



**OFFICE OF STATEWIDE HEALTH PLANNING AND DEVELOPMENT
FACILITIES DEVELOPMENT DIVISION**

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

OFFICE USE ONLY

APPLICATION #: OSP-0676

OSHPD Special Seismic Certification Preapproval (OSP)

Type: New Renewal

Manufacturer Information

Manufacturer: Gardner Denver Inc.

Manufacturer's Technical Representative: Steve Miller

Mailing Address: 1800 Gardner Denver Expressway, Quincy, IL 62305

Telephone: (217) 222-5400

Email: steve.miller@gardnerdenver.com

Product Information

Product Name: Medical Gas and Vacuum Systems

Product Type: Medical Air and Vacuum Systems

Product Model Number: Medical Vacuum Systems- Claw and Lubricated Vane

General Description: Medical vacuum systems that consist of 80 gallon - 240 gallon tanks, controllers, motors, intake filter elements, check valves, and vacuum pumps. Seismic enhancements made to the test units and required to address the anomalies observed during the tests shall be incorporated into the production units.

Mounting Description: Rigid, Floor Mounted

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: DCL Labs, LLC.

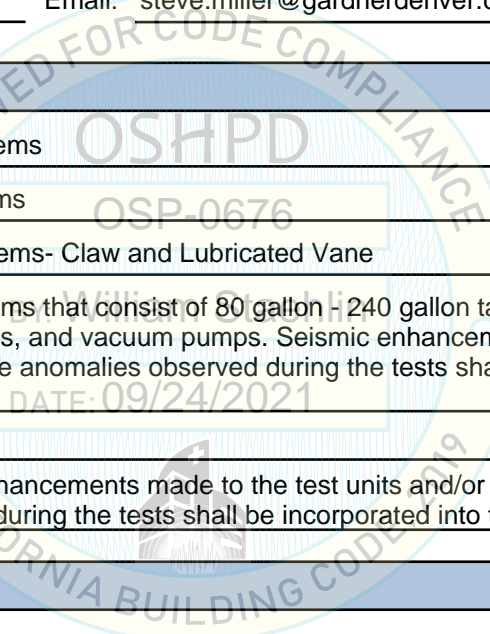
Contact Person: Kelly Laplace

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

Telephone: (775) 358-5085

Email: kelly@shaketest.com

Title: Business Manager





**OFFICE OF STATEWIDE HEALTH PLANNING AND DEVELOPMENT
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California Licensed Structural Engineer Responsible for the Engineering and Test Report(s)

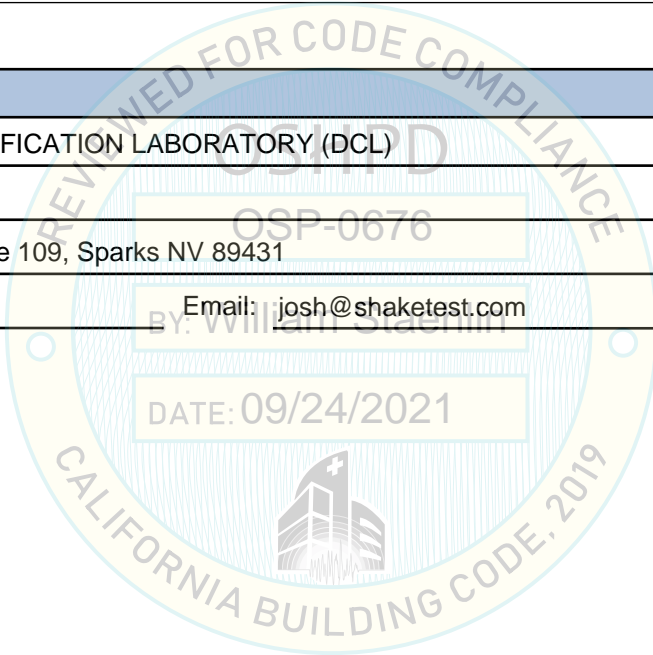
Company Name: THE VMC GROUP
Name: Kenneth Tarlow California License Number: S2851
Mailing Address: 980 9th Street, 16th Floor, Sacramento, CA 95814
Telephone: (832) 627-2214 Email: ken.tarlow@thevmcgroup.com

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: Josh Sailer
Mailing Address: 1315 Greg St., Ste 109, Sparks NV 89431
Telephone: (775) 358-5085 Email: josh@shaketest.com





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Seismic Parameters

Design Basis of Equipment or Components (F_p/W_p) = 4.5 (Sds=2.0, z/h=1.0) and 1.88 (Sds=2.5, z/h=0.0)

SDS (Design spectral response acceleration at short period, g) = 2.0 (z/h=1.0), 2.5 (z/h=0.0)

a_p (Amplification factor) = 2.5

R_p (Response modification factor) = 2.0

Ω_0 (System overstrength factor) = 2.0

I_p (Importance factor) = 1.5

z/h (Height ratio factor) = 1 and 0

Natural frequencies (Hz) = See Attachment

Overall dimensions and weight = See Attachment

OSHPD Approval (For Office Use Only) - Approval Expires on 10/07/2027

Date: 9/24/2021

Name: William Staehlin Title: Senior Structural Engineer

Special Seismic Certification Valid Up to: SDS (g) = See Above z/h = See Above

Condition of Approval (if applicable): DATE: 09/24/2021

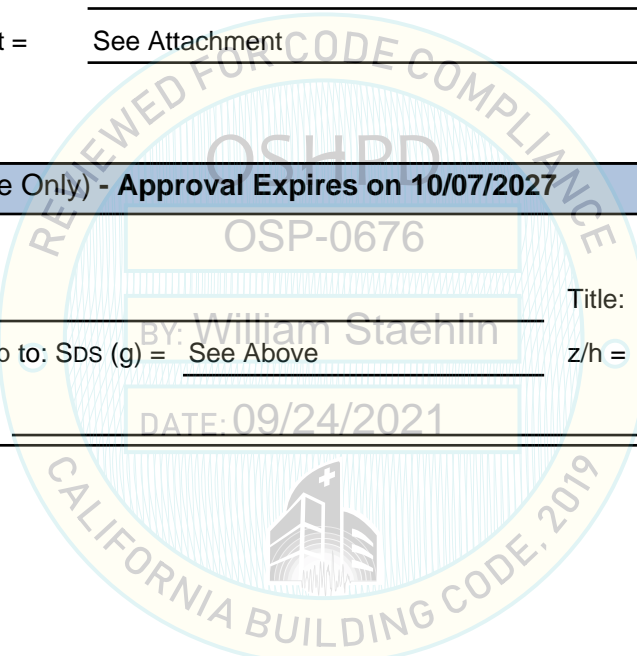


Table 1- Special Seismic Certification

Certified Components - Medical Vacuum, Base Mount Systems- Claw

Manufacturer: Gardner Denver (also branded Allied Healthcare)

Product Line: Medical Vacuum Systems - Claw

Certified Product Construction: Powder-coated carbon steel frame

Mounting Description: Rigid Base Mount

Seismic Levels: S_{DS} = 2.0g, z/h = 1.0; S_{DS} = 2.5g, z/h = 0.0



| Base Mount Systems - Claw | | | | | | | | | | | | | |
|-----------------------------|--------------------------------|-----|---------------------------|---|-----------------------|------------------------------------|-----------------------------------|-------|--------|--|---|------------------|-----------------------------|
| Gardner Denver Model Number | Allied Healthcare Model Number | Hp | Vertical Receiver Gallons | Total Number of Pump Skids ⁷ | Total Number of Pumps | Vertically Stacked Pumps or Layers | Max. Dimensions (in) ¹ | | | Tested Operating Weight (lb.) ³ | Max. Operating Weight (lb) ⁴ | Mounting | UUT ⁵ |
| | | | | | | | Depth | Width | Height | | | | |
| Duplex | | | | | | | | | | | | | |
| VRSD-150-123/SC | DCV050-120B/SC | 5 | 120 | 1 | 2 | 2 | 57 | 63 | 86 | N/A | 1,740 | Rigid Base Mount | Extrapolated |
| VRSD-251-123/SC | DCV075-120B1/SC | 7.5 | 120 | 1 | 2 | 2 | 56 | 64 | 86 | N/A | 1,840 | | Extrapolated |
| VRSD-251-203/SC | DCV075-200B1/SC | 7.5 | 200 | 1 | 2 | 2 | 62 | 76 | 91 | N/A | 2,040 | | Extrapolated |
| VRSD-251-243/SC | DCV075-240B1/SC | 7.5 | 240 | 1 | 2 | 2 | 62 | 76 | 103 | N/A | 2,110 | | Extrapolated |
| VRSD-301-123/SC | DCV075-120B2/SC | 7.5 | 120 | 1 | 2 | 2 | 60 | 62 | 86 | N/A | 2,540 | | Extrapolated |
| VRSD-301-203/SC | DCV075-200B2/SC | 7.5 | 200 | 1 | 2 | 2 | 67 | 70 | 91 | N/A | 2,740 | | Extrapolated |
| VRSD-301-243/SC | DCV075-240B2/SC | 7.5 | 240 | 1 | 2 | 2 | 67 | 70 | 103 | N/A | 2,810 | | Extrapolated |
| VRSD-401-203/SC | DCV120-200B/SC | 12 | 200 | 1 | 2 | 2 | 69 | 84 | 115 | N/A | 3,541 | | Extrapolated |
| VRSD-401-243/SC | DCV120-240B/SC | 12 | 240 | 1 | 2 | 2 | 69 | 84 | 115 | N/A | 3,611 | | Extrapolated |
| VRSD-501-203/SC | DCV150-200B/SC | 15 | 200 | 1 | 2 | 2 | 69 | 84 | 115 | N/A | 3,985 | | Extrapolated |
| VRSD-501-243/SC | DCV150-240B/SC | 15 | 240 | 1 | 2 | 2 | 69 | 84 | 115 | N/A | 4,055 | Extrapolated | |
| Triplex | | | | | | | | | | | | | |
| VRST-150-123/SC | TCV050-120B/SC | 5 | 120 | 1 | 3 | 3 | 55 | 63 | 97 | N/A | 2,400 | Rigid Base Mount | Extrapolated |
| VRST-251-123/SC | TCV075-120B1/SC | 7.5 | 120 | 1 | 3 | 3 | 56 | 68 | 103 | N/A | 2,550 | | Extrapolated |
| VRST-251-203/SC | TCV075-200B1/SC | 7.5 | 200 | 1 | 3 | 3 | 62 | 76 | 103 | N/A | 2,950 | | Extrapolated |
| VRST-251-243/SC | TCV075-240B1/SC | 7.5 | 240 | 1 | 3 | 3 | 62 | 76 | 103 | 3,020 | 3,020 | | UUT5.1, UUT5.2 |
| VRST-301-203/SC | TCV075-200B2/SC | 7.5 | 200 | 2 | 3 | 1, 2 | 67 | 104 | 91 | N/A | 3,660 | | Interpolated |
| VRST-301-243/SC | TCV075-240B2/SC | 7.5 | 240 | 2 | 3 | 1, 2 | 67 | 104 | 103 | N/A | 3,730 | | Interpolated |
| VRST-401-203/SC | TCV120-200B/SC | 12 | 200 | 2 | 3 | 1, 2 | 69 | 133 | 115 | N/A | 5,009 | | Interpolated |
| VRST-401-243/SC | TCV120-240B/SC | 12 | 240 | 2 | 3 | 1, 2 | 69 | 133 | 115 | N/A | 5,079 | | Interpolated |
| VRST-501-203/SC | TCV150-200B/SC | 15 | 200 | 2 | 3 | 1, 2 | 69 | 133 | 115 | N/A | 5,570 | | Interpolated |
| VRST-501-243/SC | TCV150-240B/SC | 15 | 240 | 2 | 3 | 1, 2 | 69 | 133 | 115 | 4,150 | 5,640 | | UUT6.1, UUT6.2 ⁶ |
| Quadruplex | | | | | | | | | | | | | |
| VRSQ-150-123/SC | QCV050-120B/SC | 5 | 120 | 2 | 4 | 2, 2 | 57 | 110 | 86 | N/A | 3,130 | Rigid Base Mount | Extrapolated ² |
| VRSQ-251-203/SC | QCV075-200B1/SC | 7.5 | 200 | 2 | 4 | 2, 2 | 62 | 121 | 91 | N/A | 3,530 | | Extrapolated ² |
| VRSQ-251-243/SC | QCV075-240B1/SC | 7.5 | 240 | 2 | 4 | 2, 2 | 62 | 121 | 103 | N/A | 3,600 | | Extrapolated ² |
| VRSQ-301-203/SC | QCV075-200B2/SC | 7.5 | 200 | 2 | 4 | 2, 2 | 67 | 112 | 91 | N/A | 4,830 | | Extrapolated ² |
| VRSQ-301-243/SC | QCV075-240B2/SC | 7.5 | 240 | 2 | 4 | 2, 2 | 67 | 112 | 103 | N/A | 4,900 | | Extrapolated ² |
| VRSQ-401-203/SC | QCV120-200B/SC | 12 | 200 | 2 | 4 | 2, 2 | 69 | 133 | 115 | N/A | 6,272 | | Extrapolated ² |
| VRSQ-401-243/SC | QCV120-240B/SC | 12 | 240 | 2 | 4 | 2, 2 | 69 | 133 | 115 | N/A | 6,342 | | Extrapolated ² |
| VRSQ-501-203/SC | QCV150-200B/SC | 15 | 200 | 2 | 4 | 2, 2 | 69 | 133 | 115 | N/A | 7,020 | | Extrapolated ² |
| VRSQ-501-243/SC | QCV150-240B/SC | 15 | 240 | 2 | 4 | 2, 2 | 69 | 113 | 115 | N/A | 7,090 | | Extrapolated ² |

- The max. dimensions reflect the complete system's dimensions as they would be installed in the field. For the individual dimensions of the tested units, please see Table 20. The pump and receiver skids are installed with a maximum distance of 13.75" between each skid.
- Quadruplex units are justified based on the UUT6.1 and UUT6.2 test and the separate Quadruplex controller tested in UUT12.1
- The tested operating weight reflects the combined measured weights of the tested units prior to being shake tested. For individual weights of the tested units, please see Table 20.
- The max. operating weight reflects the combined system weight of the receiver skid and pump skid(s), as they would be installed.
- "UUTX.1" denotes a receiver tank skid, where "UUTX.2" denotes a vacuum pump skid. Each skid is structurally independent and flexibly attached.
- Only the two-high pump skid was tested for UUT6.2 as it is the worst case scenario; therefore, the tested operating weight does not match the maximum operating weight. The one-high pump skid was extrapolated.
- The Duplex systems consist of (1) two-high pump skid, the Triplex systems consist of (1) three-high pump skid or (1) one-high pump skid with (1) two-high pump skid, and the Quadruplex systems consist of (2) two-high pump skids. All pump skids are structurally independent and flexibly attached.

Table 2- Special Seismic Certification
Certified Components - Medical Vacuum, Base Mount Systems- Lubricated Vane



Manufacturer: Gardner Denver (also branded Allied Healthcare)
Product Line: Medical Vacuum Systems - Lubricated Vane
Certified Product Construction: Powder-coated carbon steel frame
Mounting Description: Rigid Base Mount
Seismic Levels: S_{DS} = 2.0g, z/h = 1.0; S_{DS} = 2.5g, z/h = 0.0

| Base Mount Systems - Lubricated Vane | | | | | | | | | | | | | |
|--------------------------------------|--------------------------------|-----|---------------------------|---|-----------------------|------------------------------------|-----------------------------------|-------|--------|--|---|------------------|-------------------------------|
| Gardner Denver Model Number | Allied Healthcare Model Number | Hp | Vertical Receiver Gallons | Total Number of Pump Skids ⁶ | Total Number of Pumps | Vertically Stacked Pumps or Layers | Max. Dimensions (in) ¹ | | | Tested Operating Weight (lb.) ² | Max. Operating Weight (lb) ³ | Mounting | UUT ⁴ |
| | | | | | | | Depth | Width | Height | | | | |
| Duplex | | | | | | | | | | | | | |
| VXSD-100-123/SC | DLV050-120B1/SC | 5 | 120 | 1 | 2 | 2 | 59 | 63 | 86 | N/A | 1,630 | Rigid Base Mount | Extrapolated |
| VXSD-150-123/SC | DLV050-120B2/SC | 5 | 120 | 1 | 2 | 2 | 59 | 63 | 86 | N/A | 1,630 | | Extrapolated |
| VXSD-202-123/SC | DLV075-120B/SC | 7.5 | 120 | 1 | 2 | 2 | 56 | 65 | 86 | N/A | 2,010 | | Extrapolated |
| VXSD-202-203/SC | DLV075-200B/SC | 7.5 | 200 | 1 | 2 | 2 | 62 | 73 | 91 | N/A | 2,230 | | Extrapolated |
| VXSD-303-123/SC | DLV100-120B/SC | 10 | 120 | 1 | 2 | 2 | 56 | 65 | 86 | N/A | 2,035 | | Extrapolated |
| VXSD-303-203/SC | DLV100-200B/SC | 10 | 200 | 1 | 2 | 2 | 62 | 73 | 91 | N/A | 2,255 | | Extrapolated |
| VXSD-400-203/SC | DLV150-200B/SC | 15 | 200 | 1 | 2 | 2 | 77 | 92 | 95 | N/A | 5,220 | | Extrapolated |
| VXSD-500-203/SC | DLV200-200B/SC | 20 | 200 | 1 | 2 | 2 | 77 | 92 | 95 | N/A | 5,565 | | Extrapolated |
| VXSD-700-203/SC | DLV250-200B/SC | 25 | 200 | 1 | 2 | 2 | 72 | 91 | 109 | N/A | 5,830 | Extrapolated | |
| Triplex | | | | | | | | | | | | | |
| VXST-100-123/SC | TLV050-120B1/SC | 5 | 120 | 1 | 3 | 3 | 59 | 63 | 90 | N/A | 2,120 | Rigid Base Mount | Extrapolated |
| VXST-150-123/SC | TLV050-120B2/SC | 5 | 120 | 1 | 3 | 3 | 59 | 63 | 90 | 2,120 | 2,120 | | UUT11.1, UUT11.2 |
| VXST-202-203/SC | TLV075-200B/SC | 7.5 | 200 | 2 | 3 | 1, 2 | 62 | 115 | 91 | N/A | 2,920 | | Interpolated |
| VXST-303-203/SC | TLV100-200B/SC | 10 | 200 | 2 | 3 | 1, 2 | 62 | 115 | 91 | N/A | 2,970 | | Interpolated |
| VXST-400-203/SC | TLV150-200B/SC | 15 | 200 | 2 | 3 | 1, 2 | 77 | 149 | 95 | N/A | 7,370 | | Interpolated |
| VXST-400-243/SC | TLV150-240B/SC | 15 | 240 | 2 | 3 | 1, 2 | 77 | 149 | 103 | N/A | 7,440 | | Interpolated |
| VXST-500-203/SC | TLV200-200B/SC | 20 | 200 | 2 | 3 | 1, 2 | 77 | 153 | 95 | N/A | 7,880 | | Interpolated |
| VXST-500-243/SC | TLV200-240B/SC | 20 | 240 | 2 | 3 | 1, 2 | 77 | 153 | 103 | N/A | 7,950 | | Interpolated |
| VXST-700-203/SC | TLV250-200B/SC | 25 | 200 | 2 | 3 | 1, 2 | 71 | 152 | 110 | N/A | 8,230 | | Interpolated |
| VXST-700-243/SC | TLV250-240B/SC | 25 | 240 | 2 | 3 | 1, 2 | 71 | 152 | 110 | N/A | 8,300 | | Interpolated |
| Quadruplex | | | | | | | | | | | | | |
| VXSQ-100-123/SC | QLV050-120B1/SC | 5 | 120 | 2 | 4 | 2, 2 | 59 | 104 | 86 | N/A | 2,500 | Rigid Base Mount | Interpolated |
| VXSQ-150-123/SC | QLV050-120B2/SC | 5 | 120 | 2 | 4 | 2, 2 | 59 | 104 | 86 | N/A | 2,500 | | Interpolated |
| VXSQ-202-203/SC | QLV075-200B/SC | 7.5 | 200 | 2 | 4 | 2, 2 | 65 | 115 | 91 | N/A | 3,800 | | Interpolated |
| VXSQ-202-243/SC | QLV075-240B/SC | 7.5 | 240 | 2 | 4 | 2, 2 | 65 | 115 | 103 | N/A | 3,900 | | Interpolated |
| VXSQ-303-203/SC | QLV100-200B/SC | 10 | 200 | 2 | 4 | 2, 2 | 65 | 115 | 91 | N/A | 3,810 | | Interpolated |
| VXSQ-303-243/SC | QLV100-240B/SC | 10 | 240 | 2 | 4 | 2, 2 | 65 | 115 | 403 | N/A | 3,910 | | Interpolated |
| VXSQ-400-203/SC | QLV150-200B/SC | 15 | 200 | 2 | 4 | 2, 2 | 77 | 149 | 95 | N/A | 9,720 | | Interpolated |
| VXSQ-400-243/SC | QLV150-240B/SC | 15 | 240 | 2 | 4 | 2, 2 | 77 | 149 | 103 | N/A | 9,790 | | Interpolated |
| VXSQ-500-203/SC | QLV200-200B/SC | 20 | 200 | 2 | 4 | 2, 2 | 77 | 153 | 95 | N/A | 10,410 | | Interpolated |
| VXSQ-500-243/SC | QLV200-240B/SC | 20 | 240 | 2 | 4 | 2, 2 | 77 | 153 | 103 | N/A | 10,480 | | Interpolated |
| VXSQ-700-203/SC | QLV250-200B/SC | 25 | 200 | 2 | 4 | 2, 2 | 71 | 151 | 109 | N/A | 11,000 | | Interpolated |
| VXSQ-700-243/SC | QLV250-240B/SC | 25 | 240 | 2 | 4 | 2, 2 | 71 | 151 | 109 | 6,080 | 11,070 | | UUT12.1, UUT12.2 ⁵ |

- The max. dimensions reflect the complete system's dimensions as they would be installed in the field. For the individual dimensions of the tested units, please see Table 20. The pump and receiver skids are installed with a maximum distance of 13.75" between each skid.
- The tested operating weight reflects the combined measured weights of the tested units prior to being shake tested. For individual weights of the tested units, please see Table 20.
- The max. operating weight reflects the combined system weight of the receiver skid and pump skid(s), as they would be installed. The Triplex and Quadruplex systems offer (2) separate pump skid applications.
- "UUTX.1" denotes a receiver tank skid, where "UUTX.2" denotes a vacuum pump skid. Each skid is structurally independent and flexibly attached.
- Only (1) two-high pump skid was tested for UUT12.2, as it is the worst case scenario; therefore, the tested operating weight does not match the maximum operating weight. The second two-high pump skid was extrapolated.
- The Duplex systems consist of (1) two-high pump skid, the Triplex systems consist of (1) three-high pump skid or (1) one-high pump skid with (1) two-high pump skid, and the Quadruplex systems consist of (2) two-high pump skids. All pump skids are structurally independent and flexibly attached.

Table 3- Special Seismic Certification

Certified Components - Medical Vacuum, Tank Mount Systems- Claw



Manufacturer: Gardner Denver (also branded Allied Healthcare)

Product Line: Medical Vacuum Systems - Claw

Certified Product Construction: Powder-coated carbon steel frame

Mounting Description: Rigid base mount

Seismic Levels: $S_{DS} = 2.0g, z/h = 1.0; S_{DS} = 2.5g, z/h = 0.0$

| Horizontal Tank Mount Systems | | | | | | | | | | |
|-------------------------------|--------------------------------|----|-----------------------------|-----------------------|-------------------------|-------|--------|----------------------------|------------------|--------------|
| Gardner Denver Model Number | Allied Healthcare Model Number | Hp | Horizontal Receiver Gallons | Total Number of Pumps | Maximum Dimensions (in) | | | Max. Operating Weight (lb) | Mounting | UUT |
| | | | | | Depth | Width | Height | | | |
| Duplex | | | | | | | | | | |
| VRTD-060-083/SC | DCV020-80T/SC | 2 | 80 | 2 | 27 | 75 | 53 | 700 | Rigid Base Mount | UUT1 |
| VRTD-100-123/SC | DCV030-120T/SC | 3 | 120 | 2 | 30 | 83 | 58 | 1,100 | | Interpolated |
| VRTD-150-123/SC | DCV050-120T/SC | 5 | 120 | 2 | 29 | 93 | 59 | 1,300 | | UUT3 |
| Vertical Tank Mount Systems | | | | | | | | | | |
| Gardner Denver Model Number | Allied Healthcare Model Number | Hp | Vertical Receiver Gallons | Total Number of Pumps | Maximum Dimensions (in) | | | Max. Operating Weight (lb) | Mounting | UUT |
| | | | | | Depth | Width | Height | | | |
| Duplex | | | | | | | | | | |
| VRTD-060-083/V/SC | DCV020-80TV/SC | 2 | 80 | 2 | 43 | 40 | 78 | 650 | Rigid Base Mount | UUT2 |
| VRTD-100-123/V/SC | DCV030-120TV/SC | 3 | 120 | 2 | 56 | 52 | 84 | 1,050 | | Interpolated |
| VRTD-150-123/V/SC | DCV050-120TV/SC | 5 | 120 | 2 | 54 | 53 | 85 | 1,220 | | UUT4 |

DATE: 09/24/2021



Table 4- Special Seismic Certification

Certified Components - Medical Vacuum, Tank Mount Systems- Lubricated Vane

Manufacturer: Gardner Denver (also branded Allied Healthcare)

Product Line: Medical Vacuum Systems - Lubricated Vane

Certified Product Construction: Powder-coated carbon steel frame

Mounting Description: Rigid base mount

Seismic Levels: $S_{DS} = 2.0g, z/h = 1.0$; $S_{DS} = 2.5g, z/h = 0.0$



| Horizontal Tank Mount Systems | | | | | | | | | | |
|-------------------------------|--------------------------------|-----|-----------------------------|-----------------------|-----------------|-------|--------|----------------------------|------------------|--------------|
| Gardner Denver Model Number | Allied Healthcare Model Number | Hp | Horizontal Receiver Gallons | Total Number of Pumps | Dimensions (in) | | | Max. Operating Weight (lb) | Mounting | UUT |
| | | | | | Depth | Width | Height | | | |
| Duplex | | | | | | | | | | |
| VCTD-015-083/SC | DLV010-80T/SC | 1 | 80 | 2 | 27 | 66 | 48 | 550 | Rigid Base Mount | UUT7 |
| VCTD-025-083/SC | DLV015-80T/SC | 1.5 | 80 | 2 | 27 | 71 | 52 | 650 | | Interpolated |
| VXTD-050-083/SC | DLV020-80T/SC | 2 | 80 | 2 | 27 | 68 | 52 | 750 | | Interpolated |
| VXTD-050-123/SC | DLV020-120T/SC | 2 | 120 | 2 | 29 | 80 | 60 | 800 | | Interpolated |
| VXTD-075-083/SC | DLV030-80T/SC | 3 | 80 | 2 | 31 | 71 | 52 | 785 | | Interpolated |
| VXTD-075-123/SC | DLV030-120T/SC | 3 | 120 | 2 | 29 | 84 | 59 | 850 | | Interpolated |
| VXTD-100-083/SC | DLV050-80T1/SC | 5 | 80 | 2 | 33 | 70 | 52 | 925 | | Interpolated |
| VXTD-100-123/SC | DLV050-120T1/SC | 5 | 120 | 2 | 33 | 86 | 60 | 950 | | Interpolated |
| VXTD-150-123/SC | DLV050-120T2/SC | 5 | 120 | 2 | 29 | 86 | 60 | 950 | | Interpolated |
| VXTD-202-203/SC | DLV075-200T/SC | 7.5 | 200 | 2 | 33 | 105 | 68 | 1,600 | | Interpolated |
| VXTD-202-243/SC | DLV075-240T/SC | 7.5 | 240 | 2 | 33 | 105 | 68 | 1,685 | | Interpolated |
| VXTD-303-203/SC | DLV100-200T/SC | 10 | 200 | 2 | 33 | 107 | 68 | 1,625 | | Interpolated |
| VXTD-303-243/SC | DLV100-240T/SC | 10 | 240 | 2 | 33 | 107 | 68 | 1,710 | | UUT9 |
| Vertical Tank Mount Systems | | | | | | | | | | |
| Gardner Denver Model Number | Allied Healthcare Model Number | Hp | Vertical Receiver Gallons | Total Number of Pumps | Dimensions (in) | | | Max. Operating Weight (lb) | Mounting | UUT |
| | | | | | Depth | Width | Height | | | |
| Duplex | | | | | | | | | | |
| VCTD-015-083/V/SC | DLV010-80TV/SC | 1 | 80 | 2 | 40 | 38 | 70 | 440 | Rigid Base Mount | UUT8 |
| VCTD-025-083/V/SC | DLV015-80TV/SC | 1.5 | 80 | 2 | 40 | 38 | 71 | 550 | | Interpolated |
| VXTD-050-083/V/SC | DLV020-80TV/SC | 2 | 80 | 2 | 45 | 49 | 74 | 640 | | Interpolated |
| VXTD-050-123/V/SC | DLV020-120TV/SC | 2 | 120 | 2 | 45 | 49 | 80 | 750 | | Interpolated |
| VXTD-075-083/V/SC | DLV030-80TV/SC | 3 | 80 | 2 | 46 | 49 | 74 | 675 | | Interpolated |
| VXTD-075-123/V/SC | DLV030-120TV/SC | 3 | 120 | 2 | 45 | 49 | 80 | 800 | | Interpolated |
| VXTD-100-083/V/SC | DLV050-80TV1/SC | 5 | 80 | 2 | 48 | 49 | 77 | 800 | | Interpolated |
| VXTD-100-123/V/SC | DLV050-120BV1/SC* | 5 | 120 | 2 | 48 | 49 | 83 | 950 | | Interpolated |
| VXTD-150-123/V/SC | DLV050-120BV2/SC* | 5 | 120 | 2 | 48 | 49 | 83 | 1,010 | | UUT10 |

*Model numbers were defined by Allied Healthcare and *exceptions were made to keep the fifth character as "BV" instead of "TV", per Table 6. The units are Vertical Tank Mount Systems.

Table 5- Model Number Nomenclature Chart - Gardner Denver

Medical Vacuum Systems

Manufacturer: Gardner Denver

Product Line: Medical Vacuum Systems - Claw and Lubricated Vane

Certified Product Construction: Powder-coated carbon steel frame

Mounting Description: Rigid Base Mount

Test Levels: S_{DS} = 2.0g, z/h = 1.0; S_{DS} = 2.5g, z/h = 0.0



| Sample Part Number | | | | | | | | | | | |
|--------------------|----------|----------|---|------------|---|-----------|----------|---|----------|---|-----------|
| <u>VR</u> | <u>T</u> | <u>D</u> | - | <u>100</u> | - | <u>12</u> | <u>3</u> | / | <u>V</u> | / | <u>SC</u> |
| 1 | 2 | 3 | | 4 | | 5 | 6 | | 7 | | 8 |

| Character | Category | Allowable Value | Description | Unit |
|-----------|---|------------------|---|--|
| 1 | Vacuum Pump Model Series | VC | VCE and VGD Model Vacuum Pumps | UUT7, UUT8 |
| | | VR | VLR (Zephyr) (Claw) Vacuum Pumps | UUT1-UUT4, UUT5.1, UUT5.2, UUT6.1, UUT6.2 |
| | | VX | VC Model Vacuum Pumps | UUT9, 10, UUT11.1, UUT11.2, UUT12.1, UUT12.2 |
| 2 | Mounting Configuration | S | Stack Mounted (vertical stack frame) | UUT5.1, UUT5.2, UUT6.1, UUT6.2, UUT11.1, UUT11.2 UUT12.1, UUT12.2 |
| | | T | Tank mounted (horizontal unless "V" Flag) | UUT1-UUT4, UUT7-UUT10 |
| 3 | Number of Pumps | D | Duplex, two pump system | UUT1-UUT4, UUT7- UUT10 |
| | | T | Triplex, three pump system | UUT5.1, UUT5.2, UUT6.1, UUT6.2, UUT11.1, UUT11.2 |
| | | Q | Quadruplex, four pump system | UUT12.1, UUT12.2 |
| 4 | Vacuum Pump Model Number <i>Character 1 Defines the Pump Type</i> <i>(Example: 100 + VC → VC-100)</i> | 015 | VGD-15 Vacuum Pump | UUT7, UUT8 |
| | | 025 | VCE-25 Vacuum Pump | Interpolated |
| | | 050 | VC-50 Vacuum Pump | Interpolated |
| | | 060 | VLR-60 Vacuum Pump | UUT1, UUT2 |
| | | 075 | VC-75 Vacuum Pump | Interpolated |
| | | 100 | VC-100 or VLR-100 Vacuum Pump | Interpolated |
| | | 150 | VC-150 or VLR-150 Vacuum Pump | UUT3, UUT4, UUT10, UUT11.1, UUT11.2 |
| | | 202 | VC-202 Vacuum Pump | Interpolated |
| | | 251 | VLR-251 Vacuum Pump | UUT5.1, UUT5.2 |
| | | 301 | VLR-301 Vacuum Pump | Interpolated |
| | | 303 | VC-303 Vacuum Pump | UUT9 |
| | | 400 | VC-400 Vacuum Pump | Interpolated |
| 401 | VLR-401 Vacuum Pump | Interpolated | | |
| 500 | VC-500 Vacuum Pump | Interpolated | | |
| 501 | VLR-501 Vacuum Pump | UUT6.1, UUT6.2 | | |
| 700 | VC-700 Vacuum Pump | UUT12.1, UUT12.2 | | |
| 5 | Receiver Size, Volume (Gallons) | 08 | 80 Gallon tank (receiver) | UUT1, UUT2, UUT7, UUT8 |
| | | 12 | 120 Gallon tank (receiver) | UUT11.1, UUT11.2 UUT3, UUT4, UUT10 |
| | | 20 | 200 Gallon tank (receiver) | Interpolated |
| | | 24 | 240 Gallon tank (receiver) | UUT5.1, UUT5.2 UUT6.1, UUT6.2, UUT9 UUT12.1, UUT12.2 |
| 6 | Logic and Controls Configuration | 3 | Medical / NFPA Compliant | UUT1- UUT4, UUT5.1, UUT5.2, UUT6.1, UUT6.2, UUT7- UUT10, UUT11.1, UUT11.2, UUT12.1, UUT12.2 |
| 7 | Flags | V | Vertical tank mounted system | UUT2, UUT4, UUT8, UUT10 |
| 8 | | SC | Seismic Certified (Medical Only). Includes filter and tank isolation valve. | UUT1-UUT12.2 |

Table 6- Model Number Nomenclature Chart - Allied Healthcare

Medical Vacuum Systems

Manufacturer: Gardner Denver (branded Allied Healthcare)

Product Line: Medical Vacuum Systems - Claw

Certified Product Construction: Powder-coated carbon steel frame

Mounting Description: Rigid base mount

Test Levels: S_{DS} = 2.0g, z/h = 1.0; S_{DS} = 2.5g, z/h = 0.0



| Sample Part Number | | | | |
|--------------------|---------------------------------|-----------------|--|---|
| T | LV | 050 | - | 120 |
| 1 | 2 | 3 | | 4 |
| | | | B | 1 |
| | | | | 6 |
| | | | / | SC |
| | | | | 7 |
| Character | Category | Allowable Value | Description | Unit |
| 1 | Number of Pumps | D | Duplex, two pump system | UUT1-UUT4, UUT7- UUT10 |
| | | T | Triplex, three pump system | UUT5.1, UUT5.2 UUT6.1, UUT6.2 UUT11.1, UUT11.2 |
| | | Q | Quadruplex, four pump system | UUT12.1, UUT12.2 |
| 2 | Vacuum Pump Technology | CV | Claw Vacuum Pump Systems | UUT1-UUT4, UUT5.1, UUT5.2, UUT6.1, UUT6.2 |
| | | LV | Lubricated Vane Vacuum Pump Systems | UUT7-UUT10, UUT11.1, UUT11.2, UUT12.1, UUT12.2 |
| 3 | Vacuum Pump Horsepower | 010 | 1 HP Vacuum Pump | UUT7, UUT8 |
| | | 015 | 1.5 HP Vacuum Pump | Interpolated |
| | | 020 | 2 HP Vacuum Pump | UUT1, UUT2 |
| | | 030 | 3 HP Vacuum Pump | UUT3, UUT4 |
| | | 050 | 5 HP Vacuum Pump | UUT10, UUT11.1, UUT11.2 |
| | | 075 | 7.5 HP Vacuum Pump | UUT5.1, UUT5.2 |
| | | 100 | 10 HP Vacuum Pump | UUT9 |
| | | 150 | 15 HP Vacuum Pump | UUT6.1, UUT6.2 |
| | | 200 | 20 HP Vacuum Pump | Interpolated |
| 4 | Receiver Size, Volume (Gallons) | 80 | 80 Gallon tank (receiver) | UUT1, UUT2, UUT7, UUT8 |
| | | 120 | 120 Gallon tank (receiver) | UUT11.1, UUT11.2 UUT3, UUT4, UUT10 |
| | | 200 | 200 Gallon tank (receiver) | Interpolated |
| | | 240 | 240 Gallon tank (receiver) | UUT5.1, UUT5.2 UUT6.1, UUT6.2, UUT9 UUT12.1, UUT12.2 |
| 5 | Mounting Configuration | B | Base Mount Systems | UUT5.1, UUT5.2, UUT6.1, UUT6.2, UUT11.1, UUT11.2, UUT12.1, UUT12.2 |
| | | TV | Tank Mount Systems, Vertical | UUT2, UUT4, UUT8 |
| | | BV | Tank Mount Systems, Vertical | UUT10* |
| | | T | Tank Mount Systems, Horizontal | UUT1, UUT3, UUT7, UUT9 |
| 6 | Vacuum Pump Change | None | Medical vacuum pump configuration has the same horsepower vacuum pump as another configuration, but a different model number vacuum pump is used | UUT1-UUT4, UUT6.1, UUT6.2, UUT7-UUT9, UUT12.1, UUT12.2, |
| | | 1 | | UUT5.1, UUT5.2 |
| | | 2 | | UUT10, UUT11.1, UUT11.2 |
| 7 | Flags | SC | Seismic Certified (Medical Only). Includes filter and tank isolation valve. | UUT1-UUT12.2 |

*Exceptions were made by Allied Healthcare to denote the Vertical Tank Mount System in UUT10 as "BV" instead of "TV".

Table 7- Special Seismic Certification
Certified Subcomponents, Base Mount Systems- Tanks



Product Line: Medical Vacuum Systems - Claw & Lubricated Vane

Certified Subcomponents: Tanks

| Tanks - Base Mount Systems (Claw and Lubricated Vane) | | | | | |
|---|-----------------|-------------|--------------|--------------|-------------------------|
| Model No. | Manufacturer | Description | Material | Weight (lb.) | Unit |
| 60175008GD | Manchester Tank | 120 Gal | Carbon Steel | 340 | UUT11.1 |
| 60175056GD | Manchester Tank | 200 Gal | Carbon Steel | 540 | Interpolated |
| 60175068 | Manchester Tank | 240 Gal | Carbon Steel | 610 | UUT5.1, UUT6.1, UUT12.1 |



Table 8- Special Seismic Certification

Certified Subcomponents, Horizontal and Vertical Tank Mount Systems- Tanks



Product Line: Medical Vacuum Systems - Claw & Lubricated Vane

Certified Subcomponents: Tanks

| Tanks - Vertical and Horizontal Tank Mount Systems (Claw and Lubricated) | | | | | |
|--|-----------------|-------------|--------------|--------------|--------------|
| Model No. | Manufacturer | Description | Material | Weight (lb.) | Unit |
| 60175025GD | Manchester Tank | 80 gal | Carbon Steel | 225 | UUT2, UUT8 |
| 60175042GD | Manchester Tank | 120 gal | Carbon Steel | 360 | UUT4, UUT10 |
| 60275003GD | Manchester Tank | 80 Gal | Carbon Steel | 325 | UUT1, UUT7 |
| 60275004GD | Manchester Tank | 120 Gal | Carbon Steel | 385 | UUT3 |
| 60275005GD | Manchester Tank | 200 Gal | Carbon steel | 585 | Interpolated |
| 60275006GD | Manchester Tank | 240 Gal | Carbon Steel | 670 | UUT9 |

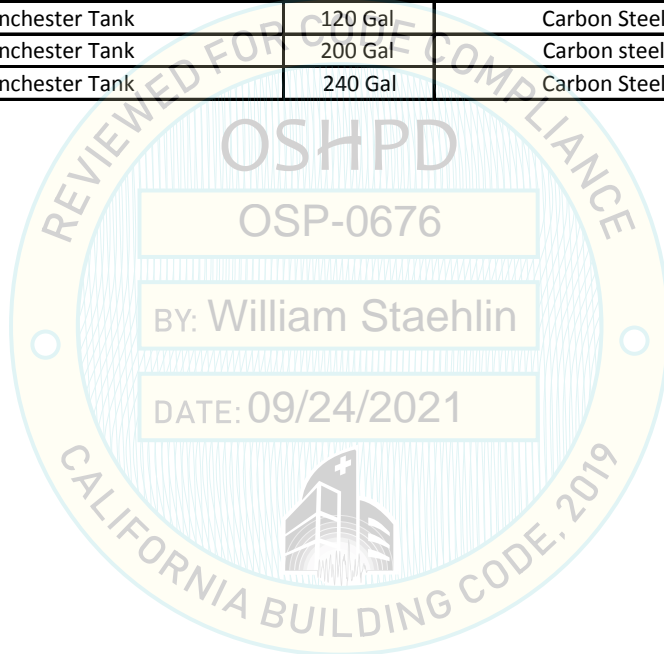


Table 9- Special Seismic Certification
Certified Subcomponents, Base Mount Systems- Controllers



Product Line: Medical Vacuum Systems - Claw

Certified Subcomponents: Controllers

| Controllers - Base Mount Systems | | | | | |
|----------------------------------|----------------------------|-----------------------------|--------------------------|--------------|---------------------------|
| Model No. | Manufacturer | Description | Material | Weight (lb.) | Unit |
| D0520363CM1 | Olson Motor Controls, Inc. | Duplex, 5HP, 208/60/3 | NEMA4/12 Steel Enclosure | 93 | Extrapolated |
| D0523363CM1 | Olson Motor Controls, Inc. | Duplex, 5HP, 230/60/3 | NEMA4/12 Steel Enclosure | 93 | Extrapolated |
| D0546363CM1 | Olson Motor Controls, Inc. | Duplex, 5HP, 460/60/3 | NEMA4/12 Steel Enclosure | 93 | Extrapolated |
| D7F20363CM1 | Olson Motor Controls, Inc. | Duplex, 7.5HP, 208/60/3 | NEMA4/12 Steel Enclosure | 95 | Extrapolated |
| D7F23363CM1 | Olson Motor Controls, Inc. | Duplex, 7.5HP, 230/60/3 | NEMA4/12 Steel Enclosure | 95 | Extrapolated |
| D7F46363CM1 | Olson Motor Controls, Inc. | Duplex, 7.5HP, 460/60/3 | NEMA4/12 Steel Enclosure | 95 | Extrapolated |
| D1223363CM | Olson Motor Controls, Inc. | Duplex, 12HP, 230/60/3 | NEMA4/12 Steel Enclosure | 97 | Extrapolated |
| D1246363CM | Olson Motor Controls, Inc. | Duplex, 12HP, 460/60/3 | NEMA4/12 Steel Enclosure | 97 | Extrapolated |
| D1523363CM | Olson Motor Controls, Inc. | Duplex, 15HP, 230/60/3 | NEMA4/12 Steel Enclosure | 97 | Extrapolated |
| D1546363CM | Olson Motor Controls, Inc. | Duplex, 15HP, 460/60/3 | NEMA4/12 Steel Enclosure | 97 | Extrapolated |
| T0520363CM1 | Olson Motor Controls, Inc. | Triplex, 5HP, 208/60/3 | NEMA4/12 Steel Enclosure | 128 | Extrapolated |
| T0523363CM1 | Olson Motor Controls, Inc. | Triplex, 5HP, 230/60/3 | NEMA4/12 Steel Enclosure | 128 | Extrapolated |
| T0546363CM1 | Olson Motor Controls, Inc. | Triplex, 5HP, 460/60/3 | NEMA4/12 Steel Enclosure | 128 | Extrapolated |
| T7F20363LM-E | Olson Motor Controls, Inc. | Triplex, 7.5HP, 208/60/3 | NEMA4/12 Steel Enclosure | 130 | UUT5.1 |
| T7F20363CM1 | Olson Motor Controls, Inc. | Triplex, 7.5HP, 208/60/3 | NEMA4/12 Steel Enclosure | 130 | Interpolated |
| T7F23363CM1 | Olson Motor Controls, Inc. | Triplex, 7.5HP, 230/60/3 | NEMA4/12 Steel Enclosure | 130 | Interpolated |
| T7F46363CM1 | Olson Motor Controls, Inc. | Triplex, 7.5HP, 460/60/3 | NEMA4/12 Steel Enclosure | 130 | Interpolated |
| T1223363CM | Olson Motor Controls, Inc. | Triplex, 12HP, 230/60/3 | NEMA4/12 Steel Enclosure | 132 | Interpolated |
| T1246363CM | Olson Motor Controls, Inc. | Triplex, 12HP, 460/60/3 | NEMA4/12 Steel Enclosure | 132 | Interpolated |
| T1523363CM | Olson Motor Controls, Inc. | Triplex, 15HP, 230/60/3 | NEMA4/12 Steel Enclosure | 132 | Interpolated |
| T1546363CM | Olson Motor Controls, Inc. | Triplex, 15HP, 460/60/3 | NEMA4/12 Steel Enclosure | 132 | Interpolated |
| T1546363LM-E | Olson Motor Controls, Inc. | Triplex, 15HP, 460/60/3 | NEMA4/12 Steel Enclosure | 132 | UUT6.1 |
| Q0520363CM1 | Olson Motor Controls, Inc. | Quadruplex, 5HP, 208/60/3 | NEMA4/12 Steel Enclosure | 142 | Extrapolated ¹ |
| Q0523363CM1 | Olson Motor Controls, Inc. | Quadruplex 5HP, 230/60/3 | NEMA4/12 Steel Enclosure | 142 | Extrapolated ¹ |
| Q0546363CM1 | Olson Motor Controls, Inc. | Quadruplex, 5HP, 460/60/3 | NEMA4/12 Steel Enclosure | 142 | Extrapolated ¹ |
| Q7F20363CM1 | Olson Motor Controls, Inc. | Quadruplex, 7.5HP, 208/60/3 | NEMA4/12 Steel Enclosure | 144 | Extrapolated ¹ |
| Q7F23363CM1 | Olson Motor Controls, Inc. | Quadruplex, 7.5HP, 230/60/3 | NEMA4/12 Steel Enclosure | 144 | Extrapolated ¹ |
| Q7F46363CM1 | Olson Motor Controls, Inc. | Quadruplex, 7.5HP, 460/60/3 | NEMA4/12 Steel Enclosure | 144 | Extrapolated ¹ |
| Q1223363CM | Olson Motor Controls, Inc. | Quadruplex, 12HP, 230/60/3 | NEMA4/12 Steel Enclosure | 146 | Extrapolated ¹ |
| Q1246363CM | Olson Motor Controls, Inc. | Quadruplex, 12HP, 460/60/3 | NEMA4/12 Steel Enclosure | 146 | Extrapolated ¹ |
| Q1523363CM | Olson Motor Controls, Inc. | Quadruplex, 15HP, 230/60/3 | NEMA4/12 Steel Enclosure | 146 | Extrapolated ¹ |
| Q1546363CM | Olson Motor Controls, Inc. | Quadruplex, 15HP, 460/60/3 | NEMA4/12 Steel Enclosure | 146 | Extrapolated ¹ |

1. Extrapolated controllers are justified based on the Quadruplex controller tested in UUT12.1.

Table 10- Special Seismic Certification
Certified Subcomponents, Base Mount Systems- Controllers



Product Line: Medical Vacuum Systems - Lubricated Vane

Certified Subcomponents: Controllers (continued)

| Controllers - Base Mount Systems | | | | | |
|----------------------------------|----------------------------|-----------------------------|--------------------------|--------------|--------------|
| Model No. | Manufacturer | Description | Material | Weight (lb.) | Unit |
| (continued from previous page) | | | | | |
| T0520363LM-E | Olson Motor Controls, Inc. | Triplex, 5HP, 208/60/3 | NEMA4/12 Steel Enclosure | 93 | UUT11.1 |
| D0520363CM2 | Olson Motor Controls, Inc. | Duplex, 5HP, 208/60/3 | NEMA4/12 Steel Enclosure | 93 | Interpolated |
| D0523363CM2 | Olson Motor Controls, Inc. | Duplex, 5HP, 230/60/3 | NEMA4/12 Steel Enclosure | 93 | Interpolated |
| D0546363CM2 | Olson Motor Controls, Inc. | Duplex, 5HP, 460/60/3 | NEMA4/12 Steel Enclosure | 93 | Interpolated |
| D7F20363CM2 | Olson Motor Controls, Inc. | Duplex, 7.5HP, 208/60/3 | NEMA4/12 Steel Enclosure | 95 | Interpolated |
| D7F23363CM2 | Olson Motor Controls, Inc. | Duplex, 7.5HP, 230/60/3 | NEMA4/12 Steel Enclosure | 95 | Interpolated |
| D7F46363CM2 | Olson Motor Controls, Inc. | Duplex, 7.5HP, 460/60/3 | NEMA4/12 Steel Enclosure | 95 | Interpolated |
| D1020363CM | Olson Motor Controls, Inc. | Duplex, 10HP, 208/60/3 | NEMA4/12 Steel Enclosure | 97 | Interpolated |
| D1023363CM | Olson Motor Controls, Inc. | Duplex, 10HP, 230/60/3 | NEMA4/12 Steel Enclosure | 97 | Interpolated |
| D1046363CM | Olson Motor Controls, Inc. | Duplex, 10HP, 460/60/3 | NEMA4/12 Steel Enclosure | 97 | Interpolated |
| D1523363CM | Olson Motor Controls, Inc. | Duplex, 15HP, 230/60/3 | NEMA4/12 Steel Enclosure | 97 | Interpolated |
| D1546363CM | Olson Motor Controls, Inc. | Duplex, 15HP, 460/60/3 | NEMA4/12 Steel Enclosure | 97 | Interpolated |
| D2023363CM | Olson Motor Controls, Inc. | Duplex, 20HP, 230/60/3 | NEMA4/12 Steel Enclosure | 100 | Interpolated |
| D2046363CM | Olson Motor Controls, Inc. | Duplex, 20HP, 460/60/3 | NEMA4/12 Steel Enclosure | 100 | Interpolated |
| D2523363CM | Olson Motor Controls, Inc. | Duplex, 25HP, 230/60/3 | NEMA4/12 Steel Enclosure | 125 | Interpolated |
| D2546363CM | Olson Motor Controls, Inc. | Duplex, 25HP, 460/60/3 | NEMA4/12 Steel Enclosure | 125 | Interpolated |
| T0520363CM2 | Olson Motor Controls, Inc. | Triplex, 5HP, 208/60/3 | NEMA4/12 Steel Enclosure | 128 | Interpolated |
| T0523363CM2 | Olson Motor Controls, Inc. | Triplex, 5HP, 230/60/3 | NEMA4/12 Steel Enclosure | 128 | Interpolated |
| T0546363CM2 | Olson Motor Controls, Inc. | Triplex, 5HP, 460/60/3 | NEMA4/12 Steel Enclosure | 128 | Interpolated |
| T7F20363CM2 | Olson Motor Controls, Inc. | Triplex, 7.5HP, 208/60/3 | NEMA4/12 Steel Enclosure | 130 | Interpolated |
| T7F23363CM2 | Olson Motor Controls, Inc. | Triplex, 7.5HP, 230/60/3 | NEMA4/12 Steel Enclosure | 130 | Interpolated |
| T7F46363CM2 | Olson Motor Controls, Inc. | Triplex, 7.5HP, 460/60/3 | NEMA4/12 Steel Enclosure | 130 | Interpolated |
| T1020363CM | Olson Motor Controls, Inc. | Triplex, 10HP, 208/60/3 | NEMA4/12 Steel Enclosure | 132 | Interpolated |
| T1023363CM | Olson Motor Controls, Inc. | Triplex, 10HP, 230/60/3 | NEMA4/12 Steel Enclosure | 132 | Interpolated |
| T1046363CM | Olson Motor Controls, Inc. | Triplex, 10HP, 460/60/3 | NEMA4/12 Steel Enclosure | 132 | Interpolated |
| T1523363CM | Olson Motor Controls, Inc. | Triplex, 15HP, 230/60/3 | NEMA4/12 Steel Enclosure | 132 | Interpolated |
| T1546363CM | Olson Motor Controls, Inc. | Triplex, 15HP, 460/60/3 | NEMA4/12 Steel Enclosure | 132 | Interpolated |
| T2023363CM | Olson Motor Controls, Inc. | Triplex, 20HP, 230/60/3 | NEMA4/12 Steel Enclosure | 135 | Interpolated |
| T2046363CM | Olson Motor Controls, Inc. | Triplex, 20HP, 460/60/3 | NEMA4/12 Steel Enclosure | 135 | Interpolated |
| T2523363CM | Olson Motor Controls, Inc. | Triplex, 25HP, 230/60/3 | NEMA4/12 Steel Enclosure | 155 | Interpolated |
| T2546363CM | Olson Motor Controls, Inc. | Triplex, 25HP, 460/60/3 | NEMA4/12 Steel Enclosure | 155 | Interpolated |
| Q0520363CM2 | Olson Motor Controls, Inc. | Quadruplex, 5HP, 208/60/3 | NEMA4/12 Steel Enclosure | 142 | Interpolated |
| Q0523363CM2 | Olson Motor Controls, Inc. | Quadruplex 5HP, 230/60/3 | NEMA4/12 Steel Enclosure | 142 | Interpolated |
| Q0546363CM2 | Olson Motor Controls, Inc. | Quadruplex, 5HP, 460/60/3 | NEMA4/12 Steel Enclosure | 142 | Interpolated |
| Q7F20363CM2 | Olson Motor Controls, Inc. | Quadruplex, 7.5HP, 208/60/3 | NEMA4/12 Steel Enclosure | 144 | Interpolated |
| Q7F23363CM2 | Olson Motor Controls, Inc. | Quadruplex, 7.5HP, 230/60/3 | NEMA4/12 Steel Enclosure | 144 | Interpolated |
| Q7F46363CM2 | Olson Motor Controls, Inc. | Quadruplex, 7.5HP, 460/60/3 | NEMA4/12 Steel Enclosure | 144 | Interpolated |
| Q1020363CM | Olson Motor Controls, Inc. | Quadruplex, 10HP, 208/60/3 | NEMA4/12 Steel Enclosure | 146 | Interpolated |
| Q1023363CM | Olson Motor Controls, Inc. | Quadruplex, 10HP, 230/60/3 | NEMA4/12 Steel Enclosure | 146 | Interpolated |
| Q1046363CM | Olson Motor Controls, Inc. | Quadruplex, 10HP, 460/60/3 | NEMA4/12 Steel Enclosure | 146 | Interpolated |
| Q1523363CM | Olson Motor Controls, Inc. | Quadruplex, 15HP, 230/60/3 | NEMA4/12 Steel Enclosure | 146 | Interpolated |
| Q1546363CM | Olson Motor Controls, Inc. | Quadruplex, 15HP, 460/60/3 | NEMA4/12 Steel Enclosure | 146 | Interpolated |
| Q2023363CM | Olson Motor Controls, Inc. | Quadruplex, 20HP, 230/60/3 | NEMA4/12 Steel Enclosure | 149 | Interpolated |
| Q2046363CM | Olson Motor Controls, Inc. | Quadruplex, 20HP, 460/60/3 | NEMA4/12 Steel Enclosure | 149 | Interpolated |
| Q2523363CM | Olson Motor Controls, Inc. | Quadruplex, 25HP, 230/60/3 | NEMA4/12 Steel Enclosure | 177 | Interpolated |
| Q2546363CM | Olson Motor Controls, Inc. | Quadruplex, 25HP, 460/60/3 | NEMA4/12 Steel Enclosure | 177 | UUT12.1 |



Table 11- Special Seismic Certification

Certified Subcomponents, Horizontal and Vertical Tank Mount Systems- Controllers

Product Line: Medical Vacuum Systems - Claw and Lubricated Vane

Certified Subcomponents: Controllers

| Controllers - Horizontal and Vertical Tank Mount Systems (Claw) | | | | | |
|--|----------------------------|-------------------------|--------------------------|--------------|--------------|
| Model No. | Manufacturer | Description | Material | Weight (lb.) | Unit |
| D0220363LM-E | Olson Motor Controls, Inc. | Duplex, 2HP, 208/60/3 | NEMA4/12 Steel Enclosure | 90 | UUT1, UUT2 |
| D0220363CM1-MC | Olson Motor Controls, Inc. | Duplex, 2HP, 208/60/3 | NEMA4/12 Steel Enclosure | 90 | Interpolated |
| D0223363CM1-MC | Olson Motor Controls, Inc. | Duplex, 2HP, 230/60/3 | NEMA4/12 Steel Enclosure | 90 | Interpolated |
| D0246363CM1-MC | Olson Motor Controls, Inc. | Duplex, 2HP, 460/60/3 | NEMA4/12 Steel Enclosure | 90 | Interpolated |
| D0320363CM1 | Olson Motor Controls, Inc. | Duplex, 3HP, 208/60/3 | NEMA4/12 Steel Enclosure | 93 | Interpolated |
| D0323363CM1 | Olson Motor Controls, Inc. | Duplex, 3HP, 230/60/3 | NEMA4/12 Steel Enclosure | 93 | Interpolated |
| D0346363CM1 | Olson Motor Controls, Inc. | Duplex, 3HP, 460/60/3 | NEMA4/12 Steel Enclosure | 93 | Interpolated |
| D0520363CM1 | Olson Motor Controls, Inc. | Duplex, 5HP, 208/60/3 | NEMA4/12 Steel Enclosure | 93 | Interpolated |
| D0523363CM1 | Olson Motor Controls, Inc. | Duplex, 5HP, 230/60/3 | NEMA4/12 Steel Enclosure | 93 | Interpolated |
| D0546363CM1 | Olson Motor Controls, Inc. | Duplex, 5HP, 460/60/3 | NEMA4/12 Steel Enclosure | 93 | Interpolated |
| D0546363LM-E | Olson Motor Controls, Inc. | Duplex, 5HP, 460/60/3 | NEMA4/12 Steel Enclosure | 93 | UUT3, UUT4 |
| Controllers - Horizontal and Vertical Tank Mount Systems (Lubricated Vane) | | | | | |
| Model No. | Manufacturer | Description | Material | Weight (lb.) | Unit |
| D0120363LM-E | Olson Motor Controls, Inc. | Duplex, 1HP, 208/60/3 | NEMA4/12 Steel Enclosure | 90 | UUT7, UUT8 |
| D0120363CM | Olson Motor Controls, Inc. | Duplex, 1HP, 208/60/3 | NEMA4/12 Steel Enclosure | 90 | Interpolated |
| D0123363CM | Olson Motor Controls, Inc. | Duplex, 1HP, 230/60/3 | NEMA4/12 Steel Enclosure | 90 | Interpolated |
| D0146363CM | Olson Motor Controls, Inc. | Duplex, 1HP, 460/60/3 | NEMA4/12 Steel Enclosure | 90 | Interpolated |
| D1F20363CM | Olson Motor Controls, Inc. | Duplex, 1.5HP, 208/60/3 | NEMA4/12 Steel Enclosure | 90 | Interpolated |
| D1F23363CM | Olson Motor Controls, Inc. | Duplex, 1.5HP, 230/60/3 | NEMA4/12 Steel Enclosure | 90 | Interpolated |
| D1F46363CM | Olson Motor Controls, Inc. | Duplex, 1.5HP, 460/60/3 | NEMA4/12 Steel Enclosure | 90 | Interpolated |
| D0220363CM2 | Olson Motor Controls, Inc. | Duplex, 2HP, 208/60/3 | NEMA4/12 Steel Enclosure | 90 | Interpolated |
| D0223363CM2 | Olson Motor Controls, Inc. | Duplex, 2HP, 230/60/3 | NEMA4/12 Steel Enclosure | 90 | Interpolated |
| D0246363CM2 | Olson Motor Controls, Inc. | Duplex, 2HP, 460/60/3 | NEMA4/12 Steel Enclosure | 90 | Interpolated |
| D0320363CM2 | Olson Motor Controls, Inc. | Duplex, 3HP, 208/60/3 | NEMA4/12 Steel Enclosure | 93 | Interpolated |
| D0323363CM2 | Olson Motor Controls, Inc. | Duplex, 3HP, 230/60/3 | NEMA4/12 Steel Enclosure | 93 | Interpolated |
| D0346363CM2 | Olson Motor Controls, Inc. | Duplex, 3HP, 460/60/3 | NEMA4/12 Steel Enclosure | 93 | Interpolated |
| D0520363CM2 | Olson Motor Controls, Inc. | Duplex, 5HP, 208/60/3 | NEMA4/12 Steel Enclosure | 93 | Interpolated |
| D0523363CM2 | Olson Motor Controls, Inc. | Duplex, 5HP, 230/60/3 | NEMA4/12 Steel Enclosure | 93 | Interpolated |
| D0546363CM2 | Olson Motor Controls, Inc. | Duplex, 5HP, 460/60/3 | NEMA4/12 Steel Enclosure | 93 | Interpolated |
| D0546363LM-E | Olson Motor Controls, Inc. | Duplex, 5HP, 460/60/3 | NEMA4/12 Steel Enclosure | 93 | UUT10 |
| D7F20363CM2 | Olson Motor Controls, Inc. | Duplex, 7.5HP, 208/60/3 | NEMA4/12 Steel Enclosure | 95 | Interpolated |
| D7F23363CM2 | Olson Motor Controls, Inc. | Duplex, 7.5HP, 230/60/3 | NEMA4/12 Steel Enclosure | 95 | Interpolated |
| D7F46363CM2 | Olson Motor Controls, Inc. | Duplex, 7.5HP, 460/60/3 | NEMA4/12 Steel Enclosure | 95 | Interpolated |
| D1020363CM | Olson Motor Controls, Inc. | Duplex, 10HP, 208/60/3 | NEMA4/12 Steel Enclosure | 97 | Interpolated |
| D1023363CM | Olson Motor Controls, Inc. | Duplex, 10HP, 230/60/3 | NEMA4/12 Steel Enclosure | 97 | Interpolated |
| D1023363CM | Olson Motor Controls, Inc. | Duplex, 10HP, 460/60/3 | NEMA4/12 Steel Enclosure | 97 | Interpolated |
| D1046363LM-E | Olson Motor Controls, Inc. | Duplex, 10HP, 460/60/3 | NEMA4/12 Steel Enclosure | 97 | UUT9 |

Table 12- Special Seismic Certification
Certified Subcomponents, Base Mount Systems- Motors



Product Line: Medical Vacuum Systems - Claw & Lubricated Vane

Certified Subcomponents: Motors

| Motors - Base Mount Systems (Claw) | | | | | | | |
|---|--------------|-----|----------------|--------------------------------|---------------------|--------------|--------------|
| Model No. | Manufacturer | HP | Tested Voltage | Certified Voltage ¹ | Material | Weight (lb.) | Unit |
| 36Q591R706G1 | Baldor | 5 | N/A | 208-230-460/3/60 | Rolled Carbon Steel | 96 | Extrapolated |
| 37N765R224G1 | | 7.5 | 208/3/60 | 208-230-460/3/60 | Rolled Carbon Steel | 121 | UUT5.2 |
| 37N765R517G2 | | 12 | N/A | 208-230-460/3/60 | Rolled Carbon Steel | 125 | Interpolated |
| 39E631X213G1 | | 15 | 460/3/60 | 208-230-460/3/60 | Rolled Carbon Steel | 247 | UUT6.2 |
| Motors - Base Mount Systems (Lubricated Vane) | | | | | | | |
| Model No. | Manufacturer | HP | Tested Voltage | Certified Voltage ¹ | Material | Weight (lb.) | Unit |
| 36G940S589G1 | Baldor | 5 | 208/3/60 | 208/3/60 | Rolled Steel | 93 | UUT11.2 |
| 36G940S268G1 | | 5 | N/A | 230-460/3/60 | Rolled Steel | 93 | Interpolated |
| 37J414R910G1 | | 7.5 | N/A | 208/3/60 | Rolled Steel | 187 | Interpolated |
| 37N765R890G1 | | 7.5 | N/A | 230-460/3/60 | Rolled Steel | 127 | Interpolated |
| 37J414R908G1 | | 10 | N/A | 208/3/60 | Rolled Steel | 187 | Interpolated |
| 37N765R889G1 | | 10 | N/A | 230-460/3/60 | Rolled Steel | 165 | Interpolated |
| 10C153Y561G1 | | 15 | N/A | 230-460/3/60 | Cast Iron | 391 | Interpolated |
| 10C153Y730G2 | | 20 | N/A | 230-460/3/60 | Cast Iron | 440 | Interpolated |
| 12K049Y978G1 | | 25 | 460/3/60 | 208-230-460/3/60 | Cast Iron | 605 | UUT12.2 |

1. Different voltages can be attained within a single motor by a simple reconfiguration of the wires in the motor's terminal plate.

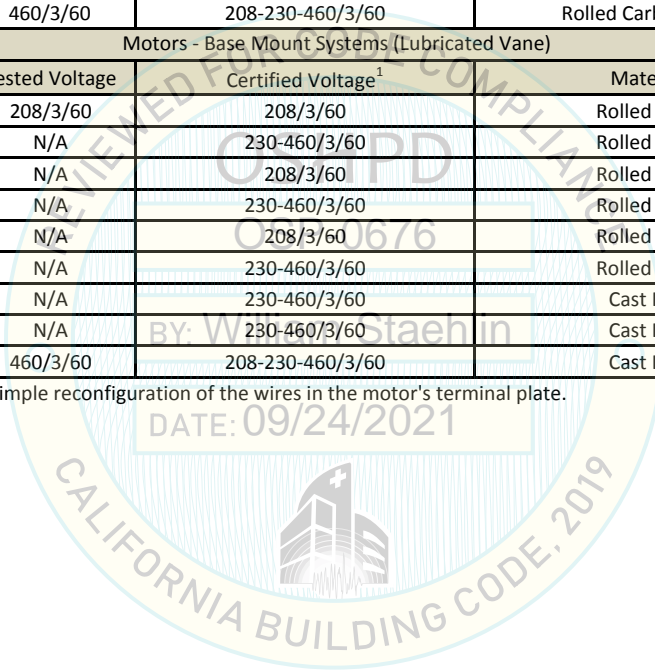


Table 13- Special Seismic Certification
Certified Subcomponents, Horizontal and Vertical Tank Mount Systems- Motors



Product Line: Medical Vacuum Systems - Claw & Lubricated Vane

Certified Subcomponents: Motors

| Motors - Horizontal and Vertical Tank Mounted Units (Claw) | | | | | | | |
|---|--------------|-----|----------------|--------------------------------|---------------------|--------------|--------------|
| Model No. | Manufacturer | HP | Tested Voltage | Certified Voltage ² | Material | Weight (lb.) | Unit |
| 35W318M984G1 | Baldor | 2 | 208/3/60 | 208/3/60 | Rolled Carbon Steel | 41 | UUT1, UUT2 |
| 35T752N787G1 | Baldor | 3 | N/A | 208-230-460/3/60 | Rolled Carbon Steel | 55 | Interpolated |
| 36Q591R706G1 | Baldor | 5 | 460/3/60 | 208-230-460/3/60 | Rolled Carbon Steel | 96 | UUT3, UUT4 |
| Motors - Horizontal and Vertical Tank Mount Systems (Lubricated Vane) | | | | | | | |
| Model No. | Manufacturer | HP | Tested Voltage | Certified Voltage ² | Material | Weight (lb.) | Unit |
| VGD-15 ¹ | Baldor | 1 | 208/3/60 | 208-230-460/3/60 | Rolled Steel | 40 | UUT7, UUT8 |
| 35L688L401G1 | | 1.5 | N/A | 208/3/60 | Rolled Steel | 41 | Interpolated |
| 35L688P802G1 | | 1.5 | N/A | 230-460/3/60 | Rolled Steel | 50 | Interpolated |
| 35L688N957G1 | | 2 | N/A | 208/3/60 | Rolled Steel | 45 | Interpolated |
| 35L688M494G1 | | 2 | N/A | 230-460/3/60 | Rolled Steel | 48 | Interpolated |
| 36A013Q008G1 | | 3 | N/A | 208-230-460/3/60 | Rolled Steel | 92 | Interpolated |
| 36G940S589G1 | | 5 | N/A | 208/3/60 | Rolled Steel | 93 | Interpolated |
| 36G940S268G1 | | 5 | 460/3/60 | 230-460/3/60 | Rolled Steel | 93 | UUT10 |
| 37N765R890G1 | | 7.5 | N/A | 230-460/3/60 | Rolled Steel | 127 | Interpolated |
| 37N765R889G1 | | 10 | 460/3/60 | 230-460/3/60 | Rolled Steel | 165 | UUT9 |

1. UUT7 and UUT8 motors are integral to Gardner Denver vacuum pumps
2. Different voltages can be attained within a single motor by a simple reconfiguration of the wiring on the motor's terminal plate.

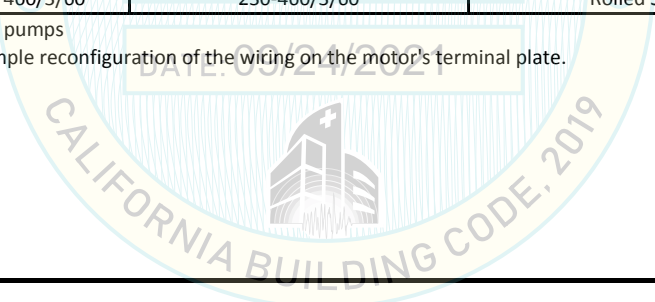


Table 14- Special Seismic Certification
Certified Subcomponents, Base Mount Systems- Intake Filter Elements



Product Line: Medical Vacuum Systems - Claw & Lubricated Vane

Certified Subcomponents: Intake Filter Elements

| Intake Filter Elements - Base Mount Systems (Claw and Lubricated Vane) | | | | | |
|--|-------------------|-----------------------------|--------------------------------------|--------------|-----------------|
| Model No. | Manufacturer | Description | Material | Weight (lb.) | Unit |
| FPV.02761 | FBN Filters | 2", L- Style Inlet Filter | Stainless Steel, w/Paper Element | 15 | UUT5.2 |
| CSL-842-050HC | Solberg MFG, Inc. | 1/2", L- Style Inlet Filter | Stainless Steel, w/Paper element | 3 | Extrapolated |
| CSL-842-100HC | Solberg MFG, Inc. | 1", L- Style Inlet Filter | Stainless Steel, w/Paper element | 3 | Extrapolated |
| CSL-848-150HC | Solberg MFG, Inc. | 1.5", L- Style Inlet Filter | Stainless Steel, w/Paper Element | 5 | UUT11.2 |
| CSL-850-200HC | Solberg MFG, Inc. | 2", L- Style Inlet Filter | Stainless Steel, w/Paper Element | 15 | Interpolated |
| CSL-239-300C | Solberg MFG, Inc. | 3", L- Style Inlet Filter | Stainless Steel, w/Polyester Element | 33 | UUT6.2, UUT12.2 |



Table 15- Special Seismic Certification

Certified Subcomponents, Horizontal and Vertical Tank Mount Systems- Intake Filter Elements



Product Line: Medical Vacuum Systems - Claw & Lubricated Vane

Certified Subcomponents: Intake filter elements

| Intake Filter Elements - Horizontal and Vertical Tank Mount Systems (Claw) | | | | | |
|---|-------------------|------------------------------|----------------------------------|--------------|--------------|
| Model No. | Manufacturer | Description | Material | Weight (lb.) | Unit |
| 4502172204 | Mann & Hummel | 1.25", L- Style Inlet Filter | Stainless Steel, w/Paper Element | 2 | UUT1, UUT2 |
| CSL-848-150HC | Solberg MFG, Inc. | 1.5", L- Style Inlet Filter | Stainless Steel, w/Paper Element | 5 | UUT3, UUT4 |
| Intake Filter Elements - Horizontal and Vertical Tank Mount Systems (Lubricated Vane) | | | | | |
| Model No. | Manufacturer | Description | Material | Weight (lb.) | Unit |
| CSL-842-050HC | Solberg MFG, Inc. | 1/2", L- Style Inlet Filter | Stainless Steel, w/Paper Element | 3 | UUT7, UUT8 |
| CSL-842-100HC | Solberg MFG, Inc. | 1", L- Style Inlet Filter | Stainless Steel, w/Paper Element | 3 | Interpolated |
| CSL-848-150HC | Solberg MFG, Inc. | 1.5", L- Style Inlet Filter | Stainless Steel, w/Paper Element | 5 | UUT10 |
| CSL-850-200HC | Solberg MFG, Inc. | 2", L- Style Inlet Filter | Stainless Steel, w/Paper Element | 15 | UUT9 |



Table 16- Special Seismic Certification
Certified Subcomponents, Base Mount Systems- Check Valves



Product Line: Medical Vacuum Systems - Claw & Lubricated Vane

Certified Subcomponents: Check valves

| Check Valves - Base Mount Systems (Claw) | | | | | |
|---|-------------------------------------|---------------|--------------|--------------|--------------|
| Model No. | Manufacturer | Description | Material | Weight (lb.) | Unit |
| 204053-NPT | China Base Ningbo Foreign Trade Co. | 1.5", In-Line | Aluminum | 5 | Extrapolated |
| 204054-NPT | | 2", In-Line | Aluminum | 5 | UUT5.2 |
| 204056-NPT | | 3", In-Line | Aluminum | 11 | UUT6.2 |
| Check Valves - Base Mount Systems (Lubricated Vane) | | | | | |
| Model No. | Manufacturer | Description | Material | Weight (lb.) | Unit |
| 1.5-502M-1310 | Flexi-Hinge Valve Co. | 1.5", In-Line | Carbon Steel | 1 | UUT11.2 |
| 204056-NPT | China Base Ningbo Foreign Trade Co. | 3", In-Line | Aluminum | 11 | UUT12.2 |

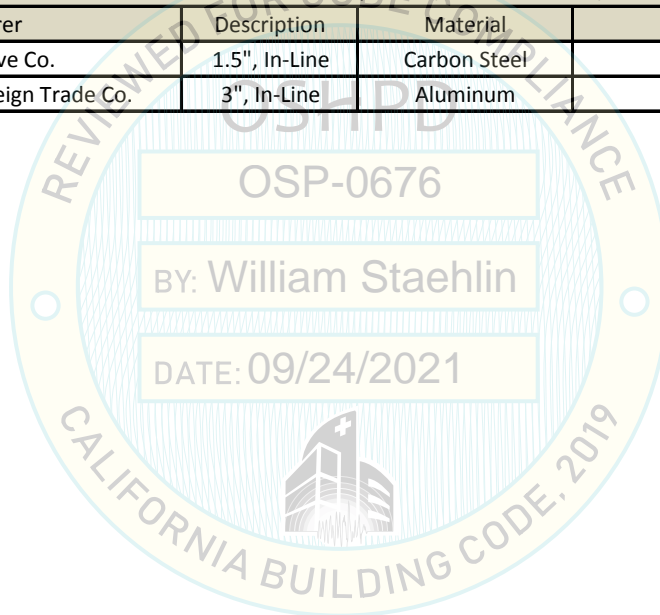


Table 17- Special Seismic Certification

Certified Subcomponents, Horizontal and Vertical Tank Mount Systems- Check Valves



Product Line: Medical Vacuum Systems - Claw & Lubricated Vane

Certified Subcomponents: Check valves

| Check Valves - Horizontal and Vertical Tank Mount Systems (Claw) | | | | | |
|---|-------------------------------------|----------------|--------------|--------------|--------------|
| Model No. | Manufacturer | Description | Material | Weight (lb.) | Unit |
| 204051-NPT | China Base Ningbo Foreign Trade Co. | 1", In-Line | Aluminum | 3 | UUT1, UUT2 |
| 204053-NPT | | 1.5", In-Line | Aluminum | 5 | UUT3, UUT4 |
| Check Valves - Horizontal and Vertical Tank Mount Systems (Lubricated Vane) | | | | | |
| Model No. | Manufacturer | Description | Material | Weight (lb.) | Unit |
| 2040496000 | Schopfheim | 1/2", In-Line | Aluminum | 1 | UUT7, UUT8 |
| 1-502M-1310 | Flexi-Hinge Valve Co. | 1", In-Line | Carbon Steel | 1 | Interpolated |
| 1.25-502M-1310 | Flexi-Hinge Valve Co. | 1.25", In-Line | Carbon Steel | 1 | Interpolated |
| 1.5-502M-1310 | Flexi-Hinge Valve Co. | 1.5", In-Line | Carbon Steel | 1 | UUT10 |
| 2-502M-1310 | Flexi-Hinge Valve Co. | 2", In-Line | Carbon Steel | 2 | UUT9 |

Table 18- Special Seismic Certification
Certified Subcomponents, Base Mount Systems - Vacuum Pumps



Product Line: Medical Vacuum Systems - Claw & Lubricated Vane

Certified Subcomponents: Vacuum pumps

| Vacuum Pump - Base Mount Systems (Claw) | | | | | |
|---|----------------|-------------|--------------|--------------|--------------|
| Model No. | Manufacturer | Description | Material | Weight (lb.) | Unit |
| VLR-251 | Gardner Denver | Vacuum Pump | Ductile Iron | 333 | UUT5.2 |
| VLR-301 | Gardner Denver | Vacuum Pump | Ductile Iron | 628 | Interpolated |
| VLR-401 | Gardner Denver | Vacuum Pump | Ductile Iron | 937 | Interpolated |
| VLR-501 | Gardner Denver | Vacuum Pump | Ductile Iron | 1,124 | UUT6.2 |
| Vacuum Pumps - Base Mount Systems (Lubricated Vane) | | | | | |
| Model No. | Manufacturer | Description | Material | Weight (lb.) | Unit |
| VC-150 | Gardner Denver | Vacuum Pump | Carbon steel | 213 | UUT11.2 |
| VC-202 | Gardner Denver | Vacuum Pump | Carbon steel | 424 | Interpolated |
| VC-303 | Gardner Denver | Vacuum Pump | Carbon steel | 429 | Interpolated |
| VC-400 | Gardner Denver | Vacuum Pump | Carbon steel | 1,250 | Interpolated |
| VC-500 | Gardner Denver | Vacuum Pump | Carbon steel | 1,422 | Interpolated |
| VC-700 | Gardner Denver | Vacuum Pump | Carbon steel | 1,512 | UUT12.2 |

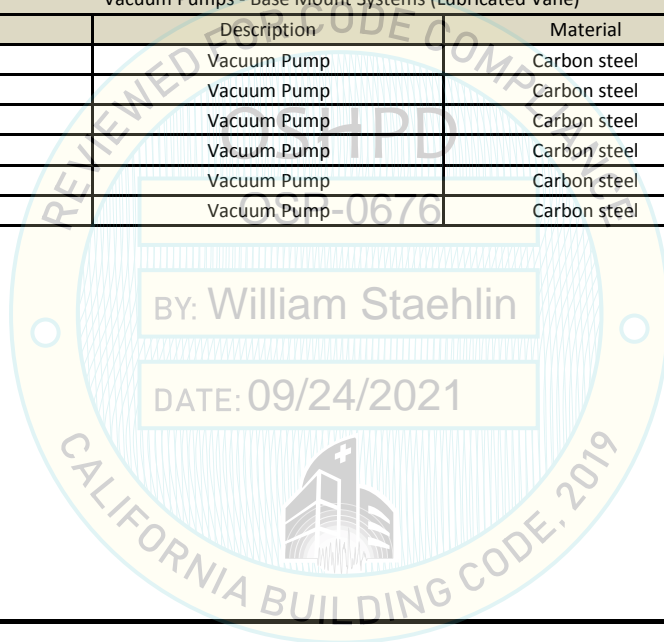


Table 19- Special Seismic Certification

Certified Subcomponents, Horizontal and Vertical Tank Mount Systems- Vacuum Pumps



Product Line: Medical Vacuum Systems - Claw & Lubricated Vane

Certified Subcomponents: Vacuum pumps

| Vacuum Pump - Horizontal and Vertical Tank Mount Systems (Claw) | | | | | |
|---|----------------|-------------|--------------|--------------|--------------|
| Model No. | Manufacturer | Description | Material | Weight (lb.) | Unit |
| VLR-60 | Gardner Denver | Vacuum Pump | Ductile Iron | 135 | UUT1, UUT2 |
| VLR-100 | Gardner Denver | Vacuum Pump | Ductile Iron | 262 | Interpolated |
| VLR-150 | Gardner Denver | Vacuum Pump | Ductile Iron | 293 | UUT3, UUT4 |
| Vacuum Pumps - Horizontal and Vertical Tank Mount Systems (Lubricated Vane) | | | | | |
| Model No. | Manufacturer | Description | Material | Weight (lb.) | Unit |
| VGD-15 | Gardner Denver | Vacuum Pump | Carbon steel | 42 | UUT7, UUT8 |
| VCE-25 | Gardner Denver | Vacuum Pump | Carbon steel | 116 | Interpolated |
| VC-50 | Gardner Denver | Vacuum Pump | Carbon steel | 128 | Interpolated |
| VC-75 | Gardner Denver | Vacuum Pump | Carbon steel | 146 | Interpolated |
| VC-100 | Gardner Denver | Vacuum Pump | Carbon steel | 213 | Interpolated |
| VC-150 | Gardner Denver | Vacuum Pump | Carbon steel | 213 | UUT10 |
| VC-202 | Gardner Denver | Vacuum Pump | Carbon steel | 424 | Interpolated |
| VC-303 | Gardner Denver | Vacuum Pump | Carbon steel | 429 | UUT9 |

DATE: 09/24/2021



Table 20- Special Seismic Certification

Tested Units

Manufacturer: Gardner Denver

Product Line: Medical Vacuum Systems - Claw and Lubricated Vane

Tested Product Construction: Powder-coated carbon steel frame or carbon steel receiver

Mounting Description: Rigid base mount

Seismic Levels: $S_{DS} = 2.0g$, $z/h = 1.0$; $S_{DS} = 2.5g$, $z/h = 0.0$



| Base Mount Systems | | | | | | | | | | | | | |
|---------------------------------|---------------------------------|--------------------------------|-----------------|---------------------|-----------------------|------------------------------------|---------------------|-------|--------|--------------------------|---------------------------|------------------|---------|
| Gardner Denver Model Numbers | Previously Tested Model Numbers | Allied Healthcare Model Number | Technology | Receiver Size (gal) | Total number of pumps | Vertically stacked pumps or layers | Dimensions (inches) | | | Weight (lb) ¹ | Connections between skids | Mounting | UUT |
| | | | | | | | Depth | Width | Height | | | | |
| VRST-251-243/SC (Receiver Skid) | VRST-251-243/F (Receiver Skid) | TCV075-240B1/SC | Claw | 240 | N/A | N/A | 44 | 35 | 103 | 890 | Flexible | Rigid Base Mount | UUT5.1 |
| VRST-251-243/SC (Pump Skid) | VRST-251-243/F (Pump Skid) | TCV075-240B1/SC | Claw | N/A | 3 | 3 | 54 | 35 | 103 | 2,130 | Flexible | Rigid Base Mount | UUT5.2 |
| VRSQ-501-243/SC (Receiver Skid) | VRSQ-501-243/F (Receiver Skid) | TCV150-240B/SC | Claw | 240 | N/A | N/A | 44 | 35 | 103 | 900 | Flexible | Rigid Base Mount | UUT6.1 |
| VRSQ-501-243/SC (Pump Skid) | VRSQ-501-243/F (Pump Skid) | TCV150-240B/SC | Claw | N/A | 2 | 2 | 68 | 40 | 115 | 3,250 | Flexible | Rigid Base Mount | UUT6.2 |
| VXST-150-123/SC (Receiver Skid) | VXST-150-123/F (Receiver Skid) | TLV050-120B2/SC | Lubricated Vane | 120 | N/A | N/A | 39 | 24 | 86 | 580 | Flexible | Rigid Base Mount | UUT11.1 |
| VXST-150-123/SC (Pump Skid) | VXST-150-123/F (Pump Skid) | TLV050-120B2/SC | Lubricated Vane | N/A | 3 | 3 | 47 | 33 | 90 | 1,540 | Flexible | Rigid Base Mount | UUT11.2 |
| VXSQ-700-243/SC (Receiver Skid) | VXSQ-700-243/F (Receiver Skid) | QLV250-240B/SC | Lubricated Vane | 240 | N/A | N/A | 44 | 42 | 103 | 1,090 | Flexible | Rigid Base Mount | UUT12.1 |
| VXSQ-700-243/SC (Pump Skid) | VXSQ-700-243/F (Pump Skid) | QLV250-240B/SC | Lubricated Vane | N/A | 2 | 2 | 71 | 51 | 109 | 4,990 | Flexible | Rigid Base Mount | UUT12.2 |
| Horizontal Tank Mount Systems | | | | | | | | | | | | | |
| Gardner Denver Model Numbers | Previously Tested Model Numbers | Allied Healthcare Model Number | Technology | Receiver Size (gal) | Total number of pumps | Vertically stacked pumps or layers | Dimensions (inches) | | | Weight (lb) | Mounting | UUT | |
| | | | | | | | Depth | Width | Height | | | | |
| VRTD-060-083/SC | VRTD-060-083/F | DCV020-80T/SC | Claw | 80 | 2 | N/A | 27 | 75 | 53 | 700 | Rigid Base Mount | UUT1 | |
| VRTD-150-123/SC | VRTD-150-123/F | DCV050-120T/SC | Claw | 120 | 2 | N/A | 29 | 93 | 59 | 1,300 | Rigid Base Mount | UUT3 | |
| VCTD-015-083/SC | VCTD-015-083/F | DLV010-80T/SC | Lubricated Vane | 80 | 2 | 1 | 27 | 66 | 48 | 550 | Rigid Base Mount | UUT7 | |
| VXTD-303-243/SC | VXTD-303-243/F | DLV100-240T/SC | Lubricated Vane | 240 | 2 | 1 | 33 | 107 | 68 | 1,710 | Rigid Base Mount | UUT9 | |
| Vertical Tank Mount Systems | | | | | | | | | | | | | |
| Gardner Denver Model Numbers | Previously Tested Model Numbers | Allied Healthcare Model Number | Technology | Receiver Size (gal) | Total number of pumps | Vertically stacked pumps or layers | Dimensions (inches) | | | Weight (lb) | Mounting | UUT | |
| | | | | | | | Depth | Width | Height | | | | |
| VRTD-060-083/V/SC | VRTD-060-083/V/F | DCV020-80TV/SC | Claw | 80 | 2 | N/A | 43 | 40 | 78 | 650 | Rigid Base Mount | UUT2 | |
| VRTD-150-123/V/SC | VRTD-150-123/V/F | DCV050-120TV/SC | Claw | 120 | 2 | N/A | 54 | 53 | 85 | 1,220 | Rigid Base Mount | UUT4 | |
| VCTD-015-083/V/SC | VCTD-015-083/V/F | DLV010-80TV/SC | Lubricated Vane | 80 | 2 | 1 | 40 | 38 | 70 | 440 | Rigid Base Mount | UUT8 | |
| VXTD-150-123/V/SC | VXTD-150-123/V/F | DLV050-120BV2/SC | Lubricated Vane | 120 | 2 | 1 | 48 | 49 | 83 | 1,010 | Rigid Base Mount | UUT10 | |

1. The weight reflects the weights of the tested units. For the maximum weight of the whole system, please refer to Table 1 through Table 4.

UNIT UNDER TEST- Summary Sheet

UUT1



DCL Project Number: 45883-1701

Manufacturer: Gardner Denver (also branded Allied Healthcare)

Product Line: Medical Vacuum Systems- Claw

Model Number: VRTD-060-083/SC

Product Construction Summary:

Powder-coated carbon steel frame, vacuum pump, horizontal tank, controller, motor, intake filter elements, and check valves

Mounting Description:

UUT1 was rigidly base-mounted to the steel shake table interface plate with (4) 1/2" diameter Grade 5 bolts, with a 3/16"-thick square plate washer, on each corner using the manufacturer-provided channel that was welded to the base of the unit. The bolts were spaced approximately 36" on center width-wise and approximately 17" on center depth-wise.

UUT Properties

| Tested Weight (lb.) | Dimensions (in.) | | | Lowest Natural Frequency (Hz) | | |
|---------------------|------------------|-------|--------|-------------------------------|--------------------------|------------------------|
| | Depth | Width | Height | X-Direction (Side-Side) | Y-Direction (Front-Back) | Z-Direction (Vertical) |
| 700 | 27 | 75 | 53 | 13.0 | 11.0 | >33.3 |

UUT Highest Passed Seismic Run Information

| Building Code | Test Criteria | Sds (g) | z/h | I _p | A _{FLX-H} (g) | A _{RIG-H} (g) | A _{FLX-V} (g) | A _{RIG-V} (g) |
|---------------|---------------|---------|-----|----------------|------------------------|------------------------|------------------------|------------------------|
| CBC 2019 | AC156 | 2.00 | 1.0 | 1.5 | 3.20 | 2.40 | N/A | N/A |
| | | 2.50 | 0.0 | | N/A | N/A | 1.67 | 0.67 |



Figure 1. Overall view of UUT1

Testing Result Comments:

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

UNIT UNDER TEST- Summary Sheet UUT2



DCL Project Number: 45883-1701

Manufacturer: Gardner Denver (also branded Allied Healthcare)

Product Line: Medical Vacuum Systems - Claw

Model Number: VRD-060-083/V/SC

Product Construction Summary:

Powder-coated carbon steel frame, vacuum pump, vertical tank, controller, motors, intake filter elements, and check valves

Mounting Description:

UUT2 was rigidly base-mounted to the shake table interface plate with (4) 1/2" diameter Grade 5 bolts and washers.

UUT Properties

| Tested Weight (lb.) | Dimensions (in.) | | | Lowest Natural Frequency (Hz) | | |
|---------------------|------------------|-------|--------|-------------------------------|--------------------------|------------------------|
| | Depth | Width | Height | X-Direction (Side-Side) | Y-Direction (Front-Back) | Z-Direction (Vertical) |
| 650 | 43 | 40 | 78 | 12.3 | 11.2 | 22.8 |

UUT Highest Passed Seismic Run Information

| Building Code | Test Criteria | Sds (g) | z/h | I _p | A _{FLX-H} (g) | A _{RIG-H} (g) | A _{FLX-V} (g) | A _{RIG-V} (g) |
|---------------|---------------|---------|-----|----------------|------------------------|------------------------|------------------------|------------------------|
| CBC 2019 | AC156 | 2.00 | 1.0 | 1.5 | 3.20 | 3.00 | N/A | N/A |
| | | 2.50 | 0.0 | | N/A | N/A | 1.67 | 0.67 |



Figure 1. Front view of UUT2



Figure 2. Rear view of UUT2

Testing Result Comments:

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

UNIT UNDER TEST- Summary Sheet UUT3



DCL Project Number: 45883-1701

Manufacturer: Gardner Denver (also branded Allied Healthcare)

Model Series: Medical Vacuum Systems- Claw

Model Number: VRTD-150-123/SC

Product Construction Summary:

Powder-coated carbon steel frame, vacuum pump, horizontal tank, controller, motors, intake filter elements, and check valves

Mounting Description:

UUT3 was rigidly base-mounted to the steel shake table interface plate with (4) 1/2" diameter Grade 5 bolts, with a 3/16"-thick square plate washer, on each corner using the manufacturer-provided channel that was welded to the base of the unit. The bolts were spaced approximately 42" on center width-wise and approximately 20" on center depth-wise.

UUT Properties

| Tested Weight (lb.) | Dimensions (in.) | | | Lowest Natural Frequency (Hz) | | |
|---------------------|------------------|-------|--------|-------------------------------|--------------------------|------------------------|
| | Depth | Width | Height | X-Direction (Side-Side) | Y-Direction (Front-Back) | Z-Direction (Vertical) |
| 1,300 | 29 | 93 | 59 | 32.0 | 11.0 | >33.3 |

UUT Highest Passed Seismic Run Information

| Building Code | Test Criteria | Sds (g) | z/h | I _p | A _{FLX-H} (g) | A _{RIG-H} (g) | A _{FLX-V} (g) | A _{RIG-V} (g) |
|---------------|---------------|---------|-----|----------------|------------------------|------------------------|------------------------|------------------------|
| CBC 2019 | AC156 | 2.00 | 1.0 | 1.5 | 3.20 | 2.40 | N/A | N/A |
| | | 2.50 | 0.0 | | N/A | N/A | 1.67 | 0.67 |



Figure 1. Overall view of UUT3

Testing Result Comments:

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

UNIT UNDER TEST- Summary Sheet

UUT4



DCL Project Number: 45883-1701

Manufacturer: Gardner Denver (also branded Allied Healthcare)

Model Series: Medical Vacuum Systems- Claw

Model Number: VRTD-150-123/V/SC

Product Construction Summary:

Powder-coated carbon steel frame, vacuum pump, vertical tank, controller, motors, intake filter elements, and check valves

Mounting Description:

UUT4 was rigidly base-mounted to the shake table interface plate with (4) 1/2" diameter Grade 5 bolts with round washers and 1.5"x1.5"x0.25" painted mild carbon steel plate washers.

Seismic enhancements made to the test unit and modifications required to address the anomalies observed during the tests shall be incorporated into the production units.

(4) 1.5"x1.5"x0.25" painted mild carbon steel plate washers were added to the tank feet on UUT4 as described above.

UUT Properties

| Tested Weight (lb.) | Dimensions (in.) | | | Lowest Natural Frequency (Hz) | | |
|---------------------|------------------|-------|--------|-------------------------------|--------------------------|------------------------|
| | Depth | Width | Height | X-Direction (Side-Side) | Y-Direction (Front-Back) | Z-Direction (Vertical) |
| 1,220 | 54 | 53 | 85 | 16.0 | 5.5 | >33.3 |

UUT Highest Passed Seismic Run Information

| Building Code | Test Criteria | Sds (g) | z/h | I _p | A _{FLX-H} (g) | A _{RIG-H} (g) | A _{FLX-V} (g) | A _{RIG-V} (g) |
|---------------|---------------|---------|-----|----------------|------------------------|------------------------|------------------------|------------------------|
| CBC 2019 | AC156 | 2.00 | 1.0 | 1.5 | 3.20 | 3.00 | N/A | N/A |
| | | 2.50 | 0.0 | | N/A | N/A | 1.67 | 0.67 |



Figure 1. Front view of UUT4



Figure 2. Rear view of UUT4

Testing Result Comments:

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

UNIT UNDER TEST- Summary Sheet

UUT5.1



DCL Project Number: 10861-2001

Manufacturer: Gardner Denver (also branded Allied Healthcare)

Model Series: Medical Vacuum Systems- Claw

Model Number: VRST-251-243/SC

Product Construction Summary:

Powder-coated carbon steel frame, base mounted tank, and controller

Mounting Description:

UUT5.1 was rigidly base-mounted to the shake table interface plate using (4) 1/2" Grade 5 bolts and round washers. The bolts were spaced approximately 33" apart on center width-wise and approximately 31-1/2" apart on center depth-wise.

UUT Properties

| Tested Weight (lb.) | Dimensions (in.) | | | Lowest Natural Frequency (Hz) | | |
|---------------------|------------------|-------|--------|-------------------------------|--------------------------|------------------------|
| | Depth | Width | Height | X-Direction (Side-Side) | Y-Direction (Front-Back) | Z-Direction (Vertical) |
| 890 | 44 | 35 | 103 | 7.5 | 7.0 | 33.0 |

UUT Highest Passed Seismic Run Information

| Building Code | Test Criteria | Sds (g) | z/h | I _p | A _{FLX-H} (g) | A _{RIG-H} (g) | A _{FLX-V} (g) | A _{RIG-V} (g) |
|---------------|---------------|---------|-----|----------------|------------------------|------------------------|------------------------|------------------------|
| CBC 2019 | AC156 | 2.00 | 1.0 | 1.5 | 3.20 | 3.00 | N/A | N/A |
| | | 2.50 | 0.0 | | N/A | N/A | 1.67 | 0.67 |



Figure 1. Front view of UUT5.1



Figure 2. Rear view of UUT5.1

Testing Result Comments:

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

UNIT UNDER TEST- Summary Sheet

UUT5.2



DCL Project Number: 45883-1701

Manufacturer: Gardner Denver (also branded Allied Healthcare)

Model Series: Medical Vacuum Systems- Claw

Model Number: VRST-251-243/SC

Product Construction Summary:

Powder-coated carbon steel frame, triple stack vacuum pumps, motors, intake filter elements, and check valves

Mounting Description:

UUT5.2 was rigidly base-mounted to the shake table interface plate using (4) 1/2" Grade 5 bolts, round washers and (4) 1.5"x1.5"x0.25" low carbon steel plate washers. The bolts were spaced approximately 31-1/2" on center width-wise and approximately 49-1/2" on center depth-wise.

UUT Properties

| Tested Weight (lb.) | Dimensions (in.) | | | Lowest Natural Frequency (Hz) | | |
|---------------------|------------------|-------|--------|-------------------------------|--------------------------|------------------------|
| | Depth | Width | Height | X-Direction (Side-Side) | Y-Direction (Front-Back) | Z-Direction (Vertical) |
| 2,130 | 54 | 35 | 103 | 19.0 | 6.0 | >33.3 |

UUT Highest Passed Seismic Run Information

| Building Code | Test Criteria | Sds (g) | z/h | I _p | A _{FLX-H} (g) | A _{RIG-H} (g) | A _{FLX-V} (g) | A _{RIG-V} (g) |
|---------------|---------------|---------|-----|----------------|------------------------|------------------------|------------------------|------------------------|
| CBC 2019 | AC156 | 2.00 | 1.0 | 1.5 | 3.20 | 3.00 | N/A | N/A |
| | | 2.50 | 0.0 | | N/A | N/A | 1.67 | 0.67 |



Figure 1. Overall view of UUT5.2



Figure 2. Additional overall view of UUT5.2

Testing Result Comments:

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

UNIT UNDER TEST- Summary Sheet

UUT6.1



DCL Project Number: 10861-2001

Manufacturer: Gardner Denver (also branded Allied Healthcare)

Model Series: Medical Vacuum Systems- Claw

Model Number: VRST-501-243/SC

Product Construction Summary:

Powder-coated carbon steel frame, base mounted tank, and controller

Mounting Description:

UUT6.1 was rigidly base-mounted to the shake table interface plate using (4) 1/2" Grade 5 bolts and round washers. The bolts were spaced approximately 33" apart on center width-wise and approximately 31-1/2" apart on center depth-wise.

UUT Properties

| Tested Weight (lb.) | Dimensions (in.) | | | Lowest Natural Frequency (Hz) | | |
|---------------------|------------------|-------|--------|-------------------------------|--------------------------|------------------------|
| | Depth | Width | Height | X-Direction (Side-Side) | Y-Direction (Front-Back) | Z-Direction (Vertical) |
| 900 | 44 | 35 | 103 | 9.0 | 7.5 | 33.0 |

UUT Highest Passed Seismic Run Information

| Building Code | Test Criteria | Sds (g) | z/h | I _p | A _{FLX-H} (g) | A _{RIG-H} (g) | A _{FLX-V} (g) | A _{RIG-V} (g) |
|---------------|---------------|---------|-----|----------------|------------------------|------------------------|------------------------|------------------------|
| CBC 2019 | AC156 | 2.00 | 1.0 | 1.5 | 3.20 | 3.00 | N/A | N/A |
| | | 2.50 | 0.0 | | N/A | N/A | 1.67 | 0.67 |



Figure 1. View 1 of UUT6.1



Figure 2. Additional front view of UUT6.1

Testing Result Comments:

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

UNIT UNDER TEST- Summary Sheet

UUT6.2



DCL Project Number: 10861-2001

Manufacturer: Gardner Denver (also branded Allied Healthcare)

Model Series: Medical Vacuum Systems- Claw

Model Number: VRST-501-243/SC

Product Construction Summary:

Powder-coated carbon steel frame, double stack vacuum pumps, motors, intake filter elements, and check valves

Mounting Description:

UUT6.2 was rigidly base-mounted to the shake table interface plate using (6) 1/2" Grade 5 bolts and round washers. The bolts were spaced approximately 37" on center width-wise and approximately 31-3/4" on center depth-wise.

UUT Properties

| Tested Weight (lb.) | Dimensions (in.) | | | Lowest Natural Frequency (Hz) | | |
|---------------------|------------------|-------|--------|-------------------------------|--------------------------|------------------------|
| | Depth | Width | Height | X-Direction (Side-Side) | Y-Direction (Front-Back) | Z-Direction (Vertical) |
| 3,250 | 68 | 40 | 115 | 3.5 | 4.5 | 10.5 |

UUT Highest Passed Seismic Run Information

| Building Code | Test Criteria | Sds (g) | z/h | I _p | A _{FLX-H} (g) | A _{RIG-H} (g) | A _{FLX-V} (g) | A _{RIG-V} (g) |
|---------------|---------------|---------|-----|----------------|------------------------|------------------------|------------------------|------------------------|
| CBC 2019 | AC156 | 2.00 | 1.0 | 1.5 | 3.20 | 3.00 | N/A | N/A |
| | | 2.50 | 0.0 | | N/A | N/A | 1.67 | 0.67 |

DATE: 09/24/2021



Figure 1. View 1 of UUT6.2



Figure 2. View 2 of UUT6.2

Testing Result Comments:

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

UNIT UNDER TEST- Summary Sheet UUT7



DCL Project Number: 45883-1701

Manufacturer: Gardner Denver (also branded Allied Healthcare)

Model Series: Medical Vacuum Systems- Lubricated Vane

Model Number: VCTD-015-083/SC

Product Construction Summary:

Powder-coated carbon steel frame, vacuum pump, horizontal tank, controller, motor, intake filter elements, and check valves

Mounting Description:

UUT7 was rigidly base-mounted to the steel shake table interface plate with (4) 1/2" diameter Grade 5 bolts, with a 3/16"-thick square plate washer, on each corner using the manufacturer-provided channel that was welded to the base of the unit. The bolts were spaced approximately 36" on center width-wise and approximately 17" on center depth-wise.

UUT Properties

| Tested Weight (lb.) | Dimensions (in.) | | | Lowest Natural Frequency (Hz) | | |
|---------------------|------------------|-------|--------|-------------------------------|--------------------------|------------------------|
| | Depth | Width | Height | X-Direction (Side-Side) | Y-Direction (Front-Back) | Z-Direction (Vertical) |
| 550 | 27 | 66 | 48 | 23.0 | 12.0 | >33.3 |

UUT Highest Passed Seismic Run Information

| Building Code | Test Criteria | Sds (g) | z/h | I _p | A _{FLX-H} (g) | A _{RIG-H} (g) | A _{FLX-V} (g) | A _{RIG-V} (g) |
|---------------|---------------|---------|-----|----------------|------------------------|------------------------|------------------------|------------------------|
| CBC 2019 | AC156 | 2.00 | 1.0 | 1.5 | 3.20 | 2.40 | N/A | N/A |
| | | 2.50 | 0.0 | | N/A | N/A | 1.67 | 0.67 |



Figure 1. Overall view of UUT7

Testing Result Comments:

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

UNIT UNDER TEST- Summary Sheet UUT8



DCL Project Number: 45883-1701

Manufacturer: Gardner Denver (also branded Allied Healthcare)

Model Series: Medical Vacuum Systems- Lubricated Vane

Model Number: VCTD-015-083/V/SC

Product Construction Summary:

Powder-coated carbon steel frame, vacuum pump, vertical tank, controller, motor, intake filter elements, and check valves

Mounting Description:

UUT8 was rigidly base-mounted to the shake table interface plate with (4) 1/2" diameter Grade 5 bolts and washers.

UUT Properties

| Tested Weight (lb.) | Dimensions (in.) | | | Lowest Natural Frequency (Hz) | | |
|---------------------|------------------|-------|--------|-------------------------------|--------------------------|------------------------|
| | Depth | Width | Height | X-Direction (Side-Side) | Y-Direction (Front-Back) | Z-Direction (Vertical) |
| 440 | 40 | 38 | 70 | 26.3 | 18.3 | 18.5 |

UUT Highest Passed Seismic Run Information

| Building Code | Test Criteria | Sds (g) | z/h | I _p | A _{FLX-H} (g) | A _{RIG-H} (g) | A _{FLX-V} (g) | A _{RIG-V} (g) |
|---------------|---------------|---------|-----|----------------|------------------------|------------------------|------------------------|------------------------|
| CBC 2019 | AC156 | 2.00 | 1.0 | 1.5 | 3.20 | 3.00 | N/A | N/A |
| | | 2.50 | 0.0 | | N/A | N/A | 1.67 | 0.67 |



Figure 1. Front view of UUT8



Figure 2. Rear view of UUT8

Testing Result Comments:

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

UNIT UNDER TEST- Summary Sheet UUT9



DCL Project Number: 45883-1701

Manufacturer: Gardner Denver (also branded Allied Healthcare)

Model Series: Medical Vacuum Systems- Lubricated Vane

Model Number: VXTD-303-243/SC

Product Construction Summary:

Powder-coated carbon steel frame, vacuum pumps, horizontal tank, controller, motors, intake filter elements, and check valves

Mounting Description:

UUT9 was rigidly base-mounted to the steel shake table interface plate with (4) 1/2" diameter Grade 5 bolts, with a 3/16"-thick square plate washer, on each corner using the manufacturer-provided channel that was welded to the base of the unit. The bolts were spaced approximately 42" on center width-wise and 26" on center depth-wise.

UUT Properties

| Tested Weight (lb.) | Dimensions (in.) | | | Lowest Natural Frequency (Hz) | | |
|---------------------|------------------|-------|--------|-------------------------------|--------------------------|------------------------|
| | Depth | Width | Height | X-Direction (Side-Side) | Y-Direction (Front-Back) | Z-Direction (Vertical) |
| 1,710 | 33 | 107 | 68 | 10.0 | 9.0 | >33.3 |

UUT Highest Passed Seismic Run Information

| Building Code | Test Criteria | Sds (g) | z/h | I _p | A _{FLX-H} (g) | A _{RIG-H} (g) | A _{FLX-V} (g) | A _{RIG-V} (g) |
|---------------|---------------|---------|-----|----------------|------------------------|------------------------|------------------------|------------------------|
| CBC 2019 | AC156 | 2.00 | 1.0 | 1.5 | 3.20 | 2.40 | N/A | N/A |
| | | 2.50 | 0.0 | | N/A | N/A | 1.67 | 0.67 |



Figure 1. Overall view of UUT9

Testing Result Comments:

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

UNIT UNDER TEST- Summary Sheet

UUT10



DCL Project Number: 45883-1701

Manufacturer: Gardner Denver (also branded Allied Healthcare)

Model Series: Medical Vacuum Systems- Lubricated Vane

Model Number: VXTD-150-123/V/SC

Product Construction Summary:

Powder-coated carbon steel frame, vacuum pump, vertical tank, controller, motors, intake filter elements, and check valves

Mounting Description:

UUT10 was rigidly base-mounted to the shake table interface plate with (4) 1/2" diameter Grade 5 bolts with round washers and 1.5"x1.5"x0.25" painted mild carbon steel plate washers.

Seismic enhancements made to the test unit and modifications required to address the anomalies observed during the tests shall be incorporated into the production units.

(4) 1.5"x1.5"x0.25" painted mild carbon steel plate washers were added to the tank feet on UUT10 as described above.

UUT Properties

| Tested Weight (lb.) | Dimensions (in.) | | | Lowest Natural Frequency (Hz) | | |
|---------------------|------------------|-------|--------|-------------------------------|--------------------------|------------------------|
| | Depth | Width | Height | X-Direction (Side-Side) | Y-Direction (Front-Back) | Z-Direction (Vertical) |
| 1,010 | 48 | 49 | 83 | 9.7 | 8.4 | 17.4 |

UUT Highest Passed Seismic Run Information

| Building Code | Test Criteria | Sds (g) | z/h | I _p | A _{FLX-H} (g) | A _{RIG-H} (g) | A _{FLX-V} (g) | A _{RIG-V} (g) |
|---------------|---------------|---------|-----|----------------|------------------------|------------------------|------------------------|------------------------|
| CBC 2019 | AC156 | 2.00 | 1.0 | 1.5 | 3.20 | 3.00 | N/A | N/A |
| | | 2.50 | 0.0 | | N/A | N/A | 1.67 | 0.67 |



Figure 1. Front view of UUT10



Figure 2. Rear view of UUT10

Testing Result Comments:

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

UNIT UNDER TEST- Summary Sheet

UUT11.1



DCL Project Number: 49446-1801

Manufacturer: Gardner Denver (also branded Allied Healthcare)

Model Series: Medical Vacuum System- Lubricated Vane

Model Number: VXST-150-123/SC

Product Construction Summary:

Powder-coated carbon steel frame, base mounted tank, and controller

Mounting Description:

UUT11.1 was base-mounted to the shake table interface plate using (4) 1/2" grade 5 bolts and (4) round washers. The bolts were spaced approximately 23-1/2" on center depth-wise and approximately 27" on center width-wise.

UUT Properties

| Tested Weight (lb.) | Dimensions (in.) | | | Lowest Natural Frequency (Hz) | | |
|---------------------|------------------|-------|--------|-------------------------------|--------------------------|------------------------|
| | Depth | Width | Height | X-Direction (Side-Side) | Y-Direction (Front-Back) | Z-Direction (Vertical) |
| 580 | 39 | 24 | 86 | 7.5 | 7.0 | 24.0 |

UUT Highest Passed Seismic Run Information

| Building Code | Test Criteria | S _{ds} (g) | z/h | I _p | A _{FLX-H} (g) | A _{RIG-H} (g) | A _{FLX-V} (g) | A _{RIG-V} (g) |
|---------------|---------------|---------------------|-----|----------------|------------------------|------------------------|------------------------|------------------------|
| CBC 2019 | AC156 | 2.00 | 1.0 | 1.5 | 3.20 | 3.00 | N/A | N/A |
| | | 2.50 | 0.0 | | N/A | N/A | 1.67 | 0.67 |



Figure 1. Overall view of UUT11.1



Figure 2. Additional view of UUT11.1

Testing Result Comments:

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

UNIT UNDER TEST- Summary Sheet

UUT11.2



DCL Project Number: 49446-1801

Manufacturer: Gardner Denver (also branded Allied Healthcare)

Model Series: Medical Vacuum System- Lubricated Vane

Model Number: VXST-150-123/SC

Product Construction Summary:

Powder-coated carbon steel frame, triple stack vacuum pumps, motors, intake filter elements, and check valves

Mounting Description:

UUT11.2 was base-mounted to the shake table interface plate using (4) 1/2" grade 5 bolts and (4) 1.5"x1.5"x1/4" low carbon steel plate washers. The bolts were spaced approximately 42-1/2" on center depth-wise and approximately 30" on center width-wise.

UUT Properties

| Tested Weight (lb.) | Dimensions (in.) | | | Lowest Natural Frequency (Hz) | | |
|---------------------|------------------|-------|--------|-------------------------------|--------------------------|------------------------|
| | Depth | Width | Height | X-Direction (Side-Side) | Y-Direction (Front-Back) | Z-Direction (Vertical) |
| 1,540 | 47 | 33 | 90 | 7.5 | 7.0 | >33.3 |

UUT Highest Passed Seismic Run Information

| Building Code | Test Criteria | Sds (g) | z/h | I _p | A _{FLX-H} (g) | A _{RIG-H} (g) | A _{FLX-V} (g) | A _{RIG-V} (g) |
|---------------|---------------|---------|-----|----------------|------------------------|------------------------|------------------------|------------------------|
| CBC 2019 | AC156 | 2.00 | 1.0 | 1.5 | 3.20 | 3.00 | N/A | N/A |
| | | 2.50 | 0.0 | | N/A | N/A | 1.67 | 0.67 |



Figure 1. Overall view of UUT11.2



Figure 2. Additional view of UUT11.2

Testing Result Comments:

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

UNIT UNDER TEST- Summary Sheet

UUT12.1



DCL Project Number: 10861-2001

Manufacturer: Gardner Denver (also branded Allied Healthcare)

Model Series: Medical Vacuum Systems- Lubricated Vane

Model Number: VXSQ-700-243/SC

Product Construction Summary:

Powder-coated carbon steel frame, base mounted tank and controller

Mounting Description:

UUT12.1 was rigidly base-mounted to the shake table interface plate using (4) 1/2" Grade 5 bolts and round washers. The bolts were spaced approximately 33" apart on center width-wise and approximately 31-1/2" apart on center depth-wise.

UUT Properties

| Tested Weight (lb.) | Dimensions (in.) | | | Lowest Natural Frequency (Hz) | | |
|---------------------|------------------|-------|--------|-------------------------------|--------------------------|------------------------|
| | Depth | Width | Height | X-Direction (Side-Side) | Y-Direction (Front-Back) | Z-Direction (Vertical) |
| 1,090 | 44 | 42 | 103 | 8.5 | 7.0 | 23.0 |

UUT Highest Passed Seismic Run Information

| Building Code | Test Criteria | Sds (g) | z/h | I _p | A _{FLX-H} (g) | A _{RIG-H} (g) | A _{FLX-V} (g) | A _{RIG-V} (g) |
|---------------|---------------|---------|-----|----------------|------------------------|------------------------|------------------------|------------------------|
| CBC 2019 | AC156 | 2.00 | 1.0 | 1.5 | 3.20 | 3.00 | N/A | N/A |
| | | 2.50 | 0.0 | | N/A | N/A | 1.67 | 0.67 |



Figure 1. Overall view of UUT12.1



Figure 2. Side view of UUT12.1

Testing Result Comments:

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

UNIT UNDER TEST- Summary Sheet

UUT12.2



DCL Project Number: 49446-1801

Manufacturer: Gardner Denver (also branded Allied Healthcare)

Model Series: Medical Vacuum Systems- Lubricated Vane

Model Number: VXSQ-700-243/SC

Product Construction Summary:

Powder-coated carbon steel frame, double stack vacuum pumps, motors, intake filter elements, and check valves

Mounting Description:

UUT12.2 was rigidly base-mounted to the shake table interface plate using (6) 1/2" Grade 5 bolts and washers to secure the motor skid to the pump fixture. The bolts were spaced approximately 48" on center width-wise and approximately 38-1/4" on center depth-wise.

UUT Properties

| Tested Weight (lb.) | Dimensions (in.) | | | Lowest Natural Frequency (Hz) | | |
|---------------------|------------------|-------|--------|-------------------------------|--------------------------|------------------------|
| | Depth | Width | Height | X-Direction (Side-Side) | Y-Direction (Front-Back) | Z-Direction (Vertical) |
| 4,990 | 71 | 51 | 109 | 5.0 | 5.0 | 15.5 |

UUT Highest Passed Seismic Run Information

| Building Code | Test Criteria | Sds (g) | z/h | I _p | A _{FLX-H} (g) | A _{RIG-H} (g) | A _{FLX-V} (g) | A _{RIG-V} (g) |
|---------------|---------------|---------|-----|----------------|------------------------|------------------------|------------------------|------------------------|
| CBC 2019 | AC156 | 2.00 | 1.0 | 1.5 | 3.20 | 3.00 | N/A | N/A |
| | | 2.50 | 0.0 | | N/A | N/A | 1.67 | 0.67 |



Figure 1. Overall view of UUT12.2

Testing Result Comments:

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