

OFFICE OF STATEWIDE HEALTH PLANNING AND DEVELOPMENT FACILITIES DEVELOPMENT DIVISION

APPLICATION FOR OSHPD PR	EAPPROVAL OF	OFFICE USE ONLY
MANUFACTURER'S CERTIFICA		APPLICATION #: OPM-0651
OSHPD Preapproval of Manufacturer's	Certification (OPM)	
Type: X New Renewal/Update		
Manufacturer Information		
Manufacturer: Torvan Medical, Inc.		
Manufacturer's Technical Representative: Has	san Alavi	
Mailing Address: 417 Horner Ave., Etobicoke,	ON M8W4W3	
Telephone: () -	Email: halavi@torvanmedica	ıl.com
	FOR CODE COM.	
Product Information	OSHPD	
Product Name: HEPA, DRYING & SCOPE CA	BINETS	Y
Product Type: other Electrical & Mechanical (OPM-0651 Components	CH
Product Model Number: 24-44" HEPA (V1/V2 <u>Drying Top Load and</u>) Side Load, 24"-44" HEPA Top Lo 27" & 36" Scope; Single and Doub	
General Description: Drying Cabinets for End	oscope Equipment	6
	DATE: 01/11/2022	207
Applicant Information	PA S	>
Applicant Company Name: EASE LLC.	A BITTO CON	
Contact Person: Tiffany Tonn	POILDING	

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

Mailing Address: 1515 FAIRVIEW AVE, STE 205, MISSOULA, MT 59801





Telephone: (406) 541-3273

Title: Office Manager

Email: tiffany@easeco.com



OFFICE OF STATEWIDE HEALTH PLANNING AND DEVELOPMENT FACILITIES DEVELOPMENT DIVISION

Registered Design Professonal Preparing Engineering Recommendations
Company Name: EASE
Name: Jonathan Roberson California License Number: S4197
Mailing Address: 5877 Pine Ave., Suite 210, Chino Hills, CA 91709
Telephone: (951) 295-1892 Email: jon@EASECo.com
OSHPD Special Seismic Certification Preapproval (OSP)
Special Seismic Certification is preapproved under OSP OSP Number:
OR GODE
Certification Method
Testing in accordance with: ICC-ES AC156 FM 1950-16
Other(s) (Please Specify):
*Use of criteria other than those adopted by the California Building Standards Code, 2019 (CBSC 2019) for component supports and attachments are not permitted. For distribution system, interior partition wall, and suspended ceiling seismic bracings, test criteria other than those adopted in the CBSC 2019 may be used when approved by OSHPD prior to testing.
X Analysis BY: William Staehlin
Experience Data DATE: 01/11/2022
Combination of Testing, Analysis, and/or Experience Data (Please Specify):
COTÉ DE COTE D
OSHPD Approval BUILDING
Date: 1/11/2022
Name: William Staehlin Title: Senior Structural Engineer
Condition of Approval (if applicable):

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





STATE OF CALIFORNIA – HEALTH AND HUMAN SERVICES AGENCY



5877 Pine Ave, Ste. 210 Chino Hills, CA. 91709 Phn: (909) 606-7622

Department of Health Care Access and Information

PREAPPROVAL OF MANUFACTURER'S CERTIFICATION OPM-0651

THIS PREAPPROVAL CONFORMS TO THE 2019 CALIFORNIA BUILDING CODE

MANUFACTURER:

TORVAN MEDICAL

Sheet: _1 of 15

EQUIPMENT NAME:

HEPA, DRYING & SCOPE CABINETS

Date: 1/11/22

GENERAL NOTES

- 1. THIS HCAI PREAPPROVAL OF MANUFACTURER'S CERTIFICATION (OPM) IS BASED ON THE 2019 CBC. THE DEMANDS (DESIGN FORCES) FOR USE WITH THIS OPM SHALL BE BASED ON THE 2019 CBC
- 2. THIS DOCUMENT MAY ONLY BE USED WITH THE EXPRESS WRITTEN CONSENT OF THE MANUFACTURER LISTED ABOVE FOR THE SPECIFIC PROJECT SITE AND INSTALLATION LOCATION. THIS DOCUMENT IS INVALID WITHOUT SUCH CONSENT.
- 3. THIS PREAPPROVAL CONFORMS TO THE 2019 CALIFORNIA BUILDING CODE.
- 4. FORCES PER ASCE 7-16 SECTION 13.3.1, EQUATIONS 13.3-1, 13.3-2 & 13.3-3, WHERE SDS € 2.20, **a**_p = 1.0, I_p = 1.5, R_p = 1.5, z/h < 1.
- 5. THE DETAILS IN THIS PREAPPROVAL MAY BE USED AT ANY LOCATION IN THE STATE OF CALIFORNIA, WHERE SDS IS NOT GREATER THAN 2.20.

 BY: William Staehlin
- 6. ALL DESIGN FORCES SHOWN ON THE DRAWINGS ARE FACTORED LOADS THAT SHALL BE USED FOR STRENGTH DESIGN.
- 7. SHEET METAL SCREWS SHALL BE HILT! S-MB SCREWS BY HILT! (ICC ESR-2196).
- 8. THIS PREAPPROVAL COVERS ONLY THE SUPPORTS AND ATTACHMENTS OF THE EQUIPMENT TO THE STRUCTURE.
- 9. PROVIDE PLACARD AT EACH CABINET IDENTIFYING MAXIMUM CONTENT WEIGHT ALLOWED. PLACARD MOUNTING LOCATION SHALL BE VISIBLE ON UNIT.
- 10. RESPONSIBILITIES OF THE STRUCTURAL ENGINEER OF RECORD OF THE BUILDING
 - A. PROVIDE SUPPORTING STRUCTURE REQUIRED TO SUPPORT WEIGHTS AND FORCES SHOWN, IN ADDITION TO ALL OTHER LOADS.
 - B. VERIFY THAT THE INSTALLATION IS IN CONFORMANCE WITH THE 2019 CBC AND WITH THE DETAILS SHOWN IN THIS PREAPPROVAL. VERIFY THAT THE ACTUAL EQUIPMENT'S WEIGHT, CG LOCATION, ANCHOR LOCATIONS, ANCHOR DETAILS AND THE MATERIAL AND GAGE OF THE UNIT WHERE ATTACHMENTS ARE MADE AGREE WITH THE INFORMATION SHOWN ON THE PREAPPROVAL DOCUMENTS.
 - C. VERIFY THAT THE COMBINATION OF SDS & z/h RESULT IN SEISMIC FORCES (Eh , Ev) THAT ARE NOT GREATER THAN THE VALUES ON THE DETAILS.
 - D. DESIGN BACKING BARS, STUDS, ETC. WHICH THE UNITS ARE ATTACHED TO AS NOTED ON THE DRAWINGS.

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TORVAN MEDICAL

DES. J. ROBERSON JOB NO. 11-2123

2

SHEET

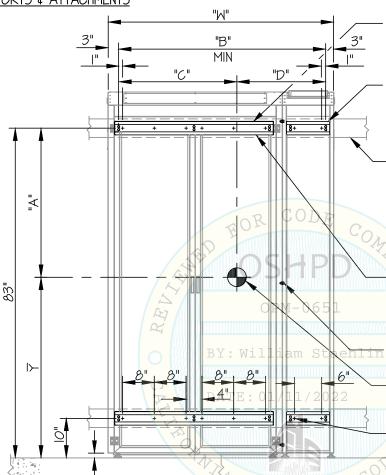
24"- 44" HEPA (V1/V2) CABINETS (SIDE LOAD)

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of 15 sheets

WALL MOUNTED

SEISMIC SUPPORTS & ATTACHMENTS



USE #12 HILTI S-MD SCREW ANCHORS (TOP & BOTTOM) (SEE SCHED ON SHEET 3 OF 14 FOR # OF BRACKETS & SCREWS)

1/11/22

IO" P5000 UNISTRUT AT COMPONENT CABINET (TOP & BOTTOM) (DETAIL "A") (SEE NOTE BELOW FOR BALANCE OF INFO)

BACKING PLATE (16 GA. 50 ksi MIN.) (TOP & BOTTOM)
DESIGNED AND CONNECTED TO
WALL STRUCTURE BY
STRUCTURAL ENGINEER OF RECORD

P5000 UNISTRUT (12 GA, A653, GR33)
W/ 1/2" P5510 UNISTRUT SPRING NUT
FOR CONN OF CABINET TO UNISTRUT
24" WIDE CABINETS USE 20" UNISTRUT P5000
30" WIDE CABINETS USE 26" UNISTRUT P5000
36" WIDE CABINETS USE 32" UNISTRUT P5000
44" WIDE CABINETS USE 40" UNISTRUT P5000
(BY CONTRACTOR) (SEE DETAIL "A")
(SIMILAR AT ADD-ONS)

USE (6)- #8-32 (A307) SCREWS W/ RIVET NUTS AT SIDE LOAD CABINET ATTACHMENT

C.G. WT. = SEE SCHED

P5510 UNISTRUT SPRING NUT (TORQUE TO 50 FT-LBS)

(TOP & BOTTOM, SEE SCHED FOR TOTAL)

NOTES:

1. FORCES ARE DETERMINED PER 2019 CALIFORNIA BUILDING CODE AND ASCE 7-16.

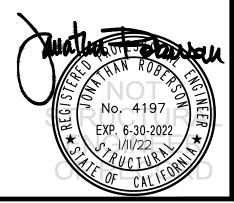
FRONT ELEVATION

(44" HEPA CABINET SHOWN)

STRENGTH DESIGN IS USED. (SDS = 2.20, ap = 1.0, lp = 1.5, Rp = 1.5, $\mathrm{z/h} \leq$ 1)

HORIZONTAL FORCE (En) = 2.64 Wp VERTICAL FORCE (Ev) = 0.44 Wp

- 2. CENTER OF GRAVITY (C.G.) AND WEIGHT ARE THE GOVERNING PARAMETERS FOR DESIGN. THIS PREAPPROVAL ENCOMPASSES ALL WEIGHTS UP TO THE MAXIMUM WEIGHT SHOWN.
- 3. STRUCTURAL ENGINEER OF RECORD FOR THE BUILDING SHALL PROVIDE SUPPORT STRUCTURE DESIGNED TO SUPPORT WEIGHTS AND FORCES SHOWN IN COMBINATION WITH ALL OTHER LOADS THAT MAY BE PRESENT.
- 4. SEE GENERAL NOTES: SHEETS 1 AND 2



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TORVAN MEDICAL

5/8" THK.

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83"

WALL BOARD

24"- 44" HEPA (V1/V2) CABINETS (SIDE LOAD)

000

3.25"

MAX

DES. J. ROBERSON

ЈОВ NO. 11-2123

DATE 1/11/22

3

of 15 sheets

WALL MOUNTED



P5510 UNISTRUT SPRING NUT

3/8" (A307) LEVELING LEG

FULL THREAD ENGAGEMENT -

TO UNIT REQ'D (TYP)

(TORQUE TO 50 FT-LBS)

(TOP & BOTTOM, — SEE SCHED FOR TOTAL)

BACKING PLATE (16 GA. 50 ksi MIN.) (TOP & BOTTOM) DESIGNED AND CONNECTED TO WALL STRUCTURE BY STRUCTURAL ENGINEER OF RECORD

USE #12 HILTI S-MD SCREW ANCHORS (TOP & BOTTOM) (SEE SCHED ON SHEET 3 OF 14 FOR # OF SCREWS)

P5000 UNISTRUT (12 GA, A653, GR33)
W/ I/2" P5510 UNISTRUT SPRING NUT
FOR CONN OF CABINET TO UNISTRUT
24" WIDE CABINETS USE 20" UNISTRUT P5000
30" WIDE CABINETS USE 26" UNISTRUT P5000
36" WIDE CABINETS USE 32" UNISTRUT P5000
44" WIDE CABINETS USE 40" UNISTRUT P5000
(BY CONTRACTOR) (SEE DETAIL "A")
(SIMILAR AT ADD ONS)

CABINET BACK MATERIAL

(VI: 20 GA, ASTM A240, TYPE 304, Fy=30 KSI) (V2: 16 GA, ASTM A240, TYPE 304, Fy=30 KSI)

- C.G. WT. = SEE SCHED

USE (6)- #8-32 (A307) SCREWS W/ RIVET NUTS AT SIDE LOAD CABINET ATTACHMENT

SIDE ELEVATION
(44" HEPA CABINET SHOWN)



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24"- 44" HEPA (V1/V2) CABINETS (SIDE LOAD)

DATE 1/11/22

JOB NO.

of 15 sheets

SEISMIC SUPPORTS & ATTACHMENTS

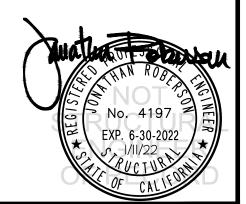
WALL MOUNTED

V1 UNIT (SIDE LOAD)	LOADED WEIGHT (lb.)	UNIT SELF WEIGHT (lb.)	"W" (in.)	"A" (in.)	"B" (in.)	"C" (in.)	"D" (in.)	"E" (in.)	₹ (in.)		**# P5510 UNISTRUT SPRING UNIT	⁺ Tu (lb.) PER SCREW	⁺ Vu (lb.) PER SCREW
24" + 13" HEPA	354	343	36.50	39.2	30.5	17.9	12.6	16.6	43.8	8	5	159	63
30" + 13" HEPA	405	394	42.95	37.9	37.0	21.2	15.8	16.9	45.1	10	7	151	56
36" + 13" HEPA	432	421	48.95	37.5	43.0	24,9	718.1	17.1	45.5	10	7	142	59
44" + 13" HEPA	465	454	56.92	37.4	51.0	29.4	215	(17,1)	45.6	10	8	133	63

V2 UNIT (SIDE LOAD)	LOADED WEIGHT (lb.)	UNIT SELF WEIGHT (lb.)		"A" (in.)	"B" (in.)	"C" (in.)	"D" (in.)	"E" (in.)		# UF	**# P5510 UNISTRUT SPRING UNIT	⁺ Tu (lb.) PER SCREW	⁺ Vu (lb.) PER SCREW
24" + 13" HEPA	382	371	37.03	36.0	31.0	16.7	14.3	15.8	47.0	8	5	151	64
30" + 13" HEPA	431	420	43.03	35.5	37.0	20.0	17.0	16.2	47.5	10	7	152	58
36" + 13" HEPA	461	450	49.03	34.9	43.0	23.4	19.6	, h16.1	48.1	10	7	145	64
44" + 13" HEPA	520	509	57.03	32.2	51.0	25.6	25.4	15.7	50.8	10	8	147	77

⁺ VALUES INCLUDE Ω₀

DATE: 01/11/2022



^{**} NUMBER OF SCREWS/SPRING NUT PER ROW (2 ROWS TOTAL, 1 TOP & 1 BOTTOM)

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TORVAN MEDICAL

24"- 44" HEPA CABINETS (TOP LOAD)

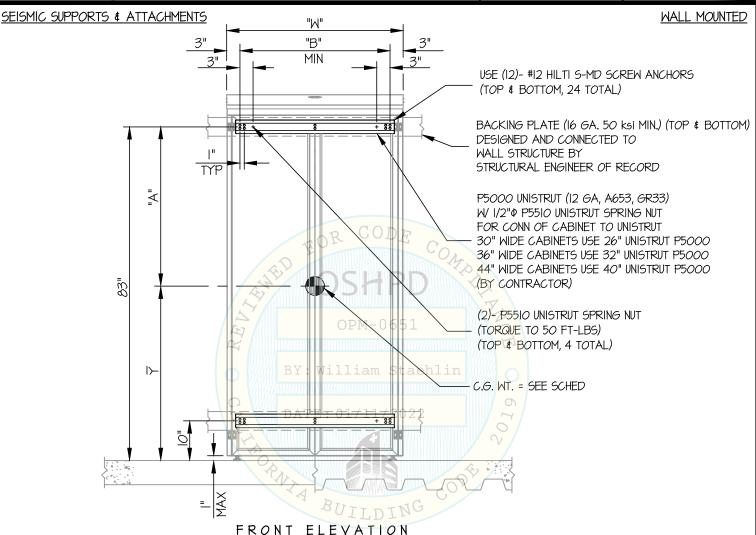
DES. J. ROBERSON

JOB NO. 11-2123

DATE 1/11/22

SHEET 5

of 15 sheets



NOTES:

1. FORCES ARE DETERMINED PER 2019 CALIFORNIA BUILDING CODE AND ASCE 7-16

(44" HEPA CABINET SHOWN)

STRENGTH DESIGN IS USED. (SDS = 2.20, Ap = 1.0, Ip = 1.5, Rp = 1.5, $Z/h \le 1$)

HORIZONTAL FORCE (Eh) = 2.64 Wp VERTICAL FORCE (Ev) = 0.44 Wp

- 2. CENTER OF GRAVITY (C.G.) AND WEIGHT ARE THE GOVERNING PARAMETERS FOR DESIGN. THIS PREAPPROVAL ENCOMPASSES ALL WEIGHTS UP TO THE MAXIMUM WEIGHT SHOWN.
- 3. STRUCTURAL ENGINEER OF RECORD FOR THE BUILDING SHALL PROVIDE SUPPORT STRUCTURE DESIGNED TO SUPPORT WEIGHTS AND FORCES SHOWN IN COMBINATION WITH ALL OTHER LOADS THAT MAY BE PRESENT.
- 4. SEE GENERAL NOTES: SHEETS 1 AND 2



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6

SHEET

24"- 44" HEPA CABINETS (TOP LOAD)

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23

5/8" THK.

WALL BOARD

3.25

MAX

DATE 1/11/22

JOB NO.

F 15 SHEETS

WALL MOUNTED

SEISMIC SUPPORTS & ATTACHMENTS

(2)- P5510 UNISTRUT SPRING NUT (TORQUE TO 50 FT-LBS)

3/8" (A307) LEVELING LEG FULL THREAD ENGAGEMENT

TO UNIT REQ'D (TYP)

(TOP & BOTTOM, 4 TOTAL)

BACKING PLATE (16 GA. 50 ksi MIN.)
(TOP & BOTTOM)
DESIGNED AND CONNECTED TO
WALL STRUCTURE BY
STRUCTURAL ENGINEER OF RECORD

USE (12)- #12 HILTI S-MD SCREW ANCHORS (TOP & BOTTOM, 24 TOTAL)

P5000 UNISTRUT (12 GA, A653, GR33)
W 1/2" P5510 UNISTRUT SPRING NUT
FOR CONN OF CABINET TO UNISTRUT
30" WIDE CABINETS USE 26" UNISTRUT P5000
36" WIDE CABINETS USE 32" UNISTRUT P5000
44" WIDE CABINETS USE 40" UNISTRUT P5000
(BY CONTRACTOR)

CABINET BACK MATERIAL (20 GA, ASTM A240, TYPE 304, Fy=30 KSI)

C.G. WT. SEE SCHED

SIDE ELEVATION
(44" HEPA CABINET SHOWN)

UNIT (TOP LOAD)	LOADED WEIGHT (lb.)	UNIT SELF WEIGHT (lb.)	"\/\" (IP)) I	"A" (in.)	"B" (in.)	"C" (in.)	11110		** # P5510 UNISTRUT SPRING UNIT	⁺ Tu (lb.) PER SCREW	⁺ Vu (lb.) PER SCREW
30" HEPA	372	360	30.97	39.8	25.0	17.4	43.2	12	5	113	67
36" HEPA	414	403	36.97	39.8	31.0	17.3	43.2	12	5	105	74
44" HEPA	473	462	44.97	39.3	39.0	17.3	43.7	12	6	106	84

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- + VALUES INCLUDE Ω_{o}
- ** NUMBER OF SCREWS/SPRING NUT PER ROW (2 ROWS TOTAL, 1 TOP & 1 BOTTOM)



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JOB NO. 11-2123

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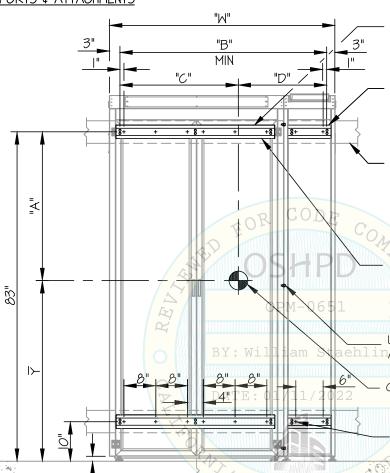
15 SHEETS

WALL MOUNTED

SHEET

24"- 44" DRYING (V1/V2) CABINETS (SIDE LOAD)

SEISMIC SUPPORTS & ATTACHMENTS



USE #12 HILTI S-MD SCREW ANCHORS (TOP & BOTTOM) (SEE SCHED ON SHEET & OF 14 FOR # OF BRACKETS & SCREWS)

1/11/22

IO" P5000 UNISTRUT AT COMPONENT CABINET (TOP & BOTTOM) (DETAIL "A") (SEE NOTE BELOW FOR BALANCE OF INFO)

BACKING PLATE (16 GA. 50 kgi MIN.) (TOP & BOTTOM)
DESIGNED AND CONNECTED TO
WALL STRUCTURE BY
STRUCTURAL ENGINEER OF RECORD

P5000 UNISTRUT (12 GA, A653, GR33)
W/ I/2" P P5510 UNISTRUT SPRING NUT
FOR CONN OF CABINET TO UNISTRUT
24" WIDE CABINETS USE 20" UNISTRUT P5000
30" WIDE CABINETS USE 26" UNISTRUT P5000
36" WIDE CABINETS USE 32" UNISTRUT P5000
44" WIDE CABINETS USE 40" UNISTRUT P5000
(BY CONTRACTOR) (SEE DETAIL "A")
(SIMILAR AT ADD-ONS)

USE (6)- #8-32 (A307) SCREWS W RIVET NUTS

Behlinat SIDE LOAD CABINET ATTACHMENT

C.G. WT. SEE SCHED

P55IO UNISTRUT SPRING NUT (TORQUE TO 50 FT-LBS) (TOP & BOTTOM, SEE SCHED FOR TOTAL)

NOTES:

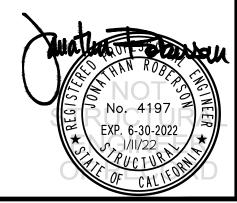
FRONT ELEVATION (44" DRYING CABINET SHOWN)

1. FORCES ARE DETERMINED PER 2019 CALIFORNIA BUILDING CODE AND ASCE 7-16.

STRENGTH DESIGN IS USED. (SDs = 2.20, ap = 1.0, lp = 1.5, Rp = 1.5, $\mathrm{z/h} \leq$ 1)

HORIZONTAL FORCE (En) = 2.64 Wp VERTICAL FORCE (Ev) = 0.44 Wp

- 2. CENTER OF GRAVITY (C.G.) AND WEIGHT ARE THE GOVERNING PARAMETERS FOR DESIGN. THIS PREAPPROVAL ENCOMPASSES ALL WEIGHTS UP TO THE MAXIMUM WEIGHT SHOWN.
- 3. STRUCTURAL ENGINEER OF RECORD FOR THE BUILDING SHALL PROVIDE SUPPORT STRUCTURE DESIGNED TO SUPPORT WEIGHTS AND FORCES SHOWN IN COMBINATION WITH ALL OTHER LOADS THAT MAY BE PRESENT.
- 4. SEE GENERAL NOTES: SHEETS 1 AND 2



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SHEET

24"- 44" DRYING (V1/V2) CABINETS (SIDE LOAD)

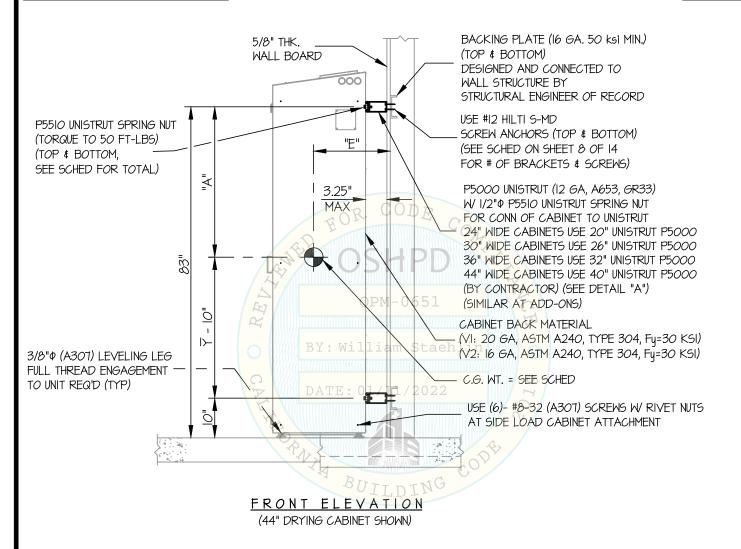
1/11/22 DATE

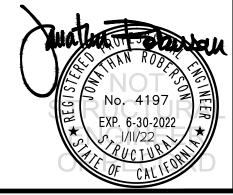
JOB NO.

OF SHEETS

SEISMIC SUPPORTS & ATTACHMENTS

WALL MOUNTED





JOB NO.

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SHEET

24"- 44" DRYING (V1/V2) CABINETS (SIDE LOAD)

DATE 1/11/22

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SEISMIC SUPPORTS & ATTACHMENTS

WALL MOUNTED

V1 UNIT (SIDE LOAD)	LOADED WEIGHT (lb.)	UNIT SELF WEIGHT (lb.)	"W" (in.)	"A" (in.)	"B" (in.)	"C" (in.)	"D" (in.)	"E" (in.)	₹ (in.)	# OF SCREWS	**# P5510 UNISTRUT SPRING UNIT	⁺ Tu (lb.) PER SCREW	⁺ Vu (lb.) PER SCREW
24" + 13" DRYING	362	343	36.50	38.1	30.5	17.4	13.1	16.4	44.9	8	5	155	62
30" + 13" DRYING	413	394	42.95	36.8	37.0	20.9	16.1	16.8	46.2	10	7	148	55
36" + 13" DRYING	448	422	48.95	36.5	43.0	24.5	18.5	16.9	46.5	10	7	141	59
44" + 13" DRYING	481	455	56.92	37.9	51.0	29.6	21,3	16.2	45.1	10	8	134	66

V2 UNIT (SIDE LOAD)	LOADED WEIGHT (lb.)	UNIT SELF WEIGHT (lb.)	"\\\\" 110 \	"A" (in.)	"B" (in.)	"C" (in.)	"D" (in.)	"E" (in.)	Ÿ (in.)	# UF	**# P5510 UNISTRUT SPRING UNIT	⁺ Tu (lb.) PER SCREW	⁺ Vu (lb.) PER SCREW
24" + 13" DRYING	410	391	37.03	34.3	31.0	17.4	13.6	15.8	48.7	<u> 8</u>	5	170	72
30" + 13" DRYING	459	440	43.03	34.1	37.0	20.7	16.3	16.2	48.9	10	7	168	65
36" + 13" DRYING	503	477	49.03	33.2	43.0	24.7	S18.3	_h 16.0 _m	49.8	10	7	166	72
44" + 13" DRYING	560	534	57.03	31.1	51.0	30.0	22.0	15.6	51.9	10	8	167	84

⁺ VALUES INCLUDE Ω_0

DATE: 01/11/2022



^{**} NUMBER OF SCREWS/SPRING NUT PER ROW (2 ROWS TOTAL, 1 TOP & 1 BOTTOM)

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TORVAN MEDICAL

24"- 44" DRYING CABINETS (TOP LOAD)

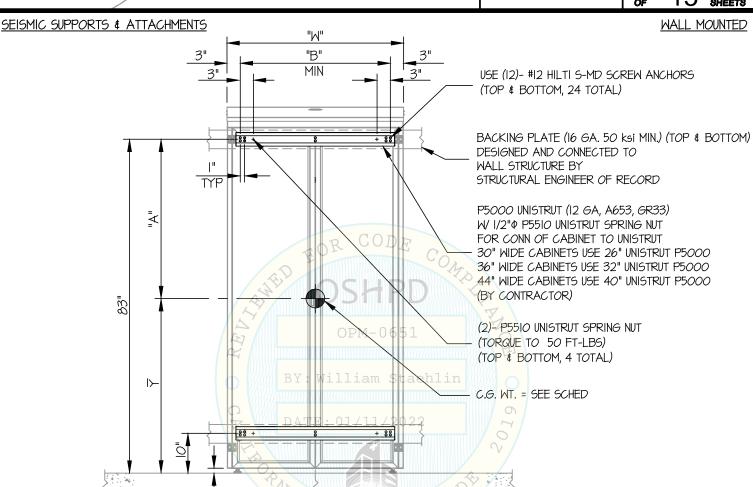
DES. J. ROBERSON

JOB NO. 11-2123

DATE 1/11/22

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f 15 sheets



NOTES:

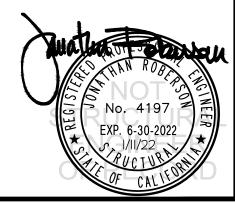
1. FORCES ARE DETERMINED PER 2019 CALIFORNIA BUILDING CODE AND ASCE 7-16.

FRONT ELEVATION
(44" DRYING CABINET SHOWN)

STRENGTH DESIGN IS USED. (SDs = 2,20, ap = 1.0, lp = 1.5, Rp = 1.5, $\mathrm{z/h} \leq$ 1)

HORIZONTAL FORCE (En) = 2.64 Wp VERTICAL FORCE (Ev) = 0.44 Wp

- 2. CENTER OF GRAVITY (C.G.) AND WEIGHT ARE THE GOVERNING PARAMETERS FOR DESIGN. THIS PREAPPROVAL ENCOMPASSES ALL WEIGHTS UP TO THE MAXIMUM WEIGHT SHOWN.
- 3. STRUCTURAL ENGINEER OF RECORD FOR THE BUILDING SHALL PROVIDE SUPPORT STRUCTURE DESIGNED TO SUPPORT WEIGHTS AND FORCES SHOWN IN COMBINATION WITH ALL OTHER LOADS THAT MAY BE PRESENT.
- 4. SEE GENERAL NOTES: SHEETS 1 AND 2



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24"- 44" DRYING CABINETS (TOP LOAD)

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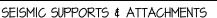
11-2123 JOB NO.

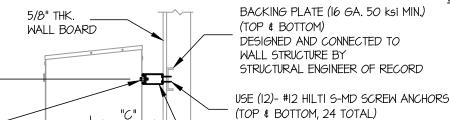
1/11/22 DATE

SHEETS

WALL MOUNTED

SHEET





(2)- P5510 UNISTRUT SPRING NUT (TORQUE TO 50 FT-LBS)

(TOP & BOTTOM, 4 TOTAL)

P5000 UNISTRUT (12 GA, A653, GR33) W/ I/2" P5510 UNISTRUT SPRING NUT FOR CONN OF CABINET TO UNISTRUT 30" WIDE CABINETS USE 26" UNISTRUT P5000 36" WIDE CABINETS USE 32" UNISTRUT P5000 44" WIDE CABINETS USE 40" UNISTRUT P5000

(BY CONTRACTOR)

CABINET BACK MATERIAL (20 GA, ASTM A240, TYPE 304, Fy=30 KSI)

3/8" (A307) LEVELING LEG FULL THREAD ENGAGEMENT TO UNIT REQ'D (TYP)



SIDE ELEVATION (44" DRYING CABINET SHOWN)

3.25"

MAX

UNIT (TOP LOAD)	LOADED WEIGHT (lb.)	UNIT SELF WEIGHT (lb.)	"W" (in.)	"A" (in.)	"B" (in.)	"C" (in.)	11100		** # P5510 UNISTRUT SPRING UNIT	⁺ Tu (lb.) PER SCREW	⁺ Vu (lb.) PER SCREW
30" HEPA	386	361	30.97	37.8	25.0	17.0	45.2	12	5	109	66
36" HEPA	428	403	36.97	37.8	31.0	17.0	45.2	12	5	102	73
44" HEPA	487	465	44.97	38.4	39.0	17.1	44.6	12	6	107	85

⁺ VALUES INCLUDE Ω_{o}



^{**} NUMBER OF SCREWS/SPRING NUT PER ROW (2 ROWS TOTAL, 1 TOP & 1 BOTTOM)

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TORVAN MEDICAL

DES. J. ROBERSON
JOB NO. 11-2123

12

SHEET

27" & 36" SCOPE CABINETS

"M" "B" MIN DATE 1/11/22

of 15 sheets

WALL MOUNTED

SEISMIC SUPPORTS & ATTACHMENTS

⋖

23

USE (12)- #12 HILTI S-MD SCREW ANCHORS (TOP & BOTTOM, 24 TOTAL)

BACKING PLATE (16 GA. 50 ksi MIN.) (TOP & BOTTOM)
DESIGNED AND CONNECTED TO
WALL STRUCTURE BY
STRUCTURAL ENGINEER OF RECORD

P5000 UNISTRUT (12 GA, A653, GR33)
W 1/2" P5510 UNISTRUT SPRING NUT
FOR CONN OF CABINET TO UNISTRUT
27" WIDE CABINETS USE 23" UNISTRUT P5000
36" WIDE CABINETS USE 32" UNISTRUT P5000
(BY CONTRACTOR)

(2)- P5510 UNISTRUT SPRING NUT (TORQUE TO 50 FT-LBS) (TOP & BOTTOM, 4 TOTAL)

C.G. WT. = SEE SCHED

FRONT ELEVATION

(36" SCOPE CABINET SHOWN)

William S

NOTES:

1. FORCES ARE DETERMINED PER 2019 CALIFORNIA BUILDING CODE AND ASCE 7-16

STRENGTH DESIGN IS USED. (SDS = 2.20, Ap = 1.0, Ip = 1.5, Rp = 1.5, $Z/h \le 1$)

HORIZONTAL FORCE (Eh) = 2.64 Wp VERTICAL FORCE (Ev) = 0.44 Wp

- 2. CENTER OF GRAVITY (C.G.) AND WEIGHT ARE THE GOVERNING PARAMETERS FOR DESIGN. THIS PREAPPROVAL ENCOMPASSES ALL WEIGHTS UP TO THE MAXIMUM WEIGHT SHOWN.
- 3. STRUCTURAL ENGINEER OF RECORD FOR THE BUILDING SHALL PROVIDE SUPPORT STRUCTURE DESIGNED TO SUPPORT WEIGHTS AND FORCES SHOWN IN COMBINATION WITH ALL OTHER LOADS THAT MAY BE PRESENT.



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TORVAN MEDICAL

DE8. J. ROBERSON

1/11/22

JOB NO. 11-2123

DATE

(BY CONTRACTOR)

13

SHEET

_{оғ} 15 _{sheets}

WALL MOUNTED

27" & 36" SCOPE CABINETS

SEISMIC SUPPORTS & ATTACHMENTS BACKING PLATE (16 GA. 50 ksi MIN.) 5/8" THK. (TOP & BOTTOM) WALL BOARD DESIGNED AND CONNECTED TO WALL STRUCTURE BY STRUCTURAL ENGINEER OF RECORD USE (8)- #12 HILTI S-MD SCREW ANCHORS "C" (TOP & BOTTOM, 16 TOTAL) (2)- P5510 UNISTRUT SPRING NUT (TORQUE TO 50 FT-LBS) -(TOP & BOTTOM, 4 TOTAL) ₹ P5000 UNISTRUT (12 GA, A653, GR33) 3.25" W/ I/2" P5510 UNISTRUT SPRING NUT MAX FOR CONN OF CABINET TO UNISTRUT 27" WIDE CABINETS USE 23" UNISTRUT P5000 36" WIDE CABINETS USE 32" UNISTRUT P5000

3/8"\$ (A301) LEVELING LEG FULL THREAD ENGAGEMENT TO UNIT REQ'D (TYP)

CABINET BACK MATERIAL
(20 GA, ASTM A240, TYPE 304, Fy=30 KSI)

OPM-0611

C.G. WT. = SEE SCHED

BY: William Staehlin

DATE: 01/11/2022

SIDE ELEVATION

					1 7						
UNIT	LOADED WEIGHT (lb.)	UNIT SELF WEIGHT (lb.)	"W" (in.)	"A" (in.)	"B" (in.)	"C" (in.)	Y (in.)	#*OF SCREWS PER BRACKET	I I INIQTOLIT	⁺ Tu (lb.) PER SCREW	⁺ Vu (lb.) PER SCREW
27" SCOPE	419	400	29.97	43.1	24.0	16.2	39.9	12	3	135	82
36" SCOPE	557	538	38.97	42.8	33.0	16.8	40.2	12	5	143	108

- + VALUES INCLUDE Ω_{0}
- ** NUMBER OF SCREWS/SPRING NUT PER ROW (2 ROWS TOTAL, 1 TOP & 1 BOTTOM)

23"



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TORVAN MEDICAL

DES. J. ROBERSON

1/11/22

JOB NO. 11-2123

DATE

14

of 15 SHEETS

BRACKET DETAILS

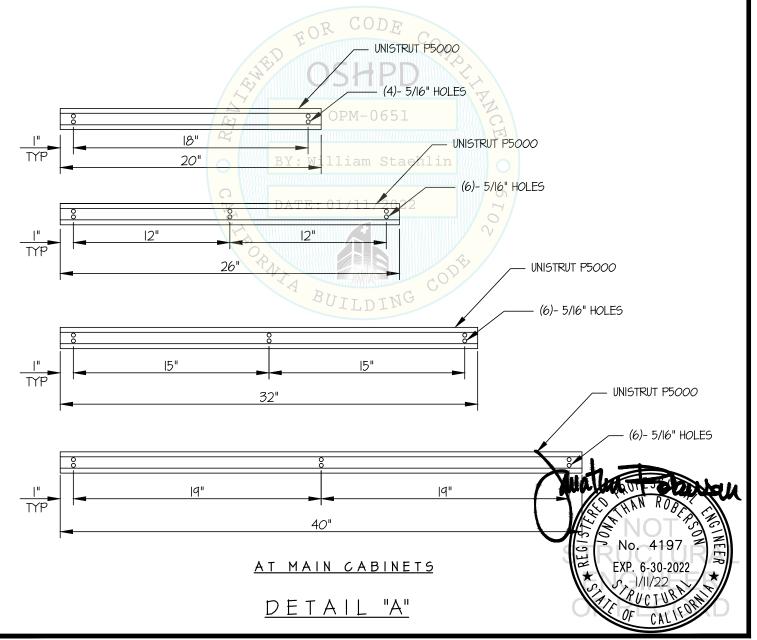
HEPA/DRYING CABINETS (SIDE LOAD)

SEISMIC SUPPORTS & ATTACHMENTS

UNISTRUT P5000

(4)- 5/16" HOLES

AT COMPONENT CABINET



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TORVAN MEDICAL

DES. J. ROBERSON 11-2123

SHEET

HEPA/DRYING/SCOPE CABINETS

1/11/22 DATE

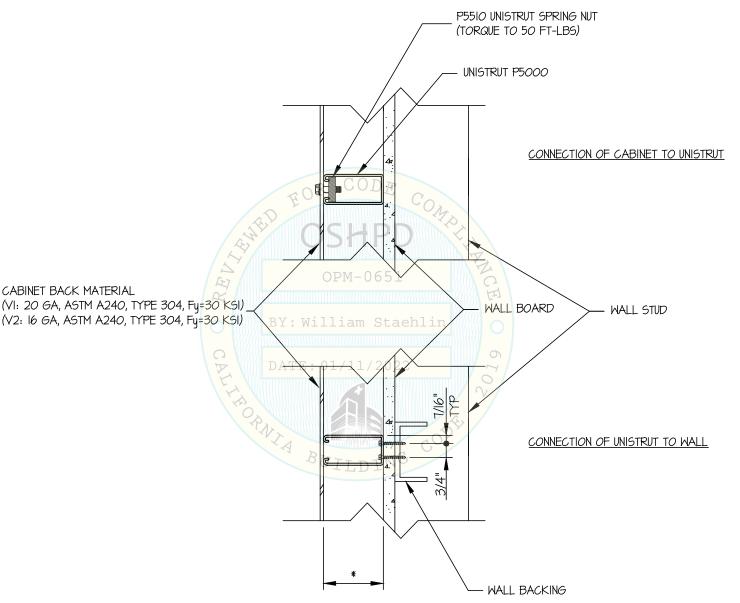
JOB NO.

SHEETS

SEISMIC SUPPORTS & ATTACHMENTS

CABINET BACK MATERIAL

BRACKET DETAILS



* I-5/8" : PIOOO UNISTRUT (USE PIOIO SPRING NUT, TORQUE TO 50 FT-LBS) 2-7/16": P5500 UNISTRUT (USE P5510 SPRING NUT, TORQUE TO 50 FT-LBS) 3-1/4" : P5000 UNISTRUT (USE P5510 SPRING NUT, TORQUE TO 50 FT-LBS)

DETAIL "B"

