amico	N/A	N/A	N/A	208	STEEL-PDL-APANEL	Quadraplex	64	32	30	268	Flexible base on STEEL-PDL-APANEL Stand, Braced at Top	72076-1601	UUT20B

UUT1
DCL Report 71743-1501
UNIT UNDER TEST (UUT) Summary Sheet



DCL Project Number: 73815-2201

Manufacturer: Amico Source

Product Line: Medical vacuum and air units

Model Number: A-XXX-D-080P-SS-N-020-46063-TS

Product Construction Summary:

Painted carbon steel skid. Control panel is painted carbon steel, NEMA 1/12.

Options / Component Summary:

460V duplex unit with duplex control panel, stack mounted, 1hp reciprocating air compressor, 2hp scroll compressor, 80 gallon vertical tank, 10 cfm dryer, 3/4" inlet filter, 1/2" pre- and after filter, dew point sensor and CO transmitter.

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 Properties

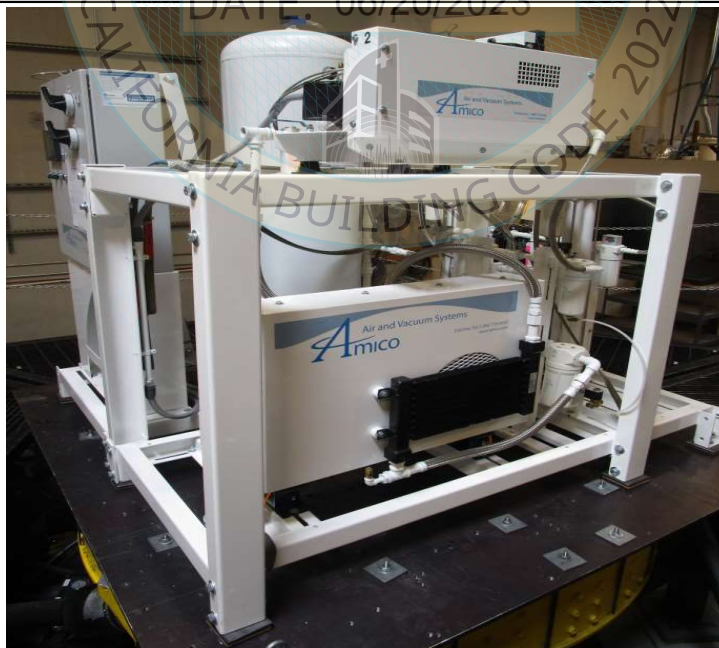
Operating Weight (lb)	Dimensions (inches)			Lowest Natural Frequency (Hz)		
	Height	Width	Depth	Side-Side (X)	Front-Back (Y)	Vertical (Z)
1,370	73.0	67.0	74.0	7.3	7.8	16.8

Seismic Test Parameters

Building Code	Test Criteria	Sds (g)	z/h	Ip	Aflx-H (g)	Arig-H (g)	Aflx-V (g)	Arig-V (g)
CBC 2022	ICC-ES AC156	2.50	1.0	1.5	4.00	3.00	1.67	0.67

Unit Mounting Description:

The unit was flexibly base mounted to the shake table with (9) 1/2" diameter Grade 5 bolts, 3/16" thick 4"x4" carbon steel plate, and 4"x4" combination cork and neoprene isolation pads by Vibration Isolation Co., Inc., Model CNP-16.



UUT1 Overall View

UUT2A
DCL Report 71743-1501
UNIT UNDER TEST (UUT) Summary Sheet



DCL Project Number: 73815-2201

Manufacturer: Amico Source

Product Line: Medical vacuum and air units

Model Number: A-XXX-D-240P-SS-N-200-20863-TS (pump skid)

Product Construction Summary:

Painted carbon steel skid.

Options / Component Summary:

208V duplex unit, stack mounted, 20hp reciprocating air compressor, 20hp scroll compressor

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 Properties

Operating Weight (lb)	Dimensions (inches)			Lowest Natural Frequency (Hz)		
	Height	Width	Depth	Side-Side (X)	Front-Back (Y)	Vertical (Z)
1,940	96.0	46.0	80.0	3.3	4.3	5.0

Seismic Test Parameters

Building Code	Test Criteria	Sds (g)	z/h	Ip	Aflx-H (g)	Arig-H (g)	Aflx-V (g)	Arig-V (g)
CBC 2022	ICC-ES AC156	2.00	1.0	1.5	3.20	2.40	1.33	0.53

Unit Mounting Description:

The unit was flexibly base mounted to the shake table with (4) 1/2" diameter Grade 5 bolts, 3/16" thick 4"x4" carbon steel plate, and 4"x4" combination cork and neoprene isolation pads by Vibration Isolation Co., Inc., Model CNP-16.



UUT2A Overall View

UUT2B
DCL Report 71743-1501
UNIT UNDER TEST (UUT) Summary Sheet



DCL Project Number: 73815-2201

Manufacturer: Amico Source

Product Line: Medical vacuum and air units

Model Number: A-XXX-D-240P-SS-N-200-20863-TS (receiver tank skid)

Product Construction Summary:

Painted carbon steel skid.

Options / Component Summary:

240 gallon vertical tank

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 Properties

Operating Weight (lb)		Dimensions (inches)			Lowest Natural Frequency (Hz)		
		Height	Width	Depth	Side-Side (X)	Front-Back (Y)	Vertical (Z)
710	UUT2B	99.0	46.0	80.0	6.3	5.3	17.3

Seismic Test Parameters

Building Code	Test Criteria	Sds (g)	z/h	IP	Aflx-H (g)	Arig-H (g)	Aflx-V (g)	Arig-V (g)
CBC 2022	ICC-ES AC156	2.00	1.0	1.5	3.20	2.40	1.33	0.53

Unit Mounting Description:

The unit was flexibly base mounted to the shake table with (4) 1/2" diameter Grade 5 bolts, 3/16" thick 4"x4" carbon steel plate, and 4"x4" combination cork and neoprene isolation pads by Vibration Isolation Co., Inc., Model CNP-16.



UUT2B Overall View

UUT2C

DCL Report 71743-1501

UNIT UNDER TEST (UUT) Summary Sheet



DCL Project Number: 73815-2201

Manufacturer: Amico Source

Product Line: Medical vacuum and air units

Model Number: A-XXX-D-240P-SS-N-200-20863-TS (dryer skid)

Product Construction Summary:

Painted carbon steel skid

Options / Component Summary:

208V, 300 cfm dryer, 1-1/2" inlet filter, 2" pre- and after filter, dew point sensor and CO transmitter.

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 Properties

Operating Weight (lb)	Dimensions (inches)			Lowest Natural Frequency (Hz)		
	Height	Width	Depth	Side-Side (X)	Front-Back (Y)	Vertical (Z)
1,560	70.0	46.0	79.0	6.5	4.8	15.0

Seismic Test Parameters

Building Code	Test Criteria	Sds (g)	z/h	Ip	Aflx-H (g)	Arig-H (g)	Aflx-V (g)	Arig-V (g)
CBC 2022	ICC-ES AC156	2.50	1.0	1.5	4.00	3.00	1.67	0.67

Unit Mounting Description:

Flexible base mounted: the unit was attached to the shake table with (4) 1/2" diameter Grade 5 bolts, 3/16" thick 4"x4" carbon steel plate, and 4"x4" combination cork and neoprene isolation pads by Vibration Isolation Co., Inc., Model CNP-16.



UUT2C Overall View

UUT2D

DCL Report 71743-1501

UNIT UNDER TEST (UUT) Summary Sheet



DCL Project Number: 73815-2201

Manufacturer: Axecon for Amico

Product Line: Medical vacuum and air units

Model Number: MA/MV 7 604-200-208-BAC-WM (A-XXX-D-240P-SS-N-200-20863-TS Control Panel Skid)

Product Construction Summary:

Painted carbon steel skid. Control panel is painted carbon steel, NEMA 1/12.

Options / Component Summary:

208V hexaplex control panel.

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 Properties

Operating Weight (lb)	Dimensions (inches)			Lowest Natural Frequency (Hz)			
	Height	Width	Depth	Front-Back (X)	Side-Side (Y)	Vertical (Z)	
750	UUT2D	71.0	51.5	29.5	7.8	20.3	21.3

Seismic Test Parameters

Building Code	Test Criteria	Sds (g)	z/h	Ip	Aflx-H (g)	Arig-H (g)	Aflx-V (g)	Arig-V (g)
CBC 2022	ICC-ES AC156	2.50	1.0	1.5	4.00	3.00	1.67	0.67

Unit Mounting Description:

Rigid base mounted: the unit was attached to the manufacturer-provided stand (Amico Part Number STEEL-PDL-WELDED-1) with (4) 3/8" x 3 Grade 5 hex cap screws, 3/8" flat washers, lock nuts, and 5/16" flat washers. The stand was mounted to the shake table with (8) 1/2" diameter Grade 5 bolts.



UUT2D Overall View

UUT3

DCL Report 71743-1501

UNIT UNDER TEST (UUT) Summary Sheet



DCL Project Number: 73815-2201

Manufacturer: Amico Source

Product Line: Medical vacuum and air units

Model Number: V-xxx-D-060P-TS-N-xxx-46063-xxMxSx

Product Construction Summary:

Painted carbon steel skid. Control panel is painted carbon steel, NEMA 1/12.

Options / Component Summary:

208V duplex unit with duplex control panel, vertical tank mounted, 1hp rotary vane lubricated pump, 2hp contactless claw pump, 60 gallon vertical tank with top plate

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 Properties

Operating Weight (lb)	Dimensions (inches)	Lowest Natural Frequency (Hz)					
		Height	Width	Depth	Front-Back (X)	Side-Side (Y)	Vertical (Z)
1,040	UUT3	89.0	49.0	47.0	5.3	4.3	8.8

Seismic Test Parameters

Building Code	Test Criteria	Sds (g)	z/h	Ip	Aflx-H (g)	Arig-H (g)	Aflx-V (g)	Arig-V (g)
CBC 2022	ICC-ES AC156	2.00	1.0	1.5	3.20	2.40	1.33	0.53

Unit Mounting Description:

Flexible base mounted: the unit was attached to the shake table with (4) 1/2" diameter Grade 5 bolts, 3/16" thick 4"x4" carbon steel plate, and 4"x4" combination cork and neoprene isolation pads by Vibration Isolation Co., Inc., Model CNP-16.



UUT3 Overall View

UUT4
DCL Report 71743-1501
UNIT UNDER TEST (UUT) Summary Sheet



DCL Project Number: 73815-2201

Manufacturer: Amico Source

Product Line: Medical vacuum and air units

Model Number: V-xxx-D-120P-TS-N-xxx-20863-xxMxSx

Product Construction Summary:

Painted carbon steel skid. Control panel is painted carbon steel, NEMA 1/12.

Options / Component Summary:

460V duplex unit with duplex control panel, vertical tank mounted, 7.5hp rotary vane lubricated pump, 7.4hp rotary vane dry pump, 120 gallon vertical tank with top plate.

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 Properties

Operating Weight (lb)	Dimensions (inches)				Lowest Natural Frequency (Hz)		
	Height	Width	Depth	Front-Back (X)	Side-Side (Y)	Vertical (Z)	
1,430	85.0	47.0	64.0	5.8	5.5	6.3	

Seismic Test Parameters

Building Code	Test Criteria	Sds (g)	z/h	Ip	Aflx-H (g)	Arig-H (g)	Aflx-V (g)	Arig-V (g)
CBC 2022	ICC-ES AC156	2.00	1.0	1.5	3.20	2.40	1.33	0.53

Unit Mounting Description:

Flexible base mounted: the unit was attached to the shake table with (4) 1/2" diameter Grade 5 bolts, (4) 1/4" thick 2"x2" A36 washers, 3/16" thick 4"x4" carbon steel plate, and 4"x4" combination cork and neoprene isolation pads by Vibration Isolation Co., Inc., Model CNP-16.



UUT4 Overall View

UUT5
DCL Report 71743-1501
UNIT UNDER TEST (UUT) Summary Sheet



DCL Project Number: 73815-2201

Manufacturer: Amico Source

Product Line: Medical vacuum and air units

Model Number: V-xxx-D-120P-TS-N-xxx-20863-xxMxSx

Product Construction Summary:

Painted carbon steel skid. Control panel is painted carbon steel, NEMA 1/12.

Options / Component Summary:

208V duplex unit with duplex control panel, vertical tank mounted, 0.5hp rotary vane dry pump, 5.4hp contactless claw pump, 120 gallon vertical tank with top plate.

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 Properties

Operating Weight (lb)	Dimensions (inches)			Lowest Natural Frequency (Hz)		
	Height	Width	Depth	Front-Back (X)	Side-Side (Y)	Vertical (Z)
1,110	85.0	50.0	48.5	7.0	5.3	9.5

Seismic Test Parameters

Building Code	Test Criteria	Sds (g)	z/h	Ip	Aflx-H (g)	Arig-H (g)	Aflx-V (g)	Arig-V (g)
CBC 2022	ICC-ES AC156	2.00	1.0	1.5	3.20	2.40	1.33	0.53

Unit Mounting Description:

Flexible base mounted: the unit was attached to the shake table with (4) 1/2" diameter Grade 5 bolts, 3/16" thick 4"x4" carbon steel plate, and 4"x4" combination cork and neoprene isolation pads by Vibration Isolation Co., Inc., Model CNP-16.



UUT5 Overall View

UUT6
DCL Report 71743-1501
UNIT UNDER TEST (UUT) Summary Sheet



DCL Project Number: 73815-2201

Manufacturer: Amico Source

Product Line: Medical vacuum and air units

Model Number: V-xxx-D-060P-TH-N-xxx-46063-xxMxSx

Product Construction Summary:

Painted carbon steel skid. Control panel is painted carbon steel, NEMA 1/12.

Options / Component Summary:

460V duplex unit with duplex control panel, horizontal tank mounted, 1hp rotary vane lubricated pump, 2hp contactless claw pump, 60 gallon horizontal tank.

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 Properties

Operating Weight (lb)	Dimensions (inches)	Lowest Natural Frequency (Hz)					
		Height	Width	Depth	Front-Back (X)	Side-Side (Y)	Vertical (Z)
960	UUT6	62.0	39.0	70.0	7.0	6.8	13.0

Seismic Test Parameters

Building Code	Test Criteria	Sds (g)	z/h	Ip	Aflx-H (g)	Arig-H (g)	Aflx-V (g)	Arig-V (g)
CBC 2022	ICC-ES AC156	2.50	1.0	1.5	4.00	3.00	1.67	0.67

Unit Mounting Description:

Flexible base mounted: the unit was attached to the shake table with (4) 1/2" diameter Grade 5 bolts, 3/16" thick 4"x4" carbon steel plate, and 4"x4" combination cork and neoprene isolation pads by Vibration Isolation Co., Inc., Model CNP-16.



UUT6 Overall View

UUT7

DCL Report 71743-1501

UNIT UNDER TEST (UUT) Summary Sheet



DCL Project Number: 73815-2201

Manufacturer: Amico Source

Product Line: Medical vacuum and air units

Model Number: V-xxx-D-240P-TH-N-xxx-20863-xxMxSx

Product Construction Summary:

Painted carbon steel skid. Control panel is painted carbon steel, NEMA 1/12.

Options / Component Summary:

208V duplex unit with duplex control panel, horizontal tank mounted, 10hp rotary vane lubricated pump, 7.5hp contactless claw pump, 240 gallon horizontal tank.

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 Properties

Operating Weight (lb)	Dimensions (inches)	Lowest Natural Frequency (Hz)					
		Height	Width	Depth			
2,040	UUT7	75.0	46.5	97.0	Front-Back (X)	Side-Side (Y)	Vertical (Z)
					5.5	6.0	9.3

Seismic Test Parameters

Building Code	Test Criteria	Sds (g)	z/h	Ip	Aflx-H (g)	Arig-H (g)	Aflx-V (g)	Arig-V (g)
CBC 2022	ICC-ES AC156	2.50	1.0	1.5	4.00	3.00	1.67	0.67

Unit Mounting Description:

Flexible base mounted: the unit was attached to the shake table with (4) 1/2" diameter Grade 5 bolts, 3/16" thick 4"x4" carbon steel plate, and 4"x4" combination cork and neoprene isolation pads by Vibration Isolation Co., Inc., Model CNP-16.



UUT7 Overall View

UUT8
DCL Report 71743-1501
UNIT UNDER TEST (UUT) Summary Sheet



DCL Project Number: 73815-2201

Manufacturer: Amico Source

Product Line: Medical vacuum and air units

Model Number: V-xxx-D-120P-TH-N-xxx-46063-xxxxSx

Product Construction Summary:

Painted carbon steel skid. Control panel is painted carbon steel, NEMA 1/12.

Options / Component Summary:

460V duplex unit with duplex control panel, horizontal tank mounted, 0.5hp rotary vane dry pump, 7.5hp rotary vane dry pump, 120 gallon horizontal tank.

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 Properties

Operating Weight (lb)	Dimensions (inches)				Lowest Natural Frequency (Hz)		
	Height	Width	Depth	Front-Back (X)	Side-Side (Y)	Vertical (Z)	
1,270	63.0	50.0	86.0	5.3	5.8	15.0	

Seismic Test Parameters

Building Code	Test Criteria	Sds (g)	z/h	Ip	Aflx-H (g)	Arig-H (g)	Aflx-V (g)	Arig-V (g)
CBC 2022	ICC-ES AC156	2.00	1.0	1.5	3.20	2.40	1.33	0.53

Unit Mounting Description:

Flexible base mounted: the unit was attached to the shake table with (4) 1/2" diameter Grade 5 bolts, 3/16" thick 4"x4" carbon steel plate, and 4"x4" combination cork and neoprene isolation pads by Vibration Isolation Co., Inc., Model CNP-16. Factory installed pump isolators were replaced with 1,020 load capacity, M10x1.50 thread size, 2-3/8" diameter, 25mm high, 5mm deflection, standard deflection vibration isolators (MSC part number 62006465), using M3VHB tape between the motor and the isolator, and 1/4" plate washers.



UUT8 Overall View

UUT9
DCL Report 71743-1501
UNIT UNDER TEST (UUT) Summary Sheet



DCL Project Number: 73815-2201

Manufacturer: Amico Source

Product Line: Medical vacuum and air units

Model Number: V-xxx-D-240P-TH-N-xxx-20863-xxxxSx

Product Construction Summary:

Painted carbon steel skid. Control panel is painted carbon steel, NEMA 1/12.

Options / Component Summary:

208V duplex unit with duplex control panel, horizontal tank mounted, 7.4hp rotary vane dry pump, 12.1hp rotary vane dry pump, 240 gallon horizontal tank.

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 Properties

Operating Weight (lb)	Dimensions (inches)			Lowest Natural Frequency (Hz)		
	Height	Width	Depth	Front-Back (X)	Side-Side (Y)	Vertical (Z)
2,250	77.0	55.0	100.0	3.8	5.3	8.3

Seismic Test Parameters

Building Code	Test Criteria	Sds (g)	z/h	Ip	Aflx-H (g)	Arig-H (g)	Aflx-V (g)	Arig-V (g)
CBC 2022	ICC-ES AC156	2.00	1.0	1.5	3.20	2.40	1.33	0.53

Unit Mounting Description:

Flexible base mounted: the unit was attached to the shake table with (4) 1/2" diameter Grade 5 bolts, 3/16" thick 4"x4" carbon steel plate, and 4"x4" combination cork and neoprene isolation pads by Vibration Isolation Co., Inc., Model CNP-16.



UUT9 Overall View

UUT10
DCL Report 71743-1501
UNIT UNDER TEST (UUT) Summary Sheet



DCL Project Number: 73815-2201

Manufacturer: Amico Source

Product Line: Medical vacuum and air units

Model Number: V-CCD-D-240P-SS-N-150-20863-xxMVxW

Product Construction Summary:

Painted carbon steel skid. Control panel is painted carbon steel, NEMA 1/12.

Options / Component Summary:

208V duplex unit, stack mounted, (2) 15hp contactless claw pumps, 240 gallon vertical tank.

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 Properties

Operating Weight (lb)	Dimensions (inches)	Lowest Natural Frequency (Hz)					
		Height	Width	Depth	Front-Back (X)	Side-Side (Y)	Vertical (Z)
2,960	UUT10	96.0	73.0	55.0	5.3	6.8	8.5

Seismic Test Parameters

Building Code	Test Criteria	Sds (g)	z/h	Ip	Aflx-H (g)	Arig-H (g)	Aflx-V (g)	Arig-V (g)
CBC 2022	ICC-ES AC156	2.50	1.0	1.5	4.00	3.00	1.67	0.67

Unit Mounting Description:

Flexible base mounted: the unit was attached to the shake table with (6) 1/2" diameter Grade 5 bolts, 3/16" thick 4"x4" carbon steel plate, and 4"x4" combination cork and neoprene isolation pads by Vibration Isolation Co., Inc., Model CNP-16. In addition, 1/4" plate washers were added to all receiver tank- to skid mounting locations.



UUT10 Overall View

UUT11
DCL Report 71743-1501
UNIT UNDER TEST (UUT) Summary Sheet



DCL Project Number: 73815-2201

Manufacturer: Amico Source

Product Line: Medical vacuum and air units

Model Number: V-CCD-T-080P-SS-N-xxx-46063-xxMVxW

Product Construction Summary:

Painted carbon steel skid. Control panel is painted carbon steel, NEMA 1/12.

Options / Component Summary:

460V triplex unit with triplex control panel, stack mounted, 2hp and 15 hp contactless claw pumps, 80 gallon vertical tank.

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 Properties

Operating Weight (lb)	Dimensions (inches)			Lowest Natural Frequency (Hz)		
	Height	Width	Depth	Front-Back (X)	Side-Side (Y)	Vertical (Z)
3,670	99.0	73.0	70.5	4.0	5.0	9.5

Seismic Test Parameters

Building Code	Test Criteria	Sds (g)	z/h	Ip	Aflx-H (g)	Arig-H (g)	Aflx-V (g)	Arig-V (g)
CBC 2022	ICC-ES AC156	2.50	1.0	1.5	4.00	3.00	1.67	0.67

Unit Mounting Description:

Flexible base mounted: the unit was attached to the shake table with (8) 1/2" diameter Grade 5 bolts, 3/16" thick 4"x4" carbon steel plate, and 4"x4" combination cork and neoprene isolation pads by Vibration Isolation Co., Inc., Model CNP-16. All factory installed pump isolators were replaced with VMC TTB-750 isolators.



UUT11 Overall View

UUT12
DCL Report 73815-2201
UNIT UNDER TEST (UUT) Summary Sheet



DCL Project Number: 73815-2201

Manufacturer: Amico Source

Product Line: Medical vacuum and air units

Model Number: V-xxx-D-240P-SS-N-xxx-20863-xxxxSW

Product Construction Summary:

Painted carbon steel skid. Control panel is painted carbon steel, NEMA 1/12.

Options / Component Summary:

208V duplex unit, stack mounted, 25 hp rotary vane dry and 25 hp rotary vane lubricated pumps, 240 gallon vertical tank.

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 Properties

Operating Weight (lb)	Dimensions (inches)			Lowest Natural Frequency (Hz)		
	Height	Width	Depth	Front-Back (X)	Side-Side (Y)	Vertical (Z)
4,200	99.0	94.3	79.5	5.0	4.5	10.0

Seismic Test Parameters

Building Code	Test Criteria	Sds (g)	z/h	Ip	Aflx-H (g)	Arig-H (g)	Aflx-V (g)	Arig-V (g)
CBC 2022	ICC-ES AC156	2.00	1.0	1.5	3.20	2.40	1.33	0.53

Unit Mounting Description:

Flexible base mounted: the unit was attached to the shake table with (8) 1/2" diameter Grade 5 bolts, flat washers, 3/16" thick 4"x4" carbon steel plates, and 4"x4" combination cork and neoprene isolation pads by Vibration Isolation Co., Inc. Model CNP-16. In addition, (4) 1.75"x1.75"x1/4" carbon steel plate washers between the top of the manufacturer-provided mounting channels and flat washers were used to mount the pump skid to the shake table interface plate.

*Pre-test retrofit: extended M12 threaded rods were used to connect the pumps to the VMC-M12-1000 isolators.



UUT12 Overall View

UUT13
DCL Report 71743-1501
UNIT UNDER TEST (UUT) Summary Sheet



DCL Project Number: 73815-2201

Manufacturer: Amico Source

Product Line: Medical vacuum and air units

Model Number: V-xxx-D-240P-SS-N-xxx-20863-xxMxSW

Product Construction Summary:

Painted carbon steel skid. Control panel is painted carbon steel, NEMA 1/12.

Options / Component Summary:

208V duplex unit with duplex control panel, stack mounted, 0.5hp rotary vane dry and 7.4 hp rotary vane dry pumps, 240 gallon vertical tank.

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 Properties

Operating Weight (lb)	Dimensions (inches)				Lowest Natural Frequency (Hz)		
	Height	Width	Depth	Front-Back (X)	Side-Side (Y)	Vertical (Z)	
1,460	103.0	67.0	55.0	6.8	7.0	22.0	

Seismic Test Parameters

Building Code	Test Criteria	Sds (g)	z/h	Ip	Aflx-H (g)	Arig-H (g)	Aflx-V (g)	Arig-V (g)
CBC 2022	ICC-ES AC156	2.50	1.0	1.5	4.00	3.00	1.67	0.67

Unit Mounting Description:

Flexible base mounted: the unit was attached to the shake table with (8) 1/2" diameter Grade 5 bolts, 3/16" thick 4"x4" carbon steel plate, and 4"x4" combination cork and neoprene isolation pads by Vibration Isolation Co., Inc., Model CNP-16.



UUT13 Overall View

UUT14**DCL Report 71743-1501****UNIT UNDER TEST (UUT) Summary Sheet****DCL Project Number:** 73815-2201**Manufacturer:** Amico Source**Product Line:** Medical vacuum and air units**Model Number:** V-xxx-T-060P-SS-N-xxx-46063-xxxxSx**Product Construction Summary:**

Painted carbon steel skid. Control panel is painted carbon steel, NEMA 1/12.

Options / Component Summary:

460V triplex unit with triplex control panel, stack mounted, 7.4hp and 7.5hp rotary vane dry pumps and 10 hp rotary vane lubricated pump, 60 gallon vertical tank.

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 Properties*

Operating Weight (lb)	Dimensions (inches)	Lowest Natural Frequency (Hz)					
		Height	Width	Depth	Front-Back (X)	Side-Side (Y)	Vertical (Z)
2,390	UUT14	93.0	67.0	55.0	4.8	5.3	14.3

Seismic Test Parameters

Building Code	Test Criteria	Sds (g)	z/h	Ip	Aflx-H (g)	Arig-H (g)	Aflx-V (g)	Arig-V (g)
CBC 2022	ICC-ES AC156	2.00	1.0	1.5	3.20	2.40	1.33	0.53

Unit Mounting Description:

Flexible base mounted: the unit was attached to the shake table with (6) 1/2" diameter Grade 5 bolts, 3/16" thick 4"x4" carbon steel plate, and 4"x4" combination cork and neoprene isolation pads by Vibration Isolation Co., Inc., Model CNP-16. The existing factory-installed motor isolators on the middle motor were replaced with 1,020 load capacity, M10x1.50 thread size, 2-3/8" diameter, 25mm high, 5mm deflection, standard deflection vibration isolators (MSC part number 62006465), using M3VHB tape between the motor and the isolator, and 1/4" plate washers. In addition, 1/4" plate washers were added to all receiver tank- to skid mounting locations.



UUT14 Overall View

UUT15
DCL Report 72076-1601
UNIT UNDER TEST (UUT) Summary Sheet



DCL Project Number: 73815-2201

Manufacturer: Axecon for Amico

Product Line: Medical vacuum and air units

Model Number: MA/MV 7/8 204-015-460 (standalone control panel)

Product Construction Summary:

Painted carbon steel frame. Control panel is painted carbon steel, NEMA 1/12.

Options / Component Summary:

Contactors, relay, VFD, circuit breaker, power distribution block, transformer, PLC controller, expansion cards, communication module, Bacnet, 5.7" HMI, switches, thermostat, filter, fan, 24VDC power supply, annunciator, fuses.

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 Properties

Operating Weight (lb)	Dimensions (inches)				Lowest Natural Frequency (Hz)		
	Height	Width	Depth	Front-Back (X)	Side-Side (Y)	Vertical (Z)	
158	54.0	24.0	11.5	20.3	10.8	>33.3	

Seismic Test Parameters

Building Code	Test Criteria	Sds (g)	z/h	Ip	Aflx-H (g)	Arig-H (g)	Aflx-V (g)	Arig-V (g)
CBC 2022	ICC-ES AC156	2.50	1.0	1.5	4.00	3.00	1.67	0.67

Unit Mounting Description:

Rigid base mounted: the unit was attached to the manufacturer-provided stand (Amico Part Number STEEL-PDL-APANEL) with (8) 3/8" diameter Grade 5 bolts, (4) on each side of the stand. The stand was mounted to the shake table with (8) 3/8" diameter Grade 5 bolts, (4) in each leg.



UUT15 Overall View

UUT16
DCL Report 72076-1601
UNIT UNDER TEST (UUT) Summary Sheet



DCL Project Number: 73815-2201

Manufacturer: Axecon for Amico

Product Line: Medical vacuum and air units

Model Number: MA/MV 7/8 605-200-208-BAC-WM (standalone control panel)

Product Construction Summary:

Painted carbon steel skid. Control panel is painted carbon steel, NEMA 1/12.

Options / Component Summary:

Contactor, relay, VFD, circuit breaker, power distribution block, transformer, PLC controller, expansion cards, communication module, Bacnet, 5.7" HMI, switches, thermostat, filter, fan, 24VDC power supply, annunciator, fuses.

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 Properties

Operating Weight (lb)	Dimensions (inches)	Dimensions (inches)			Lowest Natural Frequency (Hz)		
		Height	Width	Depth	Front-Back (X)	Side-Side (Y)	Vertical (Z)
960	UUT16	93.0	53.5	31.8	18.5	5.5	23.5

Seismic Test Parameters

Building Code	Test Criteria	Sds (g)	z/h	Ip	Aflx-H (g)	Arig-H (g)	Aflx-V (g)	Arig-V (g)
CBC 2022	ICC-ES AC156	2.50	1.0	1.5	4.00	3.00	1.67	0.67

Unit Mounting Description:

Rigid base mounted: the unit was attached to the manufacturer-provided stand (Amico Part Number STEEL-PDL-WELDED) with (8) 1/2" diameter Grade 5 bolts (4 at the back and 2 on each side of the unit). The stand was mounted to the shake table with with (10) 1/2" diameter Grade 5 bolts.



UUT16 Overall View

UUT17A
DCL Report 72076-1601
UNIT UNDER TEST (UUT) Summary Sheet



DCL Project Number: 73815-2201

Manufacturer: Axecon for Amico

Product Line: Medical vacuum and air units

Model Number: MV2202-30 (standalone control panel)

Product Construction Summary:

Control panel enclosure is painted carbon steel, NEMA 1/12.

Options / Component Summary:

Overload relay, circuit breaker, transformer, PLC base controller, analog expansion card, 2.5" HMI display, push button, and fuses.

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 Properties

Operating Weight (lb)	Dimensions (inches)			Lowest Natural Frequency (Hz)		
	Height	Width	Depth	Front-Back (Y)	Side-Side (X)	Vertical (Z)
72	24.0	24.0	8.0	N/A	N/A	N/A

Seismic Test Parameters

Building Code	Test Criteria	Sds (g)	z/h	Ip	Aflx-H (g)	Arig-H (g)	Aflx-V (g)	Arig-V (g)
CBC 2022	ICC-ES AC156	2.00	1.0	1.5	3.20	3.00	1.67	0.67
		2.50	0.0					

Unit Mounting Description:

Rigid wall mounted: the unit was attached to the test wall with (4) 3/8" Grade 5 bolts at the back of the enclosure. The test wall was rigidly mounted to the shake table.



UUT17A Overall View

UUT17B
DCL Report 72076-1601
UNIT UNDER TEST (UUT) Summary Sheet



DCL Project Number: 73815-2201

Manufacturer: Axecon for Amico

Product Line: Medical vacuum and air units

Model Number: MV2202-30 (standalone control panel)

Product Construction Summary:

Control panel enclosure is painted carbon steel, NEMA 1/12.

Options / Component Summary:

Overload relay, circuit breaker, transformer, PLC base controller, analog expansion card, 2.5" HMI display, push button, and fuses.

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 Properties

Operating Weight (lb)		Dimensions (inches)			Lowest Natural Frequency (Hz)		
		Height	Width	Depth	Front-Back (Y)	Side-Side (X)	Vertical (Z)
72	UUT17B	24.0	24.0	8.0	N/A	N/A	N/A

Seismic Test Parameters

Building Code	Test Criteria	Sds (g)	z/h	Ip	Aflx-H (g)	Arig-H (g)	Aflx-V (g)	Arig-V (g)
CBC 2022	ICC-ES AC156	2.00	1.0	1.5	3.20	3.00	1.67	0.67
		2.50	0.0					

Unit Mounting Description:

Flexible wall mounted: the unit was attached to the test wall with (4) 3/8" Grade 5 bolts at the back of the enclosure. The test wall was mounted to the shake table with (4) VMC MSSH-1E-2000 spring mounts.



UUT17B Overall View

UUT18A
DCL Report 72076-1601
UNIT UNDER TEST (UUT) Summary Sheet



DCL Project Number: 73815-2201

Manufacturer: Axecon for Amico

Product Line: Medical vacuum and air units

Model Number: MV3403-65 (standalone control panel)

Product Construction Summary:

Control panel enclosure is painted carbon steel, NEMA 1/12.

Options / Component Summary:

Contactors, circuit breaker, transformer, PLC base controller, analog expansion card, digital expansion module, serial communication module, Bacnet PLC base module, 3.5" HMI display and power supply.

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 Properties

Operating Weight (lb)	Dimensions (inches)			Lowest Natural Frequency (Hz)		
	Height	Width	Depth	Front-Back (Y)	Side-Side (X)	Vertical (Z)
181	40.0	32.0	10.0	N/A	N/A	N/A

Seismic Test Parameters

Building Code	Test Criteria	Sds (g)	z/h	Ip	Aflx-H (g)	Arig-H (g)	Aflx-V (g)	Arig-V (g)
CBC 2022	ICC-ES AC156	2.00	1.0	1.5	3.20	3.00	1.67	0.67
		2.50	0.0					

Unit Mounting Description:

Rigid wall mounted: the unit was attached to the test wall with (4) 3/8" Grade 5 bolts at the back of the enclosure. The test wall was rigidly mounted to the shake table.



UUT18A Overall View

UUT18B
DCL Report 72076-1601
UNIT UNDER TEST (UUT) Summary Sheet



DCL Project Number: 73815-2201

Manufacturer: Axecon for Amico

Product Line: Medical vacuum and air units

Model Number: MV3403-65 (standalone control panel)

Product Construction Summary:

Control panel enclosure is painted carbon steel, NEMA 1/12.

Options / Component Summary:

Contactors, circuit breaker, transformer, PLC base controller, analog expansion card, digital expansion module, serial communication module, Bacnet PLC base module, 3.5" HMI display and power supply.

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 Properties

Operating Weight (lb)	Dimensions (inches)	Lowest Natural Frequency (Hz)					
		Height	Width	Depth	Front-Back (Y)	Side-Side (X)	Vertical (Z)
181	UUT18B	40.0	32.0	10.0	N/A	N/A	N/A

Seismic Test Parameters

Building Code	Test Criteria	Sds (g)	z/h	Ip	Aflx-H (g)	Arig-H (g)	Aflx-V (g)	Arig-V (g)
CBC 2022	ICC-ES AC156	2.00	1.0	1.5	3.20	3.00	1.67	0.67
		2.50	0.0					

Unit Mounting Description:

Flexible wall mounted: the unit was attached to the test wall with (4) 3/8" Grade 5 bolts at the back of the enclosure. The test wall was mounted to the shake table with (4) VMC MSSH-1E-2000 spring mounts.



UUT18B Overall View

UUT19A
DCL Report 72076-1601
UNIT UNDER TEST (UUT) Summary Sheet



DCL Project Number: 73815-2201

Manufacturer: Axecon for Amico

Product Line: Medical vacuum and air units

Model Number: MV2202-30 (standalone control panel)

Product Construction Summary:

Painted carbon steel stand. Control panel enclosure is painted carbon steel, NEMA 1/12.

Options / Component Summary:

Overload relay, circuit breaker, transformer, PLC base controller, analog expansion card, 2.5" HMI display, push button, and fuses.

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 Properties

Operating Weight (lb)	Dimensions (inches)				Lowest Natural Frequency (Hz)		
		Height	Width	Depth	Front-Back (Y)	Side-Side (X)	Vertical (Z)
152	UUT19A	48.0	24.0	23.0	>33.3	24.0	>33.3

Note: Dimensions and weight include stand and seismic bracing.

Seismic Test Parameters

Building Code	Test Criteria	Sds (g)	z/h	Ip	Aflx-H (g)	Arig-H (g)	Aflx-V (g)	Arig-V (g)
CBC 2022	ICC-ES AC156	2.00	1.0	1.5	3.20	3.00	1.67	0.67
		2.50	0.0	1.5				

Unit Mounting Description:

Rigid base mounted: the unit was attached to its manufacturer-provided stand with (6) 3/8" Grade 5 bolts. The stand was mounted to the shake table interface plate with (8) 3/8" diameter Grade 5 bolts. The unit's seismic bracing was attached to the enclosure and to the shake table interface plate with (2) each 3/8" Grade 5 bolts.



UUT19A Overall View

UUT19B
DCL Report 72076-1601
UNIT UNDER TEST (UUT) Summary Sheet



DCL Project Number: 73815-2201

Manufacturer: Axecon for Amico

Product Line: Medical vacuum and air units

Model Number: MV2202-30 (standalone control panel)

Product Construction Summary:

Painted carbon steel stand. Control panel enclosure is painted carbon steel, NEMA 1/12.

Options / Component Summary:

Overload relay, circuit breaker, transformer, PLC base controller, analog expansion card, 2.5" HMI display, push button, and fuses.

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 Properties

Operating Weight (lb)		Dimensions (inches)			Lowest Natural Frequency (Hz)		
		Height	Width	Depth	Front-Back (Y)	Side-Side (X)	Vertical (Z)
152	UUT19A	48.0	24.0	23.0	5.5	6.5	9.5

Note: Dimensions and weight include stand and seismic bracing.

Seismic Test Parameters

Building Code	Test Criteria	Sds (g)	z/h	Ip	Aflx-H (g)	Arig-H (g)	Aflx-V (g)	Arig-V (g)
CBC 2022	ICC-ES AC156	2.00	1.0	1.5	3.20	3.00	1.67	0.67
		2.50	0.0					

Unit Mounting Description:

Flexible base mounted: the unit was attached to its manufacturer-provided stand with (6) 3/8" Grade 5 bolts. The stand was mounted to the shake table interface plate with (8) 3/8" diameter Grade 5 bolts. The unit's seismic bracing was attached to the enclosure and to the shake table interface plate with (2) each 3/8" Grade 5 bolts. Interface plate mounted to shake table surface with (4) VMC MSSH-1E-2000 spring mounts.



UUT19B Overall View

UUT20A
DCL Report 72076-1601
UNIT UNDER TEST (UUT) Summary Sheet



DCL Project Number: 73815-2201

Manufacturer: Axecon for Amico

Product Line: Medical vacuum and air units

Model Number: MV3403-65 (standalone control panel)

Product Construction Summary:

Painted carbon steel stand. Control panel enclosure is painted carbon steel, NEMA 1/12.

Options / Component Summary:

Contactor, circuit breaker, transformer, PLC base controller, analog expansion card, digital expansion module, serial communication module, Bacnet PLC base module, 3.5" HMI display and power supply.

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 Properties

Operating Weight (lb)	Dimensions (inches)			Lowest Natural Frequency (Hz)		
	Height	Width	Depth	Front-Back (Y)	Side-Side (X)	Vertical (Z)
268	64.0	32.0	30.0	9.5	14.0	22.5

Note: Dimensions and weight include stand and seismic bracing.

Seismic Test Parameters

Building Code	Test Criteria	Sds (g)	z/h	Ip	Aflx-H (g)	Arig-H (g)	Aflx-V (g)	Arig-V (g)
CBC 2022	ICC-ES AC156	2.00	1.0	1.5	3.20	3.00	1.67	0.67
		2.50	0.0					

Unit Mounting Description:

Rigid base mounted: the unit was attached to its manufacturer-provided stand with (8) 3/8" Grade 5 bolts. The stand was mounted to the shake table interface plate with (8) 3/8" diameter Grade 5 bolts. The unit's seismic bracing was attached to the enclosure and to the shake table interface plate with (2) each 3/8" Grade 5 bolts.



UUT20A Overall View

UUT20B
DCL Report 72076-1601
UNIT UNDER TEST (UUT) Summary Sheet



DCL Project Number: 73815-2201

Manufacturer: Axecon for Amico

Product Line: Medical vacuum and air units

Model Number: MV3403-65 (standalone control panel)

Product Construction Summary:

Painted carbon steel stand. Control panel enclosure is painted carbon steel, NEMA 1/12.

Options / Component Summary:

Contactor, circuit breaker, transformer, PLC base controller, analog expansion card, digital expansion module, serial communication module, Bacnet PLC base module, 3.5" HMI display and power supply.

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 Properties

Operating Weight (lb)	Dimensions (inches)	Lowest Natural Frequency (Hz)					
		Height	Width	Depth	Front-Back (Y)	Side-Side (X)	Vertical (Z)
268	UUT20B	64.0	32.0	30.0	5.5	6.5	9.5

Note: Dimensions and weight include stand and seismic bracing.

Seismic Test Parameters

Building Code	Test Criteria	Sds (g)	z/h	Ip	Aflx-H (g)	Arig-H (g)	Aflx-V (g)	Arig-V (g)
CBC 2022	ICC-ES AC156	2.00	1.0	1.5	3.20	3.00	1.67	0.67
		2.50	0.0					

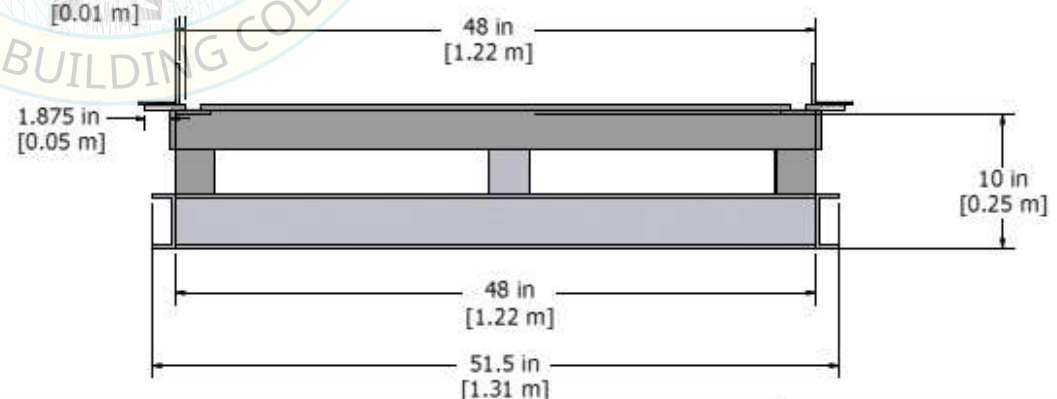
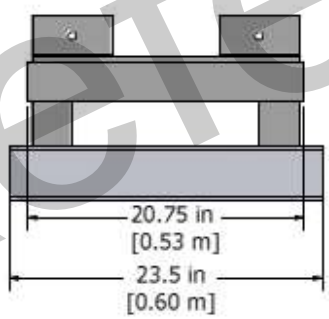
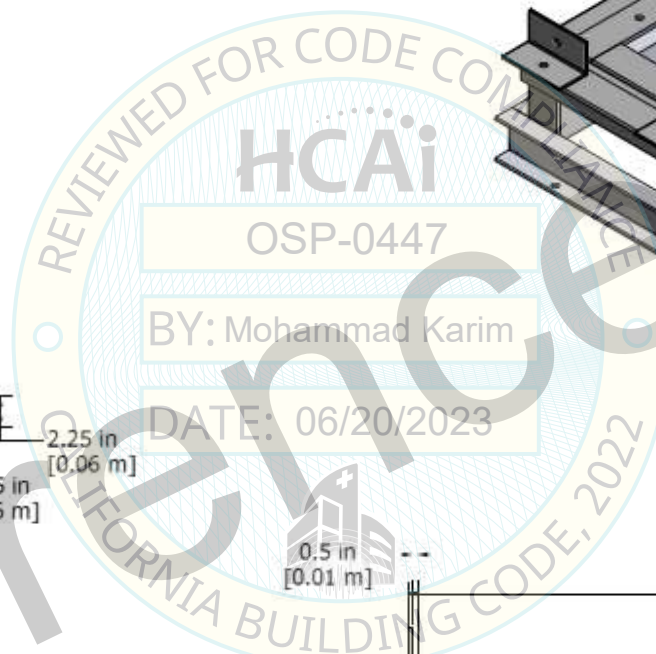
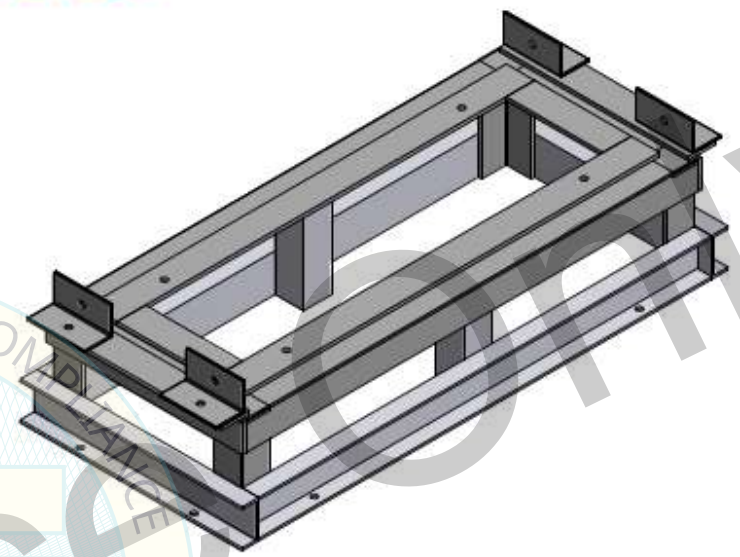
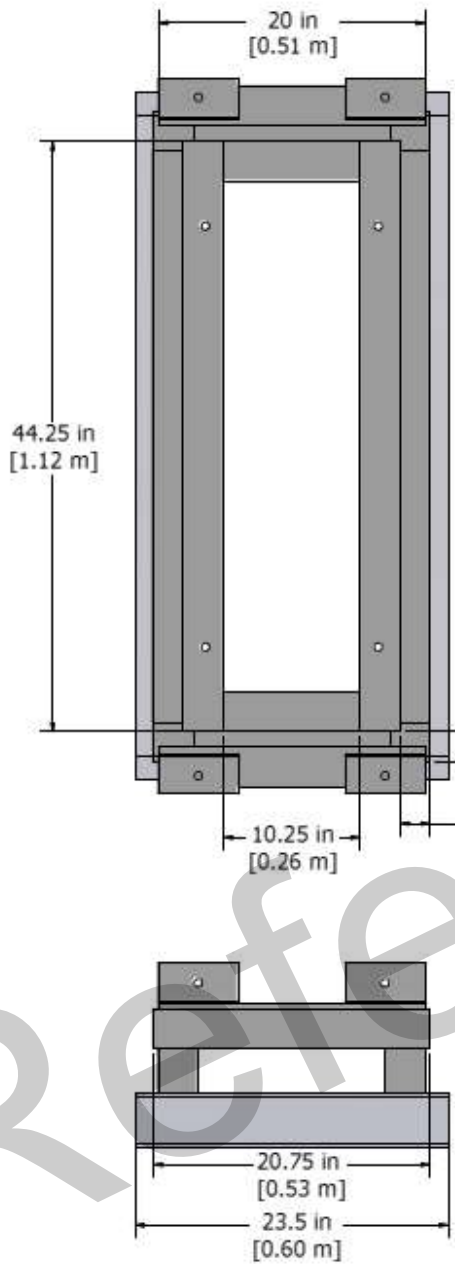
Unit Mounting Description:

Flexible base mounted: the unit was attached to its manufacturer-provided stand with (8) 3/8" Grade 5 bolts. The stand was mounted to the shake table interface plate with (8) 3/8" diameter Grade 5 bolts. The unit's seismic bracing was attached to the enclosure and to the shake table interface plate with (2) each 3/8" Grade 5 bolts. Interface plate mounted to shake table surface with (4) VMC MSSH-1E-2000 spring mounts.



UUT20B Overall View

STEEL-PDL-WELDED



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PART #:
DESCRIPTION: WELDED BASE DIAGRAM
MATERIAL: AS PROVIDED
FINISH: AMICO SOURCE
DRAWN BY: KR
DATE: SEP 22, 2021
SHEET: 1 OF 1

UNLESS SPECIFIED:
ALL DIMENSIONS IN INCHES
SURFACE FINISH: 63 μm
BREAK ALL EDGES 0.005-0.010
REMOVE SHARP EDGES AND BURRS
ANGLE TOLERANCE ±1°
DECIMAL TOLERANCES:
X.XX ±.05
X.XXX ±.005
X.XXXX ±.0025

APPROVED BY:
PROJECT MANAGER: _____
ENGINEERING: _____
PRODUCTION: _____

STEEL-PDL-WELDED-1

